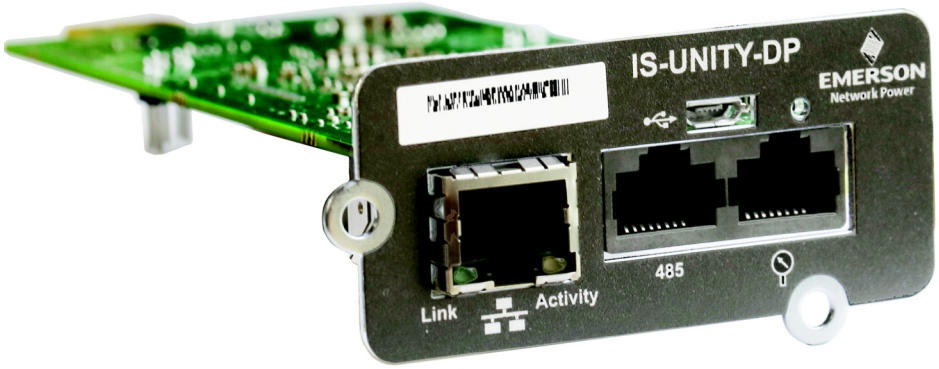
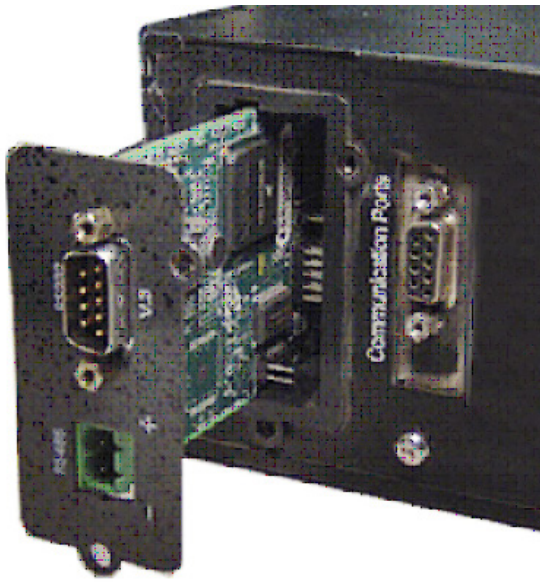
Liebert® IntelliSlot™
Modbus RTU, Modbus TCP, BACnet MSTP and BACnet IP

Reference Guide





EMERSON
Network Power

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1.0 Liebert Equipment Compatibility

1.1 What's New in This Manual

The Liebert® IntelliSlot™ Unity Communications Card has been updated to support the Liebert EMP™ UPS and Liebert DCL™ thermal-management equipment. Enhancements have also been added to support modular Liebert eXM UPS equipment and a number of thermal-management products. The supported Modbus and BACnet mapping tables for this equipment when using the IS-UNITY-DP communications card have been added to this document.

In addition, **Table 1-1** and **Table 1-2** are updated to more-easily present the cards available to support the specific BACnet and Modbus protocols.

1.2 Connectivity to Liebert IntelliSlot Using Modbus RTU, Modbus TCP, BACnet MSTP or BACnet IP

This document describes the Modbus and BACnet communications protocols available for communication with Emerson Network Power equipment. Included are the Liebert IntelliSlot Modbus RTU, Modbus TCP, BACnet MSTP and the BACnet IP communications cards.

- The Modbus information includes implementation basics, supported types, frame format, function code support and similar subjects.
- The BACnet information includes the BACnet service listing, object types, device objects, analog objects, binary objects, multistate objects and BACnet engineering units.



NOTE

Some Building Management Systems can be configured to send continuous updates for device setpoints, usually setting the same value. The BMS should be configured to send, on a sustained average, no more than two writes per second to the device. This will allow the device to catch up after a burst of updates when required while allowing other communication with the device to proceed.

The Liebert NX™ 225-600kVA UPS uses the Chloride ManageUPS Net Adapter +B card for Modbus support with the UPS' native processor. If the UPS is upgraded to use the optional MUND control board, then the IS-UNITY-DP card may be used to provide both Modbus and BACnet support. Both sets of mapping tables are provided in this document and referenced in **Table 1-1** and **Table 1-2**.

1.2.1 How to Use This Manual

Table 1-1 and **Table 1-2** show the type of Liebert IntelliSlot card required for selected Liebert products. Find the product first and the tables to reference, the columns to the right of that are the cards supported for the product.

The information is organized by Product Name, Table Number, Controller Protocol and Card Part Number.

Modbus tables are first and BACnet tables second with products in the following sections:

- Thermal Management Products
- Power Distribution and Power Conditioning Products (Modbus Only)
- UPS Systems
- Battery Monitoring Products (Modbus Only)

Products currently shipping are shown first in each section, followed by older equipment.

1.2.2 Compatibility with Liebert Equipment

Table 1-1 Liebert Equipment and Compatible Liebert IntelliSlot Cards Modbus RTU & Modbus TCP Protocols

Product Supported	Refer to Tables:	Controller / Protocol	Compatible Card Part Number	
			Modbus TCP Card	Modbus RTU Card
Thermal Management Products				
Liebert Challenger 3000™	**3-1** to **3-5**	Liebert iCOM® v4	IS-UNITY-DP IS-IPBML*	IS-UNITY-DP IS-485L*
Liebert Challenger ITR™	**3-1** to **3-5**			
Liebert CRV™	**3-1** to **3-5**			
Liebert CW™	**3-6** to **3-8**			
Liebert DCP™	**3-15** to **3-17**			
Liebert Deluxe System/3™	**3-1** to **3-5**			
Liebert DS™	**3-1** to **3-5**			
Liebert DSE™	**3-1** to **3-5**			
Liebert HPC™ (Chiller)	**3-9** to **3-12**			
Liebert HPM™	**3-1** to **3-5**			
Liebert PeX™	**3-1** to **3-5**			
Liebert PCW/PDX™	**3-1** to **3-5**			
Liebert XDC™	**3-13** to **3-10**			
Liebert XDP™	**3-15** to **3-17**			
Liebert DCL™	**3-18** to **3-20**	Liebert iCOM® v4	IS-UNITY-DP	IS-UNITY-DP
Liebert DS	**3-21** to **3-22**	Liebert iCOM v3	—	OC485-LBDS
Liebert PeX	**3-21** to **3-22**			
Liebert XDF™	**3-23** to **3-24**			
Liebert Challenger 3000	**3-25**	LAM	—	IS-WEBADPT OC485-ADPT*
Liebert Deluxe System/3	**3-25**			
Liebert Himod™	**3-25**			
Liebert ICS™	**3-25**			
Liebert DataMate™	**3-26**	L0B	—	IS-WEBADPT OC485-ADPT*
Liebert Mini-Mate Plus™	**3-26**			
Liebert Mini-Mate2™	**3-26**			
Liebert DataMate™	**3-27**	MM2	—	IS-WEBADPT OC485-ADPT*
Liebert Mini-Mate2	**3-27**			
Liebert Mini-Mate2 8 Ton	**3-28**	L8T	—	IS-WEBADPT OC485-ADPT*
Liebert Atlas Air™	**3-29**	C10 2-step	—	IS-WEBADPT OC485-ADPT*
Liebert Atlas PEC™	**3-29**			
Liebert LECS 15™	**3-29**			
Liebert Atlas Air	**3-30**	C100 4-step	—	IS-WEBADPT OC485-ADPT*
Liebert Atlas PEC	**3-30**			
Liebert CEMS 100™	**3-30**			

*Communication cards marked with an asterisk are Discontinued.

Table 1-1 Liebert Equipment and Compatible Liebert IntelliSlot Cards Modbus RTU & Modbus TCP Protocols (continued)

Product Supported	Refer to Tables:	Controller / Protocol	Compatible Card Part Number	
			Modbus TCP Card	Modbus RTU Card
Power Distribution & Power Conditioning Products				
Liebert EXC™	**3-35**,**3-36**, **3-39**	LDMF	IS-UNITY-DP IS-IPBMS*	IS-UNITY-DP IS-485S*
Liebert FDC™	**3-35** to **3-39**	LDMF, CPM		
Liebert FPC™	**3-33** to **3-39**	VPMP, LDMF, CPM		
Liebert PPC™	**3-33** to **3-39**			
Liebert RDC™	**3-35** to **3-39**	LDMF, CPM		
Liebert RX™	**3-37** to **3-39**	LDMF		
Liebert FPC	**3-31**	PMP2	—	IS-WEBADPT OC485-ADPT*
Liebert PPC	**3-31**			
Liebert Datawave™	**3-32**	PMP	—	IS-WEBADPT OC485-ADPT*
Liebert FPC	**3-32**			
Liebert PPC	**3-32**			
Liebert STS™	**3-40**	STS	—	IS-WEBADPT OC485-ADPT*
Liebert STS/PDU™	**3-40**			
Liebert STS2™	**3-35** to **3-41**	STS2	—	IS-WEBADPT OC485-ADPT*
Liebert STS2/PDU™	**3-41**			
	3-35,**3-36**, **3-39**, **3-41**	STS2 with LDMF		
UPS Systems				
Liebert APM™	**3-42** to **3-44**	—	IS-UNITY-DP IS-IPBML*	IS-UNITY-DP IS-485L*
Liebert APS™	**3-45** to **3-47**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert EPM™	**3-48** to **3-50**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert *e*XL™	**3-51** to **3-53**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert *e*XM™	**3-54** to **3-56**	Controller with LCD HMI	IS-UNITY-DP	IS-UNITY-DP
Liebert *e*XM™	**3-57** to **3-59**	Controller with Touchscreen HMI	IS-UNITY-DP	IS-UNITY-DP
Liebert GXT2™	**3-61** to **3-62**	—	—	OC-485
Liebert GXT3™	**3-61** to **3-62**	—	—	OC-485
	3-63 to **3-65**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert GXT4™	**3-63** to **3-65**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert HiNet™	**3-66** to **3-67**	—	—	OC-485
Liebert Nfinity™	**3-68** to **3-69**	—	—	OC-485
Liebert NX™	**3-70** to **3-71**	—	—	OC-485
Liebert NX™ 225-600	**3-72**	Native	Chloride ManageUPS +B	Chloride ManageUPS +B
	3-73 to **3-74**	Mund	IS-UNITY-DP	IS-UNITY-DP
Liebert NXC™	**3-42** to **3-44**	—	IS-485L* IS-UNITY-DP	IS-IPBML* IS-UNITY-DP
Liebert NXR™	**3-42** to **3-44**	—	IS-485L IS-UNITY-DP	IS-IPBML IS-UNITY-DP

*Communication cards marked with an asterisk are Discontinued.

Table 1-1 Liebert Equipment and Compatible Liebert IntelliSlot Cards Modbus RTU & Modbus TCP Protocols (continued)

Product Supported	Refer to Tables:	Controller / Protocol	Compatible Card Part Number	
			Modbus TCP Card	Modbus RTU Card
UPS Systems *(continued)*				
Liebert NXL™- 60 Hz, UL version (Model 40—SA, SR, SN, MM, CD)	**3-76** to **3-78**	—	IS-UNITY-DP IS-IPBMX*	IS-UNITY-DP IS-485X*
Liebert NXL™- 50 Hz, CE version (Model 48 and 49—SA, SR, SN, MM, CD)	**3-79** to **3-81**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert PowerSure Interactive™	**3-82** to **3-83**	—	—	OC-485
Liebert PowerSure Interactive 2™	**3-84** to **3-85**	—	—	OC-485
Liebert Series 300™ UPS	**3-86** to **3-87**	—	—	IS-WEBADPT OC485-ADPT*
Liebert Series 600™ UPS	**3-88** to **3-89**	—	—	IS-WEBADPT OC485-ADPT*
Liebert Series 610™ SCC UPS	**3-90** to **3-91**	—	—	IS-WEBADPT OC485-ADPT*
Liebert HiPulse™	**3-92**	SMM/SSM	—	IS-WEBADPT OC485-ADPT*
Liebert SICE 7200™	**3-92**		—	
Liebert SICE 7200™	**3-93**	SSC	—	IS-WEBADPT OC485-ADPT*
Liebert Npower™	**3-94**	IMP	—	IS-WEBADPT OC485-ADPT*
Battery Monitoring Products				
Alber BDSU™	**3-95** to **3-96**	—	IS-UNITY-DP IS-IPBMX*	IS-UNITY-DP IS-485X*

*Communication cards marked with an asterisk are Discontinued.

Table 1-2 Liebert Equipment and Compatible Liebert IntelliSlot Cards BACnet MSTP & BACnet IP Protocols

Product Supported	Refer to Tables:	Controller / Protocol	Compatible Card Part Number	
			BACNet IP	BACnet MSTP
Thermal Management Products				
Liebert Challenger 3000™	**4-1** to **4-7**	Liebert iCOM v4	IS-UNITY-DP IS-IPBML*	IS-UNITY-DP
Liebert Challenger ITR™	**4-1** to **4-7**			
Liebert CRV™	**4-8** to **4-11**			
Liebert CW™	**4-1** to **4-7**			
Liebert DCP™	**4-16** to **4-19**			
Liebert Deluxe System/3	**4-1** to **4-7**			
Liebert DS™	**4-1** to **4-7**			
Liebert DSE™	**4-1** to **4-7**			
Liebert HPC™	**4-12** to **4-15**			
Liebert HPM™	**4-1** to **4-7**			
Liebert PDX/PCW™	**4-1** to **4-7**			
Liebert PeX™	**4-1** to **4-7**			
Liebert XDC™	**4-17** to **4-19**			
Liebert XDP™	**4-17** to **4-19**			
Liebert DCL™	**4-20** to **4-23**	Liebert iCOM v4	IS-UNITY-DP	IS-UNITY-DP
Liebert DataMate™	**4-24**	MM2	IS-WEBADPT	—
Liebert Mini-Mate2	**4-24**			
Liebert Mini-Mate2™ 8 Ton	**4-25**	L8T		—
UPS Systems				
Liebert APM	**4-26** to **4-29**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert APS	**4-30** to **4-33**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert EPM™	**4-34** to **4-37**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert *e*XL™	**4-38** to **4-41**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert *e*XM™	**4-42** to **4-45**	Controller with LCD HMI	IS-UNITY-DP	IS-UNITY-DP
Liebert *e*XM™	**4-46** to **4-49**	Controller with Touchscreen HMI	IS-UNITY-DP	IS-UNITY-DP
Liebert GXT3™	**4-50** to **4-53**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert GXT4™	**4-50** to **4-53**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert NX™ 225-600	**4-54** to **4-57**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert NXC™	**4-26** to **4-29**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert NXR™	**4-26** to **4-29**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert NXL- 60Hz, UL version (Model 40)	**4-58** to **4-61**	—	IS-UNITY-DP	IS-UNITY-DP
Liebert NXL™ - 50Hz, CE version (Models 48 and 49)	**4-62** to **4-65**	—	IS-UNITY-DP	IS-UNITY-DP

Table 1-2 Liebert Equipment and Compatible Liebert IntelliSlot Cards BACnet MSTP & BACnet IP Protocols (continued)

Product Supported	Refer to Tables:	Controller / Protocol	Compatible Card Part Number	
			BACNet IP	BACnet MSTP
Power Distribution and Power Conditioning Products				
Liebert EXC™	**4-66** to **4-68**, **4-74**	LDMF	IS-UNITY-DP	IS-UNITY-DP IS-485S*
Liebert FDC™	**4-66** to **4-70**, **4-74**	LDMF, CPM		
Liebert FPC™	**4-66** to **4-74**	VPMP, LDMF, CPM		
Liebert PPC™	**4-66** to **4-74**			
Liebert RDC™	**4-66** to **4-70**, **4-74**	LDMF, CPM		
Liebert RX™	**4-66** to **4-68**, **4-74**	LDMF		
Battery Monitoring Products				
Alber BDSU™	**4-75** to **4-78**	—	IS-UNITY-DP	IS-UNITY-DP

2.0 Modbus Communications

2.1 Implementation Basics

Modbus protocol provides control and data acquisition, through query and response, between master and slave devices. This protocol comprises the rules for communication, controlling the message format between devices, how master and slave devices initiate communications, as well as unit identification, message-handling and error-checking.

The Liebert IntelliSlot 485/IP card acts as a slave device on a network. This network can be a multidrop configuration over EIA-485, where multiple slaves reside on a common wire or loop.

2.2 Transmission Format

The Liebert IntelliSlot 485/IP interface card supports Modbus Remote Terminal Unit (RTU) transmission modes. See **Table 2-1** below.

Table 2-1 Modbus Remote Terminal Unit settings for Liebert IntelliSlot 485/IP interface card

Physical Port	Transmission Mode	Baud Rate	Data Bits	Parity Bits	Stop Bits	Start Bits
EIA-485/422 2 wire	RTU	9600, 19200 or 38400	8	None	1	1

2.3 Modbus Packet Format

Each Modbus packet consists of these fields:

- Device Address
- Function Code
- Data Field(s)
- Error Check Field

2.3.1 Device Address

The address field immediately follows the beginning of the frame and consists of 8-bits (RTU). This bit indicates the user-assigned address of the slave device that is to receive the message from the attached master device.

Each slave must be assigned a unique address. Only the addressed slave will respond to a query that contains its address.

2.3.2 Function Code

The function code field tells the addressed slaves what function to perform. Function codes are designed to invoke a specific action by the slave device. The function code ranges from 1 to 127.

Liebert IntelliSlot Modbus server supports the following Modbus function codes.

Table 2-2 Supported Modbus function codes

Code	Function	Description
01	Read Coils	Read from 1 to 2000 contiguous status of coils managed by the server. Coils in the response message are packed as one per bit of a byte, 1=On and 0=Off. If the requested quantity of coils is not a multiple of 8, zeros are padded in the final byte.
02	Read Discrete Inputs	Read from 1 to 2000 contiguous input status managed by the server. Discrete inputs in the response message are packed as one per bit of a byte, 1=On and 0=Off. If the requested number of inputs is not a multiple of 8, zeros are padded in the final byte.
03	Read Holding Registers	Read the contents of contiguous block of 1 to 127 holding registers. Data are packed as two bytes per register; the first byte contains the high order bits.
04	Read Input Registers	Read the contents of contiguous block of 1 to 127 Input registers. Data are packed as two bytes per register; the first byte contains the high order bits.
05	Write Single Coil	Write a single output to either On (1) or Off (0) mapped in coil section.
06	Write Single Register	Write a value into a single holding register;
15	Write Multiple Coils	Force each coil in a sequence of coils to either On or Off.
16	Write Multiple Registers	Write values into a block of contiguous registers (1 to 120)

2.3.3 Data Fields

The data field length varies, depending on whether the message is a request or a response to a packet. This field typically contains information required by the slave device to perform the command specified or to the response to a data request from the master device.

Because Modbus can return only positive numbers, in registers that contain signed numbers the negative numbers are encoded in two's-complement form. For example, in a 16-bit register a -7 becomes FFF9 in hexidecimal or 65529 in decimal.

2.3.4 Error Check Field

The Error Check Field consists of a 16-bit (2 byte) Cyclical Redundancy Check (CRC16). It allows the receiving device to detect a packet that has been corrupted by transmission errors.

2.3.5 RTU Framing

The example below shows a typical query and response from a Liebert IntelliSlot interface card. The master device initiates a query asking Slave Device, with address 2, for holding registers starting at holding register 40051 (offset 50) and including next two registers (three total).

Table 2-3 Query sample

Slave Address	Function Code	Starting Register		Number of Registers		CRC16	
		Hi Byte	Lo Byte	Hi Byte	Lo Byte	Hi Byte	Lo Byte
02	03	00	32	00	03	E5	FA

Table 2-4 Response sample

Slave Address	Function Code	Count: Bytes of Data	Register						CRC16	
			40051 Data		40052 Data		40053 Data			
			Hi	Lo	Hi	Lo	Hi	Lo	Hi Byte	Lo Byte
02	03	6	1	58	00	FA	00	54	1B	0D

Slave Device, with address 2, responds to Function Code 3 with 6 bytes of hexadecimal data and ends with CRC16 checksum.

Register values: 40051 = 158 (hex) = 344 (decimal)
40052 = FA (hex) = 250 (decimal)
40053 = 54 (hex) = 84 (decimal)

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3.0 Modbus RTU and Modbus TCP Protocols

3.1 Thermal Management Products

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Ext Reheat Lockout	10009	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Humidifier Lockout	10010	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Minimum Chilled Water Temp Set Point Enable	10013	13	1	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Sensor Event Control	10019	19	1	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Event Control	10020	20	1	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Compressor Lockout	10021	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
System On/Off Control	—	25	1	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan State	10025	—	1	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Cooling State	10026	—	1	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling State	10027	—	1	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Hot Water / Hot Gas State	10028	—	1	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Electric Reheat State	10029	—	1	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier State	10030	—	1	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier State	10031	—	1	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Main Fan Overload	10034	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Loss of Air Flow	10035	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Flow	10036	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure	10037	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure	10038	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload	10039	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue	10040	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure 2	10041	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure 2	10042	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload 2	10043	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Compressor Pump Down Issue 2	10044	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Over Temp 1	10045	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Over Temp 2	10046	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Smoke Detected	10047	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Water Under Floor	10048	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Issue	10049	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Glycol Pump On	10050	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Unit On	10051	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Condenser Pump High Water	10052	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Sensor Issue	10053	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Air Blower	10055	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Low Water	10058	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Over Current	10059	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Ext Over Temperature	10060	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Shutdown - Loss Of Power	10061	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Chilled Water Over Temp	10065	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Over Temperature	10067	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Under Temperature	10068	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Humidity	10069	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Humidity	10070	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Over Temperature	10071	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temperature	10072	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A High Humidity	10073	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Low Humidity	10074	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Chilled Water Loss of Flow	10075	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Clogged Air Filter	10076	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Supply Air Sensor Issue	10077	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Temp Sensor Issue	10078	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Issue	10079	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Hours Exceeded	10080	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Hours Exceeded 1	10081	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Hours Exceeded 2	10082	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Valve Hours Exceeded	10083	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Exceeded 1	10084	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Exceeded 2	10085	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Exceeded 3	10086	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Hot Water / Hot Gas Valve Hours Exceeded	10087	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Hours Exceeded	10088	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier Hours Exceeded	10089	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Notes**	**Extra Notes (see Table 3-2)**
Unit Communication Lost	10091	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Master Unit Communication Lost	10092	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Code Missing	10094	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Service Required	10098	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Control Board Not Detected	10099	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 1	10104	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 2	10105	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 3	10106	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 4	10107	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp Sensor Issue 1	10108	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp Sensor Issue 2	10109	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Over Temperature	10209	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Under Temperature	10210	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4				
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM			**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX	
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Notes**	**Extra Notes (see Table 3-2)**
Ambient Air Sensor Issue	10211	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14
Compressor Short Cycle 1	10212	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle 2	10213	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Free Cooling Lockout	10214	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Reheater Over Temperature	10215	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Cylinder Worn	10216	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Under Current	10217	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Issue	10218	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser TVSS Issue	10219	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser VFD Issue	10220	—	1	Active on Alarm	1, 2, 4, 6, 10
Condenser Issue 1	10221	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser Issue 2	10222	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
BMS Communications Timeout	10223	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Digital Output Board Not Detected 1	10224	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Digital Output Board Not Detected 2	10225	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Digital Output Board Not Detected 3	10226	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
RAM Battery Issue	10227	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Water Leakage Detector Sensor Issue	10228	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
External Fire Detected	10229	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Chilled Water Control Valve Failure 1	10230	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Chilled Water Control Valve Failure 2	10231	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Unit Off	10232	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit On	10233	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Partial Shutdown	10234	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Shutdown	10235	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Power Shutdown	10236	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Unit Standby	10237	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Maintenance Due	10238	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Maintenance Completed	10239	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Pressure Transducer Issue 1	10240	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Pressure Transducer Issue 2	10241	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Pressure Transducer Issue 1	10242	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Pressure Transducer Issue 2	10243	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Capacity Reduced	10244	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dew Point Over Temperature	10345	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Dew Point Under Temperature	10346	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Over Temperature	10347	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Under Temperature	10348	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Compressor Superheat Over Threshold 1	10349	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Compressor Superheat Over Threshold 2	10350	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Unspecified General Event	10351	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Remote Sensor Average Over Temperature	10352	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Average Under Temperature	10353	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Average Over Temperature	10354	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Average Under Temperature	10355	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 1	10356	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 2	10357	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 3	10358	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 4	10359	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 5	10360	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 6	10361	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 7	10362	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 8	10363	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 9	10364	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temperature 10	10365	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 1	10366	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 2	10367	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 3	10368	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 4	10369	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 5	10370	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4				
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM			**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX	
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Notes**	**Extra Notes (see Table 3-2)**
Remote Sensor Under Temperature 6	10371	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 7	10372	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 8	10373	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 9	10374	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature 10	10375	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 1	10376	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14
Remote Sensor Issue 2	10377	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 3	10378	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 4	10379	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 5	10380	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 6	10381	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 7	10382	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 8	10383	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 9	10384	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue 10	10385	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air Economizer Emergency Override	10386	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air Economizer Reduced Airflow	10387	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Temperature Control Sensor Issue	10388	—	1	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
EEV Unspecified General Event	10488	—	1	Active on Alarm	4, 6, 7, 8, 11, 13, 14
Static Pressure Sensor Issue	10489	—	1	Active on Alarm	3, 5, 6, 7, 8, 9, 11, 12, 13, 14
High Static Pressure	10490	—	1	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Low Static Pressure	10491	—	1	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Pump Unspecified General Event	10492	—	1	Active on Alarm	4, 6, 7, 8, 11, 13, 14
Condenser Unit Unspecified General Event	10493	—	1	Active on Alarm	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Circuit Unspecified General Event	10494	—	1	Active on Alarm	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Input Undervoltage 1	10500	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Input Undervoltage 2	10501	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Input Undervoltage 3	10502	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Input Undervoltage 4	10503	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Input Undervoltage 5	10504	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Input Undervoltage 6	10505	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Return Humidity Sensor Issue	10600	—	1	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Compressor Low Differential Pressure Lockout 1	10601	—	1	Active on Alarm	6, 7, 8, 11, 12, 13, 14
Compressor Low Differential Pressure Lockout 2	10602	—	1	Active on Alarm	6, 7, 8, 11, 12, 13, 14
Airflow Sensor Issue	10603	—	1	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Ext Air Damper Position Issue	10604	—	1	Active on Alarm	3, 5, 6, 7, 8, 9, 11, 12, 13, 14
Ext Power Source A Failure	10605	—	1	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Ext Power Source B Failure	10606	—	1	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Static Pressure Sensor Out of Range	10607	—	1	Active on Alarm	3, 5, 6, 7, 8, 9, 11, 12, 13, 14
Fluid Temperature Sensor Issue 1	10608	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Fluid Temperature Sensor Issue 2	10609	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Fluid Flow Sensor Issue 1	10610	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Fluid Flow Sensor Issue 2	10611	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Mixed Mode Lockout	10620	—	1	Active on Alarm	6, 7, 8, 11, 12, 13, 14
Aux Air Temp Device Communication Lost	10630	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost 1	10640	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost 2	10641	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost 3	10642	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost 4	10643	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost 5	10644	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost 6	10645	—	1	Active on Alarm	5, 8, 11, 12, 13, 14
External Condenser TVSS Issue	10655	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
External Condenser VFD Issue	10656	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Outside Air Temp Out of Operating Range 1	10677	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Outside Air Temp Out of Operating Range 2	10678	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Control Board Issue 1	10679	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4	
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX

Available Points

Data Label	Status	Coil	Number of Bits	Notes	Extra Notes (see Table 3-2)
Condenser Control Board Issue 2	10680	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Outside Air Temp Sensor Issue 1	10681	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Outside Air Temp Sensor Issue 2	10682	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Communication Lost 1	10683	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Communication Lost 2	10684	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Remote Shutdown 1	10685	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Remote Shutdown 2	10686	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser TVSS Issue 1	10687	—	1	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser TVSS Issue 2	10688	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Sensor Issue 1	10699	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Sensor Issue 2	10700	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Under Threshold 1	10701	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Under Threshold 2	10702	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Over Threshold 1	10703	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Over Threshold 2	10704	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temp Sensor Issue 1	10705	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temp Sensor Issue 2	10706	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Under Temp 1	10707	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4				
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM	**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX			
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Notes**	**Extra Notes (see Table 3-2)**
Condenser Supply Refrigerant Under Temp 2	10708	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Over Temp 1	10709	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Over Temp 2	10710	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Max Fan Speed Override 1	10711	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Max Fan Speed Override 2	10712	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Issue 1	10723	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Issue 2	10724	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Issue 3	10725	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Issue 4	10726	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Issue 5	10727	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Issue 6	10728	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Issue 7	10729	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Issue 8	10730	—	1	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Compressor 1B Thermal Overload	10741	—	1	Active on Alarm	9
Compressor 2B Thermal Overload	10742	—	1	Active on Alarm	9
Compressor 1B Hours Exceeded	10743	—	1	Active on Alarm	9
Compressor 2B Hours Exceeded	10744	—	1	Active on Alarm	9
Team Static Pressure Sensor Failure	10750	—	1	Active on Alarm	9
Heating Lockout	10751	—	1	Active on Alarm	9
Free Cooling Stopped - High Room Temp	10752	—	1	Active on Alarm	9
Cold Aisle Temperature/Humidity Team Sensor Failure	10753	—	1	Active on Alarm	9
Cold Aisle Air Sensor Failure 1	10760	—	1	Active on Alarm	9
Cold Aisle Air Sensor Failure 2	10761	—	1	Active on Alarm	9

Table 3-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Status and Coil (continued)

Controller	Liebert iCOM® v4				
Liebert Products	**Units with Liebert iCOM®:** Liebert HPM			**Units with Liebert iCOM Firmware PA1.04.033.STD or later:** Liebert Challenger 3000 Liebert Challenger ITR Liebert CW Liebert Deluxe System/3 Liebert DS Liebert DSE Liebert PeX	
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Notes**	**Extra Notes (see Table 3-2)**
Cold Aisle Air Sensor Failure 3	10762	—	1	Active on Alarm	9
Chilled Water Inlet Temperature Control Active	10770	—	1	Active on Alarm	9
Chilled Water Inlet Temperature Sensor Failure 1	10780	—	1	Active on Alarm	
Chilled Water Inlet Temperature Sensor Failure 2	10781	—	1	Active on Alarm	
Chilled Water Outlet Temperature Sensor Failure 1	10782	—	1	Active on Alarm	
Chilled Water Outlet Temperature Sensor Failure 2	10783	—	1	Active on Alarm	
Chilled Water Flow Meter Sensor Failure 1	10784	—	1	Active on Alarm	
Chilled Water Flow Meter Sensor Failure 2	10785	—	1	Active on Alarm	

Table 3-2 Extra notes key to Table 3-1

Number	Description
1	This point is supported on: iCOM controller version 1.04.042.STD
2	This point is supported on: iCOM controller version 2.00.11R for US iCOM controller version 2.00.12R (for Japan and China – language corrections only)
3	This point is supported on: iCOM controller version 2.01.29.07R
4	This point is supported on: iCOM controller version 2.02.21R
5	This point is supported on: iCOM controller version 2.01.45R
6	This point is supported on: iCOM controller version 2.03.27.06R
7	This point is supported on: iCOM controller version 2.03.33R
8	This point is supported on: iCOM controller version 2.04.32R
9	This point is supported on: iCOM controller version A9HB-1.04.23-R (Similar to Liebert PDX and to be replaced by separate family branch.)
10	This point is supported on: iCOM controller version 1.04.37O-STD
11	This point is supported on: iCOM controller version 2.05.12T
12	This point is supported on: iCOM controller version 2.01.53R
13	This point is supported on: iCOM controller version 2.04.???R (TBD)
14	This point is supported on: iCOM controller version 2.05.19R

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Free Cooling Internal Control Mode	30017	40017	1	—	0 = Disabled 1 = Contact 2 = Temperature 3 = Set Point	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Humidity Control Type	30018	40018	1	—	0 = Relative 1 = Compensated 2 = Predictive	1, 9, 10
Fan Speed Maximum Set Point	30019	40019	1	—	% Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Temperature Set Point	30020	40020	1	—	deg C Int16	1, 9, 10
Supply Air Temperature Set Point	30733	40733	1	—	deg F Int16	1, 9, 10
Free Cooling Internal Temperature Delta	30021	40021	1	10	deg C Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Internal Temperature Delta	30734	40734	1	10	deg F Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Minimum Chilled Water Temp Set Point	30022	40022	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Minimum Chilled Water Temp Set Point	30735	40735	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Set Point	30023	40023	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Set Point	30736	40736	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Proportional Band	30024	40024	1	10	deg C Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Proportional Band	30737	40737	1	10	deg F Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Dead Band	30025	40025	1	10	deg C Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Dead Band	30738	40738	1	10	deg F Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Control Integration Time	30026	40026	1	10	min Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidity Set Point	30027	40027	1	—	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidity Proportional Band	30028	40028	1	—	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidity Control Integration Time	30029	40029	1	10	min Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidity Dead Band	30030	40030	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Auto Restart Delay	30031	40031	1	—	sec Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Air Temperature Control Type	30033	40033	1	—	0 = Proportional 1 = Prop+Integral 3 = Intelligent	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
BMS Timeout Period	30045	40045	1	—	min Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Air Temperature Threshold	30050	40050	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Air Temperature Threshold	30739	40739	1	10	deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Air Temperature Threshold	30051	40051	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Air Temperature Threshold	30740	40740	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Over Temp Threshold	30052	40052	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Over Temp Threshold	30741	40741	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temp Threshold	30053	40053	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temp Threshold	30742	40742	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Humidity Threshold	30054	40054	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Humidity Threshold	30055	40055	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A High Humidity Threshold	30056	40056	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Low Humidity Threshold	30057	40057	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Fan Hours Threshold	30070	40070	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Compressor Hours Threshold 1	30071	40071	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Compressor Hours Threshold 2	30072	40072	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Humidifier Hours Threshold	30073	40073	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Dehumidifier Hours Threshold	30074	40074	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Free Cooling Valve Hours Threshold	30075	40075	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Electric Reheater Hours Threshold 1	30076	40076	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Electric Reheater Hours Threshold 2	30077	40077	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
(Deprecated) Electric Reheater Hours Threshold 3	30078	40078	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Hot Water / Hot Gas Valve Hours Threshold	30079	40079	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Operating State	30100	-	1	—	0 = off 1 = on 2 = standby	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
System Status	30102	-	1	—	1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Speed	30103	—	1	—	% Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Utilization	30104	—	1	—	% Uint16	1, 9, 10
Free Cooling Valve Open Position	30105	—	1	—	% Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Reheat Utilization	30106	—	1	—	% Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Utilization	30107	—	1	—	% Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier Utilization	30108	—	1	—	% Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Free Cooling Status	30109	—	1	—	0 = off 2 = on 3 = No Support	12, 13, 14
Return Air Temperature	30110	—	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Temperature	30743	—	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Temperature	30112	—	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Temperature	30744	—	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Temperature Set Point	30113	—	1	—	deg C Int16	1, 9, 10
Supply Air Temperature Set Point	30745	—	1	—	deg F Int16	1, 9, 10
Free Cooling Fluid Temperature	30115	—	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Fluid Temperature	30746	—	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Temperature	30116	—	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Ext Air Sensor A Temperature	30747	—	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor B Temperature	30117	—	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor B Temperature	30748	—	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor C Temperature	30118	—	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor C Temperature	30749	—	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp 1	30119	—	1	—	deg C Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp 1	30750	—	1	—	deg F Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp 2	30120	—	1	—	deg C Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp 2	30751	—	1	—	deg F Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Humidity	30130	—	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Humidity	30132	—	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor B Humidity	30133	—	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor C Humidity	30134	—	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's High Air Temperature	30151	—	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's High Air Temperature	30752	—	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's Low Air Temperature	30153	—	1	10	deg C Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's Low Air Temperature	30753	—	1	10	deg F Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's High Humidity	30155	—	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's Low Humidity	30157	—	1	10	% RH Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Server Class	30257	—	1	—	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's High Air Temperature Time	30258	—	2	—	Seconds since Midnight	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Today's Low Air Temperature Time	30260	—	2	—	Seconds since Midnight	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Temperature Sensor Control	30262	40262	1	—	0 = Disabled 1 = Limit 2 = Control 3 = Temp Only	1, 9, 10
Return Air Temperature Set Point	30263	40263	1	—	deg C Int16	1, 9, 10
Return Air Temperature Set Point	30754	40754	1	—	deg F Int16	1, 9, 10
Return Humidity Set Point	30264	40264	1	—	% RH Uint16	1, 9, 10
Today's High Humidity Time	30265	-	2	—	Seconds since Midnight	—
Today's Low Humidity Time	30267	—	2	—	Seconds since Midnight	—
Compressor State 1	30269	—	1	—	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor State 2	30270	—	1	—	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Capacity Control State 1	30271	—	1	—	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Capacity Control State 2	30272	—	1	—	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Infrared Humidifier Flush Rate	30273	40273	1	—	% Uint16	—
Fan Control Mode	30274	40274	1	—	0 = Auto 1 = Manual 2 = Economy 4 = Delta	1, 9, 10
Analog Input Reading 1	30275	—	1	100	Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Analog Input Reading 2	30276	—	1	100	Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Analog Input Reading 3	30277	—	1	100	Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Analog Input Reading 4	30278	—	1	100	Int16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Control Mode	30280	—	1	—	0 = Internal (Auto) 1 = External (Manual)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Operating State Reason	30281	—	1	—	0 = Reason Unknown 1 = Network Display 2 = Alarm 3 = Schedule 4 = Remote System 5 = External Input 6 = Local Display	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Maintenance Ramp	30282	—	1	—	% Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Calculated Next Maintenance Month	30283	—	1	—	Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Calculated Next Maintenance Year	30284	—	1	—	Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Hot Water / Hot Gas Valve Open Position	30285	—	1	—	% Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Maintenance Tracking State	30286	—	1	—	0 = off 1 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 1 - Event Control	30287	40287	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 1 - Event Type	30288	40288	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 2 - Event Control	30289	40289	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 2 - Event Type	30290	40290	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 3 - Event Control	30291	40291	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 3 - Event Type	30292	40292	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 4 - Event Control	30293	40293	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 4 - Event Type	30294	40294	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Free Cooling Lockout - Event Control	30295	40295	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Free Cooling Lockout - Event Type	30296	40296	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Condenser Pump High Water - Event Control	30297	40297	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Condenser Pump High Water - Event Type	30298	40298	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Glycol Pump On - Event Control	30299	40299	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Glycol Pump On - Event Type	30300	40300	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Ext Standby Unit On - Event Control	30301	40301	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Unit On - Event Type	30302	40302	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Humidifier Lockout - Event Control	30303	40303	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Humidifier Lockout - Event Type	30304	40304	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Flow - Event Control	30305	40305	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Flow - Event Type	30306	40306	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Over Temperature - Event Control	30307	40307	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Over Temperature - Event Type	30308	40308	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Reheat Lockout - Event Control	30309	40309	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Reheat Lockout - Event Type	30310	40310	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Power Shutdown - Event Control	30311	40311	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Power Shutdown - Event Type	30312	40312	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Issue - Event Control	30313	40313	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Issue - Event Type	30314	40314	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Master Unit Communication Lost - Event Control	30315	40315	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Master Unit Communication Lost - Event Type	30316	40316	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Service Required - Event Control	30317	40317	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Service Required - Event Type	30318	40318	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Shutdown - Loss Of Power - Event Control	30319	40319	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Shutdown - Loss Of Power - Event Type	30320	40320	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Smoke Detected - Event Control	30321	40321	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Smoke Detected - Event Type	30322	40322	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Water Under Floor - Event Control	30323	40323	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Water Under Floor - Event Type	30324	40324	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Compressor Lockout - Event Control	30325	40325	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Compressor Lockout - Event Type	30326	40326	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Clogged Air Filter - Event Control	30327	40327	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Clogged Air Filter - Event Type	30328	40328	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Air Blower - Event Control	30329	40329	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Air Blower - Event Type	30330	40330	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure - Event Control 1	30331	40331	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure - Event Control 2	30332	40332	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure - Event Type 1	30333	40333	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure - Event Type 2	30334	40334	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure - Event Control 1	30335	40335	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure - Event Control 2	30336	40336	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Compressor Low Suction Pressure - Event Type 1	30337	40337	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure - Event Type 2	30338	40338	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue - Event Control 1	30339	40339	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue - Event Control 2	30340	40340	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue - Event Type 1	30341	40341	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue - Event Type 2	30342	40342	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle - Event Control 1	30343	40343	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle - Event Control 2	30344	40344	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle - Event Type 1	30345	40345	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle - Event Type 2	30346	40346	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload - Event Control 1	30347	40347	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload - Event Control 2	30348	40348	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload - Event Type 1	30349	40349	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload - Event Type 2	30350	40350	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Over Temp - Event Ctrl 1	30351	40351	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Over Temp - Event Ctrl 2	30352	40352	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Over Temp - Event Type 1	30353	40353	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Dig Scroll Comp Discharge Over Temp - Event Type 2	30354	40354	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A High Humidity - Event Control	30355	40355	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A High Humidity - Event Type	30356	40356	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Low Humidity - Event Control	30357	40357	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Low Humidity - Event Type	30358	40358	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Over Temp - Event Control	30359	40359	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Over Temp - Event Type	30360	40360	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temp - Event Control	30361	40361	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temp - Event Type	30362	40362	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Humidity - Event Control	30363	40363	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Humidity - Event Type	30364	40364	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Humidity - Event Control	30365	40365	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Humidity - Event Type	30366	40366	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Over Temp - Event Control	30367	40367	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Over Temp - Event Type	30368	40368	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Under Temp - Event Control	30369	40369	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Under Temp - Event Type	30370	40370	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Hours Exceeded - Event Control	30371	40371	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Fan Hours Exceeded - Event Type	30372	40372	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Issue - Event Control	30373	40373	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Issue - Event Type	30374	40374	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Main Fan Overload - Event Control	30375	40375	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Main Fan Overload - Event Type	30376	40376	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser Issue - Event Control 1	30377	40377	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser Issue - Event Control 2	30378	40378	1	—	0 = disabled 1 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser Issue - Event Type 1	30379	40379	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser Issue - Event Type 2	30380	40380	1	—	0 = Message 1 = Warning 2 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
System Event Acknowledge/Reset	—	40381	1	—	2 = Reset 4 = Acknowledge	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Control Sensor	30481	40481	1	—	0 = Supply 1 = Remote 2 = Return	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
High Supply Air Temperature Threshold	30482	40482	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
High Supply Air Temperature Threshold	30755	40755	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Low Supply Air Temperature Threshold	30483	40483	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Low Supply Air Temperature Threshold	30756	40756	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Outside Air Temperature	30484	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Outside Air Temperature	30757	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Humidity Control Type	30485	40485	1	—	0 = Relative 1 = Compensated 2 = Predictive 3 = Dew Point	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Ext Air Sensor A Dew Point Temp	30486	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Air Sensor A Dew Point Temp	30758	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Over Temp Threshold	30487	40487	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Over Temp Threshold	30759	40759	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Under Temp Threshold	30488	40488	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Under Temp Threshold	30760	40760	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Compressor Lockout	30489	40489	1	—	0 = disabled 1 = enabled	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Main Chilled Water Valve	30491	40491	1	—	0 = Valve 1 1 = Valve 2	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Reheater Lockout	30492	40492	1	—	0 = disabled 1 = enabled	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Humidifier Lockout	30493	40493	1	—	0 = disabled 1 = enabled	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Control Sensor	30494	40494	1	—	0 = Supply 1 = Remote 2 = Return 3 = Manual	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Minimum Set Point	30495	40495	1	—	% Uint16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Temperature Set Point	30497	40497	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Temperature Set Point	30761	40761	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Standby Units	30498	40498	1	—	Uint16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Adjusted Humidity	30499	—	1	10	% RH Uint16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Return Dew Point	30500	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Return Dew Point	30762	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Actual Air Temperature Set Point	30501	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Actual Air Temperature Set Point	30763	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Actual Humidity Set Point	30502	—	1	—	% RH Uint16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Dew Point Set Point	30764	40764	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Supply Air Over/Under Temperature - Event Control	30504	40504	1	—	0 = disabled 1 = enabled	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temp Threshold	30505	40505	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temp Threshold	30765	40765	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temp Threshold	30506	40506	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temp Threshold	30766	40766	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Average Temperature	30507	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Average Temperature	30767	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Maximum Temperature	30508	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Maximum Temperature	30768	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Average Temperature	30509	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Average Temperature	30769	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Maximum Temperature	30510	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Maximum Temperature	30770	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 1	30551	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 1	30771	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 2	30552	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 2	30772	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 3	30553	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 3	30773	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 4	30554	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 4	30774	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Remote Sensor Temperature 5	30555	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 5	30775	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 6	30556	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 6	30776	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 7	30557	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 7	30777	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 8	30558	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 8	30778	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 9	30559	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 9	30779	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 10	30560	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature 10	30780	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air Economizer Availability	30561	—	1	—	0 = Not Available 1 = Available	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air Economizer Control Source	30562	40562	1	—	0 = disabled 1 = internal 2 = external	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Cooling Capacity	30564	—	1	—	% Uint16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Cooling Control Temperature	30565	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Cooling Control Temperature	30781	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Control Temperature	30566	—	1	10	deg C Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Control Temperature	30782	—	1	10	deg F Int16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Free Cooling Internal Control Mode	30567	40567	1	—	0 = Disabled 1 = Contact 2 = Temperature 3 = Set Point	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Humidity Control Sensor	30667	40667	1	—	0 = Supply 1 = Remote 2 = Return	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Digital Scroll Compressor Loading 1	30668	—	1	—	% Uint16	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Digital Scroll Compressor Loading 2	30669	—	1	—	% Uint16	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Static Pressure Set Point	30672	40672	1	10	Pa Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Unit Static Pressure	30673	—	1	10	Pa Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
System Static Pressure	30674	—	1	10	Pa Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Low Noise Mode State	30675	—	1	—	0 = Inactive 1 = Active (Interval) 2 = Active (Full Day)	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode Schedule Control	30676	40676	1	—	0 = disabled 1 = enabled	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode Max Fan Speed	30677	40677	1	—	% Uint16	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Normal Mode Max Fan Speed	30678	40678	1	—	% Uint16	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode - Interval Days	30679	40679	1	—	1 = Monday 2 = Tuesday 4 = Wednesday 8 = Thursday 16 = Friday 32 = Saturday 64 = Sunday	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode - Full Days	30680	40680	1	—	1 = Monday 2 = Tuesday 4 = Wednesday 8 = Thursday 16 = Friday 32 = Saturday 64 = Sunday	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode Start Time	30681	40681	2	—	Seconds since Midnight	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode Stop Time	30683	40683	2	—	Seconds since Midnight	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Pump Hours 1	30685	40685	2	—	hr Uint32	6, 7, 8, 11, 13, 14
Pump Hours 2	30687	40687	2	—	hr Uint32	6, 7, 8, 11, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
System Input RMS A-N 1	30800	—	1	10	VAC Int16	5, 8, 9, 11, 12, 13, 14
System Input RMS A-N 2	30801	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS A-N 3	30802	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS A-N 4	30803	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS A-N 5	30804	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS A-N 6	30805	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-N 1	30810	—	1	10	VAC Int16	5, 8, 9, 11, 12, 13, 14
System Input RMS B-N 2	30811	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-N 3	30812	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-N 4	30813	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-N 5	30814	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-N 6	30815	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-N 1	30820	—	1	10	VAC Int16	5, 8, 9, 11, 12, 13, 14
System Input RMS C-N 2	30821	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-N 3	30822	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-N 4	30823	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-N 5	30824	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-N 6	30825	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase A 1	30830	—	1	10	A AC Int16	5, 8, 9, 11, 12, 13, 14
System Input RMS Current Phase A 2	30831	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase A 3	30832	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase A 4	30833	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
System Input RMS Current Phase A 5	30834	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase A 6	30835	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase B 1	30840	—	1	10	A AC Int16	5, 8, 9, 11, 12, 13, 14
System Input RMS Current Phase B 2	30841	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase B 3	30842	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase B 4	30843	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase B 5	30844	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase B 6	30845	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase C 1	30850	—	1	10	A AC Int16	5, 8, 9, 11, 12, 13, 14
System Input RMS Current Phase C 2	30851	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase C 3	30852	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase C 4	30853	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase C 5	30854	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
System Input RMS Current Phase C 6	30855	—	1	10	A AC Int16	5, 8, 11, 12, 13, 14
Energy Consumption 1	30870	40870	2	—	kWH Int32	5, 8, 9, 11, 12, 13, 14
Energy Consumption 2	30872	40872	2	—	kWH Int32	5, 8, 11, 12, 13, 14
Energy Consumption 3	30874	40874	2	—	kWH Int32	5, 8, 11, 12, 13, 14
Energy Consumption 4	30876	40876	2	—	kWH Int32	5, 8, 11, 12, 13, 14
Energy Consumption 5	30878	40878	2	—	kWH Int32	5, 8, 11, 12, 13, 14
Energy Consumption 6	30880	40880	2	—	kWH Int32	5, 8, 11, 12, 13, 14
Fluid Input Temperature 1	30900	—	1	10	deg C Int16	5, 8, 11, 12, 13, 14
Fluid Input Temperature 2	30901	—	1	10	deg C Int16	5, 8, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Fluid Input Temperature 1	30902	—	1	10	deg F Int16	5, 8, 11, 12, 13, 14
Fluid Input Temperature 2	30903	—	1	10	deg F Int16	5, 8, 11, 12, 13, 14
Fluid Output Temperature 1	30904	—	1	10	deg C Int16	5, 8, 11, 12, 13, 14
Fluid Output Temperature 2	30905	—	1	10	deg C Int16	5, 8, 11, 12, 13, 14
Fluid Output Temperature 1	30906	—	1	10	deg F Int16	5, 8, 11, 12, 13, 14
Fluid Output Temperature 2	30907	—	1	10	deg F Int16	5, 8, 11, 12, 13, 14
Fluid Flow Rate 1	30908	—	2	10	l/min Int32	5, 8, 11, 12, 13, 14
Fluid Flow Rate 2	30910	—	2	10	l/min Int32	5, 8, 11, 12, 13, 14
Unit Cooling Load	31001	—	2	10	kW Int32	5, 8, 11, 12, 13, 14
Circuit Cooling Load 1	31003	—	2	10	kW Int32	5, 8, 11, 12, 13, 14
Circuit Cooling Load 2	31005	—	2	10	kW Int32	5, 8, 11, 12, 13, 14
Instantaneous Power 1	31010	—	2	—	W Int32	5, 8, 9, 11, 12, 13, 14
Instantaneous Power 2	31012	—	2	—	W Int32	5, 8, 11, 12, 13, 14
Instantaneous Power 3	31014	—	2	—	W Int32	5, 8, 11, 12, 13, 14
Instantaneous Power 4	31016	—	2	—	W Int32	5, 8, 11, 12, 13, 14
Instantaneous Power 5	31018	—	2	—	W Int32	5, 8, 11, 12, 13, 14
Instantaneous Power 6	31020	—	2	—	W Int32	5, 8, 11, 12, 13, 14
Raw Auxiliary Air Temperature	31050	41050	1	10	deg C Int16	5, 8, 11, 12, 13, 14
Raw Auxiliary Air Temperature	31051	41051	1	10	deg F Int16	5, 8, 11, 12, 13, 14
Actual Auxiliary Air Temperature	31052	—	1	10	deg C Int16	5, 8, 11, 12, 13, 14
Actual Auxiliary Air Temperature	31053	—	1	10	deg F Int16	5, 8, 11, 12, 13, 14
System Input RMS A-B 1	31060	—	1	10	VAC Int16	5, 8, 9, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
System Input RMS A-B 2	31061	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS A-B 3	31062	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS A-B 4	31063	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS A-B 5	31064	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS A-B 6	31065	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-C 1	31070	—	1	10	VAC Int16	5, 8, 9, 11, 12, 13, 14
System Input RMS B-C 2	31071	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-C 3	31072	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-C 4	31073	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-C 5	31074	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS B-C 6	31075	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-A 1	31080	—	1	10	VAC Int16	5, 8, 9, 11, 12, 13, 14
System Input RMS C-A 2	31081	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-A 3	31082	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-A 4	31083	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-A 5	31084	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
System Input RMS C-A 6	31085	—	1	10	VAC Int16	5, 8, 11, 12, 13, 14
Pump State 1	31100	—	1	—	0 = off 1 = on	7, 8, 11, 13, 14
Pump State 2	31110	—	1	—	0 = off 1 = on	7, 8, 11, 13, 14
Expected Condenser Unit Count	31130	—	1	—	Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Type	31131	—	1	—	0 = R22 1 = R407C 2 = R410A	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Reversal Requested 1	31142	—	1	—	0 = false 1 = true	3, 5, 7, 8, 9, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Condenser Fan Reversal Requested 2	31143	—	1	—	0 = false 1 = true	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Outside Air Temperature 1	31144	—	1	10	deg C Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Outside Air Temperature 1	31145	—	1	10	deg F Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Outside Air Temperature 2	31146	—	1	10	deg C Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Outside Air Temperature 2	31147	—	1	10	deg F Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Refrigerant Pressure 1	31158	—	1	10	bar	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure 2	31159	—	1	10	bar Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temperature 1	31160	—	1	10	deg C Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temperature 1	31161	—	1	10	deg F Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temperature 2	31162	—	1	10	deg C Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temperature 2	31163	—	1	10	deg F Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Fan Speed 1	31174	—	1	—	% Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Speed 2	31175	—	1	—	% Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Speed 3	31176	—	1	—	% Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Speed 4	31177	—	1	—	% Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Speed 5	31178	—	1	—	% Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Speed 6	31179	—	1	—	% Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Speed 7	31180	—	1	—	% Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Speed 8	31181	—	1	—	% Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power 1	31182	—	1	—	W Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power 2	31183	—	1	—	W Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power 3	31184	—	1	—	W Int16	3, 5, 7, 8, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Condenser Fan Power 4	31185	—	1	—	W Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power 5	31186	—	1	—	W Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power 6	31187	—	1	—	W Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power 7	31188	—	1	—	W Int16	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power 8	31189	—	1	—	W Int16	3, 5, 7, 8, 11, 12, 13, 14
Cold Aisle Humidity Calculation Method	31200	—	1	—	0 = Highest 1 = Average	9
Cold Aisle Temperature Calculation Method	31201	—	1	—	0 = Highest 1 = Average	9
Cold Aisle Control Enable	31202	—	1	—	0 = disabled 1 = enabled	9
Cold Aisle Force Max Fan/Cooling - Ext Control	31203	—	1	—	0 = disabled 1 = enabled	9
Actual Cold Aisle Humidity	31204	—	1	10	% RH Int16	9
Actual Cold Aisle Temperature	31205	—	1	10	deg C Int16	9
Actual Cold Aisle Temperature	31206	—	1	10	deg F Int16	9
Cold Aisle Cascade Fan Speed Max Set Point	31207	—	1	—	% Int16	9
Cold Aisle Fan Speed Min Set Point	31208	—	1	—	% Int16	9
Cold Aisle Fan Speed Max Set Point	31209	—	1	—	% Int16	9
Chilled Water Valve Reset Enable	31211	—	1	—	0 = disabled 1 = enabled	9
Humidification Fan Speed Min Set Point	31212	—	1	—	% Int16	9
Heating Fan Speed Min Set Point	31213	—	1	—	% Int16	9
Dehumidification Fan Speed Min Set Point	31214	—	1	—	% Int16	9
Back Draft Control Fan Speed	31215	—	1	—	% Int16	9

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Local Fan Override	31300	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
Local Cooling Override	31301	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
Local Electric Heat Override	31302	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
Local Humidifier Override	31303	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
Local Dehumidifier Override	31304	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
Super Saver Call For Cooling	31320	—	1	—	% Int16	9, 11, 14
Tandem 'B' Compressor State 1	31325	—	1	—	0 = off 1 = on	8, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Tandem 'B' Compressor State 2	31326	—	1	—	0 = off 1 = on	8, 11, 12, 13, 14
Tandem 'B' Compressor Hours 1	31327	41327	2	—	hr Int32	8, 11, 12, 13, 14
Tandem 'B' Compressor Hours 2	31329	41329	2	—	hr Int32	8, 11, 12, 13, 14
Condenser Fan Current 1	31331	—	1	10	A AC Uint16	8, 11, 13, 14
Condenser Fan Current 2	31332	—	1	10	A AC Uint16	8, 11, 13, 14
Condenser Fan Current 3	31333	—	1	10	A AC Uint16	8, 11, 13, 14
Condenser Fan Current 4	31334	—	1	10	A AC Uint16	8, 11, 13, 14
Condenser Fan Current 5	31335	—	1	10	A AC Uint16	8, 11, 13, 14
Condenser Fan Current 6	31336	—	1	10	A AC Uint16	8, 11, 13, 14
Condenser Fan Current 7	31337	—	1	10	A AC Uint16	8, 11, 13, 14
Condenser Fan Current 8	31338	—	1	10	A AC Uint16	8, 11, 13, 14
Compressor Hours 1	31340	41340	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Hours 2	31342	41342	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Chilled Water Valve Hours	31344	41344	2	—	hr Int32	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Free Cooling Valve Hours	31346	41346	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Hot Water / Hot Gas Valve Hours	31348	41348	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours 1	31350	41350	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours 2	31352	41352	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours 3	31354	41354	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Hours	31356	41356	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier Hours	31358	41358	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Hours	31360	41360	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
(Deprecated) Chilled Water Valve Hours	30563	40563	1	—	hr Uint16	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
(Deprecated) Fan Hours	30141	40141	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Compressor Hours 1	30142	40142	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Compressor Hours 2	30143	40143	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Humidifier Hours	30144	40144	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Dehumidifier Hours	30145	40145	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Free Cooling Valve Hours	30146	40146	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Electric Reheater Hours 1	30147	40147	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Electric Reheater Hours 2	30148	40148	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Electric Reheater Hours 3	30149	40149	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
(Deprecated) Hot Water / Hot Gas Valve Hours	30150	40150	1	—	hr Uint16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Static Pressure Set Point	31370	41370	1	1000	inWC Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Unit Static Pressure	31371	—	1	1000	inWC Int16	3, 5, 7, 8, 11, 12, 13, 14
System Static Pressure	31372	—	1	1000	inWC Int16	3, 5, 7, 8, 9, 11, 12, 13, 14
Dew Point Proportional Band	31380	41380	1	10	deg C Int16	
Dew Point Proportional Band	31382	41382	1	10	deg F Int16	
Dew Point Dead Band	31384	41384	1	10	deg C Int16	
Dew Point Dead Band	31386	41386	1	10	deg F Int16	
Free Cooling Status	30109	—	1	—	0 = off 1 = start 2 = on	11, 12, 13, 14
Thermal Control Override	31390	41390	1	—	0 = disabled 1 = enabled	11, 14
Thermal Control Override - Temperature Control Type	31391	41391	1	—	0 = Cooling 1 = Heating	11, 14
Thermal Control Override - Temperature Call	31392	41392	1	—	% Int16	11, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Thermal Control Override - Humidity Control Type	31393	41393	1	—	0 = Dehumidification 1 = Humidification	11, 14
Thermal Control Override - Humidity Call	31394	41394	1	—	% Int16	11, 14
Underfloor Static Pressure Control Enable	31400	—	1	—	0 = disabled 1 = enabled 2 = visualization only	9
Return Damper Status	31401	—	1	—	0 = closed 1 = open	
Air Filter Differential Pressure	31402	—	1	—	Pa Int16	9
Air Filter Differential Pressure	31403	—	1	100	inWC Int16	9
Cold Aisle Sensor Air Temperature 1	31410	—	1	10	deg C Int16	9
Cold Aisle Sensor Air Temperature 1	31416	—	1	10	deg F Int16	9
Cold Aisle Sensor Air Temperature 2	31411	—	1	10	deg C Int16	9
Cold Aisle Sensor Air Temperature 2	31417	—	1	10	deg F Int16	9
Cold Aisle Sensor Air Temperature 3	31412	—	1	10	deg C Int16	9
Cold Aisle Sensor Air Temperature 3	31418	—	1	10	deg F Int16	9
Cold Aisle Sensor Humidity 1	31413	—	1	10	% RH Int16	9
Cold Aisle Sensor Humidity 2	31414	—	1	10	% RH Int16	9
Cold Aisle Sensor Humidity 3	31415	—	1	10	% RH Int16	9
Chilled Water Inlet Temperature 1	31420	—	1	10	deg C Int16	9
Chilled Water Inlet Temperature 1	31424	—	1	10	deg F Int16	9
Chilled Water Inlet Temperature 2	31421	—	1	10	deg C Int16	9
Chilled Water Inlet Temperature 2	31425	—	1	10	deg F Int16	9
Chilled Water Outlet Temperature 1	31422	—	1	10	deg C Int16	9
Chilled Water Outlet Temperature 1	31426	—	1	10	deg F Int16	9
Chilled Water Outlet Temperature 2	31423	—	1	10	deg C Int16	9

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Chilled Water Outlet Temperature 2	31427	—	1	10	deg F Int16	9
Compressor Hours Threshold 1	31430	41430	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Hours Threshold 2	31432	41432	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Valve Hours Threshold	31434	41434	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Hot Water / Hot Gas Valve Hours Threshold	31436	41436	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Threshold 1	31438	41438	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Threshold 2	31440	41440	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Threshold 3	31442	41442	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Hours Threshold	31444	41444	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier Hours Threshold	31446	41446	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Hours Threshold	31448	41448	2	—	hr Int32	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Chilled Water Valve Operating Hours Threshold	31450	41450	2	—	hr Int32	12, 13, 14
Pump Speed 1	31452	—	1	—	% Uint16	13, 14
Pump Speed 2	31453	—	1	—	% Uint16	13, 14
Pump Inlet Refrigerant Temperature 1	31454	—	1	10	deg C Int16	13, 14
Pump Inlet Refrigerant Temperature 1	31461	—	1	10	deg F Int16	13, 14
Pump Inlet Refrigerant Temperature 2	31455	—	1	10	deg C Int16	13, 14
Pump Inlet Refrigerant Temperature 2	31462	—	1	10	deg F Int16	13, 14
Pump Outlet Refrigerant Temperature 1	31456	—	1	10	deg C Int16	13, 14
Pump Outlet Refrigerant Temperature 1	31463	—	1	10	deg F Int16	13, 14
Pump Outlet Refrigerant Temperature 2	31457	—	1	10	deg C Int16	13, 14
Pump Outlet Refrigerant Temperature 2	31464	—	1	10	deg F Int16	13, 14

Table 3-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Input and Holding (continued)

Data Label	Input	Holding	# of Regs	Scale	Units / Notes	Extra Notes (see Table 3-4)
Pump Hours Threshold	31458	41458	2	—	hr Int32	13, 14
Unit Calculated Airflow	31466	—	2	—	m3/h Uint32	12, 13, 14
PRE Operational Mode 1	31468	—	1	—	0 = Bootup 1 = Idle 2 = Manual 3 = Pump Automatic 4 = Test	13, 14
PRE Operational Mode 2	31469	—	1	—	0 = Bootup 1 = Idle 2 = Manual 3 = Pump Automatic 4 = Test	13, 14
System Date and Time	39998	49998	2	—	Secs since Epoch(UTC)	

Table 3-4 Extra notes key to Table 3-3

Number	Description
1	This point is supported on: iCOM controller version 1.04.042.STD
2	This point is supported on: iCOM controller version 2.00.11R for US iCOM controller version 2.00.12R (for Japan and China – language corrections only)
3	This point is supported on: iCOM controller version 2.01.29.07R
4	This point is supported on: iCOM controller version 2.02.21R
5	This point is supported on: iCOM controller version 2.01.45R
6	This point is supported on: iCOM controller version 2.03.27.06R
7	This point is supported on: iCOM controller version 2.03.33R
8	This point is supported on: iCOM controller version 2.04.32R
9	This point is supported on: iCOM controller version A9HB-1.04.xx (Similar to Liebert PDX and to be replaced by separate family branch.)
10	This point is supported on: iCOM controller version 1.04.37O-STD
11	This point is supported on: iCOM controller version 2.05.18R
12	This point is supported on: iCOM controller version 2.01.53R
13	This point is supported on: iCOM controller version 2.04.???R (TBD)
14	This point is supported on: iCOM controller version 2.05.19R

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary

Data Label	Data Description
(Deprecated) Free Cooling Status	(Deprecated) Free cooling status.
Actual Air Temperature Set Point	The actual set point being used for air temperature control. This value may differ from [Air Temperature Set Point] if compensation is applied by the control.
Actual Auxiliary Air Temperature	Actual auxiliary air temperature value being used for control. This value may differ from the raw value received from the auxiliary device if filtering is applied.
Actual Cold Aisle Humidity	Actual humidity value being used for cold aisle humidity control. The value is calculated from multiple humidity measurements using [Cold Aisle Humidity Calculation Method].
Actual Cold Aisle Temperature	Actual temperature value being used for cold aisle temperature control. The value is calculated from multiple temperature measurements using [Cold Aisle Temperature Calculation Method].
Actual Humidity Set Point	The actual set point being used for humidity control. This value may differ from [Humidity Set Point] if compensation is applied by the control.
Adjusted Humidity	Humidity value being used for control. This value may differ from the actual measured [Return Humidity] based on several factors which may include, but are not limited to, selection of humidity control sensor and humidity control type.
Air Economizer Availability	Indicates if the outside air conditions are appropriate for cooling with the air economizer or glycol freecooling.
Air Economizer Control Source	Source of control of the air economizer.
Air Economizer Emergency Override	Indoor room temperature has exceeded its upper threshold and the outdoor air damper has been opened for emergency cooling.
Air Economizer Reduced Airflow	Air economizer filter is dirty and needs to be cleaned or replaced.
Air Filter Differential Pressure	Differential pressure across the air filter.
Air Temperature Control Integration Time	Time value used when system is under integral air temperature control.
Air Temperature Control Sensor	Sensor from which air temperature measurements will be used for cooling and heating control.
Air Temperature Control Type	Type of algorithm used to control the system's output air temperature.
Air Temperature Dead Band	Value that is divided evenly to form a temperature range above and below [Air Temperature Set Point]. If measured air temperature is within this range, no heating or cooling will occur.
Air Temperature Proportional Band	Value that is divided evenly to form proportional temperature control bands above and below [Air Temperature Set Point].
Air Temperature Set Point	Desired air temperature. This set point is dependent upon which sensor is selected for control.
Airflow Sensor Issue	Airflow sensor is disconnected or the signal is out of range.
Ambient Air Sensor Issue	Ambient air sensor is disconnected or the signal is out of range.
Analog Input Reading	Generic analog input reading (unitless).
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
Aux Air Temp Device Communication Lost	Communication with external auxiliary device providing an air temperature value has been lost.
Back Draft Control Fan Speed	Fan speed when in back draft control mode.
BMS Communications Timeout	Building Management System (or external monitoring system) has not communicated with the system within the expected timeframe.
BMS Timeout Period	Timeframe within which the Building Management System (or external monitoring system) must communicate with the system to avoid a timeout.
Calculated Next Maintenance Month	Calculated month of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Year].

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Calculated Next Maintenance Year	Calculated year of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Month].
Chilled Water Control Valve Failure	Chilled water valve out of position. Chilled water control valve position does not match expected value.
Chilled Water Flow Meter Sensor Failure	Chilled water flow meter sensor is disconnected or the signal is out of range.
Chilled Water Inlet Temperature Control Active	Chilled water inlet temperature control is active.
Chilled Water Inlet Temperature Sensor Failure	Chilled water inlet temperature sensor is disconnected or the signal is out of range.
Chilled Water Inlet Temperature	Temperature of the water entering the hydraulic circuit of the chilled water unit.
Chilled Water Outlet Temperature Sensor Failure	Chilled water outlet temperature sensor is disconnected or the signal is out of range.
Chilled Water Outlet Temperature	Temperature of the water exiting the hydraulic circuit of the chilled water unit.
Chilled Water Valve Hours	Operating hours for chilled water valve since last reset of this value.
Chilled Water Valve Operating Hours Threshold	Operating hours threshold for the chilled water valve. When the number of operating hours reaches this threshold, an event is generated.
Chilled Water Valve Reset Enable	Enable/disable the ability to reset the chilled water valve.
Circuit Cooling Load	The amount of heat energy currently being removed by a single refrigeration circuit.
Clogged Air Filter - Event Control	Enable/disable the activation of the [Clogged Air Filter] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Clogged Air Filter - Event Type	The event type for the [Clogged Air Filter] event.
Clogged Air Filter	Air filter is dirty and needs to be (cleaned or) replaced.
Cold Aisle Air Sensor Failure	Cold aisle sensor measuring air temperature and humidity is disconnected or the signal is out of range.
Cold Aisle Cascade Fan Speed Max Set Point	Cold aisle maximum fan speed when system is in cascade mode and one or more units in the system are in standby.
Cold Aisle Control Enable	Enable/disable cold aisle control.
Cold Aisle Fan Speed Max Set Point	Cold aisle maximum fan speed when system is not in cascade mode OR when system is in cascade mode and no units in the system are in standby.
Cold Aisle Fan Speed Min Set Point	Cold aisle minimum fan speed.
Cold Aisle Force Max Fan/Cooling - Ext Control	The cold aisle fan speed and system cooling can be forced to 100% via an external input signal. Use this value to enable/disable that feature.
Cold Aisle Humidity Calculation Method	Algorithm used to calculate a single cold aisle humidity value from multiple humidity measurements.
Cold Aisle Sensor Air Temperature	Air temperature measured by cold aisle sensor.
Cold Aisle Sensor Humidity	Humidity measured by cold aisle sensor.
Cold Aisle Temperature Calculation Method	Algorithm used to calculate a single cold aisle temperature value from multiple temperature measurements.
Cold Aisle Temperature/Humidity Team Sensor Failure	Cold aisle team sensor measuring air temperature and humidity is disconnected or the signal is out of range.
Compressor 1B Hours Exceeded	Fixed compressor 1B run hours have exceeded the threshold.
Compressor 1B Thermal Overload	Fixed compressor 1B is shut down due to thermal overload.
Compressor 2B Hours Exceeded	Fixed compressor 2B run hours have exceeded the threshold.
Compressor 2B Thermal Overload	Fixed compressor 2B is shut down due to thermal overload.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Compressor Capacity Control State	Compressor capacity control state. When 'ON', the cooling capacity of the compressor has been reduced.
Compressor Capacity Reduced	Compressor capacity has been reduced.
Compressor High Head Pressure - Event Control	Enable/disable the activation of the [Compressor High Head Pressure] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor High Head Pressure - Event Type	The event type for the [Compressor High Head Pressure] event.
Compressor High Head Pressure	Compressor is shut down due to high head pressure.
Compressor High Pressure Transducer Issue	Compressor high pressure transducer is disconnected or the signal is out of range.
Compressor Hours Exceeded	[Compressor Hours] has exceeded [Compressor Hours Threshold].
Compressor Hours Threshold	Threshold value used in the [Compressor Hours Exceeded] event.
Compressor Hours	Operating hours for compressor since last reset of this value.
Compressor Lockout	Enable/disable the use of the compressor.
Compressor Low Differential Pressure Lockout	Compressor exceeded maximum startup attempts due to low differential pressure. Compressor is shutdown and has been disabled.
Compressor Low Pressure Transducer Issue	Compressor low pressure transducer is disconnected or the signal is out of range.
Compressor Low Suction Pressure - Event Control	Enable/disable the activation of the [Compressor Low Suction Pressure] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor Low Suction Pressure - Event Type	The event type for the [Compressor Low Suction Pressure] event.
Compressor Low Suction Pressure	Compressor is shut down due to low suction pressure.
Compressor Pump Down Issue - Event Control	Enable/disable the activation of the [Compressor Pump Down Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor Pump Down Issue - Event Type	The event type for the [Compressor Pump Down Issue] event.
Compressor Pump Down Issue	Unable to pump down suction-side pressure during compressor shutdown.
Compressor Short Cycle - Event Control	Enable/disable the activation of the [Compressor Short Cycle] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor Short Cycle - Event Type	The event type for the [Compressor Short Cycle] event.
Compressor Short Cycle	Compressor short cycle. A short cycle is defined as turning on and off a number of times over a set time period.
Compressor State	Compressor operational state.
Compressor Superheat Over Threshold	Compressor discharge refrigerant superheat temperature has exceeded an upper threshold.
Compressor Thermal Overload - Event Control	Enable/disable the activation of the [Compressor Thermal Overload] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor Thermal Overload - Event Type	The event type for the [Compressor Thermal Overload] event.
Compressor Thermal Overload	Compressor is shut down due to thermal overload.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Compressor Utilization	Present compressor utilization expressed as a percentage of the maximum rated capacity.
Condenser Circuit Unspecified General Event	One or more unspecified condenser circuit events active. See local unit display for further details.
Condenser Communication Lost	Communication with condenser unit has been lost.
Condenser Control Board Issue	The condenser control board is reporting an issue.
Condenser Fan Current	Condenser fan's measured input current.
Condenser Fan Issue	Condenser fan is not operating within its operational parameters.
Condenser Fan Power	Condenser fan's measured input power.
Condenser Fan Reversal Requested	Request the condenser fans to rotate in the reverse direction.
Condenser Fan Speed	Condenser fan speed expressed as a percentage of the maximum rated speed.
Condenser Issue - Event Control	Enable/disable the activation of the [Condenser Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Condenser Issue - Event Type	The event type for the [Condenser Issue] event.
Condenser Issue	Condenser is not operating within its operational parameters.
Condenser Low Noise Mode - Full Days	Days of the week selected for low noise mode full day scheduling.
Condenser Low Noise Mode - Interval Days	Days of the week selected for low noise mode interval scheduling.
Condenser Low Noise Mode Max Fan Speed	Maximum fan speed when condenser is placed in low noise mode.
Condenser Low Noise Mode Schedule Control	Enable/disable scheduled control of condenser low noise mode.
Condenser Low Noise Mode Start Time	The time of day at which the condenser will transition into low noise mode.
Condenser Low Noise Mode State	State of condenser low noise mode scheduler control.
Condenser Low Noise Mode Stop Time	The time of day at which the condenser will transition out of low noise mode.
Condenser Max Fan Speed Override	Fan speed exceeding the maximum set point in order to alleviate a high temperature or pressure condition.
Condenser Normal Mode Max Fan Speed	Maximum fan speed when condenser is not in low noise mode.
Condenser Outside Air Temp Out of Operating Range	[Condenser Outside Air Temperature] is either above an upper threshold or below a lower threshold.
Condenser Outside Air Temp Sensor Issue	Condenser outside air temperature sensor is disconnected or the signal is out of range.
Condenser Outside Air Temperature	Condenser ambient outside air temperature.
Condenser Refrigerant Pressure Over Threshold	Condenser refrigerant pressure has exceeded a threshold.
Condenser Refrigerant Pressure Sensor Issue	Condenser refrigerant pressure sensor is disconnected or the signal is out of range.
Condenser Refrigerant Pressure Under Threshold	Condenser refrigerant pressure has dropped below a threshold.
Condenser Refrigerant Pressure	Pressure of the refrigerant in a condenser circuit.
Condenser Refrigerant Type	Condenser refrigerant type.
Condenser Remote Shutdown	Condenser is shut down by a remote signal.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Condenser Supply Refrigerant Over Temp	Condenser supply refrigerant temperature has exceeded a threshold.
Condenser Supply Refrigerant Temp Sensor Issue	Condenser supply refrigerant temperature sensor is disconnected or the signal is out of range.
Condenser Supply Refrigerant Temperature	Temperature of the supply refrigerant in a condenser circuit.
Condenser Supply Refrigerant Under Temp	Condenser supply refrigerant temperature has dropped below a specified threshold.
Condenser TVSS Issue	The condenser Transient Voltage Surge Suppressor or Surge Protection Device has failed.
Condenser Unit Unspecified General Event	One or more unspecified condenser unit events active. See local unit display for further details.
Condenser VFD Issue	The condenser fan Variable Frequency Drive is offline.
Cooling Capacity	Cooling capacity in use, expressed as a percentage of the maximum rated capacity.
Cooling Control Temperature	Temperature value being used for cooling capacity control. This value is compared against the temperature set point to determine the amount of cooling to be applied.
Cooling State	Cooling operational state.
Customer Input 1 - Event Control	Enable/disable the activation of the [Customer Input 1] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 1 - Event Type	The event type for the [Customer Input 1] event.
Customer Input 1	Customer Input 1
Customer Input 2 - Event Control	Enable/disable the activation of the [Customer Input 2] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 2 - Event Type	The event type for the [Customer Input 2] event.
Customer Input 2	Customer Input 2
Customer Input 3 - Event Control	Enable/disable the activation of the [Customer Input 3] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 3 - Event Type	The event type for the [Customer Input 3] event.
Customer Input 3	Customer Input 3
Customer Input 4 - Event Control	Enable/disable the activation of the [Customer Input 4] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 4 - Event Type	The event type for the [Customer Input 4] event.
Customer Input 4	Customer Input 4
Dehumidification Fan Speed Min Set Point	Minimum fan speed when system dehumidification is active.
Dehumidifier Hours Exceeded	Operating hours for the dehumidifier have exceeded the threshold.
Dehumidifier Hours Threshold	Threshold value used in the [Dehumidifier Hours Exceeded] event.
Dehumidifier Hours	Operating hours for dehumidifier since last reset of this value.
Dehumidifier State	Dehumidifier operational state.
Dehumidifier Utilization	Present dehumidifier utilization expressed as a percentage of the maximum rated capacity.
Dew Point Dead Band	Value that is divided evenly to form a range above and below [Dew Point Set Point]. If measured humidity is within this range, no humidification or dehumidification will occur. This parameter is used when [Humidity Control Type] is set to Dew Point.
Dew Point Over Temperature	Dew point temperature reading has exceeded the upper threshold.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Dew Point Proportional Band	Value that is divided evenly to form proportional humidity control bands above and below [Dew Point Set Point]. This parameter is used when [Humidity Control Type] is set to Dew Point.
Dew Point Set Point	Desired dew point temperature.
Dew Point Under Temperature	Dew point temperature reading has dropped below the lower threshold.
Dig Scroll Comp Discharge Over Temp - Event Ctrl	Enable/disable the activation of the [Dig Scroll Comp Discharge Over Temp] event.
Dig Scroll Comp Discharge Over Temp - Event Type	The event type for the [Dig Scroll Comp Discharge Over Temp] event.
Dig Scroll Comp Discharge Temp Sensor Issue	Digital scroll compressor discharge temperature sensor is disconnected or the signal is out of range.
Dig Scroll Comp Discharge Temp	Digital scroll compressor discharge temperature.
Dig Scroll Comp Over Temp	Digital scroll compressor is shut down due to head temperature exceeding an upper threshold.
Digital Output Board Not Detected	Digital output board is required to be connected, but no signal is detected.
Digital Scroll Compressor Loading	Present digital scroll compressor utilization expressed as a percentage of the maximum rated capacity.
EEV Unspecified General Event	One or more unspecified electronic expansion valve events active. See local unit display for further details.
Electric Reheat State	Electric reheater operational state.
Electric Reheater Hours Exceeded	[Electric Reheater Hours] has exceeded [Electric Reheaters Hours Threshold].
Electric Reheater Hours Threshold	Threshold value used in the [Electric Reheater Hours Exceeded] event.
Electric Reheater Hours	Operating hours for electric reheater since last reset of this value.
Energy Consumption	Energy consumption since the last reset of this value.
Expected Condenser Unit Count	Number of physical condenser units that are expected to be connected to the system.
Ext Air Damper Position Issue	Air damper position does not match expected value, as indicated by an external input signal.
Ext Air Sensor A Dew Point Temp	Dew point temperature as measured by external air sensor A.
Ext Air Sensor A Event Control	Enable/disable the activation of events related to measurements by the external air sensor A.
Ext Air Sensor A High Humidity - Event Control	Enable/disable the activation of the [Ext Air Sensor A High Humidity] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A High Humidity - Event Type	The event type for the [Ext Air Sensor A High Humidity] event.
Ext Air Sensor A High Humidity Threshold	Threshold value used in the [External Air Sensor A High Humidity] event.
Ext Air Sensor A High Humidity	[Ext Air Sensor A Humidity] has exceeded [Ext Air Sensor A High Humidity Threshold].
Ext Air Sensor A Humidity	Relative humidity as measured by external air sensor A.
Ext Air Sensor A Issue	The external air sensor A is disconnected or the signal is out of range.
Ext Air Sensor A Low Humidity - Event Control	Enable/disable the activation of the [Ext Air Sensor A Low Humidity] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Low Humidity - Event Type	The event type for the [Ext Air Sensor A Low Humidity] event.
Ext Air Sensor A Low Humidity Threshold	Threshold value used in the [External Air Sensor A Low Humidity] event.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Ext Air Sensor A Low Humidity	[Ext Air Sensor A Humidity] has dropped below [Ext Air Sensor A Low Humidity Threshold].
Ext Air Sensor A Over Temp - Event Control	Enable/disable the activation of the [External Air Sensor A Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Over Temp - Event Type	The event type for the [External Air Sensor A Over Temperature] event.
Ext Air Sensor A Over Temp Threshold	Threshold value used in the [External Air Sensor A Over Temperature] event.
Ext Air Sensor A Over Temperature	[Ext Air Sensor A Temperature] has exceeded [External Air Sensor A Over Temp Threshold].
Ext Air Sensor A Temperature	Air temperature as measured by external air sensor A.
Ext Air Sensor A Under Temp - Event Control	Enable/disable the activation of the [Ext Air Sensor A Under Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Under Temp - Event Type	The event type for the [Ext Air Sensor A Under Temperature] event.
Ext Air Sensor A Under Temp Threshold	Threshold value used in the [External Air Sensor A Under Temperature] event.
Ext Air Sensor A Under Temperature	[Ext Air Sensor A Temperature] has dropped below [Ext Air Sensor A Under Temp Threshold].
Ext Air Sensor B Humidity	Relative humidity as measured by external air sensor B.
Ext Air Sensor B Temperature	Air temperature as measured by external air sensor B.
Ext Air Sensor C Humidity	Relative humidity as measured by external air sensor C.
Ext Air Sensor C Temperature	Air temperature as measured by external air sensor C.
Ext Compressor Lockout - Event Control	Enable/disable the activation of the [Ext Compressor Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Compressor Lockout - Event Type	The event type for the [Ext Compressor Lockout] event.
Ext Compressor Lockout	The compressor is shut down and disabled by an external input signal.
Ext Condenser Pump High Water - Event Control	Enable/disable the activation of the [Ext Condenser Pump High Water] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Condenser Pump High Water - Event Type	The event type for the [Ext Condenser Pump High Water] event.
Ext Condenser Pump High Water	High water is detected in the condensate pump by the auxiliary float, as indicated by an external input signal.
Ext Dew Point Over Temp Threshold	Threshold value used in the [Ext Dew Point Over Temperature] event.
Ext Dew Point Over Temperature	At least one dew point temperature reading ([Ext Air Sensor A Dew Point Temp], [Ext Air Sensor B Dew Point Temp]...) has exceeded [Ext Dew Point Over Temp Threshold].
Ext Dew Point Under Temp Threshold	Threshold value used in the [Ext Dew Point Under Temperature] event.
Ext Dew Point Under Temperature	At least one dew point temperature reading ([Ext Air Sensor A Dew Point Temp], [Ext Air Sensor B Dew Point Temp]...) has dropped below [Ext Dew Point Under Temp Threshold].
Ext Free Cooling Lockout - Event Control	Enable/disable the activation of the [Ext Free Cooling Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Ext Free Cooling Lockout - Event Type	The event type for the [Ext Free Cooling Lockout] event.
Ext Free Cooling Lockout	Free cooling is disabled by an external input signal.
Ext Humidifier Lockout - Event Control	Enable/disable the activation of the [Ext Humidifier Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Humidifier Lockout - Event Type	The event type for the [Ext Humidifier Lockout] event.
Ext Humidifier Lockout	The humidifier is shut down and disabled by an external input signal.
Ext Loss of Air Blower - Event Control	Enable/disable the activation of the [Ext Loss of Air Blower] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Loss of Air Blower - Event Type	The event type for the [Ext Loss of Air Blower] event.
Ext Loss of Air Blower	Loss of air blower is detected, as indicated by an external input signal.
Ext Loss of Flow - Event Control	Enable/disable the activation of the [Ext Loss of Flow] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Loss of Flow - Event Type	The event type for the [Ext Loss of Flow] event.
Ext Loss of Flow	Loss of flow is detected, as indicated by an external input signal.
Ext Over Temperature - Event Control	Enable/disable the activation of the [Ext Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Over Temperature - Event Type	The event type for the [Ext Over Temperature] event.
Ext Over Temperature	A temperature has exceeded its threshold, as indicated by an external input signal.
Ext Power Source A Failure	Unit main power source A failure, as indicated by an external input signal.
Ext Power Source B Failure	Unit main power source B failure, as indicated by an external input signal.
Ext Reheat Lockout - Event Control	Enable/disable the activation of the [Ext Reheat Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Reheat Lockout - Event Type	The event type for the [Ext Reheat Lockout] event.
Ext Reheat Lockout	The reheater is shut down and disabled by an external input signal.
Ext Standby Glycol Pump On - Event Control	Enable/disable the activation of the [Ext Standby Glycol Pump On] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Standby Glycol Pump On - Event Type	The event type for the [Ext Standby Glycol Pump On] event.
Ext Standby Glycol Pump On	The standby glycol pump is on, as indicated by an external input signal.
Ext Standby Unit On - Event Control	Enable/disable the activation of the [Ext Standby Unit On] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Standby Unit On - Event Type	The event type for the [Ext Standby Unit On] event.
Ext Standby Unit On	Standby unit is on, as indicated by an external input signal.
External Condenser TVSS Issue	The condenser Transient Voltage Surge Suppressor or Surge Protection Device has failed, as indicated by an external input signal.
External Condenser VFD Issue	The condenser fan Variable Frequency Drive is offline, as indicated by an external input signal.
External Fire Detected	Fire detected, as indicated by an external input signal.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Fan Control Mode	Fan control mode.
Fan Control Sensor	Sensor to be used for fan speed control.
Fan Hours Exceeded - Event Control	Enable/disable the activation of the [Fan Hours Exceeded] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Fan Hours Exceeded - Event Type	The event type for the [Fan Hours Exceeded] event.
Fan Hours Exceeded	Operating hours for the unit blower fan have exceeded the threshold.
Fan Hours Threshold	Threshold value used in the [Fan Hours Exceeded] event.
Fan Hours	Operating hours for fan since last reset of this value.
Fan Issue - Event Control	Enable/disable the activation of the [Fan Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Fan Issue - Event Type	The event type for the [Fan Issue] event.
Fan Issue	One or more fans are not operating within their operational parameters.
Fan Speed Control Temperature	Temperature value being used for fan speed control. This value is compared against the fan speed temperature set point to determine the fan speed.
Fan Speed Maximum Set Point	Maximum fan speed. This value may only be modified if iCOM is enabled to allow fan speed changes by the BMS.
Fan Speed Minimum Set Point	Minimum fan speed.
Fan Speed Temperature Set Point	If fan is in decoupled mode and not under manual control, the fan speed will vary depending on the delta between the selected fan control sensor temperature and this set point.
Fan Speed	Fan speed expressed as a percentage of the maximum rated speed.
Fan State	Fan operational state.
Fluid Flow Rate	Flow rate of fluid used for cooling.
Fluid Flow Sensor Issue	The fluid flow sensor is disconnected or the signal is out of range.
Fluid Input Temperature	Temperature of the fluid entering the cooling coil.
Fluid Output Temperature	Temperature of the fluid exiting the cooling coil.
Fluid Temperature Sensor Issue	The fluid temperature sensor is disconnected or the signal is out of range.
Free Cooling Fluid Temperature	Free cooling fluid temperature.
Free Cooling Internal Control Mode	Free cooling internal control mode
Free Cooling Internal Temperature Delta	Minimum temperature delta required between supply fluid and internal ambient air temperatures in order to enable free cooling.
Free Cooling State	Free cooling operational state.
Free Cooling Status	Free cooling status.
Free Cooling Stopped - High Room Temp	Free cooling is temporarily disabled due to room temperature exceeding a preset delta above the the set point.
Free Cooling Temp Sensor Issue	The free cooling fluid temperature sensor is disconnected or the signal is out of range.
Free Cooling Valve Hours Exceeded	[Free Cooling Valve Hours] has exceeded [Free Cooling Valve Hours Threshold].
Free Cooling Valve Hours Threshold	Threshold value used in the [Free Cooling Valve Hours Exceeded] event.
Free Cooling Valve Hours	Operating hours for free cooling valve since last reset of this value.
Free Cooling Valve Open Position	Free cooling valve open position.
Heating Fan Speed Min Set Point	Minimum fan speed when system heating is active.
Heating Lockout	Heating is shut down and disabled.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
High Power Shutdown - Event Control	Enable/disable the activation of the [High Power Shutdown] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
High Power Shutdown - Event Type	The event type for the [High Power Shutdown] event.
High Power Shutdown	Supply to high power components has been shutdown.
High Return Air Temperature Threshold	Threshold value used in the [Return Air Over Temperature] event.
High Return Humidity - Event Control	Enable/disable the activation of the [High Return Humidity] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
High Return Humidity - Event Type	The event type for the [High Return Humidity] event.
High Return Humidity Threshold	Threshold value used in the [High Return Humidity] event.
High Return Humidity	Return air high humidity event.
High Static Pressure	High static pressure event.
High Supply Air Temperature Threshold	Threshold value used in the [Supply Air Over Temperature] event.
Hot Water / Hot Gas State	Hot water / hot gas operational state.
Hot Water / Hot Gas Valve Hours Exceeded	[Hot Water / Hot Gas Valve Hours] has exceeded [Hot Water / Hot Gas Valve Hours Threshold].
Hot Water / Hot Gas Valve Hours Threshold	Threshold value used in the [Hot Water / Hot Gas Valve Hours Exceeded] event.
Hot Water / Hot Gas Valve Hours	Operating hours for hot water / hot gas valve since last reset of this value.
Hot Water / Hot Gas Valve Open Position	Hot water / hot gas valve open position.
Humidification Fan Speed Min Set Point	Minimum fan speed when system humidification is active.
Humidifier Control Board Not Detected	Humidifier control board is required to be connected, but no signal is detected.
Humidifier Cylinder Worn	Humidifier cylinder is not operating properly and needs to be replaced.
Humidifier Hours Exceeded	Operating hours for the humidifier have exceeded the threshold.
Humidifier Hours Threshold	Threshold value used in the [Humidifier Hours Exceeded] event.
Humidifier Hours	Operating hours for humidifier since last reset of this value.
Humidifier Issue - Event Control	Enable/disable the activation of the [Humidifier Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Humidifier Issue - Event Type	The event type for the [Humidifier Issue] event.
Humidifier Issue	Humidifier issue detected, causing it to be locked out.
Humidifier Lockout	Enable/disable the use of the humidifier.
Humidifier Low Water	The water level in the humidifier has dropped below its threshold.
Humidifier Over Current	The electrical current to the humidifier has exceeded its upper threshold.
Humidifier State	Humidifier operational state.
Humidifier Under Current	The electrical current to the humidifier has dropped below its lower threshold.
Humidifier Utilization	Present humidifier utilization expressed as a percentage of the maximum rated capacity.
Humidity Control Integration Time	Time value used to add an integral term to humidity control. If set to 0, time will not be a factor in the control algorithm.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Humidity Control Sensor	Sensor from which humidity measurements will be used for humidification and dehumidification control.
Humidity Control Type	Type of algorithm to use for control of output humidity.
Humidity Control Type	Type of algorithm to use for control of output humidity.
Humidity Dead Band	Value that is divided evenly to form a range above and below [Humidity Set Point]. If measured humidity is within this range, no humidification or dehumidification will occur.
Humidity Proportional Band	Value that is divided evenly to form proportional humidity control bands above and below [Humidity Set Point]. This setting applies to Relative, Predictive and Compensated [Humidity Control Type] selections.
Humidity Set Point	Desired relative humidity.
Infrared Humidifier Flush Rate	A multiple of an internal time constant that determines the flush duration of the infrared humidifier water pan.
Input Undervoltage	One or more of the input phase voltages has dropped below the limit.
Instantaneous Power	Total electrical power currently being consumed.
Local Cooling Override	The local unit override status for cooling capacity.
Local Dehumidifier Override	The local unit override status for the dehumidifier.
Local Electric Heat Override	The local unit override status for electric heat.
Local Fan Override	The local unit override status for fan speed.
Local Humidifier Override	The local unit override status for the humidifier.
Loss of Air Flow	No air flow through the unit due to failure of all fans.
Low Return Air Temperature Threshold	Threshold value used in the [Return Air Under Temperature] event.
Low Return Humidity - Event Control	Enable/disable the activation of the [Low Return Humidity] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Low Return Humidity - Event Type	The event type for the [Low Return Humidity] event.
Low Return Humidity Threshold	Threshold value used in the [Low Return Humidity] event.
Low Return Humidity	Return air low humidity event.
Low Static Pressure	Low static pressure event.
Low Supply Air Temperature Threshold	Threshold value used in the [Supply Air Under Temperature] event.
Main Chilled Water Valve	The primary valve in a dual valve chilled water system.
Main Fan Overload - Event Control	Enable/disable the activation of the [Main Fan Overload] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Main Fan Overload - Event Type	The event type for the [Main Fan Overload] event.
Main Fan Overload	Main fan is shut down due to thermal overload.
Maintenance Completed	Maintenance has been completed on the unit.
Maintenance Due	The calculated maintenance date has been reached.
Maintenance Ramp	The ratio of operations performed to the calculated operations available between maintenance intervals.
Maintenance Tracking State	Maintenance tracking operational state.
Master Unit Communication Lost - Event Control	Enable/disable the activation of the [Master Unit Communication Lost] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Master Unit Communication Lost - Event Type	The event type for the [Master Unit Communication Lost] event.
Master Unit Communication Lost	Communication with master unit has been lost.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Minimum Chilled Water Temp Set Point Enable	Enable/disable the activation of [Minimum Chilled Water Temp Set Point].
Minimum Chilled Water Temp Set Point	Minimum desired chilled water temperature.
Mixed Mode Lockout	Mixed mode has been entered too many times over a rolling time period and has been temporarily disabled. Mixed mode is defined as the use of a compressor on one refrigeration circuit and the use of a refrigerant pump on the other circuit.
Modbus Power Meter Communication Lost	Communication with Modbus power meter has been lost.
Outside Air Temperature	Ambient outside air temperature.
PRE Operational Mode	Pumped Refrigerant Economizer operational mode.
Pump Hours Threshold	Threshold value used in the [Pump Hours Exceeded] event.
Pump Hours	Operating hours for pump since last reset of this value.
Pump Inlet Refrigerant Temperature	Refrigerant temperature at the inlet of the pump.
Pump Outlet Refrigerant Temperature	Refrigerant temperature at the outlet of the pump.
Pump Speed	Pump speed expressed as a percentage of the maximum rated speed.
Pump State	Pump operational state.
Pump Unspecified General Event	One or more unspecified pump events active. See local unit display for further details.
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Raw Auxiliary Air Temperature	Air temperature value sent by an external auxiliary device, with no additional filtering by the receiving system. This may be an aggregated value from multiple sensors.
Reheat Utilization	Present reheating utilization expressed as a percentage of the maximum rated capacity.
Reheater Lockout	Enable/disable the use of the reheater.
Reheater Over Temperature	The temperature of the reheater has exceeded its threshold.
Remote Sensor Average Over Temperature	[Remote Sensor Average Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor Average Temperature	Average value of remote sensor temperature measurements.
Remote Sensor Average Under Temperature	[Remote Sensor Average Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Remote Sensor Issue	Remote sensor is disconnected or the signal is out of range.
Remote Sensor Maximum Temperature	Maximum value of remote sensor temperature measurements.
Remote Sensor Over Temp Threshold	Threshold value used in the remote air sensor over temperature events.
Remote Sensor Over Temperature	[Remote Sensor Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor System Average Over Temperature	[Remote Sensor System Average Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor System Average Temperature	Average value of remote sensor temperature measurements among a group of interconnected units in a single system.
Remote Sensor System Average Under Temperature	[Remote Sensor System Average Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Remote Sensor System Maximum Temperature	Maximum value of remote sensor temperature measurements among a group of interconnected units in a single system.
Remote Sensor Temperature	Air temperature as measured by remote sensor.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Remote Sensor Under Temp Threshold	Threshold value used in the remote air sensor under temperature events.
Remote Sensor Under Temperature	[Remote Sensor Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Return Air Over Temp - Event Control	Enable/disable the activation of the [Return Air Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Return Air Over Temp - Event Type	The event type for the [Return Air Over Temperature] event.
Return Air Over Temperature	Return air high temperature event.
Return Air Sensor Event Control	Enable/disable the activation of events related to measurements by the return air sensor.
Return Air Sensor Issue	The air sensor at the inlet of the unit is disconnected or the signal is out of range.
Return Air Temperature Set Point	Desired air temperature at the inlet of the unit.
Return Air Temperature	The temperature of the inlet air
Return Air Under Temp - Event Control	Enable/disable the activation of the [Return Air Under Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Return Air Under Temp - Event Type	The event type for the [Return Air Under Temperature] event.
Return Air Under Temperature	[Return Air Temperature] has dropped below [Low Return Air Temperature Threshold].
Return Damper Status	Status of the return damper.
Return Dew Point	Dew point temperature measured at the inlet of the unit.
Return Humidity Sensor Issue	The humidity sensor at the inlet of the unit is disconnected or the signal is out of range.
Return Humidity Set Point	Desired relative humidity at the inlet of the unit.
Return Humidity	Relative humidity measured at the inlet of the unit.
Server Class	The general classification for this system
Service Required - Event Control	Enable/disable the activation of the [Service Required] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Service Required - Event Type	The event type for the [Service Required] event.
Service Required	Unit requires servicing.
Shutdown - Loss Of Power - Event Control	Enable/disable the activation of the [Shutdown - Loss Of Power] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Shutdown - Loss Of Power - Event Type	The event type for the [Shutdown - Loss Of Power] event.
Shutdown - Loss Of Power	System lost power. This event becomes active when the unit is powered on following an unexpected loss of power. This event remains active for 90 minutes.
Smoke Detected - Event Control	Enable/disable the activation of the [Smoke Detected] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Smoke Detected - Event Type	The event type for the [Smoke Detected] event.
Smoke Detected	Smoke detected.
Standby Units	The number of standby units.
Static Pressure Sensor Issue	The static pressure sensor is disconnected or the signal is out of range.
Static Pressure Sensor Out of Range	Static pressure sensor signal is out of its configured range.
Static Pressure Set Point	Desired static pressure.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Super Saver Call For Cooling	Call for cooling value used for Super Saver functionality. A higher call for cooling value indicates a need for a lower coolant temperature.
Supply Air Over Temperature	Supply air high temperature event.
Supply Air Over/Under Temperature - Event Control	Enable/disable the activation of the [Supply Air Over Temperature] and [Supply Air Under Temperature] events.
Supply Air Sensor Issue	The air sensor at the outlet of the unit is disconnected or the signal is out of range.
Supply Air Temperature Sensor Control	Control mode to be used with the supply air temperature sensor.
Supply Air Temperature Set Point	Desired supply air temperature.
Supply Air Temperature	Air temperature measured at the outlet of the unit.
Supply Air Under Temperature	Supply air low temperature event.
Supply Chilled Water Loss of Flow	Supply chilled water or glycol flow is too low.
Supply Chilled Water Over Temp	Chilled water temperature is too high, as indicated by an external input signal.
System Date and Time	The system date and time
System Event Acknowledge/Reset	Reset and/or acknowledge all events.
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System On/Off Control	Turn system functionality on or off.
System Static Pressure	Static pressure measurement among a group of interconnected units in a single system.
System Status	The operating status for the system
Tandem 'B' Compressor Hours	Operating hours for the 'B' compressor in a tandem configuration since last reset of this value.
Tandem 'B' Compressor State	Operational state for the 'B' compressor in a tandem configuration.
Team Static Pressure Sensor Failure	The team static pressure sensor is disconnected or the signal is out of range.
Temperature Control Sensor Issue	The air sensor selected for cooling control is disconnected or the signal is out of range.
Thermal Control Override - Temperature Call	If [Thermal Control Override] is enabled, this value sets the percent call for cooling or heating.
Thermal Control Override - Humidity Call	If [Thermal Control Override] is enabled, this value sets the percent call for humidification or dehumidification.
Thermal Control Override - Humidity Control Type	If [Thermal Control Override] is enabled, this value selects if the humidity override is applied to humidification or dehumidification.
Thermal Control Override - Temperature Control Type	If [Thermal Control Override] is enabled, this value selects if the temperature override is applied to cooling or heating.
Thermal Control Override	Override internal programmatic control of thermal conditions. This includes, but may not be limited to, temperature and humidity. The ability to enable this override may require additional system configuration.

Table 3-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Today's High Air Temperature Time	[Today's High Air Temperature] was measured at this time.
Today's High Air Temperature	The highest external air temperature measured since midnight.
Today's High Humidity Time	[Today's High Humidity] was measured at this time
Today's High Humidity	The highest external humidity measured since midnight.
Today's Low Air Temperature Time	[Today's Low Air Temperature] was measured at this time.
Today's Low Air Temperature	The lowest external air temperature measured since midnight.
Today's Low Humidity Time	[Today's Low Humidity] was measured at this time
Today's Low Humidity	The lowest external humidity measured since midnight.
Underfloor Static Pressure Control Enable	Enable/disable the underfloor static pressure control.
Unit Calculated Airflow	Total airflow calculated for the unit.
Unit Code Missing	Unit code has not been entered and saved.
Unit Communication Lost	Master has lost communication with one or more networked units.
Unit Control Mode	Unit control mode.
Unit Cooling Load	The total amount of heat energy currently being removed by the unit.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Operating State Reason	The reason the unit is in the current operating state.
Unit Operating State	Current operating state of the unit.
Unit Partial Shutdown	An event has occurred requiring some system components to be shutdown and disabled.
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
Unit Standby	Unit was placed in standby mode.
Unit Static Pressure	Static pressure measurement for a single unit.
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
Water Leakage Detector Sensor Issue	The water leakage detector sensor is disconnected or the signal is out of range.
Water Under Floor - Event Control	Enable/disable the activation of the [Water Under Floor] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Water Under Floor - Event Type	The event type for the [Water Under Floor] event.
Water Under Floor	Water under the floor is detected.

Table 3-6 Liebert CRV™—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
Air Temperature				
Supply Air Over Temperature	10001	—	1	Active on Alarm
Supply Air Under Temperature	10002	—	1	Active on Alarm
Return Air Over Temperature	10003	—	1	Active on Alarm
Supply Air Sensor Issue	10004	—	1	Active on Alarm
Return Air Sensor Issue	10077	—	1	Active on Alarm
Humidity				
High Return Humidity	10005	—	1	Active on Alarm
Low Return Humidity	10006	—	1	Active on Alarm
Humidifier Hours Exceeded	10007	—	1	Active on Alarm
Dehumidifier Hours Exceeded	10008	—	1	Active on Alarm
Humidifier Under Current	10009	—	1	Active on Alarm
Humidifier Over Current	10010	—	1	Active on Alarm
Humidifier Low Water	10011	—	1	Active on Alarm
Humidifier Cylinder Worn	10012	—	1	Active on Alarm
Humidifier Issue	10013	—	1	Active on Alarm
Ext Humidifier Lockout	10014	—	1	Active on Alarm
Humidifier Control Board Not Detected	10015	—	1	Active on Alarm
Return Humidity Out Of Proportional Band	10016	—	1	Active on Alarm
Fans				
Loss of Air Flow	10017	—	1	Active on Alarm
Fan Hours Exceeded	10018	—	1	Active on Alarm
Top Fan Issue	10019	—	1	Active on Alarm
Bottom Fan Issue	10020	—	1	Active on Alarm
Remote Sensors				
Remote Sensor Issue	10021	—	1	Active on Alarm
Remote Sensor Issue	10022	—	1	Active on Alarm
Remote Sensor Issue	10023	—	1	Active on Alarm
Remote Sensor Issue	10024	—	1	Active on Alarm
Remote Sensor Issue	10025	—	1	Active on Alarm
Remote Sensor Issue	10026	—	1	Active on Alarm
Remote Sensor Issue	10027	—	1	Active on Alarm
Remote Sensor Issue	10028	—	1	Active on Alarm
Remote Sensor Issue	10029	—	1	Active on Alarm
Remote Sensor Issue	10030	—	1	Active on Alarm
Remote Sensor Average Under Temperature	10120	—	1	Active on Alarm
Remote Sensor Average Over Temperature	10121	—	1	Active on Alarm
Remote Sensor System Average Under Temperature	10122	—	1	Active on Alarm
Remote Sensor System Average Over Temperature	10123	—	1	Active on Alarm
Remote Sensor Average Low Humidity	10124	—	1	Active on Alarm
Remote Sensor Average High Humidity	10125	—	1	Active on Alarm
Remote Sensor System Average Low Humidity	10126	—	1	Active on Alarm
Remote Sensor System Average High Humidity	10127	—	1	Active on Alarm
Compressor				
Compressor 1 High Head Pressure	10031	—	1	Active on Alarm
Compressor 1 Low Suction Pressure	10032	—	1	Active on Alarm

Table 3-6 Liebert CRV™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
Compressor 1 Hours Exceeded	10033	—	1	Active on Alarm
Dig Scroll Comp 1 Temp Sensor Issue	10034	—	1	Active on Alarm
Dig Scroll Comp 1 Over Temp	10035	—	1	Active on Alarm
Compressor 1 Low Pressure Transducer Issue	10036	—	1	Active on Alarm
Ext Compressor Lockout	10037	—	1	Active on Alarm
Compressor 1 Short Cycle	10038	—	1	Active on Alarm
Compressor 1 High Pressure Transducer Issue	10039	—	1	Active on Alarm
Compressor 1 Pump Down Issue	10040	—	1	Active on Alarm
Compressor Capacity Reduced	10180	—	1	Active on Alarm
Compressor Superheat Over Threshold	10181	—	1	Active on Alarm
Reheater				
Reheater Over Temperature	10041	—	1	Active on Alarm
Electric Reheater Hours Exceeded	10042	—	1	Active on Alarm
Ext Reheat Lockout	10043	—	1	Active on Alarm
Electric Reheater Hours Exceeded	10190	—	1	Active on Alarm
Condenser				
Condenser 1 Issue	10044	—	1	Active on Alarm
Condenser VFD Issue	10045	—	1	Active on Alarm
Condenser TVSS Issue	10046	—	1	Active on Alarm
External Condenser VFD Issue	10200	—	1	Active on Alarm
External Condenser TVSS Issue	10201	—	1	Active on Alarm
Chilled Water				
Supply Chilled Water Over Temp	10047	—	1	Active on Alarm
Chilled Water Control Valve Failure	10048	—	1	Active on Alarm
Supply Chilled Water Loss of Flow	10049	—	1	Active on Alarm
System Events				
Supply Fluid Temp Sensor Issue	10050	—	1	Active on Alarm
Customer Input 1	10051	—	1	Active on Alarm
Customer Input 2	10052	—	1	Active on Alarm
Customer Input 3	10053	—	1	Active on Alarm
Customer Input 4	10054	—	1	Active on Alarm
Smoke Detected	10055	—	1	Active on Alarm
Water Under Floor	10056	—	1	Active on Alarm
Service Required	10057	—	1	Active on Alarm
Shutdown - Loss Of Power	10058	—	1	Active on Alarm
Ext Over Temperature	10059	—	1	Active on Alarm
Ext Loss of Flow	10060	—	1	Active on Alarm
Ext Condenser Pump High Water	10061	—	1	Active on Alarm
Ext Standby Glycol Pump On	10062	—	1	Active on Alarm
External Fire Detected	10063	—	1	Active on Alarm
Unit On	10064	—	1	Active on Alarm
Unit Off	10065	—	1	Active on Alarm
Unit Standby	10066	—	1	Active on Alarm
Unit Partial Shutdown	10067	—	1	Active on Alarm
Unit Shutdown	10068	—	1	Active on Alarm
Water Leakage Detector Sensor Issue	10069	—	1	Active on Alarm

Table 3-6 Liebert CRV™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
BMS Communications Timeout	10070	—	1	Active on Alarm
Maintenance Due	10071	—	1	Active on Alarm
Maintenance Completed	10072	—	1	Active on Alarm
Clogged Air Filter	10073	—	1	Active on Alarm
RAM Battery Issue	10074	—	1	Active on Alarm
Master Unit Communication Lost	10075	—	1	Active on Alarm
High Power Shutdown	10076	—	1	Active on Alarm
Unspecified General Event	10100	—	1	Active on Alarm
SEC Unspecified General Event	10210	—	1	Active on Alarm
SEC Communication Lost	10211	—	1	Active on Alarm
Static Pressure Sensor Issue	10212	—	1	Active on Alarm
Static Pressure Sensor Out of Range	10213	—	1	Active on Alarm
Power Source 'A' Issue	10214	—	1	Active on Alarm
Power Source B Failure	10215	—	1	Active on Alarm
Fluid Flow Sensor Issue	10216	—	1	Active on Alarm
Fluid Temperature Sensor Issue	10217	—	1	Active on Alarm
Unit Code Missing	10218	—	1	Active on Alarm
Global Condenser				
Condenser Outside Air Temp Sensor Issue	10078	—	1	Active on Alarm
Condenser Outside Air Temp Out of Operating Range	10079	—	1	Active on Alarm
Condenser Control Board Issue	10080	—	1	Active on Alarm
Condenser Refrigerant Pressure Over Threshold	10081	—	1	Active on Alarm
Condenser Refrigerant Pressure Under Threshold	10082	—	1	Active on Alarm
Condenser Refrigerant Pressure Sensor Issue	10083	—	1	Active on Alarm
Condenser Supply Refrigerant Over Temp	10084	—	1	Active on Alarm
Condenser Supply Refrigerant Under Temp	10085	—	1	Active on Alarm
Condenser Supply Refrigerant Temp Sensor Issue	10086	—	1	Active on Alarm
Condenser Max Fan Speed Override	10087	—	1	Active on Alarm
Condenser Unit Unspecified General Event	10101	—	1	Active on Alarm
Condenser Circuit Unspecified General Event	10102	—	1	Active on Alarm
Condenser Fan				
Condenser Fan Issue	10088	—	1	Active on Alarm
Condenser Fan Issue	10089	—	1	Active on Alarm
Condenser Fan Issue	10090	—	1	Active on Alarm
Condenser Fan Issue	10091	—	1	Active on Alarm
Auxiliary Air				
Aux Air Temp Device Communication Lost	10111	—	1	Active on Alarm
Remote Sensor 1				
Remote Sensor Low Humidity	10130	—	1	Active on Alarm
Remote Sensor High Humidity	10140	—	1	Active on Alarm
Remote Sensor Under Temperature	10150	—	1	Active on Alarm
Remote Sensor Over Temperature	10160	—	1	Active on Alarm

Table 3-6 Liebert CRV™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
Remote Sensor 2				
Remote Sensor Low Humidity	10131	—	1	Active on Alarm
Remote Sensor High Humidity	10141	—	1	Active on Alarm
Remote Sensor Under Temperature	10151	—	1	Active on Alarm
Remote Sensor Over Temperature	10161	—	1	Active on Alarm
Remote Sensor 10				
Remote Sensor Low Humidity	10139	—	1	Active on Alarm
Remote Sensor High Humidity	10149	—	1	Active on Alarm
Remote Sensor Under Temperature	10159	—	1	Active on Alarm
Remote Sensor Over Temperature	10169	—	1	Active on Alarm
EEV				
EEV Superheat Below Threshold	10230	—	1	Active on Alarm
EEV Discharge Temp Above Threshold	10231	—	1	Active on Alarm
EEV Battery Issue	10232	—	1	Active on Alarm
EEV Power Issue	10233	—	1	Active on Alarm
EEV Unspecified General Event	10234	—	1	Active on Alarm
Liebert Condenser				
Condenser Communication Lost	10253	—	1	Active on Alarm
Condenser Remote Shutdown	10254	—	1	Active on Alarm
Power Measurement				
Input Undervoltage	10270	—	1	Active on Alarm
Modbus Power Meter Communication Lost	10271	—	1	Active on Alarm

Table 3-7 Liebert CRV™—Input and Holding

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Air Temperature					
Supply Air Temperature	30385	—	1	10	Units : deg C Int16
Supply Air Temperature	30386	—	1	10	Units : deg F Int16
Return Air Temperature	30387	—	1	10	Units : deg C Int16
Return Air Temperature	30388	—	1	10	Units : deg F Int16
Return Dew Point	30389	—	1	10	Units : deg C Int16
Return Dew Point	30390	—	1	10	Units : deg F Int16
Remote Sensor Minimum Temperature	30391	—	1	10	Units : deg C Int16
Remote Sensor Minimum Temperature	30392	—	1	10	Units : deg F Int16
Remote Sensor Maximum Temperature	30393	—	1	10	Units : deg C Int16
Remote Sensor Maximum Temperature	30394	—	1	10	Units : deg F Int16
Remote Sensor Average Temperature	30395	—	1	10	Units : deg C Int16
Remote Sensor Average Temperature	30396	—	1	10	Units : deg F Int16
Air Temperature Set Point	30397	40397	1	10	Units : deg C Int16
Air Temperature Set Point	30398	40398	1	10	Units : deg F Int16
Cooling Proportional Band	30399	40399	1	10	Units : deg C Uint16
Cooling Proportional Band	30400	40400	1	10	Units : deg F Uint16
Heating Proportional Band	30401	40401	1	10	Units : deg C Uint16
Heating Proportional Band	30402	40402	1	10	Units : deg F Uint16
Air Temperature Dead Band	30403	40403	1	10	Units : deg C Uint16
Air Temperature Dead Band	30404	40404	1	10	Units : deg F Uint16
Supply Air Over Temp Threshold	30405	40405	1	10	Units : deg C Int16
Supply Air Over Temp Threshold	30406	40406	1	10	Units : deg F Int16
Supply Air Under Temp Threshold	30407	40407	1	10	Units : deg C Int16
Supply Air Under Temp Threshold	30408	40408	1	10	Units : deg F Int16
Return Air Over Temp Threshold	30409	40409	1	10	Units : deg C Int16
Return Air Over Temp Threshold	30410	40410	1	10	Units : deg F Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-7 Liebert CRV™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Air Temperature Control Sensor	30460	40460	1	—	0 = Supply 1 = Remote 2 = Return
Remote Sensor Temperature Calculation	30461	40461	1	—	0 = Average 1 = Maximum
Humidity					
Supply Humidity	30411	—	1	10	Units : % RH Uint16
Return Humidity	30412	—	1	10	Units : % RH Uint16
Humidity Set Point	30413	40413	1	—	Units : % RH Uint16
Humidification Proportional Band	30414	40414	1	—	Units : % RH Uint16
Dehumidification Proportional Band	30415	40415	1	—	Units : % RH Uint16
Humidity Dead Band	30416	40416	1	10	Units : % RH Uint16
High Return Humidity Threshold	30417	40417	1	10	Units : % RH Uint16
Low Return Humidity Threshold	30418	40418	1	10	Units : % RH Uint16
Fans					
Fan Speed Proportional Band	30419	40419	1	10	Units : deg C Uint16
Fan Speed Proportional Band	30420	40420	1	10	Units : deg F Uint16
Fan Speed Manual Set Point	30421	40421	1	—	Units : % Uint16
Fan Speed Maximum Set Point	30422	40422	1	—	Units : % Uint16
Fan Speed Minimum Set Point	30423	40423	1	—	Units : % Uint16
Fan Control Mode	30462	40462	1	—	0 = Internal (Auto) 1 = External (Manual)
Fan Control Sensor	30463	40463	1	—	0 = Supply 1 = Remote 2 = Return
Remote Sensors					
Remote Sensor Temperature	30424	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30425	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30425	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30426	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30426	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30427	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30427	—	1	10	Units : deg C Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-7 Liebert CRV™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Remote Sensor Temperature	30428	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30428	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30429	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30429	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30430	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30430	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30431	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30431	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30432	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30432	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30433	—	1	10	Units : deg F Int16
Remote Sensor Temperature	30433	—	1	10	Units : deg C Int16
Remote Sensor Temperature	30434	—	1	10	Units : deg F Int16
Remote Sensor Function	30464	40464	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor Function	30465	40465	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor Function	30466	40466	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor Function	30467	40467	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor Function	30468	40468	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor Function	30469	40469	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor Function	30470	40470	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor Function	30471	40471	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor Function	30472	40472	1	—	0 = Disable 1 = Reference 2 = Control

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-7 Liebert CRV™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Remote Sensor Function	30473	40473	1	—	0 = Disable 1 = Reference 2 = Control
Remote Sensor System Average Temperature	30520	—	1	10	Units : deg C Int16
Remote Sensor System Average Temperature	30521	—	1	10	Units : deg F Int16
Remote Sensor System Maximum Temperature	30522	—	1	10	Units : deg C Int16
Remote Sensor System Maximum Temperature	30523	—	1	10	Units : deg F Int16
Remote Sensor Under Temp Threshold	30524	40524	1	10	Units : deg C Int16
Remote Sensor Under Temp Threshold	30525	40525	1	10	Units : deg F Int16
Remote Sensor Over Temp Threshold	30526	40526	1	10	Units : deg C Int16
Remote Sensor Over Temp Threshold	30527	40527	1	10	Units : deg F Int16
Chilled Water					
Supply Chilled Water Temperature	30444	—	1	10	Units : deg C Int16
Supply Chilled Water Temperature	30445	—	1	10	Units : deg F Int16
Supply Chilled Water Over Temp Threshold	30446	40446	1	10	Units : deg C Int16
Supply Chilled Water Over Temp Threshold	30447	40447	1	10	Units : deg F Int16
System Info					
BMS Timeout Period	30448	40448	1	—	Units : min Uint16
Auto Restart Delay	30449	40449	1	—	Units : sec Uint16
System Status	30474	—	1	—	1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
System Operating State	30475	—	1	—	0 = off 1 = on 2 = standby
System Control Mode	30476	—	1	—	0 = Internal (Auto) 1 = External (Manual)
System Operating State Reason	30477	—	1	—	0 = Reason Unknown 1 = Network Display 2 = Alarm 3 = Schedule 4 = Remote System 5 = External Input 6 = Local Display

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-7 Liebert CRV™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Operations					
Operating Efficiency	30450	—	1	—	Units : % Uint16
Fan Speed	30451	—	1	—	Units : % Uint16
Cooling Capacity (Primary)	30452	—	1	—	Units : % Uint16
Dehumidifier Utilization	30453	—	1	—	Units : % Uint16
Reheat Utilization	30454	—	1	—	Units : % Uint16
Humidifier Utilization	30455	—	1	—	Units : % Uint16
Calculated Next Maintenance Month	30456	—	1	—	Uint16
Calculated Next Maintenance Year	30457	—	1	—	Uint16
Maintenance Ramp	30458	—	1	—	Units : % Uint16
System On/Off Control	30478	40478	1	—	0 = off 1 = on
Local Fan Override	30540	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection
Local Cooling Override	30541	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection
Local Electric Heat Override	30542	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection
Local Humidifier Override	30543	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-7 Liebert CRV™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Local Dehumidifier Override	30544	—	1	—	0 = Normal operation 1 = Increased for internal protection 2 = Decreased for internal protection 3 = Disabled for internal protection 4 = Limited or disabled for low limit protection
Protocol					
Server Class	30459	—	1	—	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
Global Condenser					
Condenser Refrigerant Type	30479	—	1	—	0 = R22 1 = R407C 2 = R410A
Condenser Outside Air Temperature	30480	—	1	10	Units : deg C Int16
Condenser Outside Air Temperature	30481	—	1	10	Units : deg F Int16
Condenser Fan					
Condenser Fan Speed	30482	—	1	—	Units : % Int16
Condenser Fan Speed	30483	—	1	—	Units : % Int16
Condenser Fan Speed	30484	—	1	—	Units : % Int16
Condenser Fan Speed	30485	—	1	—	Units : % Int16
Condenser Fan Power	30486	—	1	10	Units : kW Uint16
Condenser Fan Power	30487	—	1	10	Units : kW Uint16
Condenser Fan Power	30488	—	1	10	Units : kW Uint16
Condenser Fan Power	30489	—	1	10	Units : kW Uint16
Low Noise Mode					
Condenser Low Noise Mode State	30490	—	1	—	0 = Inactive 1 = Active (Interval) 2 = Active (Full Day)
Condenser Low Noise Mode Schedule Control	30491	40491	1	—	0 = disabled 1 = enabled
Condenser Low Noise Mode Max Fan Speed	30492	40492	1	—	Units : % Uint16
Condenser Normal Mode Max Fan Speed	30493	40493	1	—	Units : % Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-7 Liebert CRV™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Condenser Low Noise Mode - Interval Days	30494	40494	1	—	1 = Monday 2 = Tuesday 4 = Wednesday 8 = Thursday 16 = Friday 32 = Saturday 64 = Sunday
Condenser Low Noise Mode - Full Days	30495	40495	1	—	1 = Monday 2 = Tuesday 4 = Wednesday 8 = Thursday 16 = Friday 32 = Saturday 64 = Sunday
Condenser Low Noise Mode Start Time	30496	40496	2	—	Secs since Epoch(UTC)
Condenser Low Noise Mode Stop Time	30498	40498	2	—	Secs since Epoch(UTC)
Super Saver					
Super Saver Call For Cooling	30502		1	—	Units : % Int16
Auxiliary Air					
Raw Auxiliary Air Temperature	30510	40510	1	10	Units : deg C Int16
Raw Auxiliary Air Temperature	30511	40511	1	10	Units : deg F Int16
Actual Auxiliary Air Temperature	30512	—	1	10	Units : deg C Int16
Actual Auxiliary Air Temperature	30513	—	1	10	Units : deg F Int16
EEV					
EEV Open Position	30550	—	1	10	Units : % Uint16
Liebert Condenser					
Expected Condenser Unit Count	30560	—	1	—	Int16
Condenser Fan Reversal Requested	30562	—	1	—	0 = false 1 = true
Condenser Refrigerant Pressure	30563	—	1	10	Units : bar Int16
Condenser Supply Refrigerant Temperature	30564	—	1	10	Units : deg C Int16
Condenser Supply Refrigerant Temperature	30565	—	1	10	Units : deg F Int16
Power Measurement					
System Input RMS A-B	30570	—	1	10	Units : VAC Int16
System Input RMS A-N	30571	—	1	10	Units : VAC Int16
System Input RMS Current Phase A	30572	—	1	10	Units : A AC Int16
System Input RMS B-C	30573	—	1	10	Units : VAC Int16
System Input RMS B-N	30574	—	1	10	Units : VAC Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-7 Liebert CRV™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Input RMS Current Phase B	30575	—	1	10	Units : A AC Int16
System Input RMS C-A	30576	—	1	10	Units : VAC Int16
System Input RMS C-N	30577	—	1	10	Units : VAC Int16
System Input RMS Current Phase C	30578	—	1	10	Units : A AC Int16
Energy Consumption	30579	40579	2	—	Units : kWH Int32
Instantaneous Power	30581	—	2	—	Units : W Int32
Event Configuration					
Smoke Detected - Event Control	30592	40592	1	—	0 = disabled 1 = enabled
Smoke Detected - Event Type	30593	40593	1	—	0 = Message 1 = Warning 2 = Alarm
Water Under Floor - Event Control	30594	40594	1	—	0 = disabled 1 = enabled
Water Under Floor - Event Type	30595	40595	1	—	0 = Message 1 = Warning 2 = Alarm
Customer Input 1 - Event Control	30596	40596	1	—	0 = disabled 1 = enabled
Customer Input 1 - Event Type	30597	40597	1	—	0 = Message 1 = Warning 2 = Alarm
Customer Input 2 - Event Control	30598	40598	1	—	0 = disabled 1 = enabled
Customer Input 2 - Event Type	30599	40599	1	—	0 = Message 1 = Warning 2 = Alarm
Customer Input 3 - Event Control	30600	40600	1	—	0 = disabled 1 = enabled
Customer Input 3 - Event Type	30601	40601	1	—	0 = Message 1 = Warning 2 = Alarm
Customer Input 4 - Event Control	30602	40602	1	—	0 = disabled 1 = enabled
Customer Input 4 - Event Type	30603	40603	1	—	0 = Message 1 = Warning 2 = Alarm
Service Required - Event Control	30604	40604	1	—	0 = disabled 1 = enabled
Service Required - Event Type	30605	40605	1	—	0 = Message 1 = Warning 2 = Alarm
Shutdown - Loss Of Power - Event Control	30606	40606	1	—	0 = disabled 1 = enabled
Shutdown - Loss Of Power - Event Type	30607	40607	1	—	0 = Message 1 = Warning 2 = Alarm

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-7 Liebert CRV™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Ext Loss of Flow - Event Control	30608	40608	1	—	0 = disabled 1 = enabled
Ext Loss of Flow - Event Type	30609	40609	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Reheat Lockout - Event Control	30610	40610	1	—	0 = disabled 1 = enabled
Ext Reheat Lockout - Event Type	30611	40611	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Humidifier Lockout - Event Control	30612	40612	1	—	0 = disabled 1 = enabled
Ext Humidifier Lockout - Event Type	30613	40613	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Compressor Lockout - Event Control	30614	40614	1	—	0 = disabled 1 = enabled
Ext Compressor Lockout - Event Type	30615	40615	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Over Temperature - Event Control	30616	40616	1	—	0 = disabled 1 = enabled
Ext Over Temperature - Event Type	30617	40617	1	—	0 = Message 1 = Warning 2 = Alarm
Condenser VFD Issue - Event Control	30618	40618	1	—	0 = disabled 1 = enabled
Condenser VFD Issue - Event Type	30619	40619	1	—	0 = Message 1 = Warning 2 = Alarm
Condenser TVSS Issue - Event Control	30620	40620	1	—	0 = disabled 1 = enabled
Condenser TVSS Issue - Event Type	30621	40621	1	—	0 = Message 1 = Warning 2 = Alarm
Condenser 1 Issue - Event Control	30622	40622	1	—	0 = disabled 1 = enabled
Condenser 1 Issue - Event Type	30623	40623	1	—	0 = Message 1 = Warning 2 = Alarm
Time					
System Date and Time	39998	49998	2	—	Secs since Epoch(UTC)
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-8 Liebert CRV™—Glossary

Data Label	Data Description
Actual Auxiliary Air Temperature	Actual auxiliary air temperature value being used for control. This value may differ from the raw value received from the auxiliary device if filtering is applied.
Air Temperature Control Sensor	Sensor from which air temperature measurements will be used for cooling and heating control.
Air Temperature Dead Band	Value that is divided evenly to form a temperature range above and below [Air Temperature Set Point]. If measured air temperature is within this range, no heating or cooling will occur.
Air Temperature Set Point	Desired air temperature. This set point is dependent upon which sensor is selected for control.
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
Aux Air Temp Device Communication Lost	Communication with external auxiliary device providing an air temperature value has been lost.
BMS Communications Timeout	Building Management System (or external monitoring system) has not communicated with the system within the expected timeframe.
BMS Timeout Period	Timeframe within which the Building Management System (or external monitoring system) must communicate with the system to avoid a timeout.
Bottom Fan Issue	The bottom fan is not operating within its normal parameters.
Calculated Next Maintenance Month	Calculated month of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Year].
Calculated Next Maintenance Year	Calculated year of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Month].
Chilled Water Control Valve Failure	Chilled water valve out of position. Chilled water control valve position does not match expected value.
Clogged Air Filter	Air filter is dirty and needs to be (cleaned or) replaced.
Compressor 1 High Head Pressure	Compressor 1 high head pressure.
Compressor 1 High Pressure Transducer Issue	Compressor 1 high pressure transducer is disconnected or the signal is out of range.
Compressor 1 Hours Exceeded	Operating hours for compressor 1 have exceeded the threshold.
Compressor 1 Low Pressure Transducer Issue	Compressor 1 low pressure transducer is disconnected or the signal is out of range.
Compressor 1 Low Suction Pressure	Compressor 1 low suction pressure.
Compressor 1 Pump Down Issue	Unable to pump down suction-side pressure during compressor 1 shutdown.
Compressor 1 Short Cycle	Compressor 1 short cycle. A short cycle is defined as turning on and off a number of times over a set time period.
Compressor Capacity Reduced	Compressor capacity has been reduced.
Compressor Superheat Over Threshold	Compressor discharge refrigerant superheat temperature has exceeded an upper threshold.
Condenser 1 Issue - Event Control	Enable/disable the activation of the [Condenser 1 Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Condenser 1 Issue - Event Type	The event type for the [Condenser 1 Issue] event.
Condenser 1 Issue	Condenser 1 is not operating within its normal parameters.
Condenser Circuit Unspecified General Event	One or more unspecified condenser circuit events active. See local unit display for further details.
Condenser Communication Lost	Communication with condenser unit has been lost.
Condenser Control Board Issue	The condenser control board is reporting an issue.
Condenser Fan Issue	Condenser fan is not operating within its operational parameters.
Condenser Fan Power	Condenser fan's measured input power.

Table 3-8 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Condenser Fan Reversal Requested	Request the condenser fans to rotate in the reverse direction.
Condenser Fan Speed	Condenser fan speed expressed as a percentage of the maximum rated speed.
Condenser Low Noise Mode - Full Days	Days of the week selected for low noise mode full day scheduling.
Condenser Low Noise Mode - Interval Days	Days of the week selected for low noise mode interval scheduling.
Condenser Low Noise Mode Max Fan Speed	Maximum fan speed when condenser is placed in low noise mode.
Condenser Low Noise Mode Schedule Control	Enable/disable scheduled control of condenser low noise mode.
Condenser Low Noise Mode Start Time	The time of day at which the condenser will transition into low noise mode.
Condenser Low Noise Mode State	State of condenser low noise mode scheduler control.
Condenser Low Noise Mode Stop Time	The time of day at which the condenser will transition out of low noise mode.
Condenser Max Fan Speed Override	Fan speed exceeding the maximum set point in order to alleviate a high temperature or pressure condition.
Condenser Normal Mode Max Fan Speed	Maximum fan speed when condenser is not in low noise mode.
Condenser Outside Air Temp Out of Operating Range	[Condenser Outside Air Temperature] is either above an upper threshold or below a lower threshold.
Condenser Outside Air Temp Sensor Issue	Condenser outside air temperature sensor is disconnected or the signal is out of range.
Condenser Outside Air Temperature	Condenser ambient outside air temperature.
Condenser Refrigerant Pressure Over Threshold	Condenser refrigerant pressure has exceeded a threshold.
Condenser Refrigerant Pressure Sensor Issue	Condenser refrigerant pressure sensor is disconnected or the signal is out of range.
Condenser Refrigerant Pressure Under Threshold	Condenser refrigerant pressure has dropped below a threshold.
Condenser Refrigerant Pressure	Pressure of the refrigerant in a condenser circuit.
Condenser Refrigerant Type	Condenser refrigerant type.
Condenser Remote Shutdown	Condenser is shut down by a remote signal.
Condenser Supply Refrigerant Over Temp	Condenser supply refrigerant temperature has exceeded a threshold.
Condenser Supply Refrigerant Temp Sensor Issue	Condenser supply refrigerant temperature sensor is disconnected or the signal is out of range.
Condenser Supply Refrigerant Temperature	Temperature of the supply refrigerant in a condenser circuit.
Condenser Supply Refrigerant Under Temp	Condenser supply refrigerant temperature has dropped below a specified threshold.
Condenser TVSS Issue - Event Control	Enable/disable the activation of the [Condenser TVSS or SPD Issue] event (Transient Voltage Surge Suppressor or Surge Protection Device). If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Condenser TVSS Issue - Event Type	The event type for the [Condenser TVSS or SPD Issue] event (Transient Voltage Surge Suppressor or Surge Protection Device).
Condenser TVSS Issue	The condenser Transient Voltage Surge Suppressor or Surge Protection Device has failed.
Condenser Unit Unspecified General Event	One or more unspecified condenser unit events active. See local unit display for further details.
Condenser VFD Issue - Event Control	Enable/disable the activation of the [Condenser VFD Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Condenser VFD Issue - Event Type	The event type for the [Condenser VFD Issue] event.
Condenser VFD Issue	The condenser fan Variable Frequency Drive is offline.

Table 3-8 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Cooling Capacity (Primary)	Compressor utilization or chilled water valve position, based on unit type.
Cooling Proportional Band	Temperature control band above [Air Temperature Set Point]. If measured air temperature is within this band, cooling operations are proportionally controlled.
Customer Input 1 - Event Control	Enable/disable the activation of the [Customer Input 1] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 1 - Event Type	The event type for the [Customer Input 1] event.
Customer Input 1	Customer Input 1.
Customer Input 2 - Event Control	Enable/disable the activation of the [Customer Input 2] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 2 - Event Type	The event type for the [Customer Input 2] event.
Customer Input 2	Customer input 2.
Customer Input 3 - Event Control	Enable/disable the activation of the [Customer Input 3] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 3 - Event Type	The event type for the [Customer Input 3] event.
Customer Input 3	Customer input 3.
Customer Input 4 - Event Control	Enable/disable the activation of the [Customer Input 4] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 4 - Event Type	The event type for the [Customer Input 4] event.
Customer Input 4	Customer input 4.
Dehumidification Proportional Band	Humidity control band above [Humidity Set Point]. If measured humidity is within this band, dehumidification operations are proportionally controlled.
Dehumidifier Hours Exceeded	Operating hours for the dehumidifier have exceeded the threshold.
Dehumidifier Utilization	Present dehumidifier utilization expressed as a percentage of the maximum rated capacity.
Dig Scroll Comp 1 Over Temp	Digital scroll compressor 1 shut off because its head temperature has exceeded the upper threshold.
Dig Scroll Comp 1 Temp Sensor Issue	Digital scroll compressor 1 temperature sensor is disconnected or the signal is out of range.
EEV Battery Issue	Electronic expansion valve battery cannot be recharged and needs to be replaced.
EEV Discharge Temp Above Threshold	Electronic expansion valve refrigerant high discharge temperature event.
EEV Open Position	Electronic expansion valve open position.
EEV Power Issue	Electronic expansion valve lost power and is running on battery backup.
EEV Superheat Below Threshold	Electronic expansion valve refrigerant low superheat event.
EEV Unspecified General Event	One or more unspecified electronic expansion valve events active. See local unit display for further details.
Electric Reheater 1 Hours Exceeded	Operating hours for electric reheater 1 have exceeded the threshold.
Electric Reheater Hours Exceeded	[Electric Reheater Hours] has exceeded [Electric Reheaters Hours Threshold].
Energy Consumption	Energy consumption since the last reset of this value.

Table 3-8 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Expected Condenser Unit Count	Number of physical condenser units that are expected to be connected to the system.
Ext Compressor Lockout - Event Control	Enable/disable the activation of the [Ext Compressor Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Compressor Lockout - Event Type	The event type for the [Ext Compressor Lockout] event.
Ext Compressor Lockout	The compressor is shut down and disabled by an external input signal.
Ext Condenser Pump High Water	High water is detected in the condenser, as indicated by an external input signal.
Ext Humidifier Lockout - Event Control	Enable/disable the activation of the [Ext Humidifier Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Humidifier Lockout - Event Type	The event type for the [Ext Humidifier Lockout] event.
Ext Humidifier Lockout	The humidifier is shut down and disabled by an external input signal.
Ext Loss of Flow - Event Control	Enable/disable the activation of the [Ext Loss of Flow] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Loss of Flow - Event Type	The event type for the [Ext Loss of Flow] event.
Ext Loss of Flow	Loss of flow is detected, as indicated by an external input signal.
Ext Over Temperature - Event Control	Enable/disable the activation of the [Ext Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Over Temperature - Event Type	The event type for the [Ext Over Temperature] event.
Ext Over Temperature	A temperature has exceeded its threshold, as indicated by an external input signal.
Ext Reheat Lockout - Event Control	Enable/disable the activation of the [Ext Reheat Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Reheat Lockout - Event Type	The event type for the [Ext Reheat Lockout] event.
Ext Reheat Lockout	The reheater is shut down and disabled by an external input signal.
Ext Standby Glycol Pump On	The standby glycol pump is on, as indicated by an external input signal.
External Condenser TVSS Issue	The condenser Transient Voltage Surge Suppressor or Surge Protection Device has failed, as indicated by an external input signal.
External Condenser VFD Issue	The condenser fan Variable Frequency Drive is offline, as indicated by an external input signal.
External Fire Detected	Fire detected, as indicated by an external input signal.
Fan Control Mode	Fan control mode. Allowable modes are: (0) Auto - Fan speed is controlled via the selected fan control sensor, and, (1) Manual - Fan will operate at a fixed speed.
Fan Control Sensor	Sensor from which air temperature measurements will be used for fan speed control.
Fan Hours Exceeded	Operating hours for the unit blower fan have exceeded the threshold.
Fan Speed Manual Set Point	Manual fan speed.
Fan Speed Maximum Set Point	Maximum fan speed.
Fan Speed Minimum Set Point	Minimum fan speed.

Table 3-8 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Fan Speed Proportional Band	Temperature control band above the temperature set point calculated for proportional fan speed control. If measured air temperature is within this band, fan speed operations are proportionally controlled.
Fan Speed	Fan speed expressed as a percentage of the maximum rated speed.
Fluid Flow Sensor Issue	The fluid flow sensor is disconnected or the signal is out of range.
Fluid Temperature Sensor Issue	The fluid temperature sensor is disconnected or the signal is out of range.
Heating Proportional Band	Temperature control band below [Air Temperature Set Point]. If measured air temperature is within this band, heating operations are proportionally controlled.
High Power Shutdown	Supply to high power components has been shutdown.
High Return Humidity Threshold	Threshold value used in the [High Return Humidity] event.
High Return Humidity	Return air high humidity event.
Humidification Proportional Band	Humidity control band below [Humidity Set Point]. If measured humidity is within this band, humidification operations are proportionally controlled.
Humidifier Control Board Not Detected	Humidifier control board is required to be connected, but no signal is detected.
Humidifier Cylinder Worn	Humidifier cylinder is not operating properly and needs to be replaced.
Humidifier Hours Exceeded	Operating hours for the humidifier have exceeded the threshold.
Humidifier Issue	Humidifier issue detected, causing it to be locked out.
Humidifier Low Water	The water level in the humidifier has dropped below its threshold.
Humidifier Over Current	The electrical current to the humidifier has exceeded its upper threshold.
Humidifier Under Current	The electrical current to the humidifier has dropped below its lower threshold.
Humidifier Utilization	Present humidifier utilization expressed as a percentage of the maximum rated capacity.
Humidity Dead Band	Value that is divided evenly to form a range above and below [Humidity Set Point]. If measured humidity is within this range, no humidification or dehumidification will occur.
Humidity Set Point	Desired relative humidity.
Input Undervoltage	One or more of the input phase voltages has dropped below the limit.
Instantaneous Power	Total electrical power currently being consumed.
Local Cooling Override	The local unit override status for cooling capacity.
Local Dehumidifier Override	The local unit override status for the dehumidifier.
Local Electric Heat Override	The local unit override status for electric heat.
Local Fan Override	The local unit override status for fan speed.
Local Humidifier Override	The local unit override status for the humidifier.
Loss of Air Flow	No air flow through the unit due to failure of all fans.
Low Return Humidity Threshold	Threshold value used in the [Low Return Humidity] event.
Low Return Humidity	Return air low humidity event.
Maintenance Completed	Maintenance has been completed on the unit.
Maintenance Due	The calculated maintenance date has been reached.
Maintenance Ramp	The ratio of operations performed to the calculated operations available between maintenance intervals.
Master Unit Communication Lost	Communication with master unit has been lost.
Modbus Power Meter Communication Lost	Communication with Modbus power meter has been lost.

Table 3-8 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Operating Efficiency	The ratio of cooling energy provided to the amount of total energy being used.
Power Source 'A' Issue	No power is detected at power source input 'A'.
Power Source B Failure	No power is detected at power source input B.
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Raw Auxiliary Air Temperature	Air temperature value sent by an external auxiliary device, with no additional filtering by the receiving system. This may be an aggregated value from multiple sensors.
Reheat Utilization	Present reheating utilization expressed as a percentage of the maximum rated capacity.
Reheater Over Temperature	The temperature of the reheater has exceeded its threshold.
Remote Sensor Average High Humidity	The average humidity of multiple remote sensors on the cooling unit has exceeded an upper threshold. The event is deactivated when the humidity drops below the threshold.
Remote Sensor Average Low Humidity	The average humidity of multiple remote sensors on the cooling unit has dropped below a lower threshold. The event is deactivated when the humidity rises above the threshold.
Remote Sensor Average Over Temperature	[Remote Sensor Average Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor Average Temperature	Average value of remote sensor temperature measurements.
Remote Sensor Average Under Temperature	[Remote Sensor Average Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Remote Sensor Function	Function assigned to remote sensor. Available values are: (0) Control - sensor will be used in calculation of remote sensor temperature that may be used for heating and cooling control, (1) Reference - sensor will not be used in calculation of remote sensor temperature, but is enabled, (2) Disable - sensor is disabled
Remote Sensor High Humidity	Remote sensor humidity has exceeded an upper threshold. The event is deactivated when the humidity drops below the threshold.
Remote Sensor Issue	Remote sensor is disconnected or the signal is out of range.
Remote Sensor Low Humidity	Remote sensor humidity has dropped below a lower threshold. The event is deactivated when the humidity rises above the threshold.
Remote Sensor Maximum Temperature	Maximum value of remote sensor temperature measurements.
Remote Sensor Minimum Temperature	Minimum value of remote sensor temperature measurements.
Remote Sensor Over Temp Threshold	Threshold value used in the remote air sensor over temperature events.
Remote Sensor Over Temperature	[Remote Sensor Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor System Average High Humidity	The average humidity of multiple remote sensors on interconnected cooling units in a single system has exceeded an upper threshold. The event is deactivated when the humidity drops below the threshold.
Remote Sensor System Average Low Humidity	The average humidity of multiple remote sensors on interconnected cooling units in a single system has dropped below a lower threshold. The event is deactivated when the humidity rises above the threshold.
Remote Sensor System Average Over Temperature	[Remote Sensor System Average Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor System Average Temperature	Average value of remote sensor temperature measurements among a group of interconnected units in a single system.
Remote Sensor System Average Under Temperature	Remote Sensor System Average Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Remote Sensor System Maximum Temperature	Maximum value of remote sensor temperature measurements among a group of interconnected units in a single system.

Table 3-8 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Remote Sensor Temperature Calculation	Calculation method applied to temperature readings from the remote sensors to determine a single temperature measurement value for cooling and heating control.
Remote Sensor Temperature	Air temperature as measured by remote sensor.
Remote Sensor Under Temp Threshold	Threshold value used in the remote air sensor under temperature events.
Remote Sensor Under Temperature	[Remote Sensor Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Return Air Over Temp Threshold	Threshold value used in the [Return Air Over Temperature] event.
Return Air Over Temperature	Return air high temperature event.
Return Air Sensor Issue	The air sensor at the inlet of the unit is disconnected or the signal is out of range.
Return Air Temperature	The temperature of the inlet air
Return Dew Point	Dew point temperature measured at the inlet of the unit.
Return Humidity Out Of Proportional Band	[Return Humidity] has exceeded the upper limit of [Dehumidification Proportional Band], or has dropped below the lower limit of [Humidification Proportional Band]], for an extended period of time.
Return Humidity	Relative humidity measured at the inlet of the unit.
SEC Communication Lost	Communication with the Superheat and Envelope Controller has been lost. The event is deactivated when communication is re-established.
SEC Unspecified General Event	One or more unspecified events active for the Superheat and Envelope Controller. See local unit display for further details.
Server Class	The general classification for this system
Service Required - Event Control	Enable/disable the activation of the [Service Required] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Service Required - Event Type	The event type for the [Service Required] event.
Service Required	Unit requires servicing.
Shutdown - Loss Of Power - Event Control	Enable/disable the activation of the [Shutdown - Loss Of Power] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Shutdown - Loss Of Power - Event Type	The event type for the [Shutdown - Loss Of Power] event.
Shutdown - Loss Of Power	System lost power. This event becomes active when the unit is powered on following an unexpected loss of power. This event remains active for 90 minutes.
Smoke Detected - Event Control	Enable/disable the activation of the [Smoke Detected] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Smoke Detected - Event Type	The event type for the [Smoke Detected] event.
Smoke Detected	Smoke detected.
Static Pressure Sensor Issue	The static pressure sensor is disconnected or the signal is out of range.
Static Pressure Sensor Out of Range	Static pressure sensor signal is out of its configured range.
Super Saver Call For Cooling	Call for cooling value used for Super Saver functionality. A higher call for cooling value indicates a need for a lower coolant temperature.
Supply Air Over Temp Threshold	Threshold value used in the [Supply Air Over Temperature] event.
Supply Air Over Temperature	Supply air high temperature event.
Supply Air Sensor Issue	The air sensor at the outlet of the unit is disconnected or the signal is out of range.

Table 3-8 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Supply Air Temperature	Air temperature measured at the outlet of the unit.
Supply Air Under Temp Threshold	Threshold value used in the [Supply Air Under Temperature] event.
Supply Air Under Temperature	Supply air low temperature event.
Supply Chilled Water Loss of Flow	Supply chilled water flow is too low.
Supply Chilled Water Over Temp Threshold	Threshold value used in the [Supply Chilled Water Over Temp] event.
Supply Chilled Water Over Temp	[Supply Chilled Water Temperature] has exceeded [Supply Chilled Water Over Temp Threshold].
Supply Chilled Water Temperature	Supply chilled water temperature.
Supply Fluid Temp Sensor Issue	The supply fluid temperature sensor is disconnected or the signal is out of range.
Supply Humidity	Relative humidity at the outlet of the unit.
System Control Mode	System control mode.
System Date and Time	The system date and time
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System On/Off Control	Turn system functionality on or off.
System Operating State Reason	The reason the system is in the current operating state.
System Operating State	Current operating state of the system.
System Status	The operating status for the system
Top Fan Issue	The top fan is not operating within its normal parameters.
Unit Code Missing	Unit code has not been entered and saved.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Partial Shutdown	An event has occurred requiring some system components to be shutdown and disabled.
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
Unit Standby	Unit was placed in standby mode.
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
Water Leakage Detector Sensor Issue	The water leakage detector sensor is disconnected or the signal is out of range.
Water Under Floor - Event Control	Enable/disable the activation of the [Water Under Floor] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Water Under Floor - Event Type	The event type for the [Water Under Floor] event.
Water Under Floor	Water under the floor is detected.

Table 3-9 Liebert HPC™ (Chiller) - Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
Compressors				
Compressor Not Stopping	10001	—	1	Active on Alarm
Compressor Superheat Over Threshold	10002	—	1	Active on Alarm
Compressor 1				
Compressor Hours Exceeded	10012	—	1	Active on Alarm
Compressor High Head Pressure	10013	—	1	Active on Alarm
Compressor Low Suction Pressure	10014	—	1	Active on Alarm
Compressor Thermal Overload	10015	—	1	Active on Alarm
Compressor Low Oil Pressure	10016	—	1	Active on Alarm
Compressor Loss of Differential Pressure	10018	—	1	Active on Alarm
Compressor Capacity Reduced	10019	—	1	Active on Alarm
Compressor Capacity Normal	10020	—	1	Active on Alarm
Compressor Contactor Issue	10021	—	1	Active on Alarm
Compressor 2				
Compressor Hours Exceeded	10029	—	1	Active on Alarm
Compressor High Head Pressure	10030	—	1	Active on Alarm
Compressor Low Suction Pressure	10031	—	1	Active on Alarm
Compressor Thermal Overload	10032	—	1	Active on Alarm
Compressor Low Suction Pressure	10033	—	1	Active on Alarm
Compressor Loss of Differential Pressure	10035	—	1	Active on Alarm
Compressor Capacity Reduced	10036	—	1	Active on Alarm
Compressor Capacity Normal	10037	—	1	Active on Alarm
Compressor Contactor Issue	10038	—	1	Active on Alarm
Compressor 4				
Compressor Hours Exceeded	10230	—	1	Active on Alarm
Compressor High Head Pressure	10231	—	1	Active on Alarm
Compressor Low Suction Pressure	10232	—	1	Active on Alarm
Compressor Thermal Overload	10233	—	1	Active on Alarm
Compressor Low Suction Pressure	10234	—	1	Active on Alarm
Compressor Loss of Differential Pressure	10236	—	1	Active on Alarm
Compressor Capacity Reduced	10237	—	1	Active on Alarm
Compressor Capacity Normal	10238	—	1	Active on Alarm
Compressor Contactor Issue	10239	—	1	Active on Alarm
Condensers 1				
Condenser Fan Issue	10046	—	1	Active on Alarm
Low Condenser Refrigerant Pressure	10047	—	1	Active on Alarm
Condenser Max Fan Speed Override	10048	—	1	Active on Alarm
Condensers 2				
Condenser Fan Issue	10058	—	1	Active on Alarm
Low Condenser Refrigerant Pressure	10059	—	1	Active on Alarm
Condenser Max Fan Speed Override	10060	—	1	Active on Alarm
Condensers 4				
Condenser Fan Issue	10066		1	Active on Alarm
Low Condenser Refrigerant Pressure	10067		1	Active on Alarm
Condenser Max Fan Speed Override	10068		1	Active on Alarm

Table 3-9 Liebert HPC™ (Chiller) - Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
Fluid				
Low Fluid Pressure	10070		1	Active on Alarm
Supply (Outlet) Fluid				
Supply Fluid Over Temp	10081		1	Active on Alarm
Supply Fluid Under Temp	10082		1	Active on Alarm
Supply Fluid Temp Sensor Issue	10083		1	Active on Alarm
Return (Inlet) Fluid				
Return Fluid Temp Sensor Issue	10096		1	Active on Alarm
Pumps				
All Pumps Loss of Flow	10107		1	Active on Alarm
Pump 1 Loss of Flow	10108		1	Active on Alarm
Pump 2 Loss of Flow	10109		1	Active on Alarm
Pump 1				
Pump Hours Exceeded	10120		1	Active on Alarm
Pump 2				
Pump Hours Exceeded	10131		1	Active on Alarm
Free Cooling				
Free Cooling Valve Hours Exceeded	10142		1	Active on Alarm
Ambient Air Temperature Sensor Issue	10143		1	Active on Alarm
Evaporators				
Evaporator Inlet Temp Sensor Issue	10154		1	Active on Alarm
Evaporator Return Fluid Over Temp	10155		1	Active on Alarm
Evaporator Return Fluid Under Temp	10156		1	Active on Alarm
Evaporator 1				
Evaporator Fluid Freeze - Auto Reset	10165		1	Active on Alarm
Evaporator Fluid Freeze - Manual Reset Required	10166		1	Active on Alarm
Supply Refrigerant Temp Sensor Issue	10167		1	Active on Alarm
Evaporator 2				
Evaporator Fluid Freeze - Auto Reset	10178		1	Active on Alarm
Evaporator Fluid Freeze - Manual Reset Required	10179		1	Active on Alarm
Supply Refrigerant Temp Sensor Issue	10180		1	Active on Alarm
System Events				
Customer Input 1	10191		1	Active on Alarm
Customer Input 2	10192		1	Active on Alarm
Customer Input 3	10251		1	Active on Alarm
Customer Input 4	10252		1	Active on Alarm
Unit On	10193		1	Active on Alarm
Unit Off	10194		1	Active on Alarm
Master Unit Communication Lost	10195		1	Active on Alarm
Subgroup Event Occurred During Communication Loss	10196		1	Active on Alarm
Humidifier Control Board Not Detected	10197		1	Active on Alarm
RAM Battery Issue	10198		1	Active on Alarm
Unit Code Missing	10199		1	Active on Alarm
Unspecified General Event	10200		1	Active on Alarm
Unit Shutdown Unspecified General Event	10250		1	Active on Alarm

Table 3-9 Liebert HPC™ (Chiller) - Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
EEV 1				
EEV Unspecified General Event	10270		1	Active on Alarm
EEV 2				
EEV Unspecified General Event	10280		1	Active on Alarm
EEV 4				
EEV Unspecified General Event	10300		1	Active on Alarm
Power Measurement 1				
Modbus Power Meter Communication Lost	10311		1	Active on Alarm
Power Measurement 2				
Modbus Power Meter Communication Lost	10322		1	Active on Alarm

Table 3-10 Liebert HPC™ (Chiller)—Input and Holding

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Protocol					
Server Class	30385		1		1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
Compressors					
Compressor Shut Down - Ambient Air Low Temp Limit	30389	40389	1		Units : deg C Int16
Compressor Shut Down - Ambient Air Low Temp Limit	30390	40390	1		Units : deg F Int16
Compressor 1					
Compressor State	30394		1		0 = off 1 = on
Compressor Capacity Control State	30395		1		0 = off 1 = on
Compressor Head Pressure	30396		1	10	Units : bar Uint16
Compressor Hours	30397	40397	1		Units : hr Uint16
Compressor Hours Threshold	30398	40398	1		Units : hr Uint16
Compressor 2					
Compressor State	30402		1		0 = off 1 = on
Compressor Capacity Control State	30403		1		0 = off 1 = on
Compressor Head Pressure	30404		1	10	Units : bar Uint16
Compressor Hours	30405	40405	1		Units : hr Uint16
Compressor Hours Threshold	30406	40406	1		Units : hr Uint16
Compressor 4					
Compressor State	30550		1		0 = off 1 = on
Compressor Capacity Control State	30551		1		0 = off 1 = on
Compressor Head Pressure	30552		1	10	Units : bar Uint16
Compressor Hours	30553	40553	1		Units : hr Uint16
Compressor Hours Threshold	30554	40554	1		Units : hr Uint16
Condensers 1					
Condenser Fan Speed	30410		1		Units : % Uint16
Condensers 2					
Condenser Fan Speed	30414		1		Units : % Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-10 Liebert HPC™ (Chiller)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Condensers 4					
Condenser Fan Speed	30417		1		Units : % Uint16
Fluid					
Fluid Pressure	30418		1	10	Units : bar Int16
Fluid Cooling Proportional Band	30419	40419	1	10	Units : deg C Uint16
Fluid Cooling Proportional Band	30420	40420	1	10	Units : deg F Uint16
Supply (Outlet) Fluid					
Supply Fluid Temp Set Point 1	30424	40424	1	10	Units : deg C Int16
Supply Fluid Temp Set Point 1	30425	40425	1	10	Units : deg F Int16
Supply Fluid Temp Set Point 2	30426	40426	1		Units : deg C Int16
Supply Fluid Temp Set Point 2	30427	40427	1		Units : deg F Int16
Supply Fluid Over Temp Alarm Threshold	30430	40430	1		Units : deg C Int16
Supply Fluid Over Temp Alarm Threshold	30431	40431	1		Units : deg F Int16
Supply Fluid Under Temp Alarm Threshold	30434	40434	1		Units : deg C Int16
Supply Fluid Under Temp Alarm Threshold	30435	40435	1		Units : deg F Int16
Pump 1					
Pump Hours	30450	40450	1		Units : hr Uint16
Pump Hours Threshold	30451	40451	1		Units : hr Uint16
Pump 2					
Pump Hours	30455	40455	1		Units : hr Uint16
Pump Hours Threshold	30456	40456	1		Units : hr Uint16
Free Cooling					
Free Cooling External Temperature Delta	30460	40460	1		Units : deg C Uint16
Free Cooling External Temperature Delta	30461	40461	1		Units : deg F Uint16
Free Cooling Status	30462		1		0 = off 2 = on 3 = No Support
Free Cooling Valve Open Position	30463		1		Units : % Uint16
Free Cooling Valve Hours	30464	40464	1		Units : hr Uint16
Free Cooling Valve Hours Threshold	30465	40465	1		Units : hr Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-10 Liebert HPC™ (Chiller)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Evaporators					
Evaporator Return Fluid Temperature	30469		1	10	Units : deg C Int16
Evaporator Return Fluid Temperature	30470		1	10	Units : deg F Int16
Evaporator Return Fluid Over Temp Alarm Threshold	30615	40615	1		Units : deg C Int16
Evaporator Return Fluid Over Temp Alarm Threshold	30616	40616	1		Units : deg F Int16
Evaporator Return Fluid Over Temp Warning Threshold	30617	40617	1		Units : deg C Int16
Evaporator Return Fluid Over Temp Warning Threshold	30618	40618	1		Units : deg F Int16
Evaporator Return Fluid Under Temp Warning Threshold	30619	40619	1		Units : deg C Int16
Evaporator Return Fluid Under Temp Warning Threshold	30620	40620	1		Units : deg F Int16
Evaporator Return Fluid Under Temp Alarm Threshold	30621	40621	1		Units : deg C Int16
Brine					
Supply Brine Temp Set Point	30474	40474	1		Units : deg C Int16
Supply Brine Temp Set Point	30475	40475	1		Units : deg F Int16
Standby Units					
Standby Units	30479	40479	1		Uint16
System Info					
System Status	30483		1		1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
System Operating State	30484		1		0 = off 1 = on 2 = standby
System Control Mode	30485		1		0 = Internal (Auto) 1 = External (Manual)
System Operating State Reason	30486		1		0 = Reason Unknown 1 = Network Display 2 = Alarm 3 = Schedule 4 = Remote System 5 = External Input 6 = Local Display
System On/Off Control	30487	40487	1		0 = off 1 = on
System Operations					
Return Fluid Temperature	30491		1	10	Units : deg C Int16
Return Fluid Temperature	30492		1	10	Units : deg F Int16
Supply Fluid Temperature	30493		1	10	Units : deg C Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-10 Liebert HPC™ (Chiller)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Supply Fluid Temperature	30494	—	1	10	Units : deg F Int16
Actual Supply Fluid Temp Set Point	30495	—	1	10	Units : deg C Int16
Actual Supply Fluid Temp Set Point	30496	—	1	10	Units : deg F Int16
Condenser Inlet Water Temperature	30497	—	1	10	Units : deg C Int16
Condenser Inlet Water Temperature	30498	—	1	10	Units : deg F Int16
Condenser Outlet Water Temperature	30499	—	1	10	Units : deg C Int16
Condenser Outlet Water Temperature	30500	—	1	10	Units : deg F Int16
Supply Heated Water Temp Set Point	30501	40501	1	—	Units : deg C Int16
Supply Heated Water Temp Set Point	30502	40502	1	—	Units : deg F Int16
Free Cooling Utilization	30503	—	1	—	Units : % Uint16
Reheat Utilization	30504	—	1	—	Units : % Uint16
Compressor Utilization	30505	—	1	—	Units : % Uint16
Ambient Air Temperature	30506	—	1	10	Units : deg C Int16
Ambient Air Temperature	30507	—	1	10	Units : deg F Int16
Compressor Economizer Utilization	30508	—	1	—	Units : % Uint16
Condenser Adiabatic Cooling Utilization	30509	—	1	—	Units : % Uint16
Pump 1 State	30510	—	1	—	0 = off 1 = on
Pump 2 State	30511	—	1	—	0 = off 1 = on
System Events					
System Event Acknowledge/Reset		40515	1	—	2 = Reset 4 = Acknowledge
Power Measurement 1					
System Input RMS A-B	30707	—	1	—	Units : VAC Int16
System Input RMS A-N	30708	—	1	—	Units : VAC Int16
System Input RMS Current Phase A	30709	—	1	—	Units : A AC Int16
System Input RMS B-C	30710	—	1	—	Units : VAC Int16
System Input RMS B-N	30711	—	1	—	Units : VAC Int16
System Input RMS Current Phase B	30712	—	1	—	Units : A AC Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-10 Liebert HPC™ (Chiller)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Input RMS C-A	30713	—	1	—	Units : VAC Int16
System Input RMS C-N	30714	—	1	—	Units : VAC Int16
System Input RMS Current Phase C	30715	—	1	—	Units : A AC Int16
Energy Consumption	30716	—	2	—	Units : kWH Int32
Instantaneous Power	30718	—	2	—	Units : W Int32
Output Power Factor	30720	—	1	—	Int16
Power Measurement 2					
System Input RMS A-B	30731	—	1	—	Units : VAC Int16
System Input RMS A-N	30732	—	1	—	Units : VAC Int16
System Input RMS Current Phase A	30733	—	1	—	Units : A AC Int16
System Input RMS B-C	30734	—	1	—	Units : VAC Int16
System Input RMS B-N	30735	—	1	—	Units : VAC Int16
System Input RMS Current Phase B	30736	—	1	—	Units : A AC Int16
System Input RMS C-A	30737	—	1	—	Units : VAC Int16
System Input RMS C-N	30738	—	1	—	Units : VAC Int16
System Input RMS Current Phase C	30739	—	1	—	Units : A AC Int16
Energy Consumption	30740	—	2	—	Units : kWH Int32
Instantaneous Power	30742	—	2	—	Units : W Int32
Output Power Factor	30744	—	1	—	Int16
Time					
System Date and Time	39998	49998	2	—	Secs since Epoch(UTC)

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-11 Extra notes key to Table 3-10

Number	Description
1	This point is supported on iCOM Controller Version 2.02.xxx
2	This point is supported on iCOM Controller Version 2.03.xxx

Table 3-12 Liebert HPC™ (Chiller)—Glossary

Data Label	Data Description
Actual Supply Fluid Temp Set Point	The actual set point value being used for the desired fluid temperature at the outlet of the unit.
All Pumps Loss of Flow	System is shut down due to loss of flow in all available pumps.
Ambient Air Temperature Sensor Issue	The ambient air temperature sensor is disconnected or the signal is out of range.
Ambient Air Temperature	Ambient air temperature.
Compressor Capacity Control State	Compressor capacity control state. When 'ON', the cooling capacity of the compressor has been reduced.
Compressor Capacity Normal	Compressor has returned to normal load capacity.
Compressor Capacity Reduced	Compressor capacity has been reduced.
Compressor Contactor Issue	Compressor contactor is not closing during compressor startup or is not opening during compressor shutdown.
Compressor Economizer Utilization	Present compressor economizer utilization expressed as a percentage of the maximum.
Compressor Head Pressure	Compressor head pressure.
Compressor High Head Pressure	Compressor is shut down due to high head pressure.
Compressor Hours Exceeded	[Compressor Hours] has exceeded [Compressor Hours Threshold].
Compressor Hours Threshold	Threshold value used in the [Compressor Hours Exceeded] event.
Compressor Hours	Operating hours for compressor since last reset of this value.
Compressor Loss of Differential Pressure	Compressor is shut down due to low differential pressure.
Compressor Low Oil Pressure	Compressor low oil pressure.
Compressor Low Suction Pressure	Compressor is shut down due to low suction pressure.
Compressor Not Stopping	Compressor commanded to stop, but continues to run.
Compressor Shut Down - Ambient Air Low Temp Limit	When the temperature of ambient air falls below this lower threshold, the compressor will be shut off. Correct condensing pressure cannot be achieved when temperature is too low.
Compressor State	Compressor operational state.
Compressor Superheat Over Threshold	Compressor discharge refrigerant superheat temperature has exceeded an upper threshold.
Compressor Thermal Overload	Compressor is shut down due to thermal overload.
Compressor Utilization	Present compressor utilization expressed as a percentage of the maximum rated capacity.
Condenser Adiabatic Cooling Utilization	Present adiabatic cooling utilization expressed as a percentage of the maximum.
Condenser Fan Issue	Condenser fan is not operating within its operational parameters.
Condenser Fan Speed	Condenser fan speed expressed as a percentage of the maximum rated speed.
Condenser Inlet Water Temperature	For water cooled condensers, the temperature of the water entering the heat exchanger, before cooling the refrigerant.
Condenser Max Fan Speed Override	Fan speed exceeding the maximum set point in order to alleviate a high temperature or pressure condition.
Condenser Outlet Water Temperature	For water cooled condensers, the temperature of the water exiting the heat exchanger, after cooling the refrigerant.
Customer Input 1	Customer input 1.
Customer Input 2	Customer input 2.
Customer Input 3	Customer input 3.
Customer Input 4	Customer input 4.
EEV Unspecified General Event	One or more unspecified electronic expansion valve events active. See local unit display for further details.
Energy Consumption	Energy consumption since the last reset of this value.

Table 3-12 Liebert HPC™ (Chiller)—Glossary (continued)

Data Label	Data Description
Evaporator Fluid Freeze - Auto Reset	Evaporator outlet fluid temperature has dropped below the freeze threshold. Evaporator has been shut down, but will restart when the temperature rises above the threshold.
Evaporator Fluid Freeze - Manual Reset Required	Evaporator outlet fluid temperature has dropped below the freeze threshold. Evaporator has been shut down and requires a manual reset.
Evaporator Inlet Temp Sensor Issue	The evaporator inlet temperature sensor is disconnected or the signal is out of range.
Evaporator Return Fluid Over Temp Alarm Threshold	Alarm threshold value used in the [Evaporator Return Fluid Over Temp] event.
Evaporator Return Fluid Over Temp Warning Threshold	Warning threshold value used in the [Evaporator Return Fluid Over Temp] event.
Evaporator Return Fluid Over Temp	[Evaporator Return Fluid Temperature] has exceeded a threshold. The event is deactivated when the temperature drops below the threshold.
Evaporator Return Fluid Temperature	Fluid temperature measured at the inlet of the evaporator.
Evaporator Return Fluid Under Temp Alarm Threshold	Alarm threshold value used in the [Evaporator Return Fluid Under Temp] event.
Evaporator Return Fluid Under Temp Warning Threshold	Warning threshold value used in the [Evaporator Return Fluid Under Temp] event.
Evaporator Return Fluid Under Temp	[Evaporator Return Fluid Temperature] has dropped below a threshold. The event is deactivated when the temperature rises above the threshold.
Fluid Cooling Proportional Band	Temperature control band above [Actual Supply Fluid Temp Set Point]. If [Return Fluid Temperature] is within this band, fluid cooling operations are proportionally controlled.
Fluid Pressure	Fluid pressure. This is the pressure within a closed water/glycol circuit.
Free Cooling External Temperature Delta	Minimum temperature delta required between return fluid and external ambient air temperatures in order to enable free cooling.
Free Cooling Status	Free cooling status.
Free Cooling Utilization	Present free cooling utilization expressed as a percentage of the maximum.
Free Cooling Valve Hours Exceeded	[Free Cooling Valve Hours] has exceeded [Free Cooling Valve Hours Threshold].
Free Cooling Valve Hours Threshold	Threshold value used in the [Free Cooling Valve Hours Exceeded] event.
Free Cooling Valve Hours	Operating hours for free cooling valve since last reset of this value.
Free Cooling Valve Open Position	Free cooling valve open position.
Humidifier Control Board Not Detected	Humidifier control board is required to be connected, but no signal is detected.
Instantaneous Power	Total electrical power currently being consumed.
Low Condenser Refrigerant Pressure	Refrigerant pressure in condenser coil is too low.
Low Fluid Pressure	[Fluid Pressure] has dropped below a specified threshold.
Master Unit Communication Lost	Communication with master unit has been lost.
Modbus Power Meter Communication Lost	Communication with Modbus power meter has been lost.
Output Power Factor	Total power factor, real power/apparent power for all phases combined
Pump 1 Loss of Flow	Loss of flow is detected in pump 1. This condition occurs when no flow is detected through the flow switch.
Pump 1 State	Pump 1 operational state.
Pump 2 Loss of Flow	Loss of flow is detected in pump 2. This condition occurs when no flow is detected through the flow switch.

Table 3-12 Liebert HPC™ (Chiller)—Glossary (continued)

Data Label	Data Description
Pump 2 State	Pump 2 operational state.
Pump Hours Exceeded	[Pump Hours] has exceeded [Pump Hours Threshold].
Pump Hours Threshold	Threshold value used in the [Pump Hours Exceeded] event.
Pump Hours	Operating hours for pump since last reset of this value.
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Reheat Utilization	Present reheating utilization expressed as a percentage of the maximum rated capacity.
Return Fluid Temp Sensor Issue	The return fluid temperature sensor is disconnected or the signal is out of range.
Return Fluid Temperature	Fluid temperature measured at the inlet of the unit.
Server Class	The general classification for this system
Standby Units	The number of standby units.
Subgroup Event Occurred During Communication Loss	While subgroup unit communication was lost, an event occurred on the subgroup unit. Please check subgroup unit event log.
Supply Brine Temp Set Point	Desired brine fluid temperature at the outlet of the unit.
Supply Fluid Over Temp Alarm Threshold	Threshold value used to generate a [Supply Fluid Over Temp] alarm.
Supply Fluid Over Temp	[Supply Fluid Temperature] has exceeded a specified threshold.
Supply Fluid Temp Sensor Issue	The supply fluid temperature sensor is disconnected or the signal is out of range.
Supply Fluid Temp Set Point 1	Set point 1 of desired fluid temperature at the outlet of the unit.
Supply Fluid Temp Set Point 2	Set point 2 of desired fluid temperature at the outlet of the unit.
Supply Fluid Temperature	Fluid temperature measured at the outlet of the unit.
Supply Fluid Under Temp Alarm Threshold	Threshold value used to generate a [Supply Fluid Under Temp] alarm.
Supply Fluid Under Temp	[Supply Fluid Temperature] has dropped below a specified threshold.
Supply Heated Water Temp Set Point	Desired heated water temperature at the outlet of the unit.
Supply Refrigerant Temp Sensor Issue	The supply refrigeramt temperature sensor is disconnected or the signal is out of range.
System Control Mode	System control mode.
System Date and Time	The system date and time
System Event Acknowledge/Reset	Reset and/or acknowledge all events.
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System On/Off Control	Turn system functionality on or off.
System Operating State Reason	The reason the system is in the current operating state.
System Operating State	Current operating state of the system.
System Status	The operating status for the system
Unit Code Missing	Unit code has not been entered and saved.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.

Table 3-12 Liebert HPC™ (Chiller)—Glossary (continued)

Data Label	Data Description
Unit Shutdown Unspecified General Event	One or more unspecified unit shutdown events active. See local unit display for further details.
Unspecified General Event	One or more unspecified events active. See local unit display for further details.

Table 3-13 Liebert XDC™—Status and Coil

Controller	Liebert iCOM® v4				
Data Description	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Pump 1 Loss of Flow	10001	—	1	—	Active on Alarm
Pump 2 Loss of Flow	10002	—	1	—	Active on Alarm
Fan Issue	10003	—	1	—	Active on Alarm
System Condensation Detected	10004	—	1	—	Active on Alarm
Customer Input 1	10005	—	1	—	Active on Alarm
Supply Refrigerant Over Temp	10006	—	1	—	Active on Alarm
Supply Refrigerant Under Temp	10007	—	1	—	Active on Alarm
Supply Refrigerant Temp Sensor Issue	10008	—	1	—	Active on Alarm
Ext Air Sensor A Over Temperature	10009	—	1	—	Active on Alarm
Ext Air Sensor A Under Temperature	10010	—	1	—	Active on Alarm
Ext Air Sensor A Issue	10011	—	1	—	Active on Alarm
Ext Air Sensor B Over Temperature	10012	—	1	—	Active on Alarm
Ext Air Sensor B Under Temperature	10013	—	1	—	Active on Alarm
Ext Air Sensor B Issue	10014	—	1	—	Active on Alarm
Ext Dew Point Over Temperature	10015	—	1	—	Active on Alarm
Pump Short Cycle	10016	—	1	—	Active on Alarm
Compressor 1A High Head Pressure	10017	—	1	—	Active on Alarm
Compressor 1B High Head Pressure	10018	—	1	—	Active on Alarm
Compressor 2A High Head Pressure	10019	—	1	—	Active on Alarm
Compressor 2B High Head Pressure	10020	—	1	—	Active on Alarm
Compressor 1A Short Cycle	10021	—	1	—	Active on Alarm
Compressor 1B Short Cycle	10022	—	1	—	Active on Alarm
Compressor 2A Short Cycle	10023	—	1	—	Active on Alarm
Compressor 2B Short Cycle	10024	—	1	—	Active on Alarm
Circuit 1 Low Suction Pressure	10025	—	1	—	Active on Alarm
Circuit 2 Low Suction Pressure	10026	—	1	—	Active on Alarm
Shutdown - Loss Of Power	10027	—	1	—	Active on Alarm
Smoke Detected	10028	—	1	—	Active on Alarm
Water Under Floor	10029	—	1	—	Active on Alarm
Service Required	10030	—	1	—	Active on Alarm
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-14 Liebert XDC™—Input and Holding

Controller	Liebert iCOM® v4				
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Pump 1 State	30385	—	1	—	0 = Off / 1 = On
Pump 2 State	30386	—	1	—	0 = Off / 1 = On
Supply Refrigerant Temperature	30387	—	1	10	deg C
Supply Refrigerant Temperature	30388	—	1	10	deg F
System Operating State	30389	—	1	—	0 = Off / 1 = On 2 = Standby
Ext Air Sensor A Temperature	30390	—	1	10	deg C
Ext Air Sensor A Temperature	30391	—	1	10	deg F
Ext Air Sensor A Humidity	30392	—	1	10	% RH
Ext Air Sensor A Dew Point Temp	30393	—	1	10	deg C
Ext Air Sensor A Dew Point Temp	30394	—	1	10	deg F
Ext Air Sensor B Temperature	30395	—	1	10	deg C
Ext Air Sensor B Temperature	30396	—	1	10	deg F
Ext Air Sensor B Humidity	30397	—	1	10	% RH
Ext Air Sensor B Dew Point Temp	30398	—	1	10	deg C
Ext Air Sensor B Dew Point Temp	30399	—	1	10	deg F
Dew Point Temperature	30400	—	1	10	deg C
Dew Point Temperature	30401	—	1	10	deg F
Minimum Room Temperature Set Point	30402	40402	1	—	deg C
Minimum Room Temperature Set Point	30403	40403	1	—	deg F
Ext Air Over Temp Threshold	30404	40404	1	—	deg C
Ext Air Over Temp Threshold	30405	40405	1	—	deg F
Ext Air Under Temp Threshold	30406	40406	1	—	deg C
Ext Air Under Temp Threshold	30407	40407	1	—	deg F
Ext Dew Point Over Temp Threshold	30408	40408	1	—	deg C
Ext Dew Point Over Temp Threshold	30409	40409	1	—	deg F
Supply Refrig Over Temp Threshold	30410	40410	1	—	deg C
Supply Refrig Over Temp Threshold	30411	40411	1	—	deg F
Hot Gas Valve 1 Open Position	30412	—	1	100	%
Hot Gas Valve 2 Open Position	30413	—	1	100	%
Hot Gas Solenoid Valve 1 Position	30414	—	1	—	0 = Closed 1 = Open
Hot Gas Solenoid Valve 2 Position	30415	—	1	—	0 = Closed 1 = Open
Compressor 1A State	30416	—	1	—	0 = Off / 1 = On
Compressor 1B State	30417	—	1	—	0 = Off / 1 = On
Compressor 2A State	30418	—	1	—	0 = Off / 1 = On
Compressor 2B State	30419	—	1	—	0 = Off / 1 = On
Calculated Next Maintenance Month	30420	—	1	—	—
Calculated Next Maintenance Year	30421	—	1	—	—
System Status	30422	—	1	—	1 = Normal Operation 2 = Startup 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-14 Liebert XDC™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
System Control Mode	30423	—	1	—	0 = Internal (Auto) 1 = External (Manual)
Maintenance Ramp	30424	—	1	—	%
Auto Restart Delay	30425	40425	1	—	sec
System On/Off Control	30426	40426	1	—	0 = Off / 1 = On
System Event Acknowledge/Reset	—	40427	1	—	2 = Reset 4 = Acknowledge
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-15 Liebert XDP™—Status and Coil

Controller	Liebert iCOM® v4			
Data Label	**Status**	**Coil**	**Number of Bits**	**Notes**
Pumps				
Pump 1 Loss of Flow	10001	—	1	Active on Alarm
Pump 2 Loss of Flow	10002	—	1	Active on Alarm
Pump Short Cycle	10020	—	1	Active on Alarm
System Events				
Fan Issue	10003	—	1	Active on Alarm
System Condensation Detected	10004	—	1	Active on Alarm
Customer Input 1	10005	—	1	Active on Alarm
Shutdown - Loss Of Power	10019	—	1	Active on Alarm
Water Under Floor	10021	—	1	Active on Alarm
Smoke Detected	10022	—	1	Active on Alarm
Service Required	10023	—	1	Active on Alarm
Unit Communication Lost	10262	—	1	Active on Alarm
RAM Battery Issue	10263	—	1	Active on Alarm
Master Unit Communication Lost	10264	—	1	Active on Alarm
Remote Shutdown	10265	—	1	Active on Alarm
Unit Code Missing	10266	—	1	Active on Alarm
Chilled Water				
Supply Chilled Water Over Temp	10006	—	1	Active on Alarm
Supply Chilled Water Temp Sensor Issue	10007	—	1	Active on Alarm
Chilled Water Control Valve Position	10018	—	1	Active on Alarm
Refrigerant				
Supply Refrigerant Over Temp	10008	—	1	Active on Alarm
Supply Refrigerant Under Temp	10009	—	1	Active on Alarm
Supply Refrigerant Temp Sensor Issue	10010	—	1	Active on Alarm
External Air				
Ext Air Sensor A Over Temperature	10011	—	1	Active on Alarm
Ext Air Sensor A Under Temperature	10012	—	1	Active on Alarm
Ext Air Sensor A Issue	10013	—	1	Active on Alarm
Ext Air Sensor B Over Temperature	10014	—	1	Active on Alarm
Ext Air Sensor B Under Temperature	10015	—	1	Active on Alarm
Ext Air Sensor B Issue	10016	—	1	Active on Alarm
Ext Dew Point Over Temperature	10017	—	1	Active on Alarm
Pump Hours 1				
Pump Hours Exceeded	10030	—	1	Active on Alarm
Pump Hours 2				
Pump Hours Exceeded	10036	—	1	Active on Alarm
XD System 1		—		
Ext System Condensation Detected	10042	—	1	Active on Alarm
Ext Fan Issue	10043	—	1	Active on Alarm
Sensor Issue	10044	—	1	Active on Alarm
Ext Remote Shutdown	10045	—	1	Active on Alarm
Hot Aisle Temp Out of Range	10046	—	1	Active on Alarm
Cold Aisle Temp Out of Range	10047	—	1	Active on Alarm

Table 3-15 Liebert XDP™—Status and Coil (continued)

Controller	Liebert iCOM® v4			
Data Label	**Status**	**Coil**	**Number of Bits**	**Notes**
XD System 2				
Ext System Condensation Detected	10053	—	1	Active on Alarm
Ext Fan Issue	10054	—	1	Active on Alarm
Sensor Issue	10055	—	1	Active on Alarm
Ext Remote Shutdown	10056	—	1	Active on Alarm
Hot Aisle Temp Out of Range	10057	—	1	Active on Alarm
Cold Aisle Temp Out of Range	10058	—	1	Active on Alarm
XD System 20				
Ext System Condensation Detected	10251	—	1	Active on Alarm
Ext Fan Issue	10252	—	1	Active on Alarm
Sensor Issue	10253	—	1	Active on Alarm
Ext Remote Shutdown	10254	—	1	Active on Alarm
Hot Aisle Temp Out of Range	10255	—	1	Active on Alarm
Cold Aisle Temp Out of Range	10256	—	1	Active on Alarm
Messages				
Unit On	10272	—	1	Active on Alarm
Unit Off	10273	—	1	Active on Alarm
Unit Standby	10274	—	1	Active on Alarm
Unit Partial Shutdown	10275	—	1	Active on Alarm
Unit Shutdown	10276	—	1	Active on Alarm
Maintenance Due	10277	—	1	Active on Alarm
Maintenance Completed	10278	—	1	Active on Alarm

Table 3-16 Liebert XDP™—Input and Holding

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
Pumps					
Pump 1 State	30385	—	1	—	0 = off 1 = on
Pump 2 State	30386	—	1	—	0 = off 1 = on
Refrigerant					
Supply Refrigerant Temperature	30387	—	1	10	Units : deg C
Supply Refrigerant Temperature	30388	—	1	10	Units : deg F
Supply Refrig Over Temp Threshold	30411	40411	1	10	Units : deg C
Supply Refrig Over Temp Threshold	30412	40412	1	10	Units : deg F
Chilled Water					
Supply Chilled Water Temperature	30389	—	1	10	Units : deg C
Supply Chilled Water Temperature	30390	—	1	10	Units : deg F
Supply Chilled Water Over Temp Threshold	30413	40413	1	10	Units : deg C
Supply Chilled Water Over Temp Threshold	30414	40414	1	10	Units : deg F
Chilled Water Valve Open Position	31710	—	1	—	—
System Information					
System Status	30391	—	1	—	1 = Normal Operation 2 = Startup 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
System Operating State	30392	—	1	—	0 = off 1 = on 2 = standby
Auto Restart Delay	30417	40417	1	—	Units : sec
System Control Mode	30418	—	1	—	0 = Internal (Auto) 1 = External (Manual)
Maintenance Ramp	30419	—	1	—	Units : %
Calculated Next Maintenance Month	30420	—	1	—	
Calculated Next Maintenance Year	30421	—	1	—	
System On/Off Control	30422	40422	1	—	0 = off 1 = on
System Operating State Reason	31704	—	1	—	0 = Reason Unknown 1 = Network Display 2 = Alarm 3 = Schedule 4 = Remote System 5 = External Input 6 = Local Display
External Air					
Ext Air Sensor A Temperature	30393	—	1	10	Units : deg C
Ext Air Sensor A Temperature	30394	—	1	10	Units : deg F
Ext Air Sensor A Humidity	30395	—	1	10	Units : % RH
Ext Air Sensor A Dew Point Temp	30396	—	1	10	Units : deg C
Ext Air Sensor A Dew Point Temp	30397	—	1	10	Units : deg F
Ext Air Sensor B Temperature	30398	—	1	10	Units : deg C
Ext Air Sensor B Temperature	30399	—	1	10	Units : deg F
Ext Air Sensor B Humidity	30400	—	1	10	Units : % RH
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
Ext Air Sensor B Dew Point Temp	30401	—	1	10	Units : deg C
Ext Air Sensor B Dew Point Temp	30402	—	1	10	Units : deg F
Minimum Room Temperature Set Point	30403	40403	1	10	Units : deg C
Minimum Room Temperature Set Point	30404	40404	1	10	Units : deg F
Ext Air Over Temp Threshold	30405	40405	1	10	Units : deg C
Ext Air Over Temp Threshold	30406	40406	1	10	Units : deg F
Ext Air Under Temp Threshold	30407	40407	1	10	Units : deg C
Ext Air Under Temp Threshold	30408	40408	1	10	Units : deg F
Ext Dew Point Over Temp Threshold	30409	40409	1	10	Units : deg C
Ext Dew Point Over Temp Threshold	30410	40410	1	10	Units : deg F
Dew Point Temperature	30415	—	1	10	Units : deg C
Dew Point Temperature	30416	—	1	10	Units : deg F
Time					
System Date and Time	39998	49998	2	—	Secs since Epoch (UTC)
Pump Hours 1					
Pump Hours	30430	40430	1	—	Units : hr
Pump Hours Threshold	30431	40431	1	—	Units : hr
Pump Hours 2					
Pump Hours	30437	40437	1	—	Units : hr
Pump Hours Threshold	30438	40438	1	—	Units : hr
XD System 1					
Communication Status	30444	—	1	—	0 = Connected 1 = Not Connected
Fan On/Off Control	30445	40445	1	—	0 = off 1 = on
Primary Fan Group State	30446	—	1	—	0 = off 1 = on 2 = economy
Fan Button Control	30447	40447	1	—	0 = enabled 1 = disabled
Visual ID Control	30448	40448	1	—	0 = disabled 1 = enabled
Cooling Capacity	30449	—	1	—	Units : %
Cooling Capacity	30450	—	1	—	Units : kW
Ext System Condensation Detected - Event Control	30451	40451	1	—	0 = disabled 1 = enabled
Ext System Condensation Detected - Event Type	30452	40452	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Fan Issue - Event Control	30453	40453	1	—	0 = disabled 1 = enabled
Ext Fan Issue - Event Type	30454	40454	1	—	0 = Message 1 = Warning 2 = Alarm
Sensor Issue - Event Control	30455	40455	1	—	0 = disabled 1 = enabled
Sensor Issue - Event Type	30456	40456	1	—	0 = Message 1 = Warning 2 = Alarm

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
Ext Remote Shutdown - Event Control	30457	40457	1	—	0 = disabled 1 = enabled
Ext Remote Shutdown - Event Type	30458	40458	1	—	0 = Message 1 = Warning 2 = Alarm
Hot Aisle Over Temp Threshold	30459	40459	1	—	Units : deg C
Hot Aisle Over Temp Threshold	30460	40460	1	—	Units : deg F
Hot Aisle Under Temp Threshold	30461	40461	1	—	Units : deg C
Hot Aisle Under Temp Threshold	30462	40462	1	—	Units : deg F
Cold Aisle Over Temp Threshold	30463	40463	1	—	Units : deg C
Cold Aisle Over Temp Threshold	30464	40464	1	—	Units : deg F
Cold Aisle Under Temp Threshold	30465	40465	1	—	Units : deg C
Cold Aisle Under Temp Threshold	30466	40466	1	—	Units : deg F
XD System 2					
Communication Status	30472	—	1	—	0 = Connected 1 = Not Connected
Fan On/Off Control	30473	40473	1	—	0 = off 1 = on
Primary Fan Group State	30474	—	1	—	0 = off 1 = on 2 = economy
Fan Button Control	30475	40475	1	—	0 = enabled 1 = disabled
Visual ID Control	30476	40476	1	—	0 = disabled 1 = enabled
Cooling Capacity	30477	—	1	—	Units : %
Cooling Capacity	30478	—	1	—	Units : kW
Ext System Condensation Detected - Event Control	30479	40479	1	—	0 = disabled 1 = enabled
Ext System Condensation Detected - Event Type	30480	40480	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Fan Issue - Event Control	30481	40481	1	—	0 = disabled 1 = enabled
Ext Fan Issue - Event Type	30482	40482	1	—	0 = Message 1 = Warning 2 = Alarm
Sensor Issue - Event Control	30483	40483	1	—	0 = disabled 1 = enabled
Sensor Issue - Event Type	30484	40484	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Remote Shutdown - Event Control	30485	40485	1	—	0 = disabled 1 = enabled
Ext Remote Shutdown - Event Type	30486	40486	1	—	0 = Message 1 = Warning 2 = Alarm
Hot Aisle Over Temp Threshold	30487	40487	1	—	Units : deg C
Hot Aisle Over Temp Threshold	30488	40488	1	—	Units : deg F
Hot Aisle Under Temp Threshold	30489	40489	1	—	Units : deg C

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
Hot Aisle Under Temp Threshold	30490	40490	1	—	Units : deg F
Cold Aisle Over Temp Threshold	30491	40491	1	—	Units : deg C
Cold Aisle Over Temp Threshold	30492	40492	1	—	Units : deg F
Cold Aisle Under Temp Threshold	30493	40493	1	—	Units : deg C
Cold Aisle Under Temp Threshold	30494	40494	1	—	Units : deg F
XD System 20					
Communication Status	30976	—	1	—	0 = Connected 1 = Not Connected
Fan On/Off Control	30977	40977	1	—	0 = off 1 = on
Primary Fan Group State	30978	—	1	—	0 = off 1 = on 2 = economy
Fan Button Control	30979	40979	1	—	0 = enabled 1 = disabled
Visual ID Control	30980	40980	1	—	0 = disabled 1 = enabled
Cooling Capacity	30981	—	1	—	Units : %
Cooling Capacity	30982	—	1	—	Units : kW
Ext System Condensation Detected - Event Control	30983	40983	1	—	0 = disabled 1 = enabled
Ext System Condensation Detected - Event Type	30984	40984	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Fan Issue - Event Control	30985	40985	1	—	0 = disabled 1 = enabled
Ext Fan Issue - Event Type	30986	40986	1	—	0 = Message 1 = Warning 2 = Alarm
Sensor Issue - Event Control	30987	40987	1	—	0 = disabled 1 = enabled
Sensor Issue - Event Type	30988	40988	1	—	0 = Message 1 = Warning 2 = Alarm
Ext Remote Shutdown - Event Control	30989	40989	1	—	0 = disabled 1 = enabled
Ext Remote Shutdown - Event Type	30990	40990	1	—	0 = Message 1 = Warning 2 = Alarm
Hot Aisle Over Temp Threshold	30991	40991	1	—	Units : deg C
Hot Aisle Over Temp Threshold	30992	40992	1	—	Units : deg F
Hot Aisle Under Temp Threshold	30993	40993	1	—	Units : deg C
Hot Aisle Under Temp Threshold	30994	40994	1	—	Units : deg F
Cold Aisle Over Temp Threshold	30995	40995	1	—	Units : deg C
Cold Aisle Over Temp Threshold	30996	40996	1	—	Units : deg F
Cold Aisle Under Temp Threshold	30997	40997	1	—	Units : deg C
Cold Aisle Under Temp Threshold	30998	40998	1	—	Units : deg F
XD System 1 Temperature Sensor 1					
Remote Sensor Temperature	31004	—	1	10	Units : deg C
Remote Sensor Temperature	31005	—	1	10	Units : deg F

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
XD System 1 Temperature Sensor 2					
Remote Sensor Temperature	31011	—	1	10	Units : deg C
Remote Sensor Temperature	31012	—	1	10	Units : deg F
XD System 1 Temperature Sensor 4					
Remote Sensor Temperature	31025	—	1	10	Units : deg C
Remote Sensor Temperature	31026	—	1	10	Units : deg F
XD System 1 Secondary Fans					
Fan State	31032	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31033	41033	1	—	0 = disabled 1 = automatic 2 = manual
XD System 2 Temperature Sensor 1					
Remote Sensor Temperature	31039	—	1	10	Units : deg C
Remote Sensor Temperature	31040	—	1	10	Units : deg F
XD System 2 Temperature Sensor 2					
Remote Sensor Temperature	31046	—	1	10	Units : deg C
Remote Sensor Temperature	31047	—	1	10	Units : deg F
XD System 2 Temperature Sensor 4					
Remote Sensor Temperature	31060	—	1	10	Units : deg C
Remote Sensor Temperature	31061	—	1	10	Units : deg F
XD System 2 Secondary Fans					
Fan State	31067	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31068	41068	1	—	0 = disabled 1 = automatic 2 = manual
XD System 3 Temperature Sensor 1					
Remote Sensor Temperature	31074	—	1	10	Units : deg C
Remote Sensor Temperature	31075	—	1	10	Units : deg F
XD System 3 Temperature Sensor 2					
Remote Sensor Temperature	31081	—	1	10	Units : deg C
Remote Sensor Temperature	31082	—	1	10	Units : deg F
XD System 3 Temperature Sensor 4					
Remote Sensor Temperature	31095	—	1	10	Units : deg C
Remote Sensor Temperature	31096	—	1	10	Units : deg F
XD System 3 Secondary Fans					
Fan State	31102	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31103	41103	1	—	0 = disabled 1 = automatic 2 = manual
XD System 4 Temperature Sensor 1					
Remote Sensor Temperature	31109	—	1	10	Units : deg C
Remote Sensor Temperature	31110	—	1	10	Units : deg F

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
XD System 4 Temperature Sensor 2					
Remote Sensor Temperature	31116	—	1	10	Units : deg C
Remote Sensor Temperature	31117	—	1	10	Units : deg F
XD System 4 Temperature Sensor 4					
Remote Sensor Temperature	31130	—	1	10	Units : deg C
Remote Sensor Temperature	31131	—	1	10	Units : deg F
XD System 4 Secondary Fans					
Fan State	31137	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31138	41138	1	—	0 = disabled 1 = automatic 2 = manual
XD System 5 Temperature Sensor 1					
Remote Sensor Temperature	31144	—	1	10	Units : deg C
Remote Sensor Temperature	31145	—	1	10	Units : deg F
XD System 5 Temperature Sensor 2					
Remote Sensor Temperature	31151	—	1	10	Units : deg C
Remote Sensor Temperature	31152	—	1	10	Units : deg F
XD System 5 Temperature Sensor 4					
Remote Sensor Temperature	31165	—	1	10	Units : deg C
Remote Sensor Temperature	31166	—	1	10	Units : deg F
XD System 5 Secondary Fans					
Fan State	31172	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31173	41173	1	—	0 = disabled 1 = automatic 2 = manual
XD System 6 Temperature Sensor 1					
Remote Sensor Temperature	31179	—	1	10	Units : deg C
Remote Sensor Temperature	31180	—	1	10	Units : deg F
XD System 6 Temperature Sensor 2					
Remote Sensor Temperature	31186	—	1	10	Units : deg C
Remote Sensor Temperature	31187	—	1	10	Units : deg F
XD System 6 Temperature Sensor 4					
Remote Sensor Temperature	31200	—	1	10	Units : deg C
Remote Sensor Temperature	31201	—	1	10	Units : deg F
XD System 6 Secondary Fans					
Fan State	31207	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31208	41208	1	—	0 = disabled 1 = automatic 2 = manual
XD System 7 Temperature Sensor 1					
Remote Sensor Temperature	31214	—	1	10	Units : deg C
Remote Sensor Temperature	31215	—	1	10	Units : deg F

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
XD System 7 Temperature Sensor 2					
Remote Sensor Temperature	31221	—	1	10	Units : deg C
Remote Sensor Temperature	31222	—	1	10	Units : deg F
XD System 7 Temperature Sensor 4					
Remote Sensor Temperature	31235	—	1	10	Units : deg C
Remote Sensor Temperature	31236	—	1	10	Units : deg F
XD System 7 Secondary Fans					
Fan State	31242	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31243	41243	1	—	0 = disabled 1 = automatic 2 = manual
XD System 8 Temperature Sensor 1					
Remote Sensor Temperature	31249	—	1	10	Units : deg C
Remote Sensor Temperature	31250	—	1	10	Units : deg F
XD System 8 Temperature Sensor 2					
Remote Sensor Temperature	31256	—	1	10	Units : deg C
Remote Sensor Temperature	31257	—	1	10	Units : deg F
XD System 8 Temperature Sensor 4					
Remote Sensor Temperature	31270	—	1	10	Units : deg C
Remote Sensor Temperature	31271	—	1	10	Units : deg F
XD System 8 Secondary Fans					
Fan State	31277	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31278	41278	1	—	0 = disabled 1 = automatic 2 = manual
XD System 9 Temperature Sensor 1					
Remote Sensor Temperature	31284	—	1	10	Units : deg C
Remote Sensor Temperature	31285	—	1	10	Units : deg F
XD System 9 Temperature Sensor 2					
Remote Sensor Temperature	31291	—	1	10	Units : deg C
Remote Sensor Temperature	31292	—	1	10	Units : deg F
XD System 9 Temperature Sensor 4					
Remote Sensor Temperature	31305	—	1	10	Units : deg C
Remote Sensor Temperature	31306	—	1	10	Units : deg F
XD System 9 Secondary Fans					
Fan State	31312	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31313	41313	1	—	0 = disabled 1 = automatic 2 = manual
XD System 10 Temperature Sensor 1					
Remote Sensor Temperature	31319	—	1	10	Units : deg C
Remote Sensor Temperature	31320	—	1	10	Units : deg F

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
XD System 10 Temperature Sensor 2					
Remote Sensor Temperature	31326	—	1	10	Units : deg C
Remote Sensor Temperature	31327	—	1	10	Units : deg F
XD System 10 Temperature Sensor 4					
Remote Sensor Temperature	31340	—	1	10	Units : deg C
Remote Sensor Temperature	31341	—	1	10	Units : deg F
XD System 10 Secondary Fans					
Fan State	31347	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31348	41348	1	—	0 = disabled 1 = automatic 2 = manual
XD System 11 Temperature Sensor 1					
Remote Sensor Temperature	31354	—	1	10	Units : deg C
Remote Sensor Temperature	31355	—	1	10	Units : deg F
XD System 11 Temperature Sensor 2					
Remote Sensor Temperature	31361	—	1	10	Units : deg C
Remote Sensor Temperature	31362	—	1	10	Units : deg F
XD System 11 Temperature Sensor 4					
Remote Sensor Temperature	31375	—	1	10	Units : deg C
Remote Sensor Temperature	31376	—	1	10	Units : deg F
XD System 11 Secondary Fans					
Fan State	31382	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31383	41383	1	—	0 = disabled 1 = automatic 2 = manual
XD System 12 Temperature Sensor 1					
Remote Sensor Temperature	31389	—	1	10	Units : deg C
Remote Sensor Temperature	31390	—	1	10	Units : deg F
XD System 12 Temperature Sensor 2					
Remote Sensor Temperature	31396	—	1	10	Units : deg C
Remote Sensor Temperature	31397	—	1	10	Units : deg F
XD System 12 Temperature Sensor 4					
Remote Sensor Temperature	31410	—	1	10	Units : deg C
Remote Sensor Temperature	31411	—	1	10	Units : deg F
XD System 12 Secondary Fans					
Fan State	31417	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31418	41418	1	—	0 = disabled 1 = automatic 2 = manual
XD System 13 Temperature Sensor 1					
Remote Sensor Temperature	31424	—	1	10	Units : deg C
Remote Sensor Temperature	31425	—	1	10	Units : deg F

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
XD System 13 Temperature Sensor 2					
Remote Sensor Temperature	31431	—	1	10	Units : deg C
Remote Sensor Temperature	31432	—	1	10	Units : deg F
XD System 13 Temperature Sensor 4					
Remote Sensor Temperature	31445	—	1	10	Units : deg C
Remote Sensor Temperature	31446	—	1	10	Units : deg F
XD System 13 Secondary Fans					
Fan State	31452	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31453	41453	1	—	0 = disabled 1 = automatic 2 = manual
XD System 14 Temperature Sensor 1					
Remote Sensor Temperature	31459	—	1	10	Units : deg C
Remote Sensor Temperature	31460	—	1	10	Units : deg F
XD System 14 Temperature Sensor 2					
Remote Sensor Temperature	31466	—	1	10	Units : deg C
Remote Sensor Temperature	31467	—	1	10	Units : deg F
XD System 14 Temperature Sensor 4					
Remote Sensor Temperature	31480	—	1	10	Units : deg C
Remote Sensor Temperature	31481	—	1	10	Units : deg F
XD System 14 Secondary Fans					
Fan State	31487	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31488	41488	1	—	0 = disabled 1 = automatic 2 = manual
XD System 15 Temperature Sensor 1					
Remote Sensor Temperature	31494	—	1	10	Units : deg C
Remote Sensor Temperature	31495	—	1	10	Units : deg F
XD System 15 Temperature Sensor 2					
Remote Sensor Temperature	31501	—	1	10	Units : deg C
Remote Sensor Temperature	31502	—	1	10	Units : deg F
XD System 15 Temperature Sensor 4					
Remote Sensor Temperature	31515	—	1	10	Units : deg C
Remote Sensor Temperature	31516	—	1	10	Units : deg F
XD System 15 Secondary Fans					
Fan State	31522	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31523	41523	1	—	0 = disabled 1 = automatic 2 = manual
XD System 16 Temperature Sensor 1					
Remote Sensor Temperature	31529	—	1	10	Units : deg C
Remote Sensor Temperature	31530	—	1	10	Units : deg F

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
XD System 16 Temperature Sensor 2					
Remote Sensor Temperature	31536	—	1	10	Units : deg C
Remote Sensor Temperature	31537	—	1	10	Units : deg F
XD System 16 Temperature Sensor 4					
Remote Sensor Temperature	31550	—	—	10	Units : deg C
Remote Sensor Temperature	31551	—	—	10	Units : deg F
XD System 16 Secondary Fans					
Fan State	31557	—	—	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31558	41558	1	—	0 = disabled 1 = automatic 2 = manual
XD System 17 Temperature Sensor 1					
Remote Sensor Temperature	31564	—	1	10	Units : deg C
Remote Sensor Temperature	31565	—	1	10	Units : deg F
XD System 17 Temperature Sensor 2					
Remote Sensor Temperature	31571	—	1	10	Units : deg C
Remote Sensor Temperature	31572	—	1	10	Units : deg F
XD System 17 Temperature Sensor 4					
Remote Sensor Temperature	31585	—	1	10	Units : deg C
Remote Sensor Temperature	31586	—	1	10	Units : deg F
XD System 17 Secondary Fans					
Fan State	31592	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31593	41593	1	—	0 = disabled 1 = automatic 2 = manual
XD System 18 Temperature Sensor 1					
Remote Sensor Temperature	31599	—	1	10	Units : deg C
Remote Sensor Temperature	31600	—	1	10	Units : deg F
XD System 18 Temperature Sensor 2		—			
Remote Sensor Temperature	31606	—	1	10	Units : deg C
Remote Sensor Temperature	31607	—	1	10	Units : deg F
XD System 18 Temperature Sensor 4					
Remote Sensor Temperature	31620	—	1	10	Units : deg C
Remote Sensor Temperature	31621	—	1	10	Units : deg F
XD System 18 Secondary Fans					
Fan State	31627	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31628	41628	1	—	0 = disabled 1 = automatic 2 = manual
XD System 19 Temperature Sensor 1					
Remote Sensor Temperature	31634	—	1	10	Units : deg C
Remote Sensor Temperature	31635	—	1	10	Units : deg F

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-16 Liebert XDP™—Input and Holding (continued)

Controller	Liebert iCOM® v4				
Data Label	**Input**	**Holding**	**# of Reg**	**Scale**	**Notes/Units**
XD System 19 Temperature Sensor 2					
Remote Sensor Temperature	31641	—	1	10	Units : deg C
Remote Sensor Temperature	31642	—	1	10	Units : deg F
XD System 19 Temperature Sensor 4					
Remote Sensor Temperature	31655	—	1	10	Units : deg C
Remote Sensor Temperature	31656	—	1	10	Units : deg F
XD System 19 Secondary Fans					
Fan State	31662	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31663	41663	1	—	0 = disabled 1 = automatic 2 = manual
XD System 20 Temperature Sensor 1					
Remote Sensor Temperature	31669	—	1	10	Units : deg C
Remote Sensor Temperature	31670	—	1	10	Units : deg F
XD System 20 Temperature Sensor 2					
Remote Sensor Temperature	31676	—	1	10	Units : deg C
Remote Sensor Temperature	31677	—	1	10	Units : deg F
XD System 20 Temperature Sensor 4					
Remote Sensor Temperature	31690	—	1	10	Units : deg C
Remote Sensor Temperature	31691	—	1	10	Units : deg F
XD System 20 Secondary Fans					
Fan State	31697	—	1	—	0 = off 1 = on 2 = economy
Fan Economy Mode	31698	41698	1	—	0 = disabled 1 = automatic 2 = manual

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-17 Liebert XDP™—Glossary

Controller	Liebert iCOM® v4
Data Label	**Data Description**
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
Calculated Next Maintenance Month	Calculated month of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Year].
Calculated Next Maintenance Year	Calculated year of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Month].
Chilled Water Control Valve Failure	Chilled water valve out of position. Chilled water control valve position does not match expected value.
Chilled Water Valve Open Position	Chilled water valve open position.
Cold Aisle Over Temp Threshold	Upper threshold value used in the [Cold Aisle Temp Out of Range] event.
Cold Aisle Temp Out of Range	The air temperature in the cold aisle is either above [Cold Aisle Over Temp Threshold] or below [Cold Aisle Under Temp Threshold].
Cold Aisle Under Temp Threshold	Lower threshold value used in the [Cold Aisle Temp Out of Range] event.
Communication Status	Communication status of remote device.
Cooling Capacity	Cooling capacity in use, expressed as a percentage of the maximum rated capacity.
Cooling Capacity	Cooling capacity in use, expressed in kilowatts.
Customer Input 1	Customer input 1.
Dew Point Temperature	Dew point temperature, using the highest reading from all sensors.
Ext Air Over Temp Threshold	Threshold value used in the ([Ext Air Sensor A Over Temperature], [Ext Air Sensor B Over Temperature]...) events.
Ext Air Sensor A Dew Point Temp	Dew point temperature as measured by External Air Sensor A.
Ext Air Sensor A Humidity	Relative humidity as measured by External Air Sensor A.
Ext Air Sensor A Issue	The External Air Sensor A is disconnected or the signal is out of range.
Ext Air Sensor A Over Temperature	[Ext Air Sensor A Temperature] has exceeded [Ext Air Over Temp Threshold].
Ext Air Sensor A Temperature	Air temperature as measured by External Air Sensor A.
Ext Air Sensor A Under Temperature	[Ext Air Sensor A Temperature] has dropped below [Ext Air Under Temp Threshold].
Ext Air Sensor B Dew Point Temp	Dew point temperature as measured by External Air Sensor B.
Ext Air Sensor B Humidity	Relative humidity as measured by External Air Sensor B.
Ext Air Sensor B Issue	The External Air Sensor B is disconnected or the signal is out of range.
Ext Air Sensor B Over Temperature	[Ext Air Sensor B Temperature] has exceeded [Ext Air Over Temp Threshold].
Ext Air Sensor B Temperature	Air temperature as measured by External Air Sensor B.
Ext Air Sensor B Under Temperature	[Ext Air Sensor B Temperature] has dropped below [Ext Air Under Temp Threshold].
Ext Air Under Temp Threshold	Threshold value used in the ([Ext Air Sensor A Under Temperature], [Ext Air Sensor B Under Temperature]...) events.
Ext Dew Point Over Temp Threshold	Threshold value used in the [Ext Dew Point Over Temperature] event.
Ext Dew Point Over Temperature	At least one dew point temperature reading ([Ext Air Sensor A Dew Point Temp], [Ext Air Sensor B Dew Point Temp]...) has exceeded [Ext Dew Point Over Temp Threshold].
Ext Fan Issue - Event Control	Enable/disable the activation of the [Ext Fan Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Fan Issue - Event Type	The event type for the [Ext Fan Issue] event.
Ext Fan Issue	One or more fans are not operating within their operational parameters.
Ext Remote Shutdown - Event Control	Enable/disable the activation of the [Remote Shutdown] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Remote Shutdown - Event Type	The event type for the [Remote Shutdown] event.
Ext Remote Shutdown	Unit is shut down by a remote signal.

Table 3-17 Liebert XDP™—Glossary (continued)

Controller	Liebert iCOM® v4
Data Label	**Data Description**
Ext System Condensation Detected - Event Control	Enable/disable the activation of the [Ext System Condensation Detected] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext System Condensation Detected - Event Type	The event type for the [Ext System Condensation Detected] event.
Ext System Condensation Detected	External system condensation detected.
Fan Button Control	Enable or disable the buttons from controlling the state of the fans.
Fan Economy Mode	Mode in which system secondary fans are to be controlled.
Fan Issue	One or more fans are not operating within their operational parameters.
Fan On/Off Control	Turn system fans on or off.
Fan State	Current operational state of a group of fans.
Hot Aisle Over Temp Threshold	Upper threshold value used in the [Hot Aisle Temp Out of Range] event.
Hot Aisle Temp Out of Range	The air temperature in the Hot aisle is either above [Hot Aisle Over Temp Threshold] or below [Hot Aisle Under Temp Threshold].
Hot Aisle Under Temp Threshold	Lower threshold value used in the [Hot Aisle Temp Out of Range] event.
Maintenance Completed	Maintenance has been completed on the unit.
Maintenance Due	The calculated maintenance date has been reached.
Maintenance Ramp	The ratio of operations performed to the calculated operations available between maintenance intervals.
Master Unit Communication Lost	Communication with master unit has been lost.
Minimum Room Temperature Set Point	Minimum desired room air temperature. If the room air temperature falls below this set point, the unit will reduce the cooling.
Primary Fan Group State	Current operational state of the primary fan group.
Pump 1 Loss of Flow	Loss of flow is detected in pump 1. The loss of flow condition occurs when no differential pressure is detected across the pump.
Pump 1 State	Pump 1 operational state.
Pump 2 Loss of Flow	Loss of flow is detected in pump 2. The loss of flow condition occurs when no differential pressure is detected across the pump.
Pump 2 State	Pump 2 operational state.
Pump Hours Exceeded	[Pump Hours] has exceeded [Pump Hours Threshold].
Pump Hours Threshold	Threshold value used in the [Pump Hours Exceeded] event.
Pump Hours	Operating hours for pump since last reset of this value.
Pump Short Cycle	Pumps have short cycled. A short cycle is defined as turning on and off a number of times over a set time period.
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Remote Shutdown	Unit is shut down by a remote signal.
Sensor Issue - Event Control	Enable/disable the activation of the [Sensor Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Sensor Issue - Event Type	The event type for the [Sensor Issue] event.
Sensor Issue	One or more sensors are disconnected or the signals are out of range.
Sensor Temperature	Temperature as measured by sensor.
Service Required	Unit requires servicing.
Shutdown - Loss Of Power	System lost power. This event becomes active when the unit is powered on following an unexpected loss of power.
Smoke Detected	Smoke detected.
Supply Chilled Water Over Temp Threshold	Threshold value used in the [Supply Chilled Water Over Temp] event.
Supply Chilled Water Over Temp	Chilled water temperature is too high, as indicated by an external input signal.

Table 3-17 Liebert XDP™—Glossary (continued)

Controller	Liebert iCOM® v4
Data Label	**Data Description**
Supply Chilled Water Temp Sensor Issue	The supply chilled water temperature sensor is disconnected or the signal is out of range.
Supply Chilled Water Temperature	Supply chilled water temperature.
Supply Refrig Over Temp Threshold	Threshold value used in the [Supply Refrigerant Over Temp] event.
Supply Refrigerant Over Temp	Event that is activated when [Supply Refrigerant Temperature] exceeds [Supply Refrig Over Temp Threshold]. The event is deactivated when the temperature drops below the threshold.
Supply Refrigerant Temp Sensor Issue	The supply refrigeramt temperature sensor is disconnected or the signal is out of range.
Supply Refrigerant Temperature	Supply refrigerant temperature.
Supply Refrigerant Under Temp	[Supply Refrigerant Temperature] has dropped below a specified threshold.
System Condensation Detected	System condensation detected.
System Control Mode	System control mode.
System Date and Time	The system date and time
System On/Off Control	Turn system functionality on or off.
System Operating State Reason	The reason the system is in the current operating state.
System Operating State	Current operating state of the system.
System Status	The operating status for the system
Unit Code Missing	Unit code has not been entered and saved.
Unit Communication Lost	Master has lost communication with one or more networked units.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Partial Shutdown	An event has occurred requiring some system components to be shutdown and disabled.
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
Unit Standby	Unit was placed in standby mode.
Visual ID Control	Visual identification control to display an LED flashing sequence, allowing it to be visually located.
Water Under Floor	Water under the floor is detected.

Table 3-18 Liebert iCOM® DCL™—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
Air Temperature				
Supply Air Over Temperature	10001		1	Active on Alarm
Supply Air Under Temperature	10002		1	Active on Alarm
Return Air Over Temperature	10003		1	Active on Alarm
Supply Air Sensor Issue	10004		1	Active on Alarm
Return Air Sensor Issue	10005		1	Active on Alarm
Unit Top Return Air Sensor Failure	10006		1	Active on Alarm
Unit Middle Return Air Sensor Failure	10007		1	Active on Alarm
Unit Bottom Return Air Sensor Failure	10008		1	Active on Alarm
Unit Top Supply Air Sensor Failure	10009		1	Active on Alarm
Unit Middle First Supply Air Sensor Failure	10010		1	Active on Alarm
Unit Middle Second Supply Air Sensor Failure	10011		1	Active on Alarm
Unit Bottom Supply Air Sensor Failure	10012		1	Active on Alarm
Pipe Temperature Sensor Failure	10013		1	Active on Alarm
Humidity				
High Return Humidity	10024		1	Active on Alarm
Low Return Humidity	10025		1	Active on Alarm
Dehumidifier Hours Exceeded	10026		1	Active on Alarm
Fans				
Loss of Air Flow	10037		1	Active on Alarm
Fan Hours Exceeded	10038		1	Active on Alarm
Top Fan Issue	10039		1	Active on Alarm
Bottom Fan Issue	10040		1	Active on Alarm
Remote Sensors 1				
Remote Sensor Issue	10051		1	Active on Alarm
Remote Sensors 2				
Remote Sensor Issue	10062		1	Active on Alarm
Remote Sensors 4				
Remote Sensor Issue	10084		1	Active on Alarm
Chilled Water				
Chilled Water Control Valve Failure	10095		1	Active on Alarm
Supply Chilled Water Loss of Flow	10096		1	Active on Alarm
Chilled Water Control Active	10097		1	Active on Alarm
Modbus 0-10V Module Communication Failure	10098		1	Active on Alarm
Chilled Water Circuit 1				
Chilled Water Flow Transducer Failure	10109		1	Active on Alarm
Chilled Water Inlet Temperature Sensor Failure	10110		1	Active on Alarm
Chilled Water High Inlet Temperature	10111		1	Active on Alarm
Chilled Water Circuit 2				
Chilled Water Flow Transducer Failure	10122		1	Active on Alarm
Chilled Water Inlet Temperature Sensor Failure	10123		1	Active on Alarm
Chilled Water High Inlet Temperature	10124		1	Active on Alarm
System Events				
Customer Input 1	10135		1	Active on Alarm
Customer Input 2	10136		1	Active on Alarm
Customer Input 3	10137		1	Active on Alarm

Table 3-18 Liebert iCOM® DCL™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
Customer Input 4	10138		1	Active on Alarm
Smoke Detected	10139		1	Active on Alarm
Water Under Floor	10140		1	Active on Alarm
Service Required	10141		1	Active on Alarm
Ext Over Temperature	10142		1	Active on Alarm
Ext Loss of Flow	10143		1	Active on Alarm
Ext Condenser Pump High Water	10144		1	Active on Alarm
Ext Standby Glycol Pump On	10145		1	Active on Alarm
External Fire Detected	10146		1	Active on Alarm
Unit On	10147		1	Active on Alarm
Unit Off	10148		1	Active on Alarm
Unit Partial Shutdown	10149		1	Active on Alarm
Unit Shutdown	10150		1	Active on Alarm
Water Leakage Detector Sensor Issue	10151		1	Active on Alarm
BMS Communications Timeout	10152		1	Active on Alarm
Maintenance Due	10153		1	Active on Alarm
Maintenance Completed	10154		1	Active on Alarm
RAM Battery Issue	10155		1	Active on Alarm
High Power Shutdown	10156		1	Active on Alarm
Unspecified General Event	10157		1	Active on Alarm
Rack Doors Open	10158		1	Active on Alarm

Table 3-19 Liebert iCOM® DCL™—Input and Status

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Protocol					
Server Class	30385		1		1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
Air Temperature					
Supply Air Temperature	30396		1	10	Units : deg C Int16
Supply Air Temperature	30397		1	10	Units : deg F Int16
Return Air Temperature	30398		1	10	Units : deg C Int16
Return Air Temperature	30399		1	10	Units : deg F Int16
Return Dew Point	30400		1	10	Units : deg C Int16
Return Dew Point	30401		1	10	Units : deg F Int16
Remote Sensor Minimum Temperature	30402		1	10	Units : deg C Int16
Remote Sensor Minimum Temperature	30403		1	10	Units : deg F Int16
Remote Sensor Maximum Temperature	30404		1	10	Units : deg C Int16
Remote Sensor Maximum Temperature	30405		1	10	Units : deg F Int16
Remote Sensor Average Temperature	30406		1	10	Units : deg C Int16
Remote Sensor Average Temperature	30407		1	10	Units : deg F Int16
Air Temperature Set Point	30408	40408	1	10	Units : deg C Int16
Air Temperature Set Point	30409	40409	1	10	Units : deg F Int16
Cooling Proportional Band	30410	40410	1	10	Units : deg C Int16
Cooling Proportional Band	30411	40411	1	10	Units : deg F Int16
Air Temperature Dead Band	30412	40412	1	10	Units : deg C Int16
Air Temperature Dead Band	30413	40413	1	10	Units : deg F Int16
Air Temperature Control Sensor	30414	40414	1		0 = Supply 1 = Remote 2 = Return
Remote Sensor Temperature Calculation	30415	40415	1		0 = Average 1 = Maximum

Table 3-19 Liebert iCOM® DCL™—Input and Status (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
High Supply Air Temperature Threshold	30416	40416	1	10	Units : deg C Int16
High Supply Air Temperature Threshold	30417	40417	1	10	Units : deg F Int16
Return Temperature/Humidity Sensor Control Type	30418	40418	1		0 = Average 1 = Maximum 2 = Top Sensor 3 = Middle Sensor 4 = Bottom Sensor
Supply Temperature Sensor Control Type	30419	40419	1		0 = Average 1 = Maximum 2 = Top Sensor 3 = Middle Sensor 1 4 = Middle Sensor 2 5 = Bottom Sensor
Unit Top Return Sensor Temperature	30420		1	10	Units : deg C Int16
Unit Top Return Sensor Temperature	30421		1	10	Units : deg F Int16
Unit Middle Return Sensor Temperature	30422		1	10	Units : deg C Int16
Unit Middle Return Sensor Temperature	30423		1	10	Units : deg F Int16
Unit Bottom Return Sensor Temperature	30424		1	10	Units : deg C Int16
Unit Bottom Return Sensor Temperature	30425		1	10	Units : deg F Int16
Unit Top Supply Sensor Temperature	30426		1	10	Units : deg C Int16
Unit Top Supply Sensor Temperature	30427		1	10	Units : deg F Int16
Unit Middle First Supply Sensor Temperature	30428		1	10	Units : deg C Int16
Unit Middle First Supply Sensor Temperature	30429		1	10	Units : deg F Int16
Unit Middle Second Supply Sensor Temperature	30430		1	10	Units : deg C Int16
Unit Middle Second Supply Sensor Temperature	30431		1	10	Units : deg F Int16
Unit Bottom Supply Sensor Temperature	30432		1	10	Units : deg C Int16
Unit Bottom Supply Sensor Temperature	30433		1	10	Units : deg F Int16
Low Supply Air Temperature Threshold	30434	40434	1	10	Units : deg C Int16
Low Supply Air Temperature Threshold	30435	40435	1	10	Units : deg F Int16

Table 3-19 Liebert iCOM® DCL™—Input and Status (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
High Return Air Temperature Threshold	30436	40436	1	10	Units : deg C Int16
High Return Air Temperature Threshold	30437	40437	1	10	Units : deg F Int16
Humidity					
Supply Humidity	30448		1	10	Units : % RH Uint16
Return Humidity	30449		1	10	Units : % RH Uint16
Humidity Set Point	30450	40450	1		Units : % RH Uint16
High Return Humidity Threshold	30451	40451	1	10	Units : % RH Uint16
Low Return Humidity Threshold	30452	40452	1	10	Units : % RH Uint16
Dehumidifier State	30453	40453	1		0 = off 1 = on
Unit Top Return Sensor Humidity	30454		1	10	Units : % RH Int16
Unit Middle Return Sensor Humidity	30455		1	10	Units : % RH Int16
Unit Bottom Return Sensor Humidity	30456		1	10	Units : % RH Int16
Fans					
Fan Control Mode	30467	40467	1		0 = Internal (Auto) 1 = External (Manual)
Fan Speed Proportional Band	30468	40468	1	10	Units : deg C Uint16
Fan Speed Proportional Band	30469	40469	1	10	Units : deg F Uint16
Fan Speed Manual Set Point	30470	40470	1		Units : % Uint16
Fan Speed Maximum Set Point	30471	40471	1		Units : % Uint16
Fan Speed Minimum Set Point	30472	40472	1		Units : % Uint16
Fan Control Sensor	30473	40473	1		0 = Supply Sensor 1 = Remote Sensor 2 = Return Sensor 3 = Delta Ret-Sup 4 = Delta Remote 5 = Pipe Sensor
Pipe Temperature Set Point	30474	40474	1	10	Units : deg C Int16
Pipe Temperature Set Point	30475	40475	1	10	Units : deg F Int16
Pipe Temperature Dead Band	30476	40476	1	10	Units : deg C Int16

Table 3-19 Liebert iCOM® DCL™—Input and Status (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Pipe Temperature Dead Band	30477	40477	1	10	Units : deg F Int16
Remote Sensors 1					
Fan Control Mode	30467	40467	1		0 = Internal (Auto) 1 = External (Manual)
Fan Speed Proportional Band	30468	40468	1	10	Units : deg C Uint16
Fan Speed Proportional Band	30469	40469	1	10	Units : deg F Uint16
Fan Speed Manual Set Point	30470	40470	1		Units : % Uint16
Fan Speed Maximum Set Point	30471	40471	1		Units : % Uint16
Fan Speed Minimum Set Point	30472	40472	1		Units : % Uint16
Fan Control Sensor	30473	40473	1		0 = Supply Sensor 1 = Remote Sensor 2 = Return Sensor 3 = Delta Ret-Sup 4 = Delta Remote 5 = Pipe Sensor
Pipe Temperature Set Point	30474	40474	1	10	Units : deg C Int16
Pipe Temperature Set Point	30475	40475	1	10	Units : deg F Int16
Pipe Temperature Dead Band	30476	40476	1	10	Units : deg C Int16
Pipe Temperature Dead Band	30477	40477	1	10	Units : deg F Int16
Remote Sensor Function	30488	40488	1		0 = Disable 1 = Reference 2 = Control
Remote Sensor Temperature	30489		1	10	Units : deg C Int16
Remote Sensor Temperature	30490		1	10	Units : deg F Int16
Remote Sensors 2					
Remote Sensor Function	30501	40501	1		0 = Disable 1 = Reference 2 = Control
Remote Sensor Temperature	30502		1	10	Units : deg C Int16
Remote Sensor Temperature	30503		1	10	Units : deg F Int16
Remote Sensors 4					
Remote Sensor Function	30527	40527	1		0 = Disable 1 = Reference 2 = Control

Table 3-19 Liebert iCOM® DCL™—Input and Status (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Remote Sensor Temperature	30528		1	10	Units : deg C Int16
Remote Sensor Temperature	30529		1	10	Units : deg F Int16
Chilled Water					
High Supply Fluid Temperature Threshold	30540	40540	1	10	Units : deg C Int16
High Supply Fluid Temperature Threshold	30541	40541	1	10	Units : deg F Int16
Int16					
Chilled Water Valve Control	30542	40542	1		0 = Single 1 = 2 Parallel 2 = 2 Alternate 3 = 2 Cascade
Chilled Water Main Valve	30543	40543	1		0 = 1 1 = 2
Chilled Water Auto Valve Rotation	30544	40544	1		0 = disabled 1 = enabled
Chilled Water Valve Rotation Hour	30545	40545	1		Units : hr Int16
Chilled Water Inlet Temperature Control	30546	40546	1		0 = disabled 1 = enabled
Chilled Water Inlet High Temperature Threshold	30547	40547	1	10	Units : deg C Int16
Chilled Water Inlet High Temperature Threshold	30548	40548	1	10	Units : deg F Int16
Int16					
Chilled Water Valve Open Position	30549	40549	1		Units : % Int16
Int16					
Chilled Water Inlet Temperature Hysteresis	30550	40550	1	10	Units : deg C Int16
Chilled Water Inlet Temperature Hysteresis	30551	40551	1	10	Units : deg F Int16
Chilled Water Circuit 1					
Chilled Water Outlet Temperature	30562		1	10	Units : deg C Int16
Chilled Water Outlet Temperature	30563		1	10	Units : deg F Int16
Chilled Water Inlet Temperature	30564		1	10	Units : deg C Int16
Chilled Water Inlet Temperature	30565		1	10	Units : deg F Int16

Table 3-19 Liebert iCOM® DCL™—Input and Status (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Chilled Water Circuit 2					
Chilled Water Outlet Temperature	30576		1	10	Units : deg C Int16
Chilled Water Outlet Temperature	30577		1	10	Units : deg F Int16
Chilled Water Inlet Temperature	30578		1	10	Units : deg C Int16
Chilled Water Inlet Temperature	30579		1	10	Units : deg F Int16
System Info					
System Status	30590		1		1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
Unit Operating State	30591		1		0 = off 1 = on 2 = standby
Unit Control Mode	30592		1		0 = Internal (Auto) 1 = External (Manual)
Unit Operating State Reason	30593		1		0 = Reason Unknown 1 = Network Display 2 = Alarm 3 = Schedule 4 = Remote System 5 = External Input 6 = Local Display
BMS Timeout Period	30594	40594	1		Units : min Uint16
Auto Restart Delay	30595	40595	1		Units : sec Uint16
System Operations					
Cooling Capacity	30606		1		Units : % Uint16
Fan Speed	30607		1		Units : % Uint16
Dehumidifier Utilization	30608		1		Units : % Uint16
Calculated Next Maintenance Month	30609		1		Uint16
Calculated Next Maintenance Year	30610		1		Uint16
Maintenance Ramp	30611		1		Units : % Uint16
System On/Off Control	30612	40612	1		0 = off 1 = on
Rack Door Open High Supply Air Temperature Threshold	30613	40613	1	10	Units : deg C Int16

Table 3-19 Liebert iCOM® DCL™—Input and Status (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Rack Door Open High Supply Air Temperature Threshold	30614	40614	1	10	Units : deg F Int16
Rack Door Open Sensor Selection	30615		1		0 = Supply Sensor 1 = Rack Sensor 1 2 = Rack Sensor 2 3 = Rack Sensor 3 4 = Rack Sensor 4
Smoke Detected - Event Control	30626	40626	1		0 = disabled 1 = enabled
Smoke Detected - Event Type	30627	40627	1		0 = Message 1 = Warning 2 = Alarm
Water Under Floor - Event Control	30628	40628	1		0 = disabled 1 = enabled
Water Under Floor - Event Type	30629	40629	1		0 = Message 1 = Warning 2 = Alarm
Customer Input 1 - Event Control	30630	40630	1		0 = disabled 1 = enabled
Customer Input 1 - Event Type	30631	40631	1		0 = Message 1 = Warning 2 = Alarm
Customer Input 2 - Event Control	30632	40632	1		0 = disabled 1 = enabled
Customer Input 2 - Event Type	30633	40633	1		0 = Message 1 = Warning 2 = Alarm
Customer Input 3 - Event Control	30634	40634	1		0 = disabled 1 = enabled
Customer Input 3 - Event Type	30635	40635	1		0 = Message 1 = Warning 2 = Alarm
Customer Input 4 - Event Control	30636	40636	1		0 = disabled 1 = enabled
Customer Input 4 - Event Type	30637	40637	1		0 = Message 1 = Warning 2 = Alarm
Service Required - Event Control	30638	40638	1		0 = disabled 1 = enabled
Service Required - Event Type	30639	40639	1		0 = Message 1 = Warning 2 = Alarm
Ext Loss of Flow - Event Control	30640	40640	1		0 = disabled 1 = enabled
Ext Loss of Flow - Event Type	30641	40641	1		0 = Message 1 = Warning 2 = Alarm

Table 3-19 Liebert iCOM® DCL™—Input and Status (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Ext Over Temperature - Event Control	30642	40642	1		0 = disabled 1 = enabled
Ext Over Temperature - Event Type	30643	40643	1		0 = Message 1 = Warning 2 = Alarm
System Event Acknowledge/Reset		40644	1		2 = Reset 4 = Acknowledge
Power Measurement					
System Input RMS A-B	30655		1		Units : VAC Int16
System Input RMS A-N	30656		1		Units : VAC Int16
System Input RMS Current Phase A	30657		1		Units : A AC Int16
System Input RMS B-C	30658		1		Units : VAC Int16
System Input RMS B-N	30659		1		Units : VAC Int16
System Input RMS Current Phase B	30660		1		Units : A AC Int16
System Input RMS C-A	30661		1		Units : VAC Int16
System Input RMS C-N	30662		1		Units : VAC Int16
System Input RMS Current Phase C	30663		1		Units : A AC Int16
Energy Consumption	30664		2		Units : kWH Int32
Instantaneous Power	30666		2		Units : W Int32
Time					
System Date and Time	39998	49998	2		Units : Secs since Epoch(UTC)

Table 3-20 Liebert iCOM® DCL™—Glossary

Data Label	Data Description
Air Temperature Control Sensor	Sensor from which air temperature measurements will be used for cooling and heating control.
Air Temperature Dead Band	Value that is divided evenly to form a temperature range above and below [Air Temperature Set Point]. If measured air temperature is within this range, no heating or cooling will occur.
Air Temperature Set Point	Desired air temperature. This set point is dependent upon which sensor is selected for control.
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
BMS Communications Timeout	Building Management System (or external monitoring system) has not communicated with the system within the expected timeframe.
BMS Timeout Period	Timeframe within which the Building Management System (or external monitoring system) must communicate with the system to avoid a timeout.
Bottom Fan Issue	The bottom fan is not operating within its normal parameters.
Calculated Next Maintenance Month	Calculated month of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Year].
Calculated Next Maintenance Year	Calculated year of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Month].
Chilled Water Auto Valve Rotation	If enabled, the priority of the chilled water valves will change daily.
Chilled Water Control Active	Chilled water inlet temperature control function is enabled due to 'bad' water.
Chilled Water Control Valve Failure	Chilled water valve out of position. Chilled water control valve position does not match expected value.
Chilled Water Flow Transducer Failure	Chilled water flow transducer is disconnected or the signal is out of range.
Chilled Water High Inlet Temperature	Chilled water inlet temperature has exceeded an upper threshold.
Chilled Water Inlet High Temperature Threshold	Defines the threshold for considering the inlet water temperature too high.
Chilled Water Inlet Temperature Control	Enable/disable the function to switch off the fan and open the chilled water valve in case of 'bad' inlet water.
Chilled Water Inlet Temperature Hysteresis	Hysteresis used before returning to standard control mode when [Chilled Water Inlet Temperature Control] is enabled.
Chilled Water Inlet Temperature Sensor Failure	Chilled water inlet temperature sensor is disconnected or the signal is out of range. The sensor is mandatory for the chilled water flow function.
Chilled Water Inlet Temperature	Temperature of the water entering the hydraulic circuit of the chilled water unit.
Chilled Water Main Valve	Specifies which of the two chilled water valves is the main valve.
Chilled Water Outlet Temperature	Temperature of the water exiting the hydraulic circuit of the chilled water unit.
Chilled Water Valve Control	Method for controlling the chilled water cooling capacity. The options available are: single, parallel, alternate and cascade.
Chilled Water Valve Open Position	Chilled water valve open position.
Chilled Water Valve Rotation Hour	Hour of the day for switching the priority of the valves.
Cooling Capacity	Cooling capacity in use, expressed as a percentage of the maximum rated capacity.
Cooling Proportional Band	Temperature control band above [Air Temperature Set Point]. If measured air temperature is within this band, cooling operations are proportionally controlled.
Customer Input 1 - Event Control	Enable/disable the activation of the [Customer Input 1] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 1 - Event Type	The event type for the [Customer Input 1] event.
Customer Input 1	Customer Input 1.

Table 3-20 Liebert iCOM® DCL™—Glossary (continued)

Data Label	Data Description
Customer Input 2 - Event Control	Enable/disable the activation of the [Customer Input 2] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 2 - Event Type	The event type for the [Customer Input 2] event.
Customer Input 2	Customer input 2.
Customer Input 3 - Event Control	Enable/disable the activation of the [Customer Input 3] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 3 - Event Type	The event type for the [Customer Input 3] event.
Customer Input 3	Customer input 3.
Customer Input 4 - Event Control	Enable/disable the activation of the [Customer Input 4] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 4 - Event Type	The event type for the [Customer Input 4] event.
Customer Input 4	Customer input 4.
Dehumidifier Hours Exceeded	Operating hours for the dehumidifier have exceeded the threshold.
Dehumidifier State	Dehumidifier operational state.
Dehumidifier Utilization	Present dehumidifier utilization expressed as a percentage of the maximum rated capacity.
Energy Consumption	Energy consumption since the last reset of this value.
Ext Condenser Pump High Water	High water is detected in the condensate pump by the auxiliary float, as indicated by an external input signal.
Ext Loss of Flow - Event Control	Enable/disable the activation of the [Ext Loss of Flow] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Loss of Flow - Event Type	The event type for the [Ext Loss of Flow] event.
Ext Loss of Flow	Loss of flow is detected, as indicated by an external input signal.
Ext Over Temperature - Event Control	Enable/disable the activation of the [Ext Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Over Temperature - Event Type	The event type for the [Ext Over Temperature] event.
Ext Over Temperature	A temperature has exceeded its threshold, as indicated by an external input signal.
Ext Standby Glycol Pump On	The standby glycol pump is on, as indicated by an external input signal.
External Fire Detected	Fire detected, as indicated by an external input signal.
Fan Control Mode	Fan control mode. Allowable modes are: (0) Auto - Fan speed is controlled via the selected fan control sensor, and, (1) Manual - Fan will operate at a fixed speed.
Fan Control Sensor	Sensor from which air temperature measurements will be used for fan speed control.
Fan Hours Exceeded	Operating hours for the unit blower fan have exceeded the threshold.
Fan Speed Manual Set Point	Manual fan speed.
Fan Speed Maximum Set Point	Maximum fan speed.
Fan Speed Minimum Set Point	Minimum fan speed.
Fan Speed Proportional Band	Temperature control band above the temperature set point calculated for proportional fan speed control. If measured air temperature is within this band, fan speed operations are proportionally controlled.
Fan Speed	Fan speed expressed as a percentage of the maximum rated speed.
High Power Shutdown	Supply to high power components has been shutdown.
High Return Air Temperature Threshold	Threshold value used in the [Return Air Over Temperature] event.

Table 3-20 Liebert iCOM® DCL™—Glossary (continued)

Data Label	Data Description
High Return Humidity Threshold	Threshold value used in the [High Return Humidity] event.
High Return Humidity	Return air high humidity event.
High Supply Air Temperature Threshold	Threshold value used in the [Supply Air Over Temperature] event.
High Supply Fluid Temperature Threshold	Threshold value used in the [Supply Chilled Water Over Temp] event.
Humidity Set Point	Desired relative humidity.
Instantaneous Power	Total electrical power currently being consumed.
Loss of Air Flow	No air flow through the unit due to failure of all fans.
Low Return Humidity Threshold	Threshold value used in the [Low Return Humidity] event.
Low Return Humidity	Return air low humidity event.
Low Supply Air Temperature Threshold	Threshold value used in the [Supply Air Under Temperature] event.
Maintenance Completed	Maintenance has been completed on the unit.
Maintenance Due	The calculated maintenance date has been reached.
Maintenance Ramp	The ratio of operations performed to the calculated operations available between maintenance intervals.
Modbus 0-10V Module Communication Failure	Modbus 0-10V module for managing the second Chilled Water circuit valve is disconnected or the signal is out of range.
Pipe Temperature Dead Band	Value that is divided evenly to form a temperature range above and below [Pipe Temperature Set Point]. If measured air temperature is within this range, the fan speed will not change.
Pipe Temperature Sensor Failure	Air temperature sensor located in the pipe is not sending a valid value.
Pipe Temperature Set Point	This value will be used as a comparison against pipe air temperature measurements in order to manage the speed of the fans.
Rack Door Open High Supply Air Temperature Threshold	If the rack supply air temperature exceeds this threshold, the rack doors are opened.
Rack Door Open Sensor Selection	Specifies the temperature sensor to be used by the control to manage the automatic rack door opening function.
Rack Doors Open	Rack doors opened due to supply air temperature exceeding the [Rack Door Open High Supply Air Temperature Threshold].
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Remote Sensor Average Temperature	Average value of remote sensor temperature measurements.
Remote Sensor Function	Function assigned to remote sensor. Available values are: (0) Control - sensor will be used in calculation of remote sensor temperature that may be used for heating and cooling control, (1) Reference - sensor will not be used in calculation of remote sensor temperature, but is enabled, (2) Disable - sensor is disabled
Remote Sensor Issue	Remote sensor is disconnected or the signal is out of range.
Remote Sensor Maximum Temperature	Maximum value of remote sensor temperature measurements.
Remote Sensor Minimum Temperature	Minimum value of remote sensor temperature measurements.
Remote Sensor Temperature Calculation	Calculation method applied to temperature readings from the remote sensors to determine a single temperature measurement value for cooling and heating control.
Remote Sensor Temperature	Air temperature as measured by remote sensor.
Return Air Over Temperature	Return air high temperature event.
Return Air Sensor Issue	The air sensor at the inlet of the unit is disconnected or the signal is out of range.
Return Air Temperature	The temperature of the inlet air
Return Dew Point	Dew point temperature measured at the inlet of the unit.
Return Humidity	Relative humidity measured at the inlet of the unit.
Return Temperature/Humidity Sensor Control Type	Specifies whether the average, maximum, or only one of the return sensor values is to be used for return humidity and temperature control.

Table 3-20 Liebert iCOM® DCL™—Glossary (continued)

Data Label	Data Description
Server Class	The general classification for this system
Service Required - Event Control	Enable/disable the activation of the [Service Required] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Service Required - Event Type	The event type for the [Service Required] event.
Service Required	Unit requires servicing.
Smoke Detected - Event Control	Enable/disable the activation of the [Smoke Detected] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Smoke Detected - Event Type	The event type for the [Smoke Detected] event.
Smoke Detected	Smoke detected.
Supply Air Over Temperature	Supply air high temperature event.
Supply Air Sensor Issue	The air sensor at the outlet of the unit is disconnected or the signal is out of range.
Supply Air Temperature	Air temperature measured at the outlet of the unit.
Supply Air Under Temperature	Supply air low temperature event.
Supply Chilled Water Loss of Flow	Supply chilled water or glycol flow is too low.
Supply Humidity	Relative humidity at the outlet of the unit.
Supply Temperature Sensor Control Type	Specifies whether the average, maximum, or only one of the supply sensor values is to be used for supply temperature control.
System Date and Time	The system date and time
System Event Acknowledge/Reset	Reset and/or acknowledge all events.
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System On/Off Control	Turn system functionality on or off.
System Status	The operating status for the system
Top Fan Issue	The top fan is not operating within its normal parameters.
Unit Bottom Return Air Sensor Failure	Return air sensor at the bottom of the unit is disconnected or the signal is out of range.
Unit Bottom Return Sensor Humidity	Return humidity as measured by the sensor located at the bottom of the unit.
Unit Bottom Return Sensor Temperature	Return air temperature as measured by the sensor located at the bottom of the unit.
Unit Bottom Supply Air Sensor Failure	Supply air sensor at the bottom of the unit is disconnected or the signal is out of range.
Unit Bottom Supply Sensor Temperature	Supply air temperature as measured by the sensor located at the bottom of the unit.
Unit Control Mode	Unit control mode.
Unit Middle First Supply Air Sensor Failure	First supply air sensor in the middle of the unit is disconnected or the signal is out of range.
Unit Middle First Supply Sensor Temperature	Supply air temperature as measured by the first sensor located in the middle of the unit.

Table 3-20 Liebert iCOM® DCL™—Glossary (continued)

Data Label	Data Description
Unit Middle Return Air Sensor Failure	Return air sensor in the middle of the unit is disconnected or the signal is out of range.
Unit Middle Return Sensor Humidity	Return humidity as measured by the sensor located in the middle of the unit.
Unit Middle Return Sensor Temperature	Return air temperature as measured by the sensor located in the middle of the unit.
Unit Middle Second Supply Air Sensor Failure	Second supply air sensor in the middle of the unit is disconnected or the signal is out of range.
Unit Middle Second Supply Sensor Temperature	Supply air temperature as measured by the second sensor located in the middle of the unit.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Operating State Reason	The reason the unit is in the current operating state.
Unit Operating State	Current operating state of the unit.
Unit Partial Shutdown	An event has occurred requiring some system components to be shutdown and disabled.
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
Unit Top Return Air Sensor Failure	Return air sensor at the top of the unit is disconnected or the signal is out of range.
Unit Top Return Sensor Humidity	Return humidity as measured by the sensor located at the top of the unit.
Unit Top Return Sensor Temperature	Return air temperature as measured by the sensor located at the top of the unit.
Unit Top Supply Air Sensor Failure	Supply air sensor at the top of the unit is disconnected or the signal is out of range.
Unit Top Supply Sensor Temperature	Supply air temperature as measured by the sensor located at the top of the unit.
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
Water Leakage Detector Sensor Issue	The water leakage detector sensor is disconnected or the signal is out of range.
Water Under Floor - Event Control	Enable/disable the activation of the [Water Under Floor] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Water Under Floor - Event Type	The event type for the [Water Under Floor] event.
Water Under Floor	Water under the floor is detected.

Table 3-21 Liebert DS™ and Liebert PeX™—Status and Coil

Controller	Liebert iCOM™ v3				
Data Description	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Sleep on Monday	10001	1	1	—	—
Sleep on Tuesday	10002	2	1	—	—
Sleep on Wednesday	10003	3	1	—	—
Sleep on Thursday	10004	4	1	—	—
Sleep on Friday	10005	5	1	—	—
Sleep on Saturday	10006	6	1	—	—
Sleep on Sunday	10007	7	1	—	—
Supply Limit Enable	10008	8	1	—	—
Reheat Lockout	10009	9	1	—	—
Humidifier Lockout	10010	10	1	—	—
Temperature Indication [1]	10011	11	1	—	—
Timer Mode Type	10012	12	1	—	—
Minimum Chilled Water Temp Enable	10013	13	1	—	—
Std. Sensor Alarms Enable	10019	19	1	—	—
Sensor A Alarms Enable	10020	20	1	—	—
Compressor Lockout	10021	21	1	—	—
VSD Fan speed	10022	22	1	—	—
Unit Control	—	25	1	—	—
Reset Alarm	—	26	1	—	—
Acknowledge Alarm	—	27	1	—	—
Reset Total Run Hours Fan Motor	—	28	1	—	—
Reset Comp1Run Hour	—	29	1	—	—
Reset Comp2Run Hour	—	30	1	—	—
Reset Humidifier Run Hour	—	31	1	—	—
Reset Dehumidifier Run Hour	—	32	1	—	—
Reset CW/FC Run Hour	—	33	1	—	—
Reset E-Heater1RunHour	—	34	1	—	—
Reset E-heater2RunHour	—	35	1	—	—
Reset E-heater3 Run Hour	—	36	1	—	—
Reset HG/HW Run Hour	—	37	1	—	—
Fan On	10025	—	1	—	—
Cool On	10026	—	1	—	—
Free Cool On	10027	—	1	—	—
Hot Water On	10028	—	1	—	—
Electrical Heater On	10029	—	1	—	—
Humidification On	10030	—	1	—	—
Dehumidification On	10031	—	1	—	—
Audible Alarm On	10032	—	1	—	—
Reserved	10033	—	1	—	—
Main Fan Overload	10034	—	1	—	—
Loss of Airflow	10035	—	1	—	—
Loss of Flow	10036	—	1	—	—

Reference Document: ST100I&C PA Parameters and Events, Version 18.0
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
1. Any non-recognized alarm code by current firmware received from the DS control will trigger this event.

Table 3-21 Liebert DS™ and Liebert PeX™—Status and Coil (continued)

Controller	Liebert iCOM™ v3				
Data Description	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Comp 1 High Pressure	10037	—	1	—	—
Comp 1 Low Pressure	10038	—	1	—	—
Comp 1 Overload	10039	—	1	—	—
Comp 1 Pumpdown Fail	10040	—	1	—	—
Comp 2 High Pressure	10041	—	1	—	—
Comp 2 Low Pressure	10042	—	1	—	—
Comp 2 Overload	10043	—	1	—	—
Comp 2 Pumpdown Fail	10044	—	1	—	—
Digital Scroll Compressor 1 High Temperature	10045	—	1	—	—
Digital Scroll Compressor 2 High Temperature	10046	—	1	—	—
Smoke Detected	10047	—	1	—	—
Water Under Floor	10048	—	1	—	—
Humidifier Problem	10049	—	1	—	—
Stby Glycol Pump On	10050	—	1	—	—
Standby Unit On	10051	—	1	—	—
Cond Pump-high Water	10052	—	1	—	—
Room Sensor Failure	10053	—	1	—	—
Loss Compressor Power	10054	—	1	—	—
Loss of Air Blower 1	10055	—	1	—	—
Humidifier Low Water	10058	—	1	—	—
Humidifier High Amps	10059	—	1	—	—
High Temperature	10060	—	1	—	—
Loss of Power	10061	—	1	—	—
Unspecified Event(s) [1]	10064	—	1	—	—
High CW Temp	10065	—	1	—	—
Reserved	10066	—	1	—	—
High Room Temp	10067	—	1	—	—
Low Room Temp	10068	—	1	—	—
High Room Hum	10069	—	1	—	—
Low Room Hum	10070	—	1	—	—
High Temp Sensor A	10071	—	1	—	—
Low Temp Sensor A	10072	—	1	—	—
High Hum Sensor A	10073	—	1	—	—
Low Hum Sensor A	10074	—	1	—	—
Loss of CW Flow	10075	—	1	—	—
Clogged Filters	10076	—	1	—	—
Supply Sensor Failure	10077	—	1	—	—
Freecool Temp Sensor	10078	—	1	—	—
Sensor A Failure	10079	—	1	—	—
Unit Hrs Exceeded	10080	—	1	—	—
Comp 1 Hrs Exceeded	10081	—	1	—	—
Comp 2 Hrs Exceeded	10082	—	1	—	—

Reference Document: ST100I&C PA Parameters and Events, Version 18.0
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
1. Any non-recognized alarm code by current firmware received from the DS control will trigger this event.

Table 3-21 Liebert DS™ and Liebert PeX™—Status and Coil (continued)

Controller	Liebert iCOM™ v3				
Data Description	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
FC Hrs Exceeded	10083	—	1	—	—
El Heat1 Hrs Exceeded	10084	—	1	—	—
El Heat2 Hrs Exceeded	10085	—	1	—	—
El Heat3 Hrs Exceeded	10086	—	1	—	—
HW/HG Hrs Exceeded	10087	—	1	—	—
Hum Hrs Exceeded	10088	—	1	—	—
Dehum Hrs Exceeded	10089	—	1	—	—
Network Failure	10091	—	1	—	—
No Connection W/Unit	10092	—	1	—	—
Unit(s) Disconnected	10093	—	1	—	—
Unit Code Missing	10094	—	—	—	—
Unit Code Mismatch	10095	—	—	—	—
Call Service	10096	—	—	—	—
Low Memory 1	10097	—	—	—	—
RAM / Battery Failure	10098	—	—	—	—
HCB not connected	10099	—	—	—	—
(Parallel Flash) Memory 1 Fail	10100	—	—	—	—
(Serial Flash) Memory 2 Fail	10101	—	—	—	—
Customer Input 1	10104	—	—	—	—
Customer Input 2	10105	—	—	—	—
Customer Input 3	10106	—	—	—	—
Customer Input 4	10107	—	—	—	—
Digital Scroll Compressor 1 Sensor Fail	10108	—	—	—	—
Digital Scroll Compressor 2 Sensor Fail	10109	—	—	—	—
Low Int Temperature	10110	—	—	—	—
High Ext Dewpoint	10111	—	—	—	—
Cabinet Temp Sensor Fail	10112	—	—	—	—
Cabinet Humidity Sensor Fail	10113	—	—	—	—
Ambient Temp Sensor Fail	10114	—	—	—	—
Comp 1 Short Cycle	10132	—	—	—	—
Comp 2 Short Cycle	10133	—	—	—	—
Reheat Lockout	10140	—	—	—	—
Humidifier Lockout	10141	—	—	—	—
Compressor(s) Lockout	10142	—	—	—	—
Fire Alarm	10148	—	—	—	—
Heaters Overheated	10149	—	—	—	—
Condenser 1 Failure	10150	—	—	—	—
Condenser 2 Failure	10151	—	—	—	—
Humidifier Cylinder Worn	10152	—	—	—	—
Heat Rej VFD	10153	—	—	—	—
Heat Rej TVSS	10154	—	—	—	—
Humidifier Low Amps	10155	—	—	—	—

Reference Document: ST100I&C PA Parameters and Events, Version 18.0
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
1. Any non-recognized alarm code by current firmware received from the DS control will trigger this event.

Table 3-21 Liebert DS™ and Liebert PeX™—Status and Coil (continued)

Controller	Liebert iCOM™ v3				
Data Description	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
FC Lockout	10156	—	—	—	—
Water Leak Sensor Fail	10157	—	—	—	—

Reference Document: ST100I&C PA Parameters and Events, Version 18.0
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
1. Any non-recognized alarm code by current firmware received from the DS control will trigger this event.

Table 3-22 Liebert DS™ and Liebert PeX™—Input and Holding

Controller	Liebert iCOM® v3				
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Vendor ID	30001	40001	1	—	—
Device ID	30002	40002	1	—	—
Version Number	30003	40003	1	—	—
UPS/Env/Pwr	30004	40004	1	—	—
Timer Mode [1]	30016	40016	1	—	—
Type of DT Room-FC [2]	30017	40017	1	—	—
Humidity Control [3]	30018	40018	1	—	—
VSD Setpoint	30019	40019	1	—	% (HP)
Supply Temperature Limit	30020	40020	1	10	deg C
DT between Room and FC	30021	40021	1	10	deg C
Minimum CW Temperature	30022	40022	1	10	deg C
Temperature Setpoint	30023	40023	1	10	deg C
Temperature Proportional Band	30024	40024	1	10	deg C
Temperature Deadband	30025	40025	1	10	deg C
Temperature Integration Time	30026	40026	1	—	Minutes
Humidity Setpoint	30027	40027	1	—	%
Humidity Proportional Band	30028	40028	1	—	%
Humidity Integration Time	30029	40029	1	—	Minutes
Humidity Deadband	30030	40030	1	—	%
Single Unit Auto-Restart Delay	30031	40031	1	—	Seconds
Infrared Flush Rate	30032	40032	1	—	%
Temp Control Type [4]	30033	40033	1	—	—
Sleep Interval 1 Start Time Hour: Minute	30040	40040	1	—	LSB:Min
Sleep Interval 1 End Time Hour: Minute	30041	40041	1	—	LSB:Min
Sleep Interval 2 Start Time Hour: Minute	30042	40042	1	—	LSB:Min
Sleep Interval 2 End Time Hour: Minute	30043	40043	1	—	LSB:Min
Timer Deadband	30044	40044	1	10	deg C
Manual VSD Timer/Counter [5]	30045	40045	1	—	—
High Temperature	30050	40050	1	10	deg C
Low Temperature	30051	40051	1	10	deg C
High Temperature Sensor A	30052	40052	1	10	deg C
Low Temperature Sensor A	30053	40053	1	10	deg C
High Humidity	30054	40054	1	—	%
Low Humidity	30055	40055	1	—	%
High Humidity Sensor A	30056	40056	1	—	%
Low Humidity Sensor A	30057	40057	1	—	%
Fan Run Hour Threshold	30070	40070	—	—	Hours
Compressor 1 Run Hour Threshold	30071	40071	—	—	Hours
Compressor 2 Run Hour Threshold	30072	40072	—	—	Hours
Humidifier Run Hours Threshold	30073	40073	—	—	Hours
Dehumidification Run Hours Threshold	30074	40074	—	—	Hours
CW/FC Run Hours Threshold	30075	40075	—	—	Hours
Electrical Heaters #1 Run Hours Threshold	30076	40076	—	—	Hours
Electrical Heaters #2 Run Hours Threshold	30077	40077	—	—	Hours
Electrical Heaters #3 Run Hours Threshold	30078	40078	—	—	Hours

Table 3-22 Liebert DS™ and Liebert PeX™—Input and Holding (continued)

Controller	Liebert iCOM® v3				
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Hot Water / Hot Gas Run Hours Threshold	30079	40079	—	—	Hours
Operating State [6]	30100	—	—	—	—
Number of Active Events/Alarm	30101	—	—	—	—
Summary Alarm Status [7]	30102	—	—	—	—
Fan Ramp	30103	—	—	—	%
Cooling Ramp	30104	—	—	—	%
Free Cooling Ramp	30105	—	—	—	%
Heating Ramp	30106	—	—	—	%
Humidification Ramp	30107	—	—	—	%
Dehumidifier Ramp	30108	—	—	—	%
FreeCooling Status [8]	30109	—	—	—	%
Return Temperature	30110	—	—	10	deg C
Actual Temperature SP	30111	—	—	10	deg C
Supply Temperature	30112	—	—	10	deg C
Actual Supply Temperature SP	30113	—	—	10	deg C
FC Temperature	30115	—	—	10	deg C
Sensor A Temperature	30116	—	—	10	deg C
Sensor B Temperature	30117	—	—	10	deg C
Sensor C Temperature	30118	—	—	10	deg C
Digital Scroll Compressor 1 High Temperature	30119	—	—	10	deg C
Digital Scroll Compressor 2 High Temperature	30120	—	—	10	deg C
Return Humidity	30130	—	—	—	%
Actual Humidity SP	30131	—	—	—	%
Sensor A Humidity	30132	—	—	—	%
Sensor B Humidity	30133	—	—	—	%
Sensor C Humidity	30134	—	—	—	%
Fan Run Hour	30141	—	—	—	Hours
Compressor 1 Run Hour	30142	—	—	—	Hours
Compressor 2 Run Hour	30143	—	—	—	Hours
Humidifier Run Hours	30144	—	—	—	Hours
Dehumidification Run Hours	30145	—	—	—	Hours
Free cooling Run Hours	30146	—	—	—	Hours
Electrical Heaters #1 Run Hours	30147	—	—	—	Hours
Electrical Heaters #2 Run Hours	30148	—	—	—	Hours
Electrical Heaters #3 Run Hours	30149	—	—	—	Hours
Hot Water / Hot Gas Run Hours	30150	—	—	—	Hours
Daily High Temperature	30151	—	—	10	deg C
Daily High Temp Time	30152	—	—	—	Hh:mm
Daily Low Temperature	30153	—	—	10	deg C
Daily Low Temp Time	30154	—	—	—	Hh:mm
Daily High Humidity	30155	—	—	—	%RH
Daily High Hum Time	30156	—	—	—	Hh:mm
Daily Low Humidity	30157	—	—	—	%RH

Table 3-22 Liebert DS™ and Liebert PeX™—Input and Holding (continued)

Controller	Liebert iCOM® v3				
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Daily Low Hum Time	30158	—	—	—	Hh:mm

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Reference Document: ST100I&C PA Parameters and Events, Version 18.0

1. Timer mode: 0 = no, 1 = yes
2. Type of DT Room-Glycol: 0 = no, 1 = contact, 2 = value
3. Predictive Hum Control: 0 = relative, 1 = compensated, 2 = predictive
4. Temp Control Algorithm: 0 = proportional, 1 = PD, 2 = PDI; 3 = intelligent
5. When VFD is set to manual mode (coil 22), the host can control the VFD by the value of register 40019. The Manual VSD Timer will start to count down. Once it reaches 0, the VFD control mode will switch to auto. The host will need to periodically reset this timer in order to maintain the manual mode. Consult factory for BMS timer information.
6. Operating state:
   - Bit 0-1: 00 unit off, 01 unit on, 10 unit standby
   - Bit 2-3: 00 auto, 01 manual
   - Bit 4-7: 0000 none
     0001 local user
     0010 alarm
     0011 schedule
     0100 remote user
     0101 external device
     0110 local display
7. Alarm state bit map:
   - Bit 0 = Reset state
   - Bit 1 = Active state
   - Bit 2 = Acknowledge state
   - Bit 3-7 = Alarm Type
     00000: Message
     00001: Warning
     00010: Alarm
8. Free-cool state: 0 = Off, 1 = Start, 2 = On

Table 3-23 Liebert XDF™—Status and Coil

Controller	Liebert iCOM® v3				
Data Description	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Temperature Indication [1]	10011	11	1	—	—
Unit Control	—	25	1	—	—
Reset Alarm	—	26	1	—	—
Acknowledge Alarm	—	27	1	—	—
Cabinet Sensor Alarm Enable	10023	23	1	—	—
Fan On	10025	—	1	—	—
Cool On	10026	—	1	—	—
Compressor 1 High Pressure	10037	—	1	—	—
Compressor 1 Low Pressure	10038	—	1	—	—
Cond Pump-High Water	10052	—	1	—	—
Loss Compressor Power	10054	—	1	—	—
Emergency Damper Fail	10056	—	1	—	—
High Internal Temperature	10057	—	1	—	—
Loss of Power	10061	—	1	—	—
Remote Shutdown	10062	—	1	—	—
Unspecified Event(s) [1]	10064	—	1	—	—
Unit Hrs Exceeded	10080	—	1	—	—
Comp 1 Hrs Exceeded	10081	—	1	—	—
Network Failure	10091	—	1	—	—
No Connection W/Unit 1	10092	—	1	—	—
Unit(s) Disconnected	10093	—	1	—	—
Unit Code Missing	10094	—	—	—	—
Unit Code Mismatch	10095	—	—	—	—
Low Memory 1	10097	—	—	—	—
Ram / Battery Failure	10098	—	—	—	—
(Parallel Flash) MEMORY 1 FAIL	10100	—	—	—	—
(Serial Flash) MEMORY 2 FAIL	10101	—	—	—	—
Front Door Open	10102	—	—	—	—
Rear Door Open	10103	—	—	—	—
Digital Scroll Compressor 1 Sensor Fail	10108	—	—	—	—
Low Int Temperature	10110	—	—	—	—
High Ext Dewpoint	10111	—	—	—	—
Cabinet Temp Sensor Fail	10112	—	—	—	—
Cabinet Humidity Sensor Fail	10113	—	—	—	—
Ambient Temp Sensor Fail	10114	—	—	—	—
Comp 1 Short Cycle	10132	—	—	—	—
Reheat Lockout	10140	—	—	—	—
Humidifier Lockout	10141	—	—	—	—
Compressor(s) Lockout	10142	—	—	—	—
Backup Ventilation	10143	—	—	—	—
Door Open	10144	—	—	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
Reference Document: ST100I&C PA Parameters and Events, Version 18.0

1. Any non-recognized alarm code by current firmware received from the XDF control will trigger this event.

Table 3-23 Liebert XDF™—Status and Coil (continued)

Controller	Liebert iCOM® v3				
Data Description	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Device Load	10146	—	—	—	—
Alarm Status	10147	—	—	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
Reference Document: ST100I&C PA Parameters and Events, Version 18.0
1. Any non-recognized alarm code by current firmware received from the XDF control will trigger this event.

Table 3-24 Liebert XDF™—Input and Holding

Controller	Liebert iCOM® v3				
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Vendor ID	30001	40001	1	—	—
Device ID	30002	40002	1	—	—
Version number	30003	40003	1	—	—
UPS/Env/Pwr	30004	40004	1	—	—
Temperature Setpoint	30023	40023	1	10	deg C
Delay after safe Temp has been reached	30034	40034	—	—	Minutes
Allowable deviation between internal temp sensors	30035	40035	—	—	deg C
High Cabinet Temperature Setpoint	30058	40058	—	10	deg C
Low Cabinet Temperature Setpoint	30059	40059	—	10	deg C
Fan Run Hour Threshold	30070	40070	—	—	Hours
Compressor 1 Run Hour Threshold	30071	40071	—	—	Hours
Service Ramp	30099	—	—	—	%
Operating State [6]	30100	—	—	—	—
Number of Active Events/Alarm	30101	—	—	—	—
Summary Alarm Status [7]	30102	—	—	—	—
Fan Ramp	30103	—	—	—	%
Cooling Ramp	30104	—	—	—	%
Digital Scroll Compressor 1 High Temperature	30119	—	—	10	deg C
Sensor 1 Temp	30121	—	—	10	deg C
Sensor 2 Temp	30122	—	—	10	deg C
Sensor 3 Temp	30123	—	—	10	deg C
Sensor 4 Temp	30124	—	—	10	deg C
Ambient Temp	30125	—	—	10	deg C
Ambient Humidity	30126	—	—	—	%
Dew Point Temp	30127	—	—	—	deg C
Adjusted Setpoint Temp	30128	—	—	10	deg C
Cabinet Temperature	30129	—	—	10	deg C
Service Due Year	30135	—	—	—	—
Service Due Month	30136	—	—	—	—
Device kW Load	30137	—	—	—	kW
Fan Run Hour	30141	—	—	—	Hours

Table 3-24 Liebert XDF™—Input and Holding (continued)

Controller	Liebert iCOM® v3				
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Compressor 1 Run Hour	30142	—	—	—	Hours

NOTES

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Reference Document: ST100I&C PA Parameters and Events, Version 18.0

1. Timer mode: 0 = no, 1 = yes
2. Type of DT Room-Glycol: 0 = no, 1 = contact, 2 = value
3. Predictive Hum Control: 0 = relative, 1 = compensated, 2 = predictive
4. Temp Control Algorithm: 0 = proportional, 1 = PD, 2 = PDI; 3 = intelligent
5. When VFD is set to manual mode (coil 22), the host can control the VFD by the value of register 40019. The Manual VSD Timer will start to count down. Once it reaches 0, the VFD control mode will switch to auto. The host will need to periodically reset this timer in order to maintain the manual mode. Consult factory for BMS timer information.
6. Operating state:
   - Bit 0-1: 00 unit off, 01 unit on, 10 unit standby
   - Bit 2-3: 00 auto, 01 manual
   - Bit 4-7: 0000 none
     0001 local user
     0010 alarm
     0011 schedule
     0100 remote user
     0101 external device
     0110 local display
7. Alarm state bit map:
   - Bit 0 = Reset state
   - Bit 1 = Active state
   - Bit 2 = Acknowledge state
   - Bit 3-7 = Alarm Type
     00000: Message
     00001: Warning
     00010: Alarm
8. Free-cool state: 0 = Off, 1 = Start, 2 = On

Table 3-25 Liebert Challenger 3000™, Liebert Deluxe System/3™, Liebert Himod™, Liebert ICS™— Input and Holding—LAM

Controller	Advanced Microprocessor - LAM				
Liebert Products	Liebert Challenger 3000 Liebert Deluxe System/3 Liebert Himod (LNA version - Using Liebert SiteScan®) Liebert ICS				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Temperature	—	40001	1	—	—
Humidity	—	40002	1	—	—
Cooling	—	40003	1	—	1=On / 0=Off
Heating	—	40004	1	—	1=On / 0=Off
Humidification	—	40005	1	—	1=On / 0=Off
De-humidification	—	40006	1	—	1=On / 0=Off
Econ-O-Cycle	—	40007	1	—	1=On / 0=Off
Stages	—	40008	1	—	—
% Capacity	—	40009	1	—	—
Unit Status (On / Off)	—	40018	1	—	1=On / 0=Off (Read Only)
Alarm Points					Discrete alarm objects available; use autodiscover for this unit
Communications	—	40289	1	—	Bit 0
Local Off	—	40289	1	—	Bit 1
Remote Off	—	40289	1	—	Bit 2
High Head Pressure 1	—	40289	1	—	Bit 3
High Head Pressure 2	—	40289	1	—	Bit 4
Loss of Airflow	—	40289	1	—	Bit 5
Standby Glycol Unit On	—	40289	1	—	Bit 6
Liquid Detected	—	40289	1	—	Bit 7
Change Filters	—	40289	1	—	Bit 8
High Temperature	—	40289	1	—	Bit 9
Low Temperature	—	40289	1	—	Bit 10
High Humidity	—	40290	1	—	Bit 0
Low Humidity	—	40290	1	—	Bit 1
Humidifier Problem	—	40290	1	—	Bit 2
No Water in Humidifier Pan	—	40290	1	—	Bit 3
Compressor 1 Overload	—	40290	1	—	Bit 4
Compressor 2 Overload	—	40290	1	—	Bit 5
Main Fan Overload	—	40290	1	—	Bit 6
Manual Override	—	40290	1	—	Bit 7
Smoke Detected	—	40290	1	—	Bit 8
Loss of Water	—	40290	1	—	Bit 9
Standby Unit On	—	40290	1	—	Bit 10
Low Suction	—	40291	1	—	Bit 0
Short Cycle	—	40291	1	—	Bit 1
Loss of Power	—	40291	1	—	Bit 2
Inverter on Bypass	—	40291	1	—	Bit 3
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-25 Liebert Challenger 3000™, Liebert Deluxe System/3™, Liebert Himod™, Liebert ICS™— Input and Holding—LAM (continued)

Controller	Advanced Microprocessor - LAM				
Liebert Products	Liebert Challenger 3000 Liebert Deluxe System/3 Liebert Himod (LNA version - Using Liebert SiteScan®) Liebert ICS				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Standby Fan On	—	40291	1	—	Bit 4
Loss of Emergency Power	—	40291	1	—	Bit 5
Local Alarm 1	—	40291	1	—	Bit 6
Local Alarm 2	—	40291	1	—	Bit 7
Off by Remote Shutdown	—	40291	1	—	Bit 8
Local Alarm 3	—	40291	1	—	Bit 9
Local Alarm 4	—	40291	1	—	Bit 10
Compressor 1 Run Hours	—	40019	1	—	—
Compressor 2 Run Hours	—	40020	1	—	—
Fan Motor Run Hours	—	40021	1	—	—
Humidifier Run Hours	—	40022	1	—	—
Setpoints (View)					
Temperature Setpoint	—	40010	1	—	(R/W)
Temperature Tolerance	—	40011	1	—	(R/W)
Humidity Setpoint	—	40012	1	—	(R/W)
Humidity Tolerance	—	40013	1	—	(R/W)
High Temp Alarm Setpoint	—	40014	1	—	(R/W)
Low Temp Alarm Setpoint	—	40015	1	—	(R/W)
High Humd Alarm Setpoint	—	40016	1	—	(R/W)
Low Humidity Alarm Setpoint	—	40017	1	—	(R/W)
Winter Start Delay	—	40028	1	—	Minutes (R/W)
Auto Flush Rate	—	40029	1	—	% (R/W)
Chill Water Flush Rate	—	40030	1	—	Hours (R/W)
Auto Restart Delay	—	40031	1	—	0.1 minute (R/W)
Control Points (Set)					
Unit On / Off	—	40349	1	—	Bit 0 On=unit Off; Bit 1 On=unit On
Temperature Setpoint	—	40350	1	—	—
Temperature Tolerance	—	40350	1	1000	—
Humidity Setpoint	—	40351	1	—	—
Humidity Tolerance	—	40351	1	1000	—
Reheat Lockout	—	40349	1	—	Bit 2 On=RH Off; Bit 3 On=RH On
Humidifier Lockout	—	40349	1	—	Bit 4 On=HL Off; Bit 5 On=HL On
Trendable Points (Set)					
Temperature	—	—	1	—	—
Humidity	—	—	1	—	—
Reports	—	—		—	—
Trend	—	—	1	—	—
Status	—	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-26 Liebert DataMate™, Liebert Mini-Mate Plus™, Liebert Mini-Mate2™—Input and Holding—L0B

Controller	Small Systems - L0B				
Liebert Products	Liebert DataMate Liebert Mini-Mate Plus Liebert Mini-Mate2				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Temperature	—	40001	1	—	—
Humidity	—	40002	1	—	—
Cooling	—	40003	1	—	1=On / 0=Off
Heating	—	40004	1	—	1=On / 0=Off
Humidification	—	40005	1	—	1=On / 0=Off
Dehumidification	—	40006	1	—	1=On / 0=Off
Econ-o-Cycle	—	40007	1	—	1=On / 0=Off
Stages	—	40008	1	—	—
% Capacity	—	40009	1	—	—
Alarm Points					
Communications	—	40289	1	—	Bit 0
Local Off	—	40289	1	—	Bit 1
Remote Off	—	40289	1	—	Bit 2
High Temperature	—	40289	1	—	Bit 3
Low Temperature	—	40289	1	—	Bit 4
High Humidity	—	40289	1	—	Bit 5
Low Humidity	—	40289	1	—	Bit 6
Setpoints (View)					
None	—	—	1	—	—
Control Points (Set)					
Unit On/Off	—	40011	1	—	1=On / 0=Off (R/W)
Remote On/Off	—	40349	1	—	Bit 0 On=unit Off Bit 1 On=unit On (W)
Trendable Points (Set)					
Temperature	—	—	1	—	—
Humidity	—	—	1	—	—
Reports	—	—		—	—
Trend	—	—	1	—	—
Status	—	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-27 Liebert DataMate™, Liebert Mini-Mate2™—Input and Holding—MM2

Controller	MM2				
Liebert Products	Liebert DataMate Liebert Mini-Mate2				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Temperature	—	40001	1	—	—
Humidity	—	40002	1	—	—
Cooling	—	40003	1	—	1=On / 0=Off
Heating	—	40004	1	—	1=On / 0=Off
Humidification	—	40005	1	—	1=On / 0=Off
Dehumidification	—	40006	1	—	1=On / 0=Off
Econ-o-Cycle	—	40007	1	—	1=On / 0=Off
Stages	—	40008	1	—	—
% Capacity	—	40009	1	—	—
Alarm Points					
Communications	—	40289	1	—	Bit 0
Local Off	—	40289	1	—	Bit 1
Remote Off	—	40289	1	—	Bit 2
High Head Pressure 1	—	40289	1	—	Bit 3
Loss of Airflow	—	40289	1	—	Bit 5
Standby Glycol Unit On	—	40289	1	—	Bit 6
Change Filters	—	40289	1	—	Bit 8
High Temperature	—	40289	1	—	Bit 9
Low Temperature	—	40289	1	—	Bit 10
High Humidity	—	40290	1	—	Bit 0
Low Humidity	—	40290	1	—	Bit 1
Humidifier Problem	—	40290	1	—	Bit 2
Smoke Detected	—	40290	1	—	Bit 8
Loss of Water Flow	—	40290	1	—	Bit 9
Standby Unit On	—	40290	1	—	Bit 10
Short Cycle	—	40291	1	—	Bit 1
Loss of Power	—	40291	1	—	Bit 2
Local Alarm 1	—	40291	1	—	Bit 6
Local Alarm 2	—	40291	1	—	Bit 7
Local Alarm 3	—	40291	1	—	Bit 9
Local Alarm 4	—	40291	1	—	Bit 10
Run Hours (View)					
Compressor 1	—	40019	1	—	—
Fan Motor	—	40020	1	—	—
Humidifier	—	40021	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-27 Liebert DataMate™, Liebert Mini-Mate2™—Input and Holding—MM2 (continued)

Controller	MM2				
Liebert Products	Liebert DataMate Liebert Mini-Mate2				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Setpoints (View)					
Temperature	—	40010	1	—	—
Temp Tolerance	—	40011	1	—	—
Humidity	—	40012	1	—	—
Humidity Tolerance	—	40013	1	—	—
High Temperature Alarm	—	40014	1	—	—
Low Temperature Alarm	—	40015	1	—	—
High Humidity Alarm	—	40016	1	—	—
Low Humidity Alarm	—	40017	1	—	—
Chill Water Flush Rate	—	40025	1	—	Hours (R/W)
Auto Restart Delay	—	40026	1	—	0.1 minute (R/W)
Control Points (Set)					
Unit On/Off	—	40018	1	—	1=On / 0=Off (Read Only)
Remote On/Off	—	40349	1	—	Bit 0 On=unit Off Bit 1 On=unit On (W)
Temperature Setpoint	—	40350	1	—	(W)
Temperature Tolerance	—	40350	1	1000	Multiply desired value by 1000 (Modbus only) 0=No Change (W)
Humidity Setpoint	—	40351	1	-	(W)
Humidity Tolerance	—	40351	1	1000	Multiply desired value by 1000 (Modbus only) 0=No Change (W)
Trendable Points (Set)					
Temperature	—	—	1	—	—
Humidity	—	—	1	—	—
Reports					
Trend	—	—	1	—	—
Status	—	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-28 Liebert Mini-Mate2™ 8 Ton—Input and Holding—L8T

Controller	L8T				
Liebert Products	Liebert Mini-Mate2 8 Ton				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Temperature	—	40001	1	—	—
Humidity	—	40002	1	—	—
Cooling	—	40003	1	—	1=On / 0=Off
Heating	—	40004	1	—	1=On / 0=Off
Humidification	—	40005	1	—	1=On / 0=Off
De-humidification	—	40006	1	—	1=On / 0=Off
Econ-O-Cycle	—	40007	1	—	1=On / 0=Off
Stages	—	40008	1	—	—
% Capacity	—	40009	1	—	—
Analog input 1	—	40023	1	—	A/D raw value w/ slope =1 and offset = 0
Analog input 2	—	40024	1	—	A/D raw value w/ slope =1 and offset = 0
Analog input 3	—	40025	1	—	A/D raw value w/ slope =1 and offset = 0
Analog input 4	—	40026	1	—	A/D raw value w/ slope =1 and offset = 0
Alarm Points					
Communications	—	40289	1	—	Bit 0
Local Off	—	40289	1	—	Bit 1
Remote Off	—	40289	1	—	Bit 2
High Head Pressure 1	—	40289	1	—	Bit 3
High Head Pressure 2	—	40289	1	—	Bit 4
Loss of Airflow	—	40289	1	—	Bit 5
Standby Glycol Unit On	—	40289	1	—	Bit 6
Not Used	—	40289	1	—	Bit 7
Change Filters	—	40289	1	—	Bit 8
High Temperature	—	40289	1	—	Bit 9
Low Temperature	—	40289	1	—	Bit 10
High Humidity	—	40290	1	—	Bit 0
Low Humidity	—	40290	1	—	Bit 1
Humidifier Problem	—	40290	1	—	Bit 2
Smoke Detected	—	40290	1	—	Bit 8
Loss of Water	—	40290	1	—	Bit 9
Standby Unit On	—	40290	1	—	Bit 10
Not Used	—	40291	1	—	Bit 0
Short Cycle	—	40291	1	—	Bit 1
Loss of Power	—	40291	1	—	Bit 2
Local Alarm 1	—	40291	1	—	Bit 6
Local Alarm 2	—	40291	1	—	Bit 7
EPO Shutdown	—	40291	1	—	Bit 8
Local Alarm 3	—	43291	1	—	Bit 9
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-28 Liebert Mini-Mate2™ 8 Ton—Input and Holding—L8T (continued)

Controller	L8T				
Liebert Products	Liebert Mini-Mate2 8 Ton				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Local Alarm 4	—	40291	1	—	Bit 10
Run Times (View)					
Compressor 1 Run Hours	—	40019	1	—	—
Compressor 2 Run Hours	—	40020	1	—	—
Glycol Run Hours	—	—	1	—	—
Fan Motor Run Hours	—	40021	1	—	—
Humidifier Run Hours	—	40022	1	—	—
Reheat 1 Run Hours	—	—	1	—	—
Reheat 2 Run Hours	—	—	1	—	—
Reheat 3 Run Hours	—	—	1	—	—
Chilled H2O Valve Run Hours	—	—	1	—	—
Setpoints (View)					
Temperature Setpoint	—	40010	1	—	(R/W)
Temperature Tolerance	—	40011	1	—	(R/W)
Humidity Setpoint	—	40012	1	—	(R/W)
Humidity Tolerance	—	40013	1	—	(R/W)
High Temperature Alarm Setpoint	—	40014	1	—	(R/W)
Low Temp Alarm Setpoint	—	40015	1	—	(R/W)
High Humidity Alarm Setpoint	—	40016	1	—	(R/W)
Low Humidity Alarm Setpoint	—	40017	1	—	(R/W)
Winter Start Delay	—	40028	1	—	Minutes (R/W)
Auto Flush Rate	—	40029	1	—	% (R/W)
Chill Water Flush Rate	—	40030	1	—	Hours (R/W)
Auto Restart Delay	—	40031	1	—	0.1 minute (R/W)
Control Points (Set)					
Unit Status (On / Off)	—	40018	1	—	1=On / 0=Off (Read Only)
Unit On / Off	—	40349	1	—	Bit 0 On=unit Off Bit 1 On=unit On (W)
Temperature Setpoint	—	40350	1	—	(W)
Temperature Tolerance	—	40350	1	1000	(W)
Humidity Setpoint	—	40351	1	-	(W)
Humidity Tolerance	—	40351	1	1000	(W)
Reheat Lockout	—	40349	1	—	Bit 2 On=RH Off Bit 3 On=RH On
Humidifier Lockout	—	40349	1	—	Bit 4 On=HL Off Bit 5 On=HL On

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-29 Liebert Atlas Air™, Liebert Atlas PEC™, Liebert LECS 15™—Input and Holding—C10 2-step

Controller	C10				
Liebert Products	Liebert Atlas Air Liebert Atlas PEC Liebert LECS 15				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Unit Number	—	40001	1	—	1-99
Average Return Air Temp.	—	40002	1	10	deg C
Average Return Air Humidity	—	40003	1	10	%
Average Supply Air Temp.	—	40004	1	10	deg C
Average Supply Air Humidity	—	40005	1	10	%
Fan Status	—	40007	1	—	1=On / 0=Off
Cool 1 Status	—	40008	1	—	1=On / 0=Off
Cool 2 Status	—	40009	1	—	1=On / 0=Off
Heat 1 Status	—	40010	1	—	1=On / 0=Off
Heat 2 Status	—	40011	1	—	1=On / 0=Off
Humidifier Status	—	40012	1	—	—
De-humidifier Status	—	40013	1	—	—
Cooling Capacity	—	40014	1	—	%
Heating Capacity	—	40015	1	—	%
Temperature Control Status	—	40019	1	—	0=Return / 1=Supply
Battery Voltage Level	—	40020	1	10	V
Remote Shutdown Status	—	40021	1	—	1=Enabled / 0=Disabled
Temperature Control Select	—	40024	1	—	0=Return / 1=Supply 2=Remote / 3=Auto
Alarm Points					
Communications	—	40289	1	—	Bit 0
Faulty Sensor	—	40289	1	—	Bit 1
High Temperature	—	40289	1	—	Bit 2
Low Temperature	—	40289	1	—	Bit 3
High Humidity	—	40289	1	—	Bit 4
Low Humidity	—	40289	1	—	Bit 5
Loss of Airflow	—	40289	1	—	Bit 6
Water Under Floor	—	40289	1	—	Bit 7
Cool 1 Low Pressure Alarm	—	40289	1	—	Bit 8
Cool 2 Low Pressure Alarm	—	40289	1	—	Bit 9
Cool 1 High Pressure Alarm	—	40289	1	—	Bit 10
Cool 2 High Pressure Alarm	—	40290	1	—	Bit 0
Cool Service	—	40290	1	—	Bit 1
Humidifier Service	—	40290	1	—	Bit 2
Filter Service	—	40290	1	—	Bit 3
Humidity Low Level	—	40290	1	—	Bit 4
Battery Level Low	—	40290	1	—	Bit 5
Loss of Power	—	40290	1	—	Bit 6
Local Alarm 1	—	40290	1	—	Bit 7
Local Alarm 2	—	40290	1	—	Bit 8

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-29 Liebert Atlas Air™, Liebert Atlas PEC™, Liebert LECS 15™—Input and Holding—C10 2-step

Controller	C10				
Liebert Products	Liebert Atlas Air Liebert Atlas PEC Liebert LECS 15				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Setpoints (View)					
Return Air Temperature	—	40016	1	10	deg C (R/W)
Return Air Humidity	—	40017	1	10	deg C (R/W)
Supply Air Temperature	—	40018	1	10	deg C (R/W)
High Temp Alarm	—	40025	1	10	deg C (R/W)
Low Temp Alarm	—	40026	1	10	deg C (R/W)
High Hum Alarm	—	40027	1	10	% (R/W)
Low Hum Alarm	—	40028	1	10	% (R/W)
Restart Delay	—	40029	1	—	Seconds (R/W)
Control Points (Set)					
Activation Mode	—	40006	1	—	1=On / 0=Off (R/W)
General Alarm Status	—	40022	1	—	1=On / 0=Off; write 0 to reset alarm
Audible Alarm Status	—	40023	1	—	1=On / 0=Off; write 0 to ack alarm
Return Air Temperature	—	40349	1	10	deg C (R/W)
Return Air Humidity	—	40350	1	10	deg C (R/W)
Supply Air Temperature	—	40351	1	10	deg C (R/W)
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-30 Liebert Atlas Air™, Liebert Atlas PEC™, Liebert CEMS 100™—Input and Holding—C100 4-step

Controller	CEMS 100				
Liebert Products	Liebert Atlas Air Liebert Atlas PEC Liebert CEMS 100				
	Available Points				
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Unit Number	—	40001	1	—	1-99
Average Return Air Temp.	—	40002	1	10	deg C
Average Return Air Humidity	—	40003	1	10	%
Average Supply Air Temp.	—	40004	1	10	deg C
Average Supply Air Humidity	—	40005	1	10	%
Fan Status	—	40007	1	—	1=On / 0=Off
Cool 1 Status	—	40008:0	1	—	1=On / 0=Off
Cool 2 Status	—	40009:0	1	—	1=On / 0=Off
Cool 3 Status	—	40008:4	1	—	1=On / 0=Off
Cool 4 Status	—	40009:4	1	—	1=On / 0=Off
Heat 1 Status	—	40010	1	—	1=On / 0=Off
Heat 2 Status	—	40011	1	—	1=On / 0=Off
Humidifier Status	—	40012	1	—	—
De-humidifier Status	—	40013	1	—	—
Cooling Capacity	—	40014	1	—	%
Heating Capacity	—	40015	1	—	%
Temperature Control Status	—	40019	1	—	0=Return / 1=Supply
Battery Voltage Level	—	40020	1	100	V
Remote Shutdown Status	—	40021	1	—	1=Enabled / 0=Disabled
Temperature Control Select	—	40024	1	—	0=Return / 1=Supply 2=Remote / 3=Auto
Alarm Points					
Communications	—	40289	1	—	Bit 0
Faulty Sensor	—	40289	1	—	Bit 1
High Temperature	—	40289	1	—	Bit 2
Low Temperature	—	40289	1	—	Bit 3
High Humidity	—	40289	1	—	Bit 4
Low Humidity	—	40289	1	—	Bit 5
Loss of Airflow	—	40289	1	—	Bit 6
Water Under Floor	—	40289	1	—	Bit 7
Cool 1 Low Pressure Alarm	—	40289	1	—	Bit 8
Cool 2 Low Pressure Alarm	—	40289	1	—	Bit 9
Cool 1 High Pressure Alarm	—	40289	1	—	Bit 10
Cool 2 High Pressure Alarm	—	40290	1	—	Bit 0
Cool Service	—	40290	1	—	Bit 1
Humidifier Service	—	40290	1	—	Bit 2
Filter Service	—	40290	1	—	Bit 3
Humidity Low Level	—	40290	1	—	Bit 4
Battery Level Low	—	40290	1	—	Bit 5
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-30 Liebert Atlas Air™, Liebert Atlas PEC™, Liebert CEMS 100™—Input and Holding—C100 4-step (continued)

Controller	CEMS 100				
Liebert Products	Liebert Atlas Air Liebert Atlas PEC Liebert CEMS 100				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Loss of Power	—	40290	1	—	Bit 6
Local Alarm 1	—	40290	1	—	Bit 7
Local Alarm 2	—	40290	1	—	Bit 8
Cool 3 Low Pressure	—	40290	1	—	Bit 9
Cool 4 Low Pressure	—	40290	1	—	Bit 10
Cool 3 High Pressure	—	40290	1	—	Bit 11
Cool 4 High Pressure	—	40290	1	—	Bit 12
Air Flow 2 Loss	—	40290	1	—	Bit 13
Setpoints (View)					
Return Air Temperature	—	40016	1	10	deg C (R/W)
Return Air Humidity	—	40017	1	10	deg C (R/W)
Supply Air Temperature	—	40018	1	10	deg C (R/W)
High Temp Alarm	—	40025	1	10	deg C (R/W)
Low Temp Alarm	—	40026	1	10	deg C (R/W)
High Hum Alarm	—	40027	1	10	% (R/W)
Low Hum Alarm	—	40028	1	10	% (R/W)
Restart Delay	—	40029	1	—	Seconds (R/W)
Control Points (Set)					
Activation Mode	—	40006	1	—	1=On / 0=Off (R/W)
General Alarm Status	—	40022	1	—	1=On / 0=Off; write 0 to reset alarm
Audible Alarm Status	—	40023	1	—	1=On / 0=Off; write 0 to ack alarm
Return Air Temperature	—	40349	1	10	deg C (R/W)
Return Air Humidity	—	40350	1	10	deg C (R/W)
Supply Air Temperature	—	40351	1	10	deg C (R/W)
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

3.2 Power Distribution and Power Conditioning Products

Table 3-31 Liebert FPC™, Liebert PPC™—Input and Holding

Controller	Power Monitoring Panel - PMP2				
Liebert Products	Liebert FPC Liebert PPC				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Voltage In X-Y	—	40001	1	—	V
Voltage In Y-Z	—	40002	1	—	V
Voltage In Z-X	—	40003	1	—	V
Voltage Out A-B	—	40004	1	—	V
Voltage Out B-C	—	40005	1	—	V
Voltage Out C-A	—	40006	1	—	V
Voltage Out A-N	—	40007	1	—	V
Voltage Out B-N	—	40008	1	—	V
Voltage Out C-N	—	40009	1	—	V
Current Out A	—	40010	1	—	A
Current Out B	—	40011	1	—	A
Current Out C	—	40012	1	—	A
Ground Current	—	40013	1	10	A
Neutral Current	—	40014	1	—	A
kVA	—	40015	1	—	kVA
kW	—	40016	1	—	kW
Frequency	—	40017	1	10	Hz
% Capacity A	—	40018	1	—	%
% Capacity B	—	40019	1	—	%
% Capacity C	—	40020	1	—	%
Power Factor	—	40021	1	100	—
Kilowatt Hours	—	—	1	—	—
THD Voltage X	—	—	1	—	—
THD Voltage Y	—	—	1	—	—
THD Voltage Z	—	—	1	—	—
THD Current X	—	—	1	—	—
THD Current Y	—	—	1	—	—
THD Current Z	—	—	1	—	—
K Factor Current X	—	—	1	—	—
K Factor Current Y	—	—	1	—	—
K Factor Current Z	—	—	1	—	—
CREST Factor Current X	—	—	1	—	—
CREST Factor Current Y	—	—	1	—	—
CREST Factor Current Z	—	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value					

Table 3-31 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	Power Monitoring Panel - PMP2				
Liebert Products	Liebert FPC Liebert PPC				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Alarm Points					Discrete alarm objects available; use auto-discover for this unit
Communications	—	40289	1	—	Bit 0
Output Undervoltage	—	40289	1	—	Bit 1
Output Overvoltage	—	40289	1	—	Bit 2
Output Overcurrent	—	40289	1	—	Bit 3
Frequency Deviation	—	40289	1	—	Bit 4
Ground Overcurrent	—	40289	1	—	Bit 5
Transformer Overtemp	—	40289	1	—	Bit 6
Ground Fault	—	40289	1	—	Bit 7
Ground Failure	—	40289	1	—	Bit 8
Liquid Detected	—	40289	1	—	Bit 9
Security Alarm	—	40289	1	—	Bit 10
Phase Rotation/Loss	—	40290	1	—	Bit 0
Datawave Overtemperature	—	40290	1	—	Bit 1
Emergency Shutdown	—	40290	1	—	Bit 2
Load On Bypass	—	40290	1	—	Bit 3
Local Alarm #1	—	40290	1	—	Bit 4
Local Alarm #2	—	40290	1	—	Bit 5
Output Voltage THD	—	40290	1	—	Bit 6
Custom Alarm #1	—	40290	1	—	Bit 7
Custom Alarm #2	—	40290	1	—	Bit 8
Setpoints (View)					
None	—	—	1	—	—
Control Points (Set)					
None	—	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value					

Table 3-32 Liebert Datawave™, Liebert FPC™, Liebert PPC™—Input and Holding—PMP Option for Liebert FPC and Liebert PPC

Controller	Power Monitoring Panel - PMP Option for Liebert FPC and Liebert PPC				
Liebert Products	Liebert Datawave Liebert FPC Liebert PPC				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Voltage In X-Y	—	40001	1	—	V
Voltage In Y-Z	—	40002	1	—	V
Voltage In Z-X	—	40003	1	—	V
Voltage Out A-B	—	40004	1	—	V
Voltage Out B-C	—	40005	1	—	V
Voltage Out C-A	—	40006	1	—	V
Voltage Out A-N	—	40007	1	—	V
Voltage Out B-N	—	40008	1	—	V
Voltage Out C-N	—	40009	1	—	V
Current Out A	—	40010	1	—	A
Current Out B	—	40011	1	—	A
Current Out C	—	40012	1	—	A
Ground Current	—	40013	1	10	A
Neutral Current	—	40014	1	—	A
kVA	—	40015	1	—	kVA
kW	—	40016	1	—	kW
Frequency	—	40017	1	10	Hz
% Capacity A	—	40018	1	—	%
% Capacity B	—	40019	1	—	%
% Capacity C	—	40020	1	—	%
Alarm Points					Discrete alarm objects available; use auto-discover for this unit
Communications	—	40289	1	—	Bit 0
Output Undervoltage	—	40289	1	—	Bit 1
Output Overvoltage	—	40289	1	—	Bit 2
Output Overcurrent	—	40289	1	—	Bit 3
Frequency Deviation	—	40289	1	—	Bit 4
Ground Overcurrent	—	40289	1	—	Bit 5
Transformer Overtemp	—	40289	1	—	Bit 6
Ground Fault	—	40289	1	—	Bit 7
Ground Failure	—	40289	1	—	Bit 8
Liquid Detected	—	40289	1	—	Bit 9
Security Alarm	—	40289	1	—	Bit 10
Phase Rotation/Loss	—	40290	1	—	Bit 0
Datawave Overtemperature	—	40290	1	—	Bit 1
Emergency Shutdown	—	40290	1	—	Bit 2
Load On Bypass	—	40290	1	—	Bit 3
Local Alarm	—	40290	1	—	Bit 4
Custom Alarm #1	—	40290	1	—	Bit 5

Table 3-32 Liebert Datawave™, Liebert FPC™, Liebert PPC™—Input and Holding— PMP Option for Liebert FPC and Liebert PPC (continued)

Controller	Power Monitoring Panel - PMP Option for Liebert FPC and Liebert PPC				
Liebert Products	Liebert Datawave Liebert FPC Liebert PPC				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Custom Alarm #2	—	40290	1	—	Bit 6
Setpoints (View)					
None	—		1	—	—
Control Points (Set)					
None	—	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-33 Liebert FPC™, Liebert PPC™—Status and Coil

Controller	Liebert iCOM® v4				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Input Power 1					
Phase Loss	10001	—	1	—	Active on Alarm
Phase Rotation Error	10002	—	1	—	Active on Alarm
Input Power 2 (used only with 2nd VPMP controller)					
Phase Loss	10013	—	1	—	Active on Alarm
Phase Rotation Error	10014	—	1	—	Active on Alarm
Output Power 1					
Output Overvoltage	10025	—	1	—	Active on Alarm
Output Undervoltage	10026	—	1	—	Active on Alarm
Output Overcurrent	10027	—	1	—	Active on Alarm
Neutral Overcurrent	10028	—	1	—	Active on Alarm
Ground Overcurrent	10029	—	1	—	Active on Alarm
Output Voltage THD	10030	—	1	—	Active on Alarm
Frequency Deviation	10031	—	1	—	Active on Alarm
Transformer Overtemperature Power Off	10032	—	1	—	Active on Alarm
Transformer Overtemperature	10033	—	1	—	Active on Alarm
Transformer Temperature Sensor Fail	10034	—	1	—	Active on Alarm
Output Power 2 (used only with 2nd VPMP controller for Dual-output Transformer)					
Output Overvoltage	10045	—	1	—	Active on Alarm
Output Undervoltage	10046	—	1	—	Active on Alarm
Output Overcurrent	10047	—	1	—	Active on Alarm
Neutral Overcurrent	10048	—	1	—	Active on Alarm
Ground Overcurrent	10049	—	1	—	Active on Alarm
Output Voltage THD	10050	—	1	—	Active on Alarm
Frequency Deviation	10051	—	1	—	Active on Alarm
Transformer Overtemperature Power Off	10052	—	1	—	Active on Alarm
Transformer Overtemperature	10053	—	1	—	Active on Alarm
Transformer Temperature Sensor Fail	10054	—	1	—	Active on Alarm
Panel 1					
Panel Summary Alarm	10065	—	1	—	Active on Alarm
Panel Overvoltage	10066	—	1	—	Active on Alarm
Panel Undervoltage	10067	—	1	—	Active on Alarm
Panel Phase Overcurrent	10068	—	1	—	Active on Alarm
Panel Phase Overcurrent	10069	—	1	—	Active on Warning
Panel Neutral Overcurrent	10070	—	1	—	Active on Alarm
Panel Ground Overcurrent	10071	—	1	—	Active on Alarm
Panel 2					
Panel Summary Alarm	10082	—	1	—	Active on Alarm
Panel Overvoltage	10083	—	1	—	Active on Alarm
Panel Undervoltage	10084	—	1	—	Active on Alarm
Panel Phase Overcurrent	10085	—	1	—	Active on Alarm
Panel Phase Overcurrent	10086	—	1	—	Active on Warning

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-33 Liebert FPC™, Liebert PPC™—Status and Coil (continued)

Controller	Liebert iCOM® v4				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Panel Neutral Overcurrent	10087	—	1	—	Active on Alarm
Panel Ground Overcurrent	10088	—	1	—	Active on Alarm
Panel 4					
Panel Summary Alarm	10116	—	1	—	Active on Alarm
Panel Overvoltage	10117	—	1	—	Active on Alarm
Panel Undervoltage	10118	—	1	—	Active on Alarm
Panel Phase Overcurrent	10119	—	1	—	Active on Alarm
Panel Phase Overcurrent	10120	—	1	—	Active on Warning
Panel Neutral Overcurrent	10121	—	1	—	Active on Alarm
Panel Ground Overcurrent	10122	—	1	—	Active on Alarm
Panel 1 Position 1					
Branch Overcurrent	10133	—	1	—	Active on Alarm
Branch Overcurrent	10134	—	1	—	Active on Warning
Branch Undercurrent Warning	10135	—	1	—	Active on Alarm
Panel 1 Position 2					
Branch Overcurrent	10146	—	1	—	Active on Alarm
Branch Overcurrent	10147	—	1	—	Active on Warning
Branch Undercurrent Warning	10148	—	1	—	Active on Alarm
Panel 1 Position 84					
Branch Overcurrent	11212	—	1	—	Active on Alarm
Branch Overcurrent	11213	—	1	—	Active on Warning
Branch Undercurrent Warning	11214	—	1	—	Active on Alarm
Panel 2 Position 1					
Branch Overcurrent	11225	—	1	—	Active on Alarm
Branch Overcurrent	11226	—	1	—	Active on Warning
Branch Undercurrent Warning	11227	—	1	—	Active on Alarm
Panel 2 Position 2					
Branch Overcurrent	11238	—	1	—	Active on Alarm
Branch Overcurrent	11239	—	1	—	Active on Warning
Branch Undercurrent Warning	11240	—	1	—	Active on Alarm
Panel 2 Position 84					
Branch Overcurrent	12304	—	1	—	Active on Alarm
Branch Overcurrent	12305	—	1	—	Active on Warning
Branch Undercurrent Warning	12306	—	1	—	Active on Alarm
Panel 3 Position 1					
Branch Overcurrent	12317	—	1	—	Active on Alarm
Branch Overcurrent	12318	—	1	—	Active on Warning
Branch Undercurrent Warning	12319	—	1	—	Active on Alarm
Panel 3 Position 2					
Branch Overcurrent	12330	—	1	—	Active on Alarm
Branch Overcurrent	12331	—	1	—	Active on Warning
Branch Undercurrent Warning	12332	—	1	—	Active on Alarm

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-33 Liebert FPC™, Liebert PPC™—Status and Coil (continued)

Controller	Liebert iCOM® v4				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Panel 3 Position 84					
Branch Overcurrent	13396	—	1	—	Active on Alarm
Branch Overcurrent	13397	—	1	—	Active on Warning
Branch Undercurrent Warning	13398	—	1	—	Active on Alarm
Panel 4 Position 1					
Branch Overcurrent	13409	—	1	—	Active on Alarm
Branch Overcurrent	13410	—	1	—	Active on Warning
Branch Undercurrent Warning	13411	—	1	—	Active on Alarm
Panel 4 Position 2					
Branch Overcurrent	13422	—	1	—	Active on Alarm
Branch Overcurrent	13423	—	1	—	Active on Warning
Branch Undercurrent Warning	13424	—	1	—	Active on Alarm
Panel 4 Position 84					
Branch Overcurrent	14488	—	1	—	Active on Alarm
Branch Overcurrent	14489	—	1	—	Active on Warning
Branch Undercurrent Warning	14490	—	1	—	Active on Alarm
Subfeed 1					
Subfeed Phase Overcurrent	14501	—	1	—	Active on Alarm
Subfeed Phase Overcurrent	14502	—	1	—	Active on Warning
Subfeed Neutral Overcurrent	14503	—	1	—	Active on Alarm
Subfeed Ground Overcurrent	14504	—	1	—	Active on Alarm
Subfeed 2					
Subfeed Phase Overcurrent	14515	—	1	—	Active on Alarm
Subfeed Phase Overcurrent	14516	—	1	—	Active on Warning
Subfeed Neutral Overcurrent	14517	—	1	—	Active on Alarm
Subfeed Ground Overcurrent	14518	—	1	—	Active on Alarm
Subfeed 64					
Subfeed Phase Overcurrent	15383	—	1	—	Active on Alarm
Subfeed Phase Overcurrent	15384	—	1	—	Active on Warning
Subfeed Neutral Overcurrent	15385	—	1	—	Active on Alarm
Subfeed Ground Overcurrent	15386	—	1	—	Active on Alarm
Customer Events 1 (Alarms 1 - 5 for 1 VPMP, Alarms 6 - 10 only if 2nd VPMP is used)					
Event State	15397	—	1	—	Active on Alarm
Customer Events 2					
Event State	15408	—	1	—	Active on Alarm
Customer Events 10					
Event State	15496	—	1	—	Active on Alarm
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-33 Liebert FPC™, Liebert PPC™—Status and Coil (continued)

Controller	Liebert iCOM® v4				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
System					
System Shutdown - EPO	15507	—	1	—	Active on Alarm
System Shutdown - REPO	15508	—	1	—	Active on Alarm
Transformer Overtemperature Shutdown	15509	—	1	—	Active on Alarm
Transformer Overtemperature	15510	—	1	—	Active on Alarm
Equipment Temperature Sensor Fail	15511	—	1	—	Active on Alarm
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Input Power 1					
Input Voltage A-B	30385	—	1	—	VAC
Input Voltage B-C	30386	—	1	—	VAC
Input Voltage C-A	30387	—	1	—	VAC
Input Power 2 (used only with 2nd VPMP controller)					
Input Voltage A-B	30391	—	1	—	VAC
Input Voltage B-C	30392	—	1	—	VAC
Input Voltage C-A	30393	—	1	—	VAC
Output Power 1		—		—	
Output Voltage X-Y	30397	—	1	—	VAC
Output Voltage Y-Z	30398	—	1	—	VAC
Output Voltage Z-X	30399	—	1	—	VAC
Output Voltage Vx	30400	—	1	—	VAC
Output Voltage Vy	30401	—	1	—	VAC
Output Voltage Vz	30402	—	1	—	VAC
Output Current Ix	30403	—	1	—	A AC
Output Current Iy	30404	—	1	—	A AC
Output Current Iz	30405	—	1	—	A AC
Output Neutral Current	30406	—	1	—	A AC
Ground Current	30407	—	1	10	A AC
Output Frequency	30408	—	1	—	Hz
Output Power (kVA)	30409	—	1	—	kVA
Output Power (kW)	30410	—	1	—	kW
Output kW-Hrs	30411	40411	2	—	kWH
Output Power Factor	30413	—	1	100	—
Output Percent Load	30414	—	1	—	%
Output Voltage Vx THD	30415	—	1	10	% THD
Output Voltage Vy THD	30416	—	1	10	% THD
Output Voltage Vz THD	30417	—	1	10	% THD
Output Current Ix THD	30418	—	1	10	% THD
Output Current Iy THD	30419	—	1	10	% THD
Output Current Iz THD	30420	—	1	10	% THD
Output Current Ix K-Factor	30421	—	1	10	—
Output Current Iy K-Factor	30422	—	1	10	—
Output Current Iz K-Factor	30423	—	1	10	—
Output Current Ix Crest Factor	30424	—	1	10	—
Output Current Iy Crest Factor	30425	—	1	10	—
Output Current Iz Crest Factor	30426	—	1	10	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Output Power 2 (used only with 2nd VPMP controller)					
Output Voltage X-Y	30430	—	1	—	VAC
Output Voltage Y-Z	30431	—	1	—	VAC
Output Voltage Z-X	30432	—	1	—	VAC
Output Voltage Vx	30433	—	1	—	VAC
Output Voltage Vy	30434	—	1	—	VAC
Output Voltage Vz	30435	—	1	—	VAC
Output Current Ix	30436	—	1	—	A AC
Output Current Iy	30437	—	1	—	A AC
Output Current Iz	30438	—	1	—	A AC
Output Neutral Current	30439	—	1	—	A AC
Ground Current	30440	—	1	10	A AC
Output Frequency	30441	—	1	—	Hz
Output Power (kVA)	30442	—	1	—	kVA
Output Power (kW)	30443	—	1	—	kW
Output kW-Hrs	30444	40444	2	—	kWH
Output Power Factor	30446	—	1	100	—
Output Percent Load	30447	—	1	-	%
Output Voltage Vx THD	30448	—	1	10	% THD
Output Voltage Vy THD	30449	—	1	10	% THD
Output Voltage Vz THD	30450	—	1	10	% THD
Output Current Ix THD	30451	—	1	10	% THD
Output Current Iy THD	30452	—	1	10	% THD
Output Current Iz THD	30453	—	1	10	% THD
Output Current Ix K-Factor	30454	—	1	10	—
Output Current Iy K-Factor	30455	—	1	10	—
Output Current Iz K-Factor	30456	—	1	10	—
Output Current Ix Crest Factor	30457	—	1	10	—
Output Current Iy Crest Factor	30458	—	1	10	—
Output Current Iz Crest Factor	30459	—	1	10	—
Panel 1					
Columns of Breakers	30463	—	1	—	—
Number of Breakers	30464	—	1	—	—
Panel Main Voltage X-Y	30465	—	1	—	VAC
Panel Main Voltage Y-Z	30466	—	1	—	VAC
Panel Main Voltage Z-X	30467	—	1	—	VAC
Panel Main Voltage X-N	30468	—	1	—	VAC
Panel Main Voltage Y-N	30469	—	1	—	VAC
Panel Main Voltage Z-N	30470	—	1	—	VAC
Panel Main Current Ix	30471	—	1	—	A AC
Panel Main Current Iy	30472	—	1	—	A AC
Panel Main Current Iz	30473	—	1	—	A AC
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel Main Neutral Current	30474	—	1	—	A AC
Panel Main Ground Current	30475	—	1	10	A AC
Panel Main Output Power (kVA)	30476	—	1	—	kVA
Panel Main Output Power (kW)	30477	—	1	—	kW
Panel Main Output kW-Hrs	30478	40478	2	10	kWH
Panel Main Output Power Factor	30480	—	1	100	—
Panel Main Output Percent Load	30481	—	1	—	%
Panel Main Voltage Vx THD	30482	—	1	10	% THD
Panel Main Voltage Vy THD	30483	—	1	10	% THD
Panel Main Voltage Vz THD	30484	—	1	10	% THD
Panel Main Current Ix THD	30485	—	1	10	% THD
Panel Main Current Iy THD	30486	—	1	10	% THD
Panel Main Current Iz THD	30487	—	1	10	% THD
Panel Main Current Ix Crest Factor	30488	—	1	10	—
Panel Main Current Iy Crest Factor	30489	—	1	10	—
Panel Main Current Iz Crest Factor	30490	—	1	10	—
Panel 2					
Columns of Breakers	30494	—	1	—	—
Number of Breakers	30495	—	1	—	—
Panel Main Voltage X-Y	30496	—	1	—	VAC
Panel Main Voltage Y-Z	30497	—	1	—	VAC
Panel Main Voltage Z-X	30498	—	1	—	VAC
Panel Main Voltage X-N	30499	—	1	—	VAC
Panel Main Voltage Y-N	30500	—	1	—	VAC
Panel Main Voltage Z-N	30501	—	1	—	VAC
Panel Main Current Ix	30502	—	1	—	A AC
Panel Main Current Iy	30503	—	1	—	A AC
Panel Main Current Iz	30504	—	1	—	A AC
Panel Main Neutral Current	30505	—	1	—	A AC
Panel Main Ground Current	30506	—	1	10	A AC
Panel Main Output Power (kVA)	30507	—	1	—	kVA
Panel Main Output Power (kW)	30508	—	1	—	kW
Panel Main Output kW-Hrs	30509	40509	2	10	kWH
Panel Main Output Power Factor	30511	—	1	100	—
Panel Main Output Percent Load	30512	—	1	—	%
Panel Main Voltage Vx THD	30513	—	1	10	% THD
Panel Main Voltage Vy THD	30514	—	1	10	% THD
Panel Main Voltage Vz THD	30515	—	1	10	% THD
Panel Main Current Ix THD	30516	—	1	10	% THD
Panel Main Current Iy THD	30517	—	1	10	% THD
Panel Main Current Iz THD	30518	—	1	10	% THD
Panel Main Current Ix Crest Factor	30519	—	1	10	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel Main Current Iy Crest Factor	30520	—	1	10	—
Panel Main Current Iz Crest Factor	30521	—	1	10	—
Panel 4					
Columns of Breakers	30556	—	1	—	—
Number of Breakers	30557	—	1	—	—
Panel Main Voltage X-Y	30558	—	1	—	VAC
Panel Main Voltage Y-Z	30559	—	1	—	VAC
Panel Main Voltage Z-X	30560	—	1	—	VAC
Panel Main Voltage X-N	30561	—	1	—	VAC
Panel Main Voltage Y-N	30562	—	1	—	VAC
Panel Main Voltage Z-N	30563	—	1	—	VAC
Panel Main Current Ix	30564	—	1	—	A AC
Panel Main Current Iy	30565	—	1	—	A AC
Panel Main Current Iz	30566	—	1	—	A AC
Panel Main Neutral Current	30567	—	1	—	A AC
Panel Main Ground Current	30568	—	1	10	A AC
Panel Main Output Power (kVA)	30569	—	1	—	kVA
Panel Main Output Power (kW)	30570	—	1	—	kW
Panel Main Output kW-Hrs	30571	40571	2	10	kWH
Panel Main Output Power Factor	30573	—	1	100	—
Panel Main Output Percent Load	30574	—	1	-	%
Panel Main Voltage Vx THD	30575	—	1	10	% THD
Panel Main Voltage Vy THD	30576	—	1	10	% THD
Panel Main Voltage Vz THD	30577	—	1	10	% THD
Panel Main Current Ix THD	30578	—	1	10	% THD
Panel Main Current Iy THD	30579	—	1	10	% THD
Panel Main Current Iz THD	30580	—	1	10	% THD
Panel Main Current Ix Crest Factor	30581	—	1	10	—
Panel Main Current Iy Crest Factor	30582	—	1	10	—
Panel Main Current Iz Crest Factor	30583	—	1	10	—
Panel 1 Position 1					
Breaker position	30587	—	1	—	—
Branch Current Phase 1	30588	—	1	10	A AC
Branch Current Phase 2	30589	—	1	10	A AC
Branch Current Phase 3	30590	—	1	10	A AC
Branch Output Power (kW)	30591	—	1	1000	kW
Output kW-Hrs	30592	—	2	1000	kWH
Branch Output Power Factor	30594	—	1	100	-
Branch Output Percent Load	30595	—	1	—	%

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel 1 Position 2					
Breaker position	30599	—	1	—	—
Branch Current Phase 1	30600	—	1	10	A AC
Branch Current Phase 2	30601	—	1	10	A AC
Branch Current Phase 3	30602	—	1	10	A AC
Branch Output Power (kW)	30603	—	1	1000	kW
Output kW-Hrs	30604	—	2	1000	kWH
Branch Output Power Factor	30606	—	1	100	—
Branch Output Percent Load	30607	—	1	—	%
Panel 1 Position 84					
Breaker position	31583	—	1	—	—
Branch Current Phase 1	31584	—	1	10	A AC
Branch Current Phase 2	31585	—	1	10	A AC
Branch Current Phase 3	31586	—	1	10	A AC
Branch Output Power (kW)	31587	—	1	1000	kW
Output kW-Hrs	31588	—	2	1000	kWH
Branch Output Power Factor	31590	—	1	100	—
Branch Output Percent Load	31591	—	1	—	%
Panel 2 Position 1					
Breaker position	31595	—	1	-	—
Branch Current Phase 1	31596	—	1	10	A AC
Branch Current Phase 2	31597	—	1	10	A AC
Branch Current Phase 3	31598	—	1	10	A AC
Branch Output Power (kW)	31599	—	1	1000	kW
Output kW-Hrs	31600	—	2	1000	kWH
Branch Output Power Factor	31602	—	1	100	—
Branch Output Percent Load	31603	—	1	—	%
Panel 2 Position 2					
Breaker position	31607	—	1	—	—
Branch Current Phase 1	31608	—	1	10	A AC
Branch Current Phase 2	31609	—	1	10	A AC
Branch Current Phase 3	31610	—	1	10	A AC
Branch Output Power (kW)	31611	—	1	1000	kW
Output kW-Hrs	31612	—	2	1000	kWH
Branch Output Power Factor	31614	—	1	100	—
Branch Output Percent Load	31615	—	1	—	%
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel 2 Position 84					
Breaker position	32591	—	1	—	—
Branch Current Phase 1	32592	—	1	10	A AC
Branch Current Phase 2	32593	—	1	10	A AC
Branch Current Phase 3	32594	—	1	10	A AC
Branch Output Power (kW)	32595	—	1	1000	kW
Output kW-Hrs	32596	—	2	1000	kWH
Branch Output Power Factor	32598	—	1	100	—
Branch Output Percent Load	32599	—	1	—	%
Panel 3 Position 1					
Breaker position	32603	—	1	—	—
Branch Current Phase 1	32604	—	1	10	A AC
Branch Current Phase 2	32605	—	1	10	A AC
Branch Current Phase 3	32606	—	1	10	A AC
Branch Output Power (kW)	32607	—	1	1000	kW
Output kW-Hrs	32608	—	2	1000	kWH
Branch Output Power Factor	32610	—	1	100	—
Branch Output Percent Load	32611	—	1	—	%
Panel 3 Position 2					
Breaker position	32615	—	1	—	—
Branch Current Phase 1	32616	—	1	10	A AC
Branch Current Phase 2	32617	—	1	10	A AC
Branch Current Phase 3	32618	—	1	10	A AC
Branch Output Power (kW)	32619	—	1	1000	kW
Output kW-Hrs	32620	—	2	1000	kWH
Branch Output Power Factor	32622	—	1	100	—
Branch Output Percent Load	32623	—	1	—	%
Panel 3 Position 84					
Breaker position	33599	—	1	—	—
Branch Current Phase 1	33600	—	1	10	A AC
Branch Current Phase 2	33601	—	1	10	A AC
Branch Current Phase 3	33602	—	1	10	A AC
Branch Output Power (kW)	33603	—	1	1000	kW
Output kW-Hrs	33604	—	2	1000	kWH
Branch Output Power Factor	33606	—	1	100	—
Branch Output Percent Load	33607	—	1	—	%
Panel 4 Position 1					
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Breaker position	33611	—	1	—	—
Branch Current Phase 1	33612	—	1	10	A AC
Branch Current Phase 2	33613	—	1	10	A AC
Branch Current Phase 3	33614	—	1	10	A AC
Branch Output Power (kW)	33615	—	1	1000	kW
Output kW-Hrs	33616	—	2	1000	kWH
Branch Output Power Factor	33618	—	1	100	—
Branch Output Percent Load	33619	—	1	—	%
Panel 4 Position 2					
Breaker position	33623	—	1	—	—
Branch Current Phase 1	33624	—	1	10	A AC
Branch Current Phase 2	33625	—	1	10	A AC
Branch Current Phase 3	33626	—	1	10	A AC
Branch Output Power (kW)	33627	—	1	1000	kW
Output kW-Hrs	33628	—	2	1000	kWH
Branch Output Power Factor	33630	—	1	100	—
Branch Output Percent Load	33631	—	1	-	%
Panel 4 Position 84					
Breaker position	34607	—	1	—	—
Branch Current Phase 1	34608	—	1	10	A AC
Branch Current Phase 2	34609	—	1	10	A AC
Branch Current Phase 3	34610	—	1	10	A AC
Branch Output Power (kW)	34611	—	1	1000	kW
Output kW-Hrs	34612	—	2	1000	kWH
Branch Output Power Factor	34614	—	1	100	—
Branch Output Percent Load	34615	—	1	—	%
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Subfeed 1					
Subfeed Current Ix	34619	—	1	—	A AC
Subfeed Current Iy	34620	—	1	—	A AC
Subfeed Current Iz	34621	—	1	—	A AC
Subfeed Neutral Current	34622	—	1	—	A AC
Subfeed Ground Current	34623	—	1	10	A AC
Subfeed Output Power (kVA)	34624	—	1	—	kVA
Subfeed Output Power (kW)	34625	—	1	—	kW
Subfeed Output kW-Hrs	34626	44626	2	10	kWH
Subfeed Power Factor	34628	—	1	100	—
Subfeed Output Percent Load	34629	—	1	-	%
Subfeed Current Ix THD	34630	—	1	10	%
Subfeed Current Iy THD	34631	—	1	10	%
Subfeed Current Iz THD	34632	—	1	10	%
Subfeed Current Ix Crest Factor	34633	—	1	10	—
Subfeed Current Iy Crest Factor	34634	—	1	10	—
Subfeed Current Iz Crest Factor	34635	—	1	10	—
Subfeed 2					
Subfeed Current Ix	34639	—	1	—	A AC
Subfeed Current Iy	34640	—	1	—	A AC
Subfeed Current Iz	34641	—	1	—	A AC
Subfeed Neutral Current	34642	—	1	—	A AC
Subfeed Ground Current	34643	—	1	10	A AC
Subfeed Output Power (kVA)	34644	—	1	—	kVA
Subfeed Output Power (kW)	34645	—	1	—	kW
Subfeed Output kW-Hrs	34646	44646	2	10	kWH
Subfeed Power Factor	34648	—	1	100	—
Subfeed Output Percent Load	34649	—	1	-	%
Subfeed Current Ix THD	34650	—	1	10	%
Subfeed Current Iy THD	34651	—	1	10	%
Subfeed Current Iz THD	34652	—	1	10	%
Subfeed Current Ix Crest Factor	34653	—	1	10	—
Subfeed Current Iy Crest Factor	34654	—	1	10	—
Subfeed Current Iz Crest Factor	34655	—	1	10	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-34 Liebert FPC™, Liebert PPC™—Input and Holding (continued)

Controller	VPMP				
Liebert Products	Liebert FPC, Liebert PPC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Subfeed 64					
Subfeed Current Ix	35879	—	1	—	A AC
Subfeed Current Iy	35880	—	1	—	A AC
Subfeed Current Iz	35881	—	1	—	A AC
Subfeed Neutral Current	35882	—	1	—	A AC
Subfeed Ground Current	35883	—	1	10	A AC
Subfeed Output Power (kVA)	35884	—	1	—	kVA
Subfeed Output Power (kW)	35885	—	1	—	kW
Subfeed Output kW-Hrs	35886	45886	2	10	kWH
Subfeed Power Factor	35888	—	1	100	—
Subfeed Output Percent Load	35889	—	1	-	%
Subfeed Current Ix THD	35890	—	1	10	%
Subfeed Current Iy THD	35891	—	1	10	%
Subfeed Current Iz THD	35892	—	1	10	%
Subfeed Current Ix Crest Factor	35893	—	1	10	—
Subfeed Current Iy Crest Factor	35894	—	1	10	—
Subfeed Current Iz Crest Factor	35895	—	1	10	—
System					
System Status	35899	—	1	—	1 = Normal Operation 2 = Startup 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
System Event Acknowledge/Reset	—	45900	1	—	2 = Reset 4 = Acknowledge
System Date and Time	39998	49998	2	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-35 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Status and Coil

Controller	Liebert LDMF				
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU				
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Panel 1 – Panelboard Main 1 (if panelboards are installed)					
Panel Summary Alarm	10065	—	1	—	Active on Alarm
Panel Overvoltage	10066	—	1	—	Active on Alarm
Panel Undervoltage	10067	—	1	—	Active on Alarm
Panel Phase Overcurrent	10068	—	1	—	Active on Alarm
Panel Phase Overcurrent	10069	—	1	—	Active on Warning
Panel Neutral Overcurrent	10070	—	1	—	Active on Alarm
Panel Ground Overcurrent	10071	—	1	—	Active on Alarm
Panel 2 – Panelboard Main 2 (if panelboards are installed)					
Panel Summary Alarm	10082	—	1	—	Active on Alarm
Panel Overvoltage	10083	—	1	—	Active on Alarm
Panel Undervoltage	10084	—	1	—	Active on Alarm
Panel Phase Overcurrent	10085	—	1	—	Active on Alarm
Panel Phase Overcurrent	10086	—	1	—	Active on Warning
Panel Neutral Overcurrent	10087	—	1	—	Active on Alarm
Panel Ground Overcurrent	10088	—	1	—	Active on Alarm
Panel 4 – Panelboard Main 4 (if panelboards are installed)					
Panel Summary Alarm	10116	—	1	—	Active on Alarm
Panel Overvoltage	10117	—	1	—	Active on Alarm
Panel Undervoltage	10118	—	1	—	Active on Alarm
Panel Phase Overcurrent	10119	—	1	—	Active on Alarm
Panel Phase Overcurrent	10120	—	1	—	Active on Warning
Panel Neutral Overcurrent	10121	—	1	—	Active on Alarm
Panel Ground Overcurrent	10122	—	1	—	Active on Alarm
Panel 1 Position 1					
Branch Overcurrent	10133	—	1	—	Active on Alarm
Branch Overcurrent	10134	—	1	—	Active on Warning
Branch Undercurrent Warning	10135	—	1	—	Active on Alarm
Panel 1 Position 2					
Branch Overcurrent	10146	—	1	—	Active on Alarm
Branch Overcurrent	10147	—	1	—	Active on Warning
Branch Undercurrent Warning	10148	—	1	—	Active on Alarm
Panel 1 Position 84					
Branch Overcurrent	11212	—	1	—	Active on Alarm
Branch Overcurrent	11213	—	1	—	Active on Warning
Branch Undercurrent Warning	11214	—	1	—	Active on Alarm
Panel 2 Position 1					
Branch Overcurrent	11225	—	1	—	Active on Alarm
Branch Overcurrent	11226	—	1	—	Active on Warning
Branch Undercurrent Warning	11227	—	1	—	Active on Alarm

Table 3-35 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Status and Coil (continued)

Controller	Liebert LDMF				
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU				
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Panel 2 Position 2					
Branch Overcurrent	11238	—	1	—	Active on Alarm
Branch Overcurrent	11239	—	1	—	Active on Warning
Branch Undercurrent Warning	11240	—	1	—	Active on Alarm
Panel 2 Position 84					
Branch Overcurrent	12304	—	1	—	Active on Alarm
Branch Overcurrent	12305	—	1	—	Active on Warning
Branch Undercurrent Warning	12306	—	1	—	Active on Alarm
Panel 3 Position 1					
Branch Overcurrent	12317	—	1	—	Active on Alarm
Branch Overcurrent	12318	—	1	—	Active on Warning
Branch Undercurrent Warning	12319	—	1	—	Active on Alarm
Panel 3 Position 2					
Branch Overcurrent	12330	—	1	—	Active on Alarm
Branch Overcurrent	12331	—	1	—	Active on Warning
Branch Undercurrent Warning	12332	—	1	—	Active on Alarm
Panel 3 Position 84					
Branch Overcurrent	13396	—	1	—	Active on Alarm
Branch Overcurrent	13397	—	1	—	Active on Warning
Branch Undercurrent Warning	13398	—	1	—	Active on Alarm
Panel 4 Position 1					
Branch Overcurrent	13409	—	1	—	Active on Alarm
Branch Overcurrent	13410	—	1	—	Active on Warning
Branch Undercurrent Warning	13411	—	1	—	Active on Alarm
Panel 4 Position 2					
Branch Overcurrent	13422	—	1	—	Active on Alarm
Branch Overcurrent	13423	—	1	—	Active on Warning
Branch Undercurrent Warning	13424	—	1	—	Active on Alarm
Panel 4 Position 84					
Branch Overcurrent	14488	—	1	—	Active on Alarm
Branch Overcurrent	14489	—	1	—	Active on Warning
Branch Undercurrent Warning	14490	—	1	—	Active on Alarm
Subfeed 1					
Subfeed Phase Overcurrent	14501	—	1	—	Active on Alarm
Subfeed Phase Overcurrent	14502	—	1	—	Active on Warning
Subfeed Neutral Overcurrent	14503	—	1	—	Active on Alarm
Subfeed Ground Overcurrent	14504	—	1	—	Active on Alarm

Table 3-35 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Status and Coil (continued)

Controller	Liebert LDMF				
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU				
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Subfeed 2					
Subfeed Phase Overcurrent	14515	—	1	—	Active on Alarm
Subfeed Phase Overcurrent	14516	—	1	—	Active on Warning
Subfeed Neutral Overcurrent	14517	—	1	—	Active on Alarm
Subfeed Ground Overcurrent	14518	—	1	—	Active on Alarm
Subfeed 64					
Subfeed Phase Overcurrent	15383	—	1	—	Active on Alarm
Subfeed Phase Overcurrent	15384	—	1	—	Active on Warning
Subfeed Neutral Overcurrent	15385	—	1	—	Active on Alarm
Subfeed Ground Overcurrent	15386	—	1	—	Active on Alarm

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-36 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Input and Holding

Controller	Liebert LDMF
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU

Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel 1					
Columns of Breakers	30463	—	1	—	—
Number of Breakers	30464	—	1	—	—
Panel Main Voltage X-Y	30465	—	1	—	VAC
Panel Main Voltage Y-Z	30466	—	1	—	VAC
Panel Main Voltage Z-X	30467	—	1	—	VAC
Panel Main Voltage X-N	30468	—	1	—	VAC
Panel Main Voltage Y-N	30469	—	1	—	VAC
Panel Main Voltage Z-N	30470	—	1	—	VAC
Panel Main Current Ix	30471	—	1	—	A AC
Panel Main Current Iy	30472	—	1	—	A AC
Panel Main Current Iz	30473	—	1	—	A AC
Panel Main Neutral Current	30474	—	1	—	A AC
Panel Main Ground Current	30475	—	1	10	A AC
Panel Main Output Power (kVA)	30476	—	1	—	kVA
Panel Main Output Power (kW)	30477	—	1	—	kW
Panel Main Output kW-Hrs	30478	40478	2	10	kWH
Panel Main Output Power Factor	30480	—	1	100	—
Panel Main Output Percent Load	30481	—	1	—	%
Panel Main Voltage Vx THD	30482	—	1	10	% THD
Panel Main Voltage Vy THD	30483	—	1	10	% THD
Panel Main Voltage Vz THD	30484	—	1	10	% THD
Panel Main Current Ix THD	30485	—	1	10	% THD
Panel Main Current Iy THD	30486	—	1	10	% THD
Panel Main Current Iz THD	30487	—	1	10	% THD
Panel Main Current Ix Crest Factor	30488	—	1	10	—
Panel Main Current Iy Crest Factor	30489	—	1	10	—
Panel Main Current Iz Crest Factor	30490	—	1	10	—
Panel 2					
Columns of Breakers	30494	—	1	—	—
Number of Breakers	30495	—	1	—	—
Panel Main Voltage X-Y	30496	—	1	—	VAC
Panel Main Voltage Y-Z	30497	—	1	—	VAC
Panel Main Voltage Z-X	30498	—	1	—	VAC
Panel Main Voltage X-N	30499	—	1	—	VAC
Panel Main Voltage Y-N	30500	—	1	—	VAC
Panel Main Voltage Z-N	30501	—	1	—	VAC

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-36 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Input and Holding (continued)

Controller	Liebert LDMF
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU

Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel Main Current Ix	30502	—	1	—	A AC
Panel Main Current Iy	30503	—	1	—	A AC
Panel Main Current Iz	30504	—	1	—	A AC
Panel Main Neutral Current	30505	—	1	—	A AC
Panel Main Ground Current	30506	—	1	10	A AC
Panel Main Output Power (kVA)	30507	—	1	—	kVA
Panel Main Output Power (kW)	30508	—	1	—	kW
Panel Main Output kW-Hrs	30509	40509	2	10	kWH
Panel Main Output Power Factor	30511	—	1	100	—
Panel Main Output Percent Load	30512	—	1	—	%
Panel Main Voltage Vx THD	30513	—	1	10	% THD
Panel Main Voltage Vy THD	30514	—	1	10	% THD
Panel Main Voltage Vz THD	30515	—	1	10	% THD
Panel Main Current Ix THD	30516	—	1	10	% THD
Panel Main Current Iy THD	30517	—	1	10	% THD
Panel Main Current Iz THD	30518	—	1	10	% THD
Panel Main Current Ix Crest Factor	30519	—	1	10	—
Panel Main Current Iy Crest Factor	30520	—	1	10	—
Panel Main Current Iz Crest Factor	30521	—	1	10	—
Panel 4					
Columns of Breakers	30556	—	1	—	—
Number of Breakers	30557	—	1	—	—
Panel Main Voltage X-Y	30558	—	1	—	VAC
Panel Main Voltage Y-Z	30559	—	1	—	VAC
Panel Main Voltage Z-X	30560	—	1	—	VAC
Panel Main Voltage X-N	30561	—	1	—	VAC
Panel Main Voltage Y-N	30562	—	1	—	VAC
Panel Main Voltage Z-N	30563	—	1	—	VAC
Panel Main Current Ix	30564	—	1	—	A AC
Panel Main Current Iy	30565	—	1	—	A AC
Panel Main Current Iz	30566	—	1	—	A AC
Panel Main Neutral Current	30567	—	1	—	A AC
Panel Main Ground Current	30568	—	1	10	A AC
Panel Main Output Power (kVA)	30569	—	1	—	kVA
Panel Main Output Power (kW)	30570	—	1	—	kW
Panel Main Output kW-Hrs	30571	40571	2	10	kWH
Panel Main Output Power Factor	30573	—	1	100	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-36 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Input and Holding (continued)

Controller	Liebert LDMF
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU

Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel Main Output Percent Load	30574	—	1	-	%
Panel Main Voltage Vx THD	30575	—	1	10	% THD
Panel Main Voltage Vy THD	30576	—	1	10	% THD
Panel Main Voltage Vz THD	30577	—	1	10	% THD
Panel Main Current Ix THD	30578	—	1	10	% THD
Panel Main Current Iy THD	30579	—	1	10	% THD
Panel Main Current Iz THD	30580	—	1	10	% THD
Panel Main Current Ix Crest Factor	30581	—	1	10	—
Panel Main Current Iy Crest Factor	30582	—	1	10	—
Panel Main Current Iz Crest Factor	30583	—	1	10	—
Panel 1 Position 1					
Breaker position	30587	—	1	—	—
Branch Current Phase 1	30588	—	1	10	A AC
Branch Current Phase 2	30589	—	1	10	A AC
Branch Current Phase 3	30590	—	1	10	A AC
Branch Output Power (kW)	30591	—	1	1000	kW
Output kW-Hrs	30592	—	2	1000	kWH
Branch Output Power Factor	30594	—	1	100	-
Branch Output Percent Load	30595	—	1	—	%
Panel 1 Position 2					
Breaker position	30599	—	1	—	—
Branch Current Phase 1	30600	—	1	10	A AC
Branch Current Phase 2	30601	—	1	10	A AC
Branch Current Phase 3	30602	—	1	10	A AC
Branch Output Power (kW)	30603	—	1	1000	kW
Output kW-Hrs	30604	—	2	1000	kWH
Branch Output Power Factor	30606	—	1	100	—
Branch Output Percent Load	30607	—	1	—	%
Panel 1 Position 84					
Breaker position	31583	—	1	—	—
Branch Current Phase 1	31584	—	1	10	A AC
Branch Current Phase 2	31585	—	1	10	A AC
Branch Current Phase 3	31586	—	1	10	A AC
Branch Output Power (kW)	31587	—	1	1000	kW
Output kW-Hrs	31588	—	2	1000	kWH
Branch Output Power Factor	31590	—	1	100	—
Branch Output Percent Load	31591	—	1	—	%

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-36 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Input and Holding (continued)

Controller	Liebert LDMF
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU

Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel 2 Position 1					
Breaker position	31595	—	1	—	—
Branch Current Phase 1	31596	—	1	10	A AC
Branch Current Phase 2	31597	—	1	10	A AC
Branch Current Phase 3	31598	—	1	10	A AC
Branch Output Power (kW)	31599	—	1	1000	kW
Output kW-Hrs	31600	—	2	1000	kWH
Branch Output Power Factor	31602	—	1	100	—
Branch Output Percent Load	31603	—	1	—	%
Panel 2 Position 2					
Breaker position	31607	—	1	—	—
Branch Current Phase 1	31608	—	1	10	A AC
Branch Current Phase 2	31609	—	1	10	A AC
Branch Current Phase 3	31610	—	1	10	A AC
Branch Output Power (kW)	31611	—	1	1000	kW
Output kW-Hrs	31612	—	2	1000	kWH
Branch Output Power Factor	31614	—	1	100	—
Branch Output Percent Load	31615	—	1	—	%
Panel 2 Position 84					
Breaker position	32591	—	1	—	—
Branch Current Phase 1	32592	—	1	10	A AC
Branch Current Phase 2	32593	—	1	10	A AC
Branch Current Phase 3	32594	—	1	10	A AC
Branch Output Power (kW)	32595	—	1	1000	kW
Output kW-Hrs	32596	—	2	1000	kWH
Branch Output Power Factor	32598	—	1	100	—
Branch Output Percent Load	32599	—	1	—	%
Panel 3 Position 1					
Breaker position	32603	—	1	—	—
Branch Current Phase 1	32604	—	1	10	A AC
Branch Current Phase 2	32605	—	1	10	A AC
Branch Current Phase 3	32606	—	1	10	A AC
Branch Output Power (kW)	32607	—	1	1000	kW
Output kW-Hrs	32608	—	2	1000	kWH
Branch Output Power Factor	32610	—	1	100	—
Branch Output Percent Load	32611	—	1	—	%

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-36 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Input and Holding (continued)

Controller	Liebert LDMF
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU

Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel 3 Position 2					
Breaker position	32615	—	1	—	—
Branch Current Phase 1	32616	—	1	10	A AC
Branch Current Phase 2	32617	—	1	10	A AC
Branch Current Phase 3	32618	—	1	10	A AC
Branch Output Power (kW)	32619	—	1	1000	kW
Output kW-Hrs	32620	—	2	1000	kWH
Branch Output Power Factor	32622	—	1	100	—
Branch Output Percent Load	32623	—	1	—	%
Panel 3 Position 84					
Breaker position	33599	—	1	—	—
Branch Current Phase 1	33600	—	1	10	A AC
Branch Current Phase 2	33601	—	1	10	A AC
Branch Current Phase 3	33602	—	1	10	A AC
Branch Output Power (kW)	33603	—	1	1000	kW
Output kW-Hrs	33604	—	2	1000	kWH
Branch Output Power Factor	33606	—	1	100	—
Branch Output Percent Load	33607	—	1	—	%
Panel 4 Position 1					
Breaker position	33611	—	1	—	—
Branch Current Phase 1	33612	—	1	10	A AC
Branch Current Phase 2	33613	—	1	10	A AC
Branch Current Phase 3	33614	—	1	10	A AC
Branch Output Power (kW)	33615	—	1	1000	kW
Output kW-Hrs	33616	—	2	1000	kWH
Branch Output Power Factor	33618	—	1	100	—
Branch Output Percent Load	33619	—	1	—	%
Panel 4 Position 2					
Breaker position	33623	—	1	—	—
Branch Current Phase 1	33624	—	1	10	A AC
Branch Current Phase 2	33625	—	1	10	A AC
Branch Current Phase 3	33626	—	1	10	A AC
Branch Output Power (kW)	33627	—	1	1000	kW
Output kW-Hrs	33628	—	2	1000	kWH
Branch Output Power Factor	33630	—	1	100	—
Branch Output Percent Load	33631	—	1	—	%

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-36 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Input and Holding (continued)

Controller	Liebert LDMF				
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel 4 Position 84					
Breaker position	34607	—	1	—	—
Branch Current Phase 1	34608	—	1	10	A AC
Branch Current Phase 2	34609	—	1	10	A AC
Branch Current Phase 3	34610	—	1	10	A AC
Branch Output Power (kW)	34611	—	1	1000	kW
Output kW-Hrs	34612	—	2	1000	kWH
Branch Output Power Factor	34614	—	1	100	—
Branch Output Percent Load	34615	—	1	—	%
Subfeed 1					
Subfeed Current Ix	34619	—	1	—	A AC
Subfeed Current Iy	34620	—	1	—	A AC
Subfeed Current Iz	34621	—	1	—	A AC
Subfeed Neutral Current	34622	—	1	—	A AC
Subfeed Ground Current	34623	—	1	10	A AC
Subfeed Output Power (kVA)	34624	—	1	—	kVA
Subfeed Output Power (kW)	34625	—	1	—	kW
Subfeed Output kW-Hrs	34626	44626	2	10	kWH
Subfeed Power Factor	34628	—	1	100	—
Subfeed Output Percent Load	34629	—	1	—	%
Subfeed Current Ix THD	34630	—	1	10	%
Subfeed Current Iy THD	34631	—	1	10	%
Subfeed Current Iz THD	34632	—	1	10	%
Subfeed Current Ix Crest Factor	34633	—	1	10	—
Subfeed Current Iy Crest Factor	34634	—	1	10	—
Subfeed Current Iz Crest Factor	34635	—	1	10	—
Subfeed 2					
Subfeed Current Ix	34639	—	1	—	A AC
Subfeed Current Iy	34640	—	1	—	A AC
Subfeed Current Iz	34641	—	1	—	A AC
Subfeed Neutral Current	34642	—	1	—	A AC
Subfeed Ground Current	34643	—	1	10	A AC
Subfeed Output Power (kVA)	34644	—	1	—	kVA
Subfeed Output Power (kW)	34645	—	1	—	kW
Subfeed Output kW-Hrs	34646	44646	2	10	kWH
Subfeed Power Factor	34648	—	1	100	—
Subfeed Output Percent Load	34649	—	1	—	%

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-36 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Input and Holding (continued)

Controller	Liebert LDMF
Liebert Products	Liebert EXC, Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC, Liebert RX, Liebert STS2/PDU

Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Subfeed Current Ix THD	34650	—	1	10	%
Subfeed Current Iy THD	34651	—	1	10	%
Subfeed Current Iz THD	34652	—	1	10	%
Subfeed Current Ix Crest Factor	34653	—	1	10	—
Subfeed Current Iy Crest Factor	34654	—	1	10	—
Subfeed Current Iz Crest Factor	34655	—	1	10	—
Subfeed 64					
Subfeed Current Ix	35879	—	1	—	A AC
Subfeed Current Iy	35880	—	1	—	A AC
Subfeed Current Iz	35881	—	1	—	A AC
Subfeed Neutral Current	35882	—	1	—	A AC
Subfeed Ground Current	35883	—	1	10	A AC
Subfeed Output Power (kVA)	35884	—	1	—	kVA
Subfeed Output Power (kW)	35885	—	1	—	kW
Subfeed Output kW-Hrs	35886	45886	2	10	kWH
Subfeed Power Factor	35888	—	1	100	—
Subfeed Output Percent Load	35889	—	1	-	%
Subfeed Current Ix THD	35890	—	1	10	%
Subfeed Current Iy THD	35891	—	1	10	%
Subfeed Current Iz THD	35892	—	1	10	%
Subfeed Current Ix Crest Factor	35893	—	1	10	—
Subfeed Current Iy Crest Factor	35894	—	1	10	—
Subfeed Current Iz Crest Factor	35895	—	1	10	—
System					
System Status	35899	—	1	—	1 = Normal Operation 2 = Startup 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
System Event Acknowledge/Reset	—	45900	1	—	2 = Reset 4 = Acknowledge
System Date and Time	39998	49998	2	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-37 Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™—Status and Coil

Controller	Liebert CPM				
Liebert Products	Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC				
Available Points					
Data Label	**Status**	**Coil**	**Number of Bits**	**Scale**	**Notes / Units**
Panel 1 – Panelboard Main 1 (if panelboards are installed)					
Panel Summary Alarm	10065	—	1	—	Active on Alarm
Panel Overvoltage	10066	—	1	—	Active on Alarm
Panel Undervoltage	10067	—	1	—	Active on Alarm
Panel Phase Overcurrent	10068	—	1	—	Active on Alarm
Panel Phase Overcurrent	10069	—	1	—	Active on Warning
Panel Neutral Overcurrent	10070	—	1	—	Active on Alarm
Panel Ground Overcurrent	10071	—	1	—	Active on Alarm
Panel 2 – Panelboard Main 2 (if panelboards are installed)					
Panel Summary Alarm	10082	—	1	—	Active on Alarm
Panel Overvoltage	10083	—	1	—	Active on Alarm
Panel Undervoltage	10084	—	1	—	Active on Alarm
Panel Phase Overcurrent	10085	—	1	—	Active on Alarm
Panel Phase Overcurrent	10086	—	1	—	Active on Warning
Panel Neutral Overcurrent	10087	—	1	—	Active on Alarm
Panel Ground Overcurrent	10088	—	1	—	Active on Alarm
Panel 4 – Panelboard Main 4 (if panelboards are installed)					
Panel Summary Alarm	10116	—	1	—	Active on Alarm
Panel Overvoltage	10117	—	1	—	Active on Alarm
Panel Undervoltage	10118	—	1	—	Active on Alarm
Panel Phase Overcurrent	10119	—	1	—	Active on Alarm
Panel Phase Overcurrent	10120	—	1	—	Active on Warning
Panel Neutral Overcurrent	10121	—	1	—	Active on Alarm
Panel Ground Overcurrent	10122	—	1	—	Active on Alarm
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-38 Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™—Input and Holding

Controller	Liebert CPM				
Liebert Products	Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel 1					
Columns of Breakers	30463	—	1	—	—
Number of Breakers	30464	—	1	—	—
Panel Main Voltage X-Y	30465	—	1	—	VAC
Panel Main Voltage Y-Z	30466	—	1	—	VAC
Panel Main Voltage Z-X	30467	—	1	—	VAC
Panel Main Voltage X-N	30468	—	1	—	VAC
Panel Main Voltage Y-N	30469	—	1	—	VAC
Panel Main Voltage Z-N	30470	—	1	—	VAC
Panel Main Current Ix	30471	—	1	—	A AC
Panel Main Current Iy	30472	—	1	—	A AC
Panel Main Current Iz	30473	—	1	—	A AC
Panel Main Neutral Current	30474	—	1	—	A AC
Panel Main Ground Current	30475	—	1	10	A AC
Panel Main Output Power (kVA)	30476	—	1	—	kVA
Panel Main Output Power (kW)	30477	—	1	—	kW
Panel Main Output kW-Hrs	30478	40478	2	10	kWH
Panel Main Output Power Factor	30480	—	1	100	—
Panel Main Output Percent Load	30481	—	1	—	%
Panel Main Voltage Vx THD	30482	—	1	10	% THD
Panel Main Voltage Vy THD	30483	—	1	10	% THD
Panel Main Voltage Vz THD	30484	—	1	10	% THD
Panel Main Current Ix THD	30485	—	1	10	% THD
Panel Main Current Iy THD	30486	—	1	10	% THD
Panel Main Current Iz THD	30487	—	1	10	% THD
Panel Main Current Ix Crest Factor	30488	—	1	10	—
Panel Main Current Iy Crest Factor	30489	—	1	10	—
Panel Main Current Iz Crest Factor	30490	—	1	10	—
Panel 2					
Columns of Breakers	30494	—	1	—	—
Number of Breakers	30495	—	1	—	—
Panel Main Voltage X-Y	30496	—	1	—	VAC
Panel Main Voltage Y-Z	30497	—	1	—	VAC
Panel Main Voltage Z-X	30498	—	1	—	VAC
Panel Main Voltage X-N	30499	—	1	—	VAC
Panel Main Voltage Y-N	30500	—	1	—	VAC
Panel Main Voltage Z-N	30501	—	1	—	VAC
Panel Main Current Ix	30502	—	1	—	A AC
Panel Main Current Iy	30503	—	1	—	A AC
Panel Main Current Iz	30504	—	1	—	A AC
Panel Main Neutral Current	30505	—	1	—	A AC

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-38 Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™—Input and Holding (continued)

Controller	Liebert CPM				
Liebert Products	Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel Main Ground Current	30506	—	1	10	A AC
Panel Main Output Power (kVA)	30507	—	1	—	kVA
Panel Main Output Power (kW)	30508	—	1	—	kW
Panel Main Output kW-Hrs	30509	40509	2	10	kWH
Panel Main Output Power Factor	30511	—	1	100	—
Panel Main Output Percent Load	30512	—	1	—	%
Panel Main Voltage Vx THD	30513	—	1	10	% THD
Panel Main Voltage Vy THD	30514	—	1	10	% THD
Panel Main Voltage Vz THD	30515	—	1	10	% THD
Panel Main Current Ix THD	30516	—	1	10	% THD
Panel Main Current Iy THD	30517	—	1	10	% THD
Panel Main Current Iz THD	30518	—	1	10	% THD
Panel Main Current Ix Crest Factor	30519	—	1	10	—
Panel Main Current Iy Crest Factor	30520	—	1	10	—
Panel Main Current Iz Crest Factor	30521	—	1	10	—
Panel 4					
Columns of Breakers	30556	—	1	—	—
Number of Breakers	30557	—	1	—	—
Panel Main Voltage X-Y	30558	—	1	—	VAC
Panel Main Voltage Y-Z	30559	—	1	—	VAC
Panel Main Voltage Z-X	30560	—	1	—	VAC
Panel Main Voltage X-N	30561	—	1	—	VAC
Panel Main Voltage Y-N	30562	—	1	—	VAC
Panel Main Voltage Z-N	30563	—	1	—	VAC
Panel Main Current Ix	30564	—	1	—	A AC
Panel Main Current Iy	30565	—	1	—	A AC
Panel Main Current Iz	30566	—	1	—	A AC
Panel Main Neutral Current	30567	—	1	—	A AC
Panel Main Ground Current	30568	—	1	10	A AC
Panel Main Output Power (kVA)	30569	—	1	—	kVA
Panel Main Output Power (kW)	30570	—	1	—	kW
Panel Main Output kW-Hrs	30571	40571	2	10	kWH
Panel Main Output Power Factor	30573	—	1	100	—
Panel Main Output Percent Load	30574	—	1	-	%
Panel Main Voltage Vx THD	30575	—	1	10	% THD
Panel Main Voltage Vy THD	30576	—	1	10	% THD
Panel Main Voltage Vz THD	30577	—	1	10	% THD
Panel Main Current Ix THD	30578	—	1	10	% THD
Panel Main Current Iy THD	30579	—	1	10	% THD
Panel Main Current Iz THD	30580	—	1	10	% THD
Panel Main Current Ix Crest Factor	30581	—	1	10	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-38 Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™—Input and Holding (continued)

Controller	Liebert CPM				
Liebert Products	Liebert FDC, Liebert FPC, Liebert PPC, Liebert RDC				
Available Points					
Data Label	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Panel Main Current Iy Crest Factor	30582	—	1	10	—
Panel Main Current Iz Crest Factor	30583	—	1	10	—
System					
System Status	35899	—	1	—	1 = Normal Operation 2 = Startup 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
System Event Acknowledge/Reset	—	45900	1	—	2 = Reset 4 = Acknowledge
System Date and Time	39998	49998	2	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-39 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Glossary

Data Label	Data Description
Branch Current Phase 1	Branch breaker Phase 1 RMS current
Branch Current Phase 2	Branch Breaker Phase 2 RMS current
Branch Current Phase 3	Branch breaker Phase 3 RMS current
Branch Output Percent Load	Branch breaker percent load of rated current
Branch Output Power (W)	Branch breaker W
Branch Output Power Factor	Branch breaker Power Factor (real power/apparent power)
Branch Overcurrent	Branch breaker current has exceeded the limit.
Branch Undercurrent Warning	Branch breaker current is less than the limit.
Breaker position	Panelboard pole position of the branch breaker. First position if 2 or 3 pole breaker
Columns of Breakers	The breakers in this panel are physically arranged in this many columns.
Equipment Temperature Sensor Fail	Transformer temperature sensor has failed
Event State	Alarm present
Frequency Deviation	The output frequency is outside a specified range.
Ground Current	Unit Ground RMS current.
Ground Overcurrent	Unit ground current has exceeded the limit.
Input Voltage A-B	Unit Input RMS Voltage between Phase A and Phase B
Input Voltage B-C	Unit Input RMS Voltage between Phase B and Phase C
Input Voltage C-A	Unit Input RMS Voltage between Phase C and Phase A
Neutral Overcurrent	Unit neutral current has exceeded the limit.
Number of Breakers	Number of Breakers in this panelboard.
Output Current Ix Crest Factor	Unit phase X Current Crest Factor (peak/RMS).
Output Current Ix K-Factor	Unit output Current Harmonic K-Factor for phase X.
Output Current Ix THD	Unit Current Total Harmonic Distortion for phase X.
Output Current Ix	Unit Phase X output RMS current.
Output Current Iy Crest Factor	Unit phase Y Current Crest Factor (peak/RMS).
Output Current Iy K-Factor	Unit output Current Harmonic K-Factor for phase Y.
Output Current Iy THD	Unit Current Total Harmonic Distortion for phase Y.
Output Current Iy	Unit Phase Y output RMS current.
Output Current Iz Crest Factor	Unit phase Z Current Crest Factor (peak/RMS).
Output Current Iz K-Factor	Unit output Current Harmonic K-Factor for phase Z.
Output Current Iz THD	Unit Current Total Harmonic Distortion for phase Z.
Output Current Iz	Unit Phase Z output RMS current.
Output Frequency	The system output frequency.
Output kW-Hrs	Branch Breaker accumulated KW-Hours since last KW-Hours reset.
Output kW-Hrs	Unit accumulated KW-Hours since last KW-Hours reset.
Output Neutral Current	Unit output Neutral RMS current.
Output Overcurrent	Unit phase current has exceeded the limit.
Output Overvoltage	Unit voltage has exceeded the limit.
Output Percent Load	Unit percent load of rated current
Output Power (kVA)	Unit output kVA
Output Power (kW)	Unit output KW
Output Power Factor	Unit output Power Factor (real power/apparent power)
Output Undervoltage	Unit voltage is less than the limit.
Output Voltage THD	Unit output Voltage Total Harmonic Distortion has exceeded the limit.
Output Voltage Vx THD	Unit Voltage Total Harmonic Distortion for phase X.

Table 3-39 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Glossary (continued)

Data Label	Data Description
Output Voltage Vx	Unit output RMS voltage between phase X and Neutral
Output Voltage Vy THD	Unit Voltage Total Harmonic Distortion for phase Y.
Output Voltage Vy	Unit output RMS voltage between phase Y and Neutral
Output Voltage Vz THD	Unit Voltage Total Harmonic Distortion for phase Z.
Output Voltage Vz	Unit output RMS voltage between phase Z and Neutral
Output Voltage X-Y	Unit output RMS voltage between phases X and Y
Output Voltage Y-Z	Unit output RMS voltage between phases Y and Z.
Output Voltage Z-X	Unit output RMS voltage between phases Z and X.
Panel Ground Overcurrent	Panelboard Ground current has exceeded the limit.
Panel Main Current Ix Crest Factor	Panelboard phase X Current Crest Factor (peak/RMS).
Panel Main Current Ix THD	Current Total Harmonic Distortion for Panelboard phase X.
Panel Main Current Ix	Panelboard RMS current for phase X.
Panel Main Current Iy Crest Factor	Panelboard phase Y Current Crest Factor (peak/RMS).
Panel Main Current Iy THD	Current Total Harmonic Distortion for Panelboard phase Y.
Panel Main Current Iy	Panelboard RMS current for phase Y.
Panel Main Current Iz Crest Factor	Panelboard phase Z Current Crest Factor (peak/RMS).
Panel Main Current Iz THD	Current Total Harmonic Distortion for Panelboard phase Z.
Panel Main Current Iz	Panelboard RMS current for phase Z.
Panel Main Ground Current	Panelboard Ground RMS current.
Panel Main Neutral Current	Panelboard Neutral RMS current.
Panel Main Output kW-Hrs	Panelboard accumulated KW-Hours since last KW-Hours reset.
Panel Main Output Percent Load	Panelboard percent load of rated current
Panel Main Output Power (kVA)	Panelboard output kVA.
Panel Main Output Power (kW)	Panelboard output KW
Panel Main Output Power Factor	Panelboard Output Power Factor (real power/apparent power)
Panel Main Voltage Vx THD	Voltage Total Harmonic Distortion for Panelboard phase X.
Panel Main Voltage Vy THD	Voltage Total Harmonic Distortion for Panelboard phase Y.
Panel Main Voltage Vz THD	Voltage Total Harmonic Distortion for Panelboard phase Z.
Panel Main Voltage X-N	Panelboard RMS voltage between Phase X and Neutral.
Panel Main Voltage X-Y	Panelboard RMS voltage between phases X and Y.
Panel Main Voltage Y-N	Panelboard RMS voltage between Phase Y and Neutral.
Panel Main Voltage Y-Z	Panelboard RMS voltage between phases Y and Z.
Panel Main Voltage Z-N	Panelboard RMS voltage between Phase Z and Neutral.
Panel Main Voltage Z-X	Panelboard RMS voltage between phases Z and X.
Panel Neutral Overcurrent	Panelboard Neutral current has exceeded the limit.
Panel Overvoltage	Panelboard voltage has exceeded the limit.
Panel Phase Overcurrent	Panelboard phase current has exceeded the limit.
Panel Summary Alarm	Panelboard Summary Alarm. Annunciates upon occurrence of any branch or panelboard main breaker alarm.
Panel Undervoltage	Panelboard voltage is less than the limit.
Phase Loss	Voltage and/or Frequency on one or more of the phases is outside the limit.
Phase Rotation Error	Unit input phase sequence is not A, B, C. The phase sequence should be verified and corrected.
Subfeed Current Ix Crest Factor	Subfeed breaker phase X Current Crest Factor (peak/RMS).
Subfeed Current Ix THD	Current Total Harmonic Distortion for Subfeed breaker phase X.
Subfeed Current Ix	Subfeed breaker RMS current for phase X.

Table 3-39 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™—Glossary (continued)

Data Label	Data Description
Subfeed Current Iy Crest Factor	Subfeed breaker phase Y Current Crest Factor (peak/RMS).
Subfeed Current Iy THD	Current Total Harmonic Distortion for Subfeed breaker phase Y.
Subfeed Current Iy	Subfeed breaker RMS current for phase Y.
Subfeed Current Iz Crest Factor	Subfeed breaker phase Z Current Crest Factor (peak/RMS).
Subfeed Current Iz THD	Current Total Harmonic Distortion for Subfeed breaker phase Z.
Subfeed Current Iz	Subfeed breaker RMS current for phase Z.
Subfeed Ground Current	Subfeed breaker Ground RMS current.
Subfeed Ground Overcurrent	Subfeed breaker Ground current has exceeded the limit.
Subfeed Neutral Current	Subfeed breaker Neutral RMS current.
Subfeed Neutral Overcurrent	Subfeed breaker Neutral current has exceeded the limit.
Subfeed Output kW-Hrs	Subfeed breaker accumulated KW-Hours since last KW-Hours reset.
Subfeed Output Percent Load	Subfeed breaker percent load of rated current
Subfeed Output Power (kVA)	Subfeed breaker output kVA.
Subfeed Output Power (kW)	Subfeed breaker output KW
Subfeed Phase Overcurrent	Subfeed breaker phase current has exceeded the limit.
Subfeed Power Factor	Subfeed breaker Power Factor (real power/apparent power)
System Date and Time	Unit date and time
System Event Acknowledge/Reset	Alarm Present/Reset
System Shutdown - EPO	Unit shutdown by Emergency Power Off (EPO) switch
System Shutdown - REPO	Unit shutdown by Remote Emergency Power Off (REPO) switch
System Status	The operating status for the system
Transformer Overtemperature Power Off	Output power shutdown due to high transformer temperature
Transformer Overtemperature Shutdown	Unit shutdown due to transformer over temperature
Transformer Overtemperature	Transformer temperature has exceeded the limit
Transformer Overtemperature	Transformer temperature has exceeded the limit
Transformer Temperature Sensor Fail	Transformer temperature sensor has failed

Table 3-40 Liebert STS™, Liebert STS/PDU™—Input and Holding—STS

Controller	STS
Liebert Products	Liebert STS Liebert STS/PDU

Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Transfer Count	—	40001	1	—	—
Preferred Source	—	40002	1	—	1=Source 1 / 2=Source 2
Load On Source	—	40003	1	—	1=Source 1 / 2=Source 2
Source 1 Voltage A-B	—	40004	1	—	V
Source 1 Voltage B-C	—	40005	1	—	V
Source 1 Voltage C-A	—	40006	1	—	V
Source 1 Current A	—	40007	1	—	A
Source 1 Current B	—	40008	1	—	A
Source 1 Current C	—	40009	1	—	A
Source 1 Frequency	—	40010	1	10	Hz
Source 2 Voltage A-B	—	40011	1	—	V
Source 2 Voltage B-C	—	40012	1	—	V
Source 2 Voltage C-A	—	40013	1	—	V
Source 2 Current A	—	40014	1	—	A
Source 2 Current B	—	40015	1	—	A
Source 2 Current C	—	40016	1	—	A
Source 2 Frequency	—	40017	1	10	Hz
kW	—	40018	1	—	kW
kVA	—	40019	1	—	kVA
Auto Transfer Timer	—	40020	1	—	Seconds
Nominal Voltage Deviation	—	40021	1	—	V
Phase Differential Limit	—	40022	1	—	Degree
Frequency Deviation	—	40023	1	10	Hz
Alarm Points					
Communications	—	40289	1	—	Bit 0
Logic Failure	—	40289	1	—	Bit 1
Equipment Overtemp	—	40289	1	—	Bit 2
Power Supply 1 Fault	—	40289	1	—	Bit 3
Source 1 Overvoltage	—	40289	1	—	Bit 4
Source 1 Undervoltage	—	40289	1	—	Bit 5
Source 2 Overvoltage	—	40289	1	—	Bit 6
Source 2 Undervoltage	—	40289	1	—	Bit 7
Source 1 Overload	—	40289	1	—	Bit 8
Shorted SCR1	—	40289	1	—	Bit 9
Shorted SCR2	—	40289	1	—	Bit 10
Open SCR1	—	40290	1	—	Bit 0
Open SCR2	—	40290	1	—	Bit 1
Fan Failure	—	40290	1	—	Bit 2
Source 2 Overload	—	40290	1	—	Bit 3
Power Supply 2 Fault	—	40290	1	—	Bit 4

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-40 Liebert STS™, Liebert STS/PDU™—Input and Holding—STS (continued)

Controller	STS				
Liebert Products	Liebert STS Liebert STS/PDU				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Frequency Deviation	—	40290	1	—	Bit 5
Transfer Inhibit	—	40290	1	—	Bit 6
Auto Retransfer Primed	—	40290	1	—	Bit 7
Out of Synchronization	—	40290	1	—	Bit 8
Source 1 Failure	—	40290	1	—	Bit 9
Source 2 Failure	—	40290	1	—	Bit 10
Auto Retransfer Failed	—	40291	1	—	Bit 0
Overload	—	40291	1	—	Bit 1
Control Fuse 1 Blown	—	40291	1	—	Bit 2
Control Fuse 2 Blown	—	40291	1	—	Bit 3
Source 1 CB1 Open	—	40291	1	—	Bit 4
Source 2 CB2 Open	—	40291	1	—	Bit 5
Output CB3 Open	—	40291	1	—	Bit 6
Custom Alarm 1	—	40291	1	—	Bit 7
Custom Alarm 2	—	40291	1	—	Bit 8
Bypass CB4 Closed	—	40291	1	—	Bit 9
Bypass CB5 Closed	—	40291	1	—	Bit 10
Custom Alarm 3	—	40292	1	—	Bit 0
Custom Alarm 4	—	40292	1	—	Bit 1
Custom Alarm 5	—	40292	1	—	Bit 2
Custom Alarm 6	—	40292	1	—	Bit 3
Custom Alarm 7	—	40292	1	—	Bit 4
Custom Alarm 8	—	40292	1	—	Bit 5
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-41 Liebert STS2™, Liebert STS2/PDU™—Input and Holding—STS2

Controller	STS2				
Liebert Products	Liebert STS2 Liebert STS2/PDU				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Total Transfer Count	—	40001	1	—	—
Preferred Source	—	40002	1	—	1=Source 1, 2=Source 2
Active Source	—	40003	1	—	1=Source 1, 2=Source 2
Source 1 Volts A-B	—	40004	1	—	V
Source 1 Volts B-C	—	40005	1	—	V
Source 1 Volts C-A	—	40006	1	—	V
Source 1 Current A	—	40007	1	—	A
Source 1 Current B	—	40008	1	—	A
Source 1 Current C	—	40009	1	—	A
Source 1 Frequency	—	40010	1	10	Hz
Source 2 Volts A-B	—	40011	1	—	V
Source 2 Volts B-C	—	40012	1	—	V
Source 2 Volts C-A	—	40013	1	—	V
Source 2 Current A	—	40014	1	—	A
Source 2 Current B	—	40015	1	—	A
Source 2 Current C	—	40016	1	—	A
Source 2 Frequency	—	40017	1	10	Hz
Output kW	—	40018	1	—	kW
Output kVA	—	40019	1	—	kVA
CB 1 Status	—	40024	1	—	Bit 0
CB 2 Status	—	40024	1	—	Bit 1
CB 3 Status	—	40024	1	—	Bit 2
CB 3A Status	—	40024	1	—	Bit 3
CB 4 Status	—	40024	1	—	Bit 4
CB 5 Status	—	40024	1	—	Bit 5
CB Spare 1 Status	—	40024	1	—	Bit 6
CB Spare 2 Status	—	40024	1	—	Bit 7
CB 7 Status	—	40024	1	—	Bit 8
CB 8 Status	—	40024	1	—	Bit 9
Auto Xfer Enabled	—	40025	1	—	Bit 0
Has Dual Out Breakers	—	40025	1	—	Bit 1
Has PDU Equipped	—	40025	1	—	Bit 2
Has 4 pole Switch	—	40025	1	—	Bit 3
Has Shunt Trip	—	40025	1	—	Bit 4
Has Wye Out Xfmr	—	40025	1	—	Bit 5
Has Rmt Sorce Sel	—	40025	1	—	Bit 6
Manual I peak Reset	—	40025	1	—	Bit 7
Auto Restart Enabled	—	40025	1	—	Bit 8
LoadKVA %	—	40026	1	—	%
Source 1 Volts A-N	—	40027	1	—	V (4 Pole only)

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-41 Liebert STS2™, Liebert STS2/PDU™—Input and Holding—STS2 (continued)

Controller	STS2				
Liebert Products	Liebert STS2 Liebert STS2/PDU				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Source 1 Volts B-N	—	40028	1	—	V (4 Pole only)
Source 1 Volts C-N	—	40029	1	—	V (4 Pole only)
Source 2 Volts A-N	—	40030	1	—	V (4 Pole only)
Source 2 Volts B-N	—	40031	1	—	V (4 Pole only)
Source 2 Volts C-N	—	40032	1	—	V (4 Pole only)
Source 1 Neutral Current	—	40033	1	—	A (4 Pole only)
Source 2 Neutral Current	—	40034	1	—	A (4 Pole only)
Setpoints (View)					
Retransfer Delay	—	40020	1	—	Seconds
STS2 Voltage Rating	—	40021	1	—	V
Max Xfer Phase Angle	—	40022	1	—	Degree
Freq. Deviation Trip Point	—	40023	1	10	Hz
Source 1 Neutral Current Limit	—	40035	1	—	A (4 Pole only)
Source 2 Neutral Current Limit	—	40036	1	—	A (4 Pole only)
Alarm Points					Discrete alarm objects available; use auto-discover for this unit
Communications Lost	—	40289	1	—	Bit 0
S1 SCR Short	—	40289	1	—	Bit 1
S2 SCR Short	—	40289	1	—	Bit 2
S1 SCR Open	—	40289	1	—	Bit 3
S2 SCR Open	—	40289	1	—	Bit 4
Primary Fan Fail	—	40289	1	—	Bit 5
Control Module Fail	—	40289	1	—	Bit 6
PWR Supply DC A Fail	—	40289	1	—	Bit 7
PWR Supply DC B Fail	—	40289	1	—	Bit 8
PWR Supply SRC 1 AC Fail	—	40289	1	—	Bit 9
PWR Supply SRC 2 AC Fail	—	40289	1	—	Bit 10
PWR Supply Logic Fail	—	40289	1	—	Bit 11
Output Voltage Sense Fail	—	40289	1	—	Bit 12
S1 Voltage Sense Fail	—	40289	1	—	Bit 13
S2 Voltage Sense Fail	—	40289	1	—	Bit 14
S1 SCR Sense Fail	—	40289	1	—	Bit 15
S2 SCR Sense Fail	—	40290	1	—	Bit 0
S1 Current Sense Fail	—	40290	1	—	Bit 1
S2 Current Sense Fail	—	40290	1	—	Bit 2
S1 Gate Drive Fail	—	40290	1	—	Bit 3
S2 Gate Drive Fail	—	40290	1	—	Bit 4
Internal Comm Fail	—	40290	1	—	Bit 5
External Comm Fail	—	40290	1	—	Bit 6
CB1 Shunt Trip Fail	—	40290	1	—	Bit 7
CB2 Shunt Trip Fail	—	40290	1	—	Bit 8

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-41 Liebert STS2™, Liebert STS2/PDU™—Input and Holding—STS2 (continued)

Controller	STS2				
Liebert Products	Liebert STS2 Liebert STS2/PDU				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
CB6 Neutral Open	—	40290	1	—	Bit 9 (N/A to 4P)
Contactor Neutral Fail	—	40290	1	—	Bit 10 (N/A to 4P)
Heatsink Overtemp	—	40290	1	—	Bit 11
Equipment Overtemp	—	40290	1	—	Bit 12 (N/A to 4P)
Ambient Overtemp	—	40290	1	—	Bit 13 (N/A to 4P)
S1 Undervolts	—	40290	1	—	Bit 14
S1 Undervolts (RMS)	—	40290	1	—	Bit 15
S1 Overvolts	—	40291	1	—	Bit 0
S1 Over/Under Freq	—	40291	1	—	Bit 1
S1 Fail	—	40291	1	—	Bit 2
S2 Undervolts	—	40291	1	—	Bit 3
S2 Undervolts (RMS)	—	40291	1	—	Bit 4
S2 Overvolts	—	40291	1	—	Bit 5
S2 Over/Under Frequency	—	40291	1	—	Bit 6
S2 Fail	—	40291	1	—	Bit 7
S1 Overcurrent	—	40291	1	—	Bit 8
S2 Overcurrent	—	40291	1	—	Bit 9
S1 I-Peak	—	40291	1	—	Bit 10
S2 I-Peak	—	40291	1	—	Bit 11
Sources Out of Sync	—	40291	1	—	Bit 12
Load On Alternate Source	—	40291	1	—	Bit 13
Auto Retransfer Inhibit	—	40291	1	—	Bit 14
CB1 (S1) Open	—	40292	1	—	Bit 0
CB2 (S2) Open	—	40292	1	—	Bit 1
CB4 (S1 BYP) Closed	—	40292	1	—	Bit 2
CB5 (S2 BYP) Closed	—	40292	1	—	Bit 3
CB3 Output Bkr Open	—	40292	1	—	Bit 4
CB3A Output Bkr Open	—	40292	1	—	Bit 5
S1 Phase Rotation Error	—	40292	1	—	Bit 6
S2 Phase Rotation Error	—	40292	1	—	Bit 7
Transfer Inhibited	—	40292	1	—	Bit 8
Output Undervoltage	—	40292	1	—	Bit 9
History Logs Full	—	40292	1	—	Bit 10
Equipment Fan Fail	—	40292	1	—	Bit 11
Load Volt THD High	—	40292	1	—	Bit 12
Load Over-current	—	40292	1	—	Bit 13
Ground Over-current	—	40292	1	—	Bit 14
Neutral Over-current	—	40292	1	—	Bit 15
Customer Alarm #1	—	40293	1	—	Bit 0
Customer Alarm #2	—	40293	1	—	Bit 1
Customer Alarm #3	—	40293	1	—	Bit 2

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-41 Liebert STS2™, Liebert STS2/PDU™—Input and Holding—STS2 (continued)

Controller	STS2				
Liebert Products	Liebert STS2 Liebert STS2/PDU				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Customer Alarm #4	—	40293	1	—	Bit 3
Customer Alarm #5	—	40293	1	—	Bit 4
Customer Alarm #6	—	40293	1	—	Bit 5
Customer Alarm #7	—	40293	1	—	Bit 6
Customer Alarm #8	—	40293	1	—	Bit 7
Neutral Current 1 Over Limit	—	40294	1	—	Bit 13 (4P Only)
Neutral Current 2 Over Limit	—	40294	1	—	Bit 14 (4P Only)
Neutral Snubber Fail	—	40294	1	—	Bit 15 (4P Only)
Neutral 1 SCR Short	—	40295	1	—	Bit 0 (4P Only)
Neutral 2 SCR Short	—	40295	1	—	Bit 1 (4P Only)
Neutral 1 SCR Open	—	40295	1	—	Bit 2 (4P Only)
Neutral 2 SCR Open	—	40295	1	—	Bit 3 (4P Only)
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

3.3 UPS Systems

Table 3-42 Liebert APM™, Liebert NXC™, Liebert NXR™—Status and Coil

Data Label	Status	Coil	Number of Bits	Scale	Notes / Units
System Status					
Battery Auto Test In Progress	10001	—	1	—	Active on Alarm
Battery Equalize	10002	—	1	—	Active on Alarm
Battery Charging Inhibited	10003	—	1	—	Active on Alarm
On Generator	10004	—	1	—	Active on Alarm
System Events					
System Input Power Problem	10015	—	1	—	Active on Alarm
Rectifier Failure	10016	—	1	—	Active on Alarm
Inverter Failure	10017	—	1	—	Active on Alarm
Bypass Not Available	10018	—	1	—	Active on Alarm
Battery Low	10019	—	1	—	Active on Alarm
LBS Inhibited	10020	—	1	—	Active on Alarm
System Fan Failure	10021	—	1	—	Active on Alarm
Equipment Over Temperature	10022	—	1	—	Active on Alarm
System Shutdown - EPO	10023	—	1	—	Active on Alarm
Bypass Static Switch Unavailable	10024	—	1	—	Active on Alarm
Bypass - Excess Auto Retransfers	10025	—	1	—	Active on Alarm
Parallel Comm Warning	10026	—	1	—	Active on Alarm
Power Supply Failure	10027	—	1	—	Active on Alarm
Battery Over Temperature	10028	—	1	—	Active on Alarm
System Input Phs Rotation Error	10029	—	1	—	Active on Alarm
Fuse Failure	10030	—	1	—	Active on Alarm
Inverter Overload Phase A	10031	—	1	—	Active on Alarm
Inverter Overload Phase B	10032	—	1	—	Active on Alarm
Inverter Overload Phase C	10033	—	1	—	Active on Alarm
MMS Overload	10034	—	1	—	Active on Alarm
Inverter Shutdown - Overload	10035	—	1	—	Active on Alarm
System Output Fault	10036	—	1	—	Active on Alarm
Internal Communications Failure	10037	—	1	—	Active on Alarm
Battery Charging Error	10038	—	1	—	Active on Alarm
System Input Current Imbalance	10039	—	1	—	Active on Alarm
Main Battery Disconnect Open	10040	—	1	—	Active on Alarm
Inverter Static Switch SCR Short	10041	—	1	—	Active on Alarm
Battery Not Qualified	10042	—	1	—	Active on Alarm
Battery Terminals Reversed	10043	—	1	—	Active on Alarm
Battery Converter Failure	10044	—	1	—	Active on Alarm
Inverter SCR Open	10045	—	1	—	Active on Alarm
Load Sharing Fault	10046	—	1	—	Active on Alarm
DC Bus Abnormal	10047	—	1	—	Active on Alarm
Mains Input Neutral Lost	10048	—	1	—	Active on Alarm
Load Impact Transfer	10049	—	1	—	Active on Alarm
User Operation Invalid	10050	—	1	—	Active on Alarm
Power Sub Module Fault	10051	—	1	—	Active on Alarm

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-42 Liebert APM™, Liebert NXC™, Liebert NXR™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Scale	Notes / Units
Battery Discharging	10052	—	1	—	Active on Alarm
UPS Output on Bypass	10053	—	1	—	Active on Alarm
Output Load on Maint. Bypass	10054	—	1	—	Active on Alarm
Battery Capacity Low	10055	—	1	—	Active on Alarm
MMS On Battery	10056	—	1	—	Active on Alarm
Loss of Redundancy	10057	—	1	—	Active on Alarm
Top Outlet Fan Fault	10058	—	1	—	Active on Alarm
MMS Over Capacity	10059	—	1	—	Active on Alarm
Battery Charge Equalization Timeout	10060	—	1	—	Active on Alarm
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-43 Liebert APM™, Liebert NXC™, Liebert NXR™—Input and Holding

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Input					
System Input RMS A-B	30385	—	1	—	VAC
System Input RMS B-C	30386	—	1	—	VAC
System Input RMS C-A	30387	—	1	—	VAC
System Input RMS Current Phase A	30388	—	1	—	A AC
System Input RMS Current Phase B	30389	—	1	—	A AC
System Input RMS Current Phase C	30390	—	1	—	A AC
System Input Frequency	30391	—	1	10	Hz
System Input RMS A-N	30392	—	1	—	VAC
System Input RMS B-N	30393	—	1	—	VAC
System Input RMS C-N	30394	—	1	—	VAC
System Input Power Factor Phs A	30395	—	1	100	—
System Input Power Factor Phs B	30396	—	1	100	—
System Input Power Factor Phs C	30397	—	1	100	—
Bypass					
Bypass Input Voltage RMS A-N	30401	—	1	—	VAC
Bypass Input Voltage RMS B-N	30402	—	1	—	VAC
Bypass Input Voltage RMS C-N	30403	—	1	—	VAC
Bypass Input Frequency	30404	—	1	10	Hz
Battery					
Battery Time Remaining	30408	—	1	—	min
Battery Volts for Cabinet	30409	—	1	—	VDC
Battery Temperature for Cabinet	30410	—	1	—	deg C
Battery Temperature for Cabinet	30411	—	1	—	deg F
Inlet Air Temperature	30412	—	1	—	deg C
Inlet Air Temperature	30413	—	1	—	deg F
DC Bus Current	30414	—	1	—	A DC
UPS battery1 status	30415	—	1	—	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Output					
System Output Voltage RMS A-N	30419	—	1	—	VAC
System Output Voltage RMS B-N	30420	—	1	—	VAC
System Output Voltage RMS C-N	30421	—	1	—	VAC
System Output RMS Current Phs A	30422	—	1	—	A AC
System Output RMS Current Phs B	30423	—	1	—	A AC
System Output RMS Current Phs C	30424	—	1	—	A AC
System Output Frequency	30425	—	1	10	Hz
System Output Voltage RMS A-B	30426	—	1	—	VAC
System Output Voltage RMS B-C	30427	—	1	—	VAC
System Output Voltage RMS C-A	30428	—	1	—	VAC
System Output Power Factor Phs A	30429	—	1	100	—
System Output Power Factor Phs B	30430	—	1	100	—
System Output Power Factor Phs C	30431	—	1	100	—
System Output Pct Power Phase A	30432	—	1	—	%

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-43 Liebert APM™, Liebert NXC™, Liebert NXR™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
System Output Pct Power Phase B	30433	—	1	—	%
System Output Pct Power Phase C	30434	—	1	—	%
MMS Output Apparent Power	30435	—	1	—	kVA
MMS Output Power	30436	—	1	—	kW
System Output Apparent Power	30437	—	1	—	kVA
System Output Power	30438	—	1	—	kW
Output Current Crest Factor Phs A	30439	—	1	10	—
Output Current Crest Factor Phs B	30440	—	1	10	—
Output Current Crest Factor Phs C	30441	—	1	10	—
System Status					
Inverter On/Off State	30445	—	1	—	0 = Off / 1 = On
Maintenance Bypass Breaker (MBB)	30446	—	1	—	0 = Open / 1 = Closed 2 = Not Installed
UPS Output Source	30447	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Status	30448	—	1	—	1 = Normal Operation 2 = Startup 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
ECO Mode Operation State	30449	—	1	—	0 = disabled 1 = enabled
System Configuration					
System Date and Time	39998	49998	2	—	Secs since Epoch(UTC)

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-44 Liebert APM™, Liebert NXC™, Liebert NXR™—Glossary

Data Label	Data Description
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Capacity Low	Battery capacity is low
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Converter Failure	Battery converter failure. This is a summary event caused by one or more power sub-modules in a UPS module.
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Not Qualified	The UPS battery voltage is not qualified. This event will be detected even in the absence of battery disconnect or when it is open.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral
Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral
Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Static Switch Unavailable	The static bypass switch is off, and unable to operate
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
Equipment Over Temperature	Equipment over temperature summary event
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Temperature	The temperature of the inlet air
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Overload Phase A	Inverter is operating with an overload on phase A
Inverter Overload Phase B	Inverter is operating with an overload on phase B
Inverter Overload Phase C	Inverter is operating with an overload on phase C
Inverter SCR Open	The system has detected an open across one or more inverter static switch Silicon Controlled Rectifiers.
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Static Switch SCR Short	The system has detected a short across one or more inverter static switch Silicon Controlled Rectifiers (SCR)
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Load Impact Transfer	On bypass as result of load impact.
Load Sharing Fault	Difference between any phase inverter current of unit and the relevant average output current of parallel system is more than a specific percent of nominal current.
Main Battery Disconnect Open	Main battery disconnect is open
Mains Input Neutral Lost	Loss of neutral in the input source is detected.

Table 3-44 Liebert APM™, Liebert NXC™, Liebert NXR™—Glossary (continued)

Data Label	Data Description
Maintenance Bypass Breaker (MBB)	Maintenance bypass breaker (MBB)
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Power	The sum total power of all system output modules
MMS Overload	Multi-module system overload
On Generator	A generator is supplying the power to the system
Output Current Crest Factor Phs A	Output current crest factor of Phase A.
Output Current Crest Factor Phs B	Output current crest factor of Phase B.
Output Current Crest Factor Phs C	Output current crest factor of Phase C.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Parallel Comm Warning	Parallel communication bus warning
Power Sub Module Fault	One or more failures detected in power module, inverter or rectifier.
Power Supply Failure	Power supply failure
Rectifier Failure	Rectifier failure - rectifier is off
System Date and Time	The system date and time
System Fan Failure	System fan failure - one or more fans have failed
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Frequency	The system input frequency
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Factor Phs A	The system input power factor for Phase A
System Input Power Factor Phs B	The system input power factor for Phase B
System Input Power Factor Phs C	The system input power factor for Phase C
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B

Table 3-44 Liebert APM™, Liebert NXC™, Liebert NXR™—Glossary (continued)

Data Label	Data Description
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
UPS battery1 status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
User Operation Invalid	User attempted an invalid operation.

Table 3-45 Liebert APS™—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
Input				
Rectifier Failure	10001	—	1	Active on Alarm
System Input Power Problem	10002	—	1	Active on Alarm
System Input Current Imbalance	10003	—	1	Active on Alarm
Bypass				
UPS Output on Bypass	10014	—	1	Active on Alarm
Output Load on Maint. Bypass	10015	—	1	Active on Alarm
Bypass Not Available	10016	—	1	Active on Alarm
Bypass Overload	10017	—	1	Active on Alarm
Bypass Frequency Error	10018	—	1	Active on Alarm
Bypass Auto Retransfer Failed	10019	—	1	Active on Alarm
Battery				
Battery Discharging	10030	—	1	Active on Alarm
Battery Manual Test In Progress	10031	—	1	Active on Alarm
Battery Auto Test In Progress	10032	—	1	Active on Alarm
Battery Test Passed	10033	—	1	Active on Alarm
Battery Test Failed	10034	—	1	Active on Alarm
Low Battery - Shutdown Imminent	10035	—	1	Active on Alarm
Battery Module Fault	10036	—	1	Active on Alarm
Battery Module Warning	10037	—	1	Active on Alarm
Battery Over Temperature	10038	—	1	Active on Alarm
Battery Temperature Imbalance	10039	—	1	Active on Alarm
Output				
Output Overload	10050	—	1	Active on Alarm
Output Off Pending	10051	—	1	Active on Alarm
System Output Off	10052	—	1	Active on Alarm
System Shutdown - Transformer Over Temperature	10053	—	1	Active on Alarm
Inverter Shutdown - Overload	10054	—	1	Active on Alarm
System Shutdown - Output Short	10055	—	1	Active on Alarm
System Shutdown - Low Battery	10056	—	1	Active on Alarm
System Shutdown - Remote Shutdown	10057	—	1	Active on Alarm
System Shutdown - Hardware Fault	10058	—	1	Active on Alarm
Maximum Load Alarm	10059	—	1	Active on Alarm
Inverter				
Loss of Redundancy	10070	—	1	Active on Alarm
Power Module Failure	10071	—	1	Active on Alarm
Power Module Warning	10072	—	1	Active on Alarm
System Status				
Unspecified General Event	10083	—	1	Active on Alarm
Check Air Filter	10084	—	1	Active on Alarm
Frame Fan Fault	10085	—	1	Active on Alarm
Transformer Fan Fault	10086	—	1	Active on Alarm
Transformer Overtemperature	10087	—	1	Active on Alarm
No Load Warning	10088	—	1	Active on Alarm

Table 3-45 Liebert APS™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
PowerModule 1				
Power Module Fan Fault	10099	—	1	Active on Alarm
Power Module Over Temperature	10100	—	1	Active on Alarm
Power Module Shutdown - Over Temperature	10101	—	1	Active on Alarm
PowerModule 2				
Power Module Fan Fault	10112	—	1	Active on Alarm
Power Module Over Temperature	10113	—	1	Active on Alarm
Power Module Shutdown - Over Temperature	10114	—	1	Active on Alarm
PowerModule 10				
Power Module Fan Fault	10216	—	1	Active on Alarm
Power Module Over Temperature	10217	—	1	Active on Alarm
Power Module Shutdown - Over Temperature	10218	—	1	Active on Alarm
BatteryModule 1				
Battery Module Temperature Sensor Fault	10229	—	1	Active on Alarm
Battery Module Over Temperature	10230	—	1	Active on Alarm
Replace Battery Module	10231	—	1	Active on Alarm
BatteryModule 2				
Battery Module Temperature Sensor Fault	10242	—	1	Active on Alarm
Battery Module Over Temperature	10243	—	1	Active on Alarm
Replace Battery Module	10244	—	1	Active on Alarm
BatteryModule 80				
Battery Module Temperature Sensor Fault	11256	—	1	Active on Alarm
Battery Module Over Temperature	11257	—	1	Active on Alarm
Replace Battery Module	11258	—	1	Active on Alarm
ChargerModule				
Charger Module Fan Fault	11269	—	1	Active on Alarm

Table 3-46 Liebert APS™—Input and Holding

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Protocol					
Server Class	30385	—	1	—	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
Input					
System Input RMS L1-N	30396	—	1	10	Units : VAC Uint16
System Input RMS L2-N	30397	—	1	10	Units : VAC Uint16
System Input RMS L3-N	30398	—	1	10	Units : VAC Uint16
System Input RMS L1-L2	30399	—	1	10	Units : VAC Uint16
System Input RMS L2-L3	30400	—	1	10	Units : VAC Uint16
System Input RMS L3-L1	30401	—	1	10	Units : VAC Uint16
System Input RMS Current L1	30402	—	1	10	Units : A AC Uint16
System Input RMS Current L2	30403	—	1	10	Units : A AC Uint16
System Input RMS Current L3	30404	—	1	10	Units : A AC Uint16
System Input Frequency	30405	—	1	100	Units : Hz Uint16
System Input Power Factor L1	30406	—	1	100	Uint16
System Input Power Factor L2	30407	—	1	100	Uint16
System Input Power Factor L3	30408	—	1	100	Uint16
System Input Brown Out Count	30409	—	1	—	Uint16
System Input Black Out Count	30410	—	1	—	Uint16
Bypass					
Bypass Input Voltage RMS L1-N	30421	—	1	10	Units : VAC Uint16
Bypass Input Voltage RMS L2-N	30422	—	1	10	Units : VAC Uint16
Bypass Input Voltage RMS L1-L2	30423	—	1	10	Units : VAC Uint16
Bypass Input Frequency	30424	—	1	100	Units : Hz Uint16
Number Of Transfers To Bypass	30425	—	1	—	Uint16
Bypass Qualification Status	30426	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-46 Liebert APS™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Battery					
Battery Time Remaining	30437	—	1	—	Units : min Uint16
Battery Volts for Cabinet	30438	—	1	10	Units : VDC Uint16
DC Bus Current	30439	—	1	100	Units : A DC Uint16
Battery Percentage Charge	30440	—	1	—	Units : % Uint16
UPS Battery Status	30441	—	1	—	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Battery is	30442	—	1	—	0 = fully charged 1 = charging 2 = discharging 3 = not charging (charger off)
Battery Temperature	30443	—	1	10	Units : deg C Int16
Battery Temperature	30444	—	1	10	Units : deg F Int16
Number of Discharge Cycles	30445	—	1	—	Uint16
Accumulated Discharge Time	30446	—	1	10	Units : hr Uint16
Time Until Next Auto Battery Test	30447	—	2	—	Units : min Uint32
Number of EBC Installed	30449	—	1	—	Uint16
Low Battery Warning Time	30450	40450	1	—	Units : min Uint16
Automatic Battery Test	30451	40451	1	—	0 = disabled 1 = enabled
Auto Battery Test Interval	30452	40452	1	—	0 = 8 weeks 1 = 12 weeks 2 = 16 weeks 3 = 20 weeks 4 = 26 weeks
Manual Battery Test	—	40453	1	—	1 = Start Test
Output					
System Output Voltage RMS L1-N	30464	—	1	10	Units : VAC Uint16
System Output Voltage RMS L2-N	30465	—	1	10	Units : VAC Uint16
System Output Voltage RMS L1-L2	30466	—	1	10	Units : VAC Uint16
System Output RMS Current L1	30467	—	1	10	Units : A AC Uint16
System Output RMS Current L2	30468	—	1	10	Units : A AC Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-46 Liebert APS™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
System Output Frequency	30469	—	1	100	Units : Hz Uint16
System Output Power Factor L1	30470	—	1	100	Uint16
System Output Power Factor L2	30471	—	1	100	Uint16
System Output Apparent Power	30472	—	1	100	Units : kVA Uint16
System Output Apparent Power L1	30473	—	1	100	Units : kVA Uint16
System Output Apparent Power L2	30474	—	1	100	Units : kVA Uint16
System Output Power	30475	—	1	100	Units : kW Uint16
System Output Power L1	30476	—	1	100	Units : kW Uint16
System Output Power L2	30477	—	1	100	Units : kW Uint16
System Output Pct Power L1	30478	—	1	10	Units : % Uint16
System Output Pct Power L2	30479	—	1	10	Units : % Uint16
Output Qualification Status	30480	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Maximum Load Alarm Limit	30481	40481	1	10	Units : kVA Uint16
Shutdown After Delay	30482	40482	1	—	Units : sec Uint16
Reboot After Delay	30483	40483	1	—	Units : sec Uint16
Output On Delay	30484	40484	1	—	Units : sec Uint16
Inverter					
Inverter On/Off State	30495	—	1	—	0 = off 1 = on
System Set To Operate With	30496	40496	1	—	0 = No Redundancy 1 = Redundancy
System Status					
System Capacity	30507	—	1	—	Units : VA Uint16
Frame Capacity	30508	—	1	—	Units : VA Uint16
Number of Installed Power Modules	30509	—	1	—	Uint16
Number Of Active Power Modules	30510	—	1	—	Uint16
Number Of Power Modules With Warnings	30511	—	1	—	Uint16
Number Of Failed Power Modules	30512	—	1	—	Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-46 Liebert APS™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Installed Battery Strings	30513	—	1	—	Uint16
Number of Active Battery Strings	30514	—	1	—	Uint16
Number of Battery Strings With Warnings	30515	—	1	—	Uint16
Number of Failed Battery Strings	30516	—	1	—	Uint16
UPS Output Source	30517	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Status	30518	—	1	—	1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
Auto Restart	30519	40519	1	—	0 = disabled 1 = enabled
Auto Restart Delay	30520	40520	1	—	Units : sec Uint16
Auto Restart Minimum Battery Setting	30521	40521	1	—	0 = 0% 1 = 10% 2 = 20% 3 = 30% 4 = 40% 5 = 50% 6 = 60% 7 = 70% 8 = 80% 9 = 90%
No Load Warning Current Threshold	30522	40522	1	—	Units : A AC Int16
No Load Warning Delay	30523	40523	1	—	Units : min Uint16
Inlet Air Temperature	30524	—	1	10	Units : deg C Int16
Inlet Air Temperature	30525	—	1	10	Units : deg F I nt16
PowerModule 1					
Module Operating Status	30534	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Inverter Status	30535	—	1	—	0 = Inverter Inactive 1 = Inverter Active

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-46 Liebert APS™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
PowerModule 2					
Module Operating Status	30546	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Inverter Status	30547	—	1	—	0 = Inverter Inactive 1 = Inverter Active
PowerModule 10					
Module Operating Status	30642	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Inverter Status	30643	—	1	—	0 = Inverter Inactive 1 = Inverter Active
BatteryModlue 1					
Module Operating Status	30654	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Battery String Voltage	30655	—	1	10	Units : VDC Uint16
Battery Module Temperature	30656	—	1	10	Units : deg C Int16
Battery Module Temperature	30657	—	1	10	Units : deg F Int16
Number of Discharge Cycles	30658	—	1	—	Uint16
Accumulated Discharge Time	30659	—	1	10	Units : hr Uint16
BatteryModlue 2					
Module Operating Status	30670	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Battery String Voltage	30671	—	1	10	Units : VDC Uint16
Battery Module Temperature	30672	—	1	10	Units : deg C Int16
Battery Module Temperature	30673	—	1	10	Units : deg F Int16
Number of Discharge Cycles	30674	—	1	—	Uint16
Accumulated Discharge Time	30675	—	1	10	Units : hr Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-46 Liebert APS™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
BatteryModule 80					
Module Operating Status	31918	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Battery String Voltage	31919	—	1	10	Units : VDC Uint16
Battery Module Temperature	31920	—	1	10	Units : deg C Int16
Battery Module Temperature	31921	—	1	10	Units : deg F Int16
Number of Discharge Cycles	31922	—	1	—	Uint16
Accumulated Discharge Time	31923	—	1	10	Units : hr Uint16
ChargerModule					
Module Operating Status	31934	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Charger Mode	31935	—	1	—	0 = Not Charging 1 = Float Charging 2 = Current Limit Charging 3 = Equalize Charging
BypassControlModule					
Module Operating Status	31946	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
System Configuration					
System Date and Time	31957	41957	2	—	Units : Secs since Epoch(UTC)
SystemConfiguration					
System Date and Time	39998	49998	2	—	Units : Secs since Epoch(UTC)

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-47 Liebert APS™—Glossary

Data Label	Data Description
Accumulated Discharge Time	The highest accumulated battery discharge time among installed battery modules.
Accumulated Discharge Time	Total accumulated discharge time for the Battery Module since it was made.
Auto Battery Test Interval	The time between automatic battery tests.
Auto Restart Delay	If 'Auto Restart' is set to 'enabled' the UPS will not restart the load after a battery discharge until this amount of time has elapsed since the restoration of utility power.
Auto Restart Minimum Battery Setting	The percent state of charge that the batteries must have before the unit is allowed to auto restart.
Auto Restart	When 'enabled', the UPS will automatically restart the load when utility power is restored after a battery discharge.
Automatic Battery Test	Enable/disable the automatic battery test schedule.
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Discharging	The battery is discharging
Battery is	Battery charge status.
Battery Manual Test In Progress	Manual battery test is in progress
Battery Module Fault	One or more battery modules are reporting a fault condition.
Battery Module Over Temperature	The Battery Module has detected an over temperature condition.
Battery Module Temperature Sensor Fault	A Battery Module temperature sensor fault has been detected.
Battery Module Temperature	The battery temperature measured by the Battery Module.
Battery Module Warning	One or more battery modules are reporting a warning condition.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Percentage Charge	The percentage of battery charge
Battery String Voltage	The voltage between the positive and negative battery terminals of a battery string.
Battery Temperature Imbalance	Excessive temperature differences between battery sensors detected
Battery Temperature	The highest battery temperature among all installed Battery Modules.
Battery Test Failed	Battery test failed
Battery Test Passed	Battery test passed
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass Auto Retransfer Failed	After performing a recoverable transfer to bypass, an attempt to auto retransfer from bypass to inverter failed
Bypass Frequency Error	The bypass frequency is outside the inverter synchronization limits
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS L1-L2	The bypass input RMS voltage between Lines 1 and 2
Bypass Input Voltage RMS L1-N	The bypass input RMS voltage between Line 1 and Neutral
Bypass Input Voltage RMS L2-N	The bypass input RMS voltage between Line 2 and Neutral
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload	Bypass overloaded, reduce load immediately.
Bypass Qualification Status	bypass qualification status
Charger Mode	The Charger Module is operating in the stated charging mode.
Charger Module Fan Fault	The Charger Module has detected a fan fault.
Check Air Filter	Please check air filter, it may need to be cleaned or replaced.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value

Table 3-47 Liebert APS™—Glossary (continued)

Data Label	Data Description
Frame Capacity	Total system capacity supported when the maximum number of power modules are installed.
Frame Fan Fault	The frame top outlet fan has failed.
Inlet Air Temperature	The temperature of the inlet air
Inverter On/Off State	inverter on/off state
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Status	Status of the inverter output. Active means the inverter is online with regulated output voltage and ready to power the load. Inactive means the inverter is offline and not ready to power the load.
Loss of Redundancy	The system has an insufficient number of power modules to provide redundancy.
Low Battery - Shutdown Imminent	If active and guaranteed shutdown is enabled, a low battery reserve condition exists that will shutdown the UPS.
Low Battery Warning Time	When battery time remaining falls to, or below, this value the low battery alarm is activated.
Manual Battery Test	Command to initiate a manual battery test.
Maximum Load Alarm Limit	Maximum load [VA] supportable without a 'Maximum Load Alarm' condition.
Maximum Load Alarm	Maximum load alarm indicating load setting has been exceeded.
Module Operating Status	The operating status for this Battery Module.
Module Operating Status	The operating status for this Bypass Control Module.
Module Operating Status	The operating status for this Charger Module.
Module Operating Status	The operating status for this Power Module.
No Load Warning Current Threshold	If the output current is below this number of amps for a period of [No Load Warning Delay] time, the [No Load Warning] will become active.
No Load Warning Delay	If the output current is below the [No Load Warning Current Threshold] number of amps for this period of time, the [No Load Warning] will become active.
No Load Warning	Indicates the UPS has output voltage but the output current is below a set threshold [No Load Warning Current Threshold] for a set period of time [No Load Warning Delay].
Number of Active Battery Strings	The total number of active battery strings.
Number Of Active Power Modules	The total number of active power modules.
Number of Battery Strings With Warnings	The total number of battery strings with warnings.
Number of Discharge Cycles	The highest number of battery discharge cycles among all installed Battery Modules.
Number of Discharge Cycles	The total number of battery discharge cycles for the Battery Module since it was made.
Number of EBC Installed	The total number of Extended Battery Cabinets installed.
Number of Failed Battery Strings	The total number of failed battery strings.
Number Of Failed Power Modules	The total number of failed power modules.
Number of Installed Battery Strings	The total number of battery strings installed.
Number of Installed Power Modules	The total number of Power Modules installed.
Number Of Power Modules With Warnings	The total number of power modules with warnings.
Number Of Transfers To Bypass	The total number of transfers to bypass from inverter since system startup.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Off Pending	Output off pending - shutdown imminent.
Output On Delay	When a value is written to this point the output will be turned on after the specified time has elapsed.

Table 3-47 Liebert APS™—Glossary (continued)

Data Label	Data Description
Output Overload	An overload exists on the output.
Output Qualification Status	output qualification status
Power Module Failure	One or more conditions indicate a power module failure, service is required.
Power Module Fan Fault	The Power Module has detected a fan fault.
Power Module Over Temperature	The Power Module has detected an over temperature condition.
Power Module Shutdown - Over Temperature	Power Module has shutdown due to over temperature.
Power Module Warning	One or more power modules is reporting a warning condition.
Reboot With Delay	When a value is written to this point the output will be turned off immediately and then turned back on after the specified time has elapsed.
Rectifier Failure	Rectifier failure - rectifier is off
Replace Battery Module	The Battery Module needs to be replaced.
Server Class	The general classification for this system
Shutdown After Delay	When a value is written to this point the system will shutdown after the specified time has elapsed and output will remain off.
System Capacity	System capacity supported by the installed power modules.
System Date and Time	The system date and time
System Input Black Out Count	The number of occurrences, since the last reset, where the input was not qualified to provide power to the system
System Input Brown Out Count	The number of occurrences, since the last reset, where the system input voltage has fallen below a pre-determined threshold for a specified amount of time
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Frequency	The system input frequency
System Input Power Factor L1	The system input power factor for Line 1
System Input Power Factor L2	The system input power factor for Line 2
System Input Power Factor L3	The system input power factor for Line 3
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS Current L1	The system input RMS current for Line 1
System Input RMS Current L2	The system input RMS current for Line 2
System Input RMS Current L3	The system input RMS current for Line 3
System Input RMS L1-L2	The System Input RMS Voltage between Line 1 and Line 2
System Input RMS L1-N	The System Input RMS Voltage between Line 1 and Neutral
System Input RMS L2-L3	The System Input RMS Voltage between Line 2 and Line 3
System Input RMS L2-N	The System Input RMS Voltage between Line 2 and Neutral
System Input RMS L3-L1	The System Input RMS Voltage between Line 3 and Line 1
System Input RMS L3-N	The System Input RMS Voltage between Line 3 and Neutral
System Output Apparent Power L1	System output apparent power on Line 1
System Output Apparent Power L2	System output apparent power on Line 2
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Frequency	The system output frequency
System Output Off	The system output is off
System Output Pct Power L1	The system output power on Line 1 as a percentage of the rated capacity
System Output Pct Power L2	The system output power on Line 2 as a percentage of the rated capacity
System Output Power Factor L1	The system output power factor of Line 1

Table 3-47 Liebert APS™—Glossary (continued)

Data Label	Data Description
System Output Power Factor L2	The system output power factor of Line 2
System Output Power L1	The system output power on Line 1.
System Output Power L2	The system output power on Line 2.
System Output Power	The sum total power of all system output phases
System Output RMS Current L1	The system output RMS current for Line 1
System Output RMS Current L2	The system output RMS current for Line 2
System Output Voltage RMS L1-L2	The system output RMS voltage between Lines 1 and 2
System Output Voltage RMS L1-N	The system output RMS voltage between Line 1 and Neutral
System Output Voltage RMS L2-N	The system output RMS voltage between Line 2 and Neutral
System Set To Operate With	If this point reports 'Redundancy' then the system is configured for redundancy and the 'Loss of Redundancy' alarm is enabled.
System Shutdown - Hardware Fault	Shutdown was due to an externally applied hardware control signal.
System Shutdown - Low Battery	Shutdown was due to a low battery condition.
System Shutdown - Output Short	Shutdown was due to a short on the output.
System Shutdown - Remote Shutdown	Shutdown was due to a remote communications shutdown command.
System Shutdown - Transformer Over Temperature	System shutdown due to transformer over temperature.
System Status	The operating status for the system
Time Until Next Auto Battery Test	The time until the next automatic battery test is started.
Transformer Fan Fault	The transformer fan has failed.
Transformer Overtemperature	Transformer temperature has exceeded the limit
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
UPS Battery Status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source

Table 3-48 Liebert EPM™—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
System Status				
Battery Equalize	10001		1	Active on Alarm
Battery Charging Inhibited	10002		1	Active on Alarm
On Generator	10003		1	Active on Alarm
Battery Self Test	10004		1	Active on Alarm
Battery Circuit Breaker 1 Open	10005		1	Active on Alarm
Battery Circuit Breaker 2 Open	10006		1	Active on Alarm
Battery Circuit Breaker 3 Open	10007		1	Active on Alarm
Battery Circuit Breaker 4 Open	10008		1	Active on Alarm
Main Battery Disconnect Open	10009		1	Active on Alarm
System Events				
System Input Power Problem	10020		1	Active on Alarm
Rectifier Failure	10021		1	Active on Alarm
Inverter Failure	10022		1	Active on Alarm
Bypass Not Available	10023		1	Active on Alarm
Battery Low	10024		1	Active on Alarm
LBS Inhibited	10025		1	Active on Alarm
System Fan Failure	10026		1	Active on Alarm
Equipment Over Temperature	10027		1	Active on Alarm
System Shutdown - EPO	10028		1	Active on Alarm
Bypass Static Switch Unavailable	10029		1	Active on Alarm
Bypass - Excess Auto Retransfers	10030		1	Active on Alarm
Parallel Comm Warning	10031		1	Active on Alarm
Power Supply Failure	10032		1	Active on Alarm
Battery Over Temperature	10033		1	Active on Alarm
System Input Phs Rotation Error	10034		1	Active on Alarm
Fuse Failure	10035		1	Active on Alarm
Inverter Overload	10036		1	Active on Alarm
MMS Overload	10037		1	Active on Alarm
Inverter Shutdown - Overload	10038		1	Active on Alarm
System Output Fault	10039		1	Active on Alarm
Internal Communications Failure	10040		1	Active on Alarm
Battery Charging Error	10041		1	Active on Alarm
System Input Current Imbalance	10042		1	Active on Alarm
Battery Not Qualified	10043		1	Active on Alarm
Battery Terminals Reversed	10044		1	Active on Alarm
Battery Converter Failure	10045		1	Active on Alarm
Load Sharing Fault	10046		1	Active on Alarm
DC Bus Abnormal	10047		1	Active on Alarm
Mains Input Neutral Lost	10048		1	Active on Alarm
Load Impact Transfer	10049		1	Active on Alarm
User Operation Invalid	10050		1	Active on Alarm
Battery Discharging	10051		1	Active on Alarm
UPS Output on Bypass	10052		1	Active on Alarm
Output Load on Maint. Bypass	10053		1	Active on Alarm
Battery Capacity Low	10054		1	Active on Alarm

Table 3-48 Liebert EPM™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
MMS On Battery	10055		1	Active on Alarm
Loss of Redundancy	10056		1	Active on Alarm
Top Outlet Fan Fault	10057		1	Active on Alarm
MMS Over Capacity	10058		1	Active on Alarm
Bypass Input Voltage Fault	10059		1	Active on Alarm
Power Module Over Temperature	10060		1	Active on Alarm
Excess ECO Suspends	10061		1	Active on Alarm
Battery Ground Fault	10062		1	Active on Alarm
System Input Current Limit	10063		1	Active on Alarm
Inverter Relay Fault	10064		1	Active on Alarm
Transfer to Bypass - System Overload	10065		1	Active on Alarm
Input Source Backfeed	10066		1	Active on Alarm
Loss of Synchronization	10067		1	Active on Alarm
Battery Converter Current Limit	10068		1	Active on Alarm
LBS Cable Failure	10069		1	Active on Alarm
Battery Charge Equalization Timeout	10070		1	Active on Alarm
Parallel Cable Failure	10071		1	Active on Alarm
Battery Fault	10072		1	Active on Alarm
Battery Room Alarm	10073		1	Active on Alarm
Battery Breaker 1 Open Failure	10074		1	Active on Alarm
Battery Breaker 2 Open Failure	10075		1	Active on Alarm
Battery Breaker 3 Open Failure	10076		1	Active on Alarm
Battery Breaker 4 Open Failure	10077		1	Active on Alarm
Bypass Backfeed Detected	10078		1	Active on Alarm

Table 3-49 Liebert EPM™—Input and Holding

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Input					
System Input RMS A-B	30385		1		Units : VAC Uint16
System Input RMS B-C	30386		1		Units : VAC Uint16
System Input RMS C-A	30387		1		Units : VAC Uint16
System Input RMS Current Phase A	30388		1		Units : A AC Uint16
System Input RMS Current Phase B	30389		1		Units : A AC Uint16
System Input RMS Current Phase C	30390		1		Units : A A Uint16
System Input Frequency	30391		1	10	Units : Hz Uint16
System Input RMS A-N	30392		1		Units : VAC Uint16
System Input RMS B-N	30393		1		Units : VAC Uint16
System Input RMS C-N	30394		1		Units : VAC Uint16
System Input Power Factor Phs A	30395		1	100	Uint16
System Input Power Factor Phs B	30396		1	100	Uint16
System Input Power Factor Phs C	30397		1	100	Uint16
Bypass					
Bypass Input Voltage RMS A-N	30408		1		Units : VAC Uint16
Bypass Input Voltage RMS B-N	30409		1		Units : VAC Uint16
Bypass Input Voltage RMS C-N	30410		1		Units : VAC Uint16
Bypass Input Frequency	30411		1	10	Units : Hz Uint16
Bypass Input Voltage RMS A-B	30412		1		Units : VAC Uint16
Bypass Input Voltage RMS B-C	30413		1		Units : VAC Uint16
Bypass Input Voltage RMS C-A	30414		1		Units : VAC Uint16
Battery					
Battery Time Remaining	30425		1		Units : min Uint16
Battery Volts for Cabinet	30426		1		Units : VDC Int16
Battery Temperature for Cabinet	30427		1		Units : deg C Int16
Battery Temperature for Cabinet	30428		1		Units : deg F Int16
DC Bus Current	30429		1		Units : A DC Int16

Table 3-49 Liebert EPM™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
UPS battery1 status	30430		1		1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Output					
System Output Voltage RMS A-N	30441		1		Units : VAC Uint16
System Output Voltage RMS B-N	30442		1		Units : VAC Uint16
System Output Voltage RMS C-N	30443		1		Units : VAC Uint16
System Output RMS Current Phs A	30444		1		Units : A AC Uint16
System Output RMS Current Phs B	30445		1		Units : A AC Uint16
System Output RMS Current Phs C	30446		1		Units : A AC Uint16
System Output Frequency	30447		1	10	Units : Hz Uint16
System Output Voltage RMS A-B	30448		1		Units : VAC Uint16
System Output Voltage RMS B-C	30449		1		Units : VAC Uint16
System Output Voltage RMS C-A	30450		1		Units : VAC Uint16
System Output Power Factor Phs A	30451		1	100	Uint16
System Output Power Factor Phs B	30452		1	100	Uint16
System Output Power Factor Phs C	30453		1	100	Uint16
System Output Pct Power Phase A	30454		1		Units : % Uint16
System Output Pct Power Phase B	30455		1		Units : % Uint16
System Output Pct Power Phase C	30456		1		Units : % Uint16
MMS Output Apparent Power	30457		1		Units : kVA Uint16
MMS Output Power	30458		1		Units : kW Uint16
Output Current Crest Factor Phs A	30459		1	10	Uint16
Output Current Crest Factor Phs B	30460		1	10	Uint16
Output Current Crest Factor Phs C	30461		1	10	Uint16
System Output Power Phase A	30462		1		Units : kW Uint16
System Output Power Phase B	30463		1		Units : kW Uint16
System Output Power Phase C	30464		1		Units : kW Uint16
System Output Apparent Power Phs A	30465		1		Units : kVA Uint16
System Output Apparent Power Phs B	30466		1		Units : kVA Uint16

Table 3-49 Liebert EPM™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Output Apparent Power Phs C	30467		1		Units : kVA Uint16
System Output Power	30468		1		Units : kW Uint16
System Output Apparent Power	30469		1		Units : kVA Uint16
System Status					
Inverter On/Off State	30480		1		0 = off 1 = on
Maintenance Bypass Breaker	30481		1		0 = Open 1 = Close 2 = Not Installed
UPS Output Source	30482		1		1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Status	30483		1		1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
ECO Mode Operation State	30484		1		0 = disabled 1 = enabled
Input Breaker	30485		1		0 = Open 1 = Close 2 = Not Installed
Internal Bypass Breaker	30486		1		0 = Open 1 = Close 2 = Not Installed
Output Breaker	30487		1		0 = Open 1 = Close 2 = Not Installed
UPS Application Mode	30488		1		0 = UPS Mode 1 = Frequency converter mode
MMS UPS Output Source	30489		1		1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Intelligent Parallel Operation State	30490		1		0 = disabled 1 = enabled

Table 3-49 Liebert EPM™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Advanced Efficiency Mode	30491		1		0 = unknown 1 = ECO mode 2 = Intelligent ECO mode 3 = Active Inverter ECO mode
System Configuration					
System Input Nominal Voltage	30502		1		Units : VAC Uint16
System Input Nominal Frequency	30503		1	10	Units : Hz Uint16
System Input Nominal Current	30504		1		Units : A AC Uint16
Bypass Nominal Voltage	30505		1		Units : VAC Uint16
System Output Nominal Voltage	30506		1		Units : VAC Uint16
System Output Nominal Frequency	30507		1	10	Units : Hz Uint16
System Analog					
Total System Operating Time	30518		2		Units : hr Uint32
Average system efficiency	30520		1	10	Units : % Uint16
Inlet Air Temperature	30521		1		Units : deg C Uint16
Inlet Air Temperature	30522		1		Units : deg F Uint16
System Configuration					
System Date and Time	39998	49998	2		Secs since Epoch(UTC)

Table 3-50 Liebert EPM™—Glossary

Data Label	Data Description
Advanced Efficiency Mode	Advanced efficiency modes where the UPS supports the critical load using the static bypass.
Average system efficiency	Average system efficiency
Battery Breaker 1 Open Failure	Battery circuit breaker 1 failed to open
Battery Breaker 2 Open Failure	Battery circuit breaker 2 failed to open
Battery Breaker 3 Open Failure	Battery circuit breaker 3 failed to open
Battery Breaker 4 Open Failure	Battery circuit breaker 4 failed to open
Battery Capacity Low	Battery capacity is low
Battery Charge Equalization Timeout	The battery equalizing is time out.
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Converter Current Limit	The battery converter has reached is maximum current limit.
Battery Converter Failure	Battery converter failure. This is a summary event caused by one or more power sub-modules in a UPS module.
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Fault	A short circuit exists in the battery system.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Not Qualified	The UPS battery voltage is not qualified. This event will be detected even in the absence of battery disconnect or when it is open.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Room Alarm	The ambient temperature of the battery room is abnormal.
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass Backfeed Detected	The system detected a voltage on the bypass when none was expected
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage Fault	The system has detected the bypass voltage is unqualified.
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral

Table 3-50 Liebert EPM™—Glossary (continued)

Data Label	Data Description
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Temperature	The temperature of the inlet air
Input Breaker	Input breaker
Input Source Backfeed	The battery is backfeeding the input source.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Internal Bypass Breaker	Internal bypass breaker
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Overload	Inverter in overload fault
Inverter Relay Fault	The inverter relay has malfunctioned.
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
LBS Cable Failure	Load Bus Sync communications is abnormal. A problem with the LBS cable may exist.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Load Impact Transfer	On bypass as result of load impact.
Load Sharing Fault	Difference between any phase inverter current of unit and the relevant average output current of parallel system is more than a specific percent of nominal current.
Loss of Redundancy	The multi-module collection doesn't have enough modules to satisfy the redundancy configuration.
Loss of Synchronization	The inverter and bypass are no longer synchronized.
Main Battery Disconnect Open	Main battery disconnect is open
Mains Input Neutral Lost	Loss of neutral in the input source is detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Power	The sum total power of all system output modules
MMS Over Capacity	The multi-module system load is larger than the apparent power limit setting.
MMS Overload	Multi-module system overload
MMS UPS Output Source	Multi-module UPS output source
On Generator	A generator is supplying the power to the system
Output Breaker	Output breaker
Output Current Crest Factor Phs A	Output current crest factor of Phase A.

Table 3-50 Liebert EPM™—Glossary (continued)

Data Label	Data Description
Output Current Crest Factor Phs B	Output current crest factor of Phase B.
Output Current Crest Factor Phs C	Output current crest factor of Phase C.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Parallel Cable Failure	The UPS parallel system communications is abnormal. A problem with the parallel cable may exist.
Parallel Comm Warning	Parallel communication bus warning
Power Module Over Temperature	The Power Module has detected an over temperature condition.
Power Supply Failure	Power supply failure
Rectifier Failure	Rectifier failure - rectifier is off
System Date and Time	The system date and time
System Fan Failure	System fan failure - one or more fans have failed
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Current	The nominal (or rated) system input current
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Factor Phs A	The system input power factor for Phase A
System Input Power Factor Phs B	The system input power factor for Phase B
System Input Power Factor Phs C	The system input power factor for Phase C
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power Phs A	System output apparent power on phase A
System Output Apparent Power Phs B	System output apparent power on phase B
System Output Apparent Power Phs C	System output apparent power on phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A

Table 3-50 Liebert EPM™—Glossary (continued)

Data Label	Data Description
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power Phase A	The system output power on phase A.
System Output Power Phase B	The system output power on phase B.
System Output Power Phase C	The system output power on phase C.
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
Top Outlet Fan Fault	Top outlet fan fault - one or more top outlet fans have failed.
Total System Operating Time	The cumulative operation time of the unit
Transfer to Bypass - System Overload	The UPS System has transferred to bypass because the active power modules cannot support the critical load.
UPS Application Mode	UPS application mode.
UPS battery1 status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
User Operation Invalid	User attempted an invalid operation.

Table 3-51 Liebert eXL™—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
Input				
System Input Power Problem	10001		1	Active on Alarm
System Input Current Limit	10002		1	Active on Alarm
Input Undervoltage	10003		1	Active on Alarm
Bypass				
Bypass Not Available	10014		1	Active on Alarm
Bypass Overload Phase A	10015		1	Active on Alarm
Bypass Overload Phase B	10016		1	Active on Alarm
Bypass Overload Phase C	10017		1	Active on Alarm
Bypass Auto Retransfer Primed	10018		1	Active on Alarm
Bypass Auto Retransfer Failed	10019		1	Active on Alarm
Bypass - Excess Auto Retransfers	10020		1	Active on Alarm
Bypass Static Switch Overload	10021		1	Active on Alarm
Bypass Static Switch Unavailable	10022		1	Active on Alarm
Bypass Excessive Pulse Parallel	10023		1	Active on Alarm
Bypass Auto Transfer Failed	10024		1	Active on Alarm
Bypass - Manual Rexfr Inhibited	10025		1	Active on Alarm
Bypass - Manual Xfr Inhibited	10026		1	Active on Alarm
Bypass Undervoltage Warning	10027		1	Active on Alarm
Battery				
Battery Test Inhibited	10038		1	Active on Alarm
Battery Capacity Low	10039		1	Active on Alarm
Battery Discharging	10040		1	Active on Alarm
Battery Temperature Imbalance	10041		1	Active on Alarm
Battery Equalize	10042		1	Active on Alarm
Battery Self Test	10043		1	Active on Alarm
Battery Test Failed	10044		1	Active on Alarm
Main Battery Disconnect Open	10045		1	Active on Alarm
Battery Low	10046		1	Active on Alarm
Battery Temperature Sensor Fault	10047		1	Active on Alarm
Battery Circuit Breaker 1 Open	10048		1	Active on Alarm
Battery Circuit Breaker 2 Open	10049		1	Active on Alarm
Battery Circuit Breaker 3 Open	10050		1	Active on Alarm
Battery Circuit Breaker 4 Open	10051		1	Active on Alarm
Battery Circuit Breaker 5 Open	10052		1	Active on Alarm
Battery Circuit Breaker 6 Open	10053		1	Active on Alarm
Battery Circuit Breaker 7 Open	10054		1	Active on Alarm
Battery Circuit Breaker 8 Open	10055		1	Active on Alarm
Battery Over Temperature Limit	10056		1	Active on Alarm
Battery - External Monitor 1	10057		1	Active on Alarm
Battery - External Monitor 2	10058		1	Active on Alarm
Battery Low Shutdown	10059		1	Active on Alarm
DC Bus				
Precharge Circuit Failed	10065		1	Active on Alarm

Table 3-51 Liebert *e*XL™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
Output				
System Shutdown - EPO	10070		1	Active on Alarm
System Output Low Power Factor	10071		1	Active on Alarm
Output Amp Over User Limit-Phs A	10072		1	Active on Alarm
Output Amp Over User Limit-Phs B	10073		1	Active on Alarm
Output Amp Over User Limit-Phs C	10074		1	Active on Alarm
System Output Fault	10075		1	Active on Alarm
Output Of/Uf	10076		1	Active on Alarm
Ground Fault	10077		1	Active on Alarm
Inverter				
Inverter Failure	10087		1	Active on Alarm
Inverter Overload Phase A	10088		1	Active on Alarm
Inverter Overload Phase B	10089		1	Active on Alarm
Inverter Overload Phase C	10090		1	Active on Alarm
Inverter Shutdown - Overload	10091		1	Active on Alarm
Environment				
Inlet Air Over Temperature	10102		1	Active on Alarm
Equipment Over Temp Warning	10103		1	Active on Alarm
Outlet Air Overtemperature Limit	10104		1	Active on Alarm
Equipment Temperature Sensor Fail	10105		1	Active on Alarm
Memory Card Removed	10106		1	Active on Alarm
Auto Calibration Active	10107		1	Active on Alarm
Auto Calibration Failed	10108		1	Active on Alarm
External Input Signals				
Input Contact 01	10116		1	Active on Alarm
Input Contact 02	10117		1	Active on Alarm
Input Contact 03	10118		1	Active on Alarm
Input Contact 04	10119		1	Active on Alarm
Input Contact 05	10120		1	Active on Alarm
Input Contact 06	10121		1	Active on Alarm
Input Contact 07	10122		1	Active on Alarm
Input Contact 08	10123		1	Active on Alarm
Input Contact 09	10124		1	Active on Alarm
Input Contact 10	10125		1	Active on Alarm
Input Contact 11	10126		1	Active on Alarm
Input Contact 12	10127		1	Active on Alarm
Input Contact 13	10128		1	Active on Alarm
Input Contact 14	10129		1	Active on Alarm
Input Contact 15	10130		1	Active on Alarm
Input Contact 16	10131		1	Active on Alarm
Rectifier				
Rectifier Failure	10142		1	Active on Alarm

Table 3-51 Liebert *e*XL™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
System				
System Fan Failure - Redundant	10153		1	Active on Alarm
Multiple Fan Failure	10154		1	Active on Alarm
Internal Communications Failure	10155		1	Active on Alarm
UPS Output on Bypass	10156		1	Active on Alarm
Output Load on Maint. Bypass	10157		1	Active on Alarm
Backfeed Breaker Open	10158		1	Active on Alarm
Auto Restart In Progress	10159		1	Active on Alarm
Power Supply Failure	10160		1	Active on Alarm
On Generator	10161		1	Active on Alarm
Auto Restart Inhibited - Ext	10162		1	Active on Alarm
Automatic Restart Failed	10163		1	Active on Alarm
Main Controller Fault	10164		1	Active on Alarm
Fuse Failure	10165		1	Active on Alarm
System Controller Error	10166		1	Active on Alarm
System Breaker(s) Open Failure	10167		1	Active on Alarm
System Breaker(s) Close Failure	10168		1	Active on Alarm
EMO Shutdown	10169		1	Active on Alarm
Service Code Active	10170		1	Active on Alarm
LBS Inhibited	10171		1	Active on Alarm
Regeneration Active	10172		1	Active on Alarm
Regeneration Operation Terminated	10173		1	Active on Alarm
Regeneration Operation Failure	10174		1	Active on Alarm
Controls Reset Required	10175		1	Active on Alarm
LBS Active - Master	10176		1	Active on Alarm
LBS Active - Slave	10177		1	Active on Alarm
Cont Tie Active	10178		1	Active on Alarm
UPSC Communication Failure	10179		1	Active on Alarm
Parallel Cable Failure	10180		1	Active on Alarm
MultiModule				
Parallel Comm Warning	10191		1	Active on Alarm
Loss of Redundancy	10192		1	Active on Alarm
MMS Transfer Inhibit	10193		1	Active on Alarm
MMS Retransfer Inhibit	10194		1	Active on Alarm
MMS Overload	10195		1	Active on Alarm
MMS On Battery	10196		1	Active on Alarm
MMS Low Battery Warning	10197		1	Active on Alarm
MMS Module Alarm Active	10198		1	Active on Alarm
Module Output Breaker Open	10199		1	Active on Alarm
Intelligent Paralleling				
Module In Standby - Intelligent Paralleling	10209		1	Active on Alarm
ECO Mode				
ECO Mode Active	10220		1	Active on Alarm
ECO Mode Suspended	10221		1	Active on Alarm
Excess ECO Suspends	10222		1	Active on Alarm

Table 3-51 Liebert *e*XL™—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
Service Reminder				
Service Required	10233		1	Active on Alarm

Table 3-52 Liebert *e*XL™—Input and Holding

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Input					
System Input RMS A-B	30385		1		Units : VAC Uint16
System Input RMS B-C	30386		1		Units : VAC Uint16
System Input RMS C-A	30387		1		Units : VAC Uint16
System Input RMS Current Phase A	30388		1		Units : A AC Uint16
System Input RMS Current Phase B	30389		1		Units : A AC Uint16
System Input RMS Current Phase C	30390		1		Units : A AC Uint16
System Input Frequency	30391		1	10	Units : Hz Uint16
Input Qualification Status	30392		1		0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Input Breaker Operation	30393		1		0 = Manual 1 = Elec Op
Bypass					
Bypass Input Voltage RMS A-B	30404		1		Units : VAC Uint16
Bypass Input Voltage RMS B-C	30405		1		Units : VAC Uint16
Bypass Input Voltage RMS C-A	30406		1		Units : VAC Uint16
Bypass Input Frequency	30407		1	10	Units : Hz Uint16
Bypass Sync Phase Difference	30408		1		Units : deg Int16
Bypass SS Overload Time Remain	30409		1		Units : sec Uint16
Manual Transfer Bypass Voltage High Limit	30410		1		Units : % Uint16
Manual Transfer Bypass Voltage Low Limit	30411		1		Units : % Uint16
Static Bypass Switch	30412		1		0 = off 1 = on
Bypass Qualification Status	30413		1		0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Auto Retransfer Time Remaining	30414		1		Units : sec Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Battery					
Battery Total Discharge Time	30425		1		Units : hr Uint16
Battery Percentage Charge	30426		1		Units : % Uint16
Battery Volts for Cabinet 1	30427		1		Units : VDC Uint16
Battery Volts for Cabinet 2	30428		1		Units : VDC Uint16
Battery Volts for Cabinet 3	30429		1		Units : VDC Uint16
Battery Volts for Cabinet 4	30430		1		Units : VDC Uint16
Battery Volts for Cabinet 5	30431		1		Units : VDC Uint16
Battery Volts for Cabinet 6	30432		1		Units : VDC Uint16
Battery Volts for Cabinet 7	30433		1		Units : VDC Uint16
Battery Volts for Cabinet 8	30434		1		Units : VDC Uint16
Battery Temperature for Cabinet	30435		1		Units : deg C Int16
Battery Temperature for Cabinet 1	30436		1		Units : deg F Int16
Battery Temperature for Cabinet 2	30437		1		Units : deg C Int16
Battery Temperature for Cabinet 2	30438		1		Units : deg F Int16
Battery Temperature for Cabinet 3	30439		1		Units : deg C Int16
Battery Temperature for Cabinet 3	30440		1		Units : deg F Int16
Battery Temperature for Cabinet 4	30441		1		Units : deg C Int16
Battery Temperature for Cabinet 4	30442		1		Units : deg F Int16
Battery Temperature for Cabinet 5	30443		1		Units : deg C Int16
Battery Temperature for Cabinet 5	30444		1		Units : deg F Int16
Battery Temperature for Cabinet 6	30445		1		Units : deg C Int16
Battery Temperature for Cabinet 6	30446		1		Units : deg F Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Battery Temperature for Cabinet 7	30447		1		Units : deg C Int16
Battery Temperature for Cabinet 7	30448		1		Units : deg F Int16
Battery Temperature for Cabinet 8	30449		1		Units : deg C Int16
Battery Temperature for Cabinet 8	30450		1		Units : deg F Int16
Battery Recharge Method	30451		1		0 = Constant Voltage 1 = Two Step Constant Voltage
Battery Recharge Voltage	30452		1	1000	Units : VDC Uint16
Battery Float Voltage	30453		1	1000	Units : VDC Uint16
Battery Amp-Hours Consumed This Discharge	30454		1		Units : AH Uint16
Battery Time Remaining	30455		1		Units : min Uint16
Battery Discharge Time	30456		1		Units : sec Uint16
Battery Discharge Power	30457		1		Units : kW Uint16
Battery Commission Date	30458		2		Units : Secs since Epoch(UTC)
Battery Equalize Voltage	30460		1	1000	Units : VDC Uint16
Battery Equalize Time	30461		1		Units : hr Uint16
Automatic Battery Test	30462		1		0 = disabled 1 = enabled
Battery Self Test Cycle Time	30463		1		Units : week(s) Uint16
Battery Self Test Time of Test	30464		1		Units : min Uint16
Battery Self Test Start Date	30465		2		Units : Secs since Epoch(UTC)
Battery Self Test Duration	30467		1		Units : min Uint16
Battery Self Test Minimum Voltage	30468		1	1000	Units : VDC Uint16
Low Battery Warning Time	30469		1		Units : min Uint16
Battery Over Temp Warn Setting	30470		1		Units : deg C Int16
Battery Over Temp Warn Setting	30471		1		Units : deg F Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Battery Over Temp Limit Setting	30472		1		Units : deg C Int16
Battery Over Temp Limit Setting	30473		1		Units : deg F Int16
Battery Disconnect Setting	30474		1		0 = disabled 1 = enabled
Battery Cell Count Adjust	30475		1		Int16
Battery Cell Count	30476		1		Uint16
Battery Breaker Operation	30477		1		0 = Manual 1 = Elec Op
DC Bus					
DC Bus Voltage	30488		1		Units : VDC Uint16
DC Bus Current	30489		1		Units : A DC Int16
DC Bus Qualification Status	30490		1		0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
DC Converter Status	30491		1		0 = off 1 = on
Output					
System Output Voltage RMS A-B	30502		1		Units : VAC Uint16
System Output Voltage RMS B-C	30503		1		Units : VAC Uint16
System Output Voltage RMS C-A	30504		1		Units : VAC Uint16
System Output RMS Current Phs A	30505		1		Units : A AC Uint16
System Output RMS Current Phs B	30506		1		Units : A AC Uint16
System Output RMS Current Phs C	30507		1		Units : A AC Uint16
System Output Frequency	30508		1	10	Units : Hz Uint16
System Output Power	30509		1		Units : kW Uint16
System Output Apparent Power	30510		1		Units : kVA Uint16
System Output Power Factor Phs A	30511		1	100	Int16
System Output Power Factor Phs B	30512		1	100	Int16
System Output Power Factor Phs C	30513		1	100	Int16
System Output Pct Power Phase A	30514		1		Units : % Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
System Output Pct Power Phase B	30515		1		Units : % Uint16
System Output Pct Power Phase C	30516		1		Units : % Uint16
System Output Pct Pwr (VA) Phs A	30517		1		Units : % Uint16
System Output Pct Pwr (VA) Phs B	30518		1		Units : % Uint16
System Output Pct Pwr (VA) Phs C	30519		1		Units : % Uint16
Output Qualification Status	30520		1		0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Output Breaker Operation	30521		1		0 = Manual 1 = Elec Op
Inverter					
Inverter Overload Time Remaining	30532		1		Units : sec Uint16
Maximum Load Exceeded Phase A	30533		1		Units : % Uint16
Maximum Load Exceeded Phase B	30534		1		Units : % Uint16
Maximum Load Exceeded Phase C	30535		1		Units : % Uint16
Maximum Load Exceeded Delay	30536		1		Units : sec Uint16
Inverter Output Qualification Status	30537		1		0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Inverter On/Off State	30538		1		0 = off 1 = on
Environment					
Inlet Air Warning Setting	30549		1		Units : deg C Uint16
Inlet Air Warning Setting	30550		1		Units : deg F Uint16
Inlet Air Temperature	30551		1		Units : deg C Int16
Inlet Air Temperature	30552		1		Units : deg F Int16
Total System Operating Time	30553		2		Units : hr Uint32
System Date and Time	30555	40555	2		Units : Secs since Epoch(UTC)
Total kW Hours Saved	30557		2		Units : kWH Uint32

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
System Date and Time	39998	49998	2		Units : Secs since Epoch(UTC)
External Input Signals					
Delay for Input Contact 01	30585		1	10	Units : sec Int16
Delay for Input Contact 02	30586		1	10	Units : sec Int16
Delay for Input Contact 03	30587		1	10	Units : sec Int16
Delay for Input Contact 04	30588		1	10	Units : sec Int16
Delay for Input Contact 05	30589		1	10	Units : sec Int16
Delay for Input Contact 06	30590		1	10	Units : sec Int16
Delay for Input Contact 07	30591		1	10	Units : sec Int16
Delay for Input Contact 08	30592		1	10	Units : sec Int16
Delay for Input Contact 09	30593		1	10	Units : sec Int16
Delay for Input Contact 10	30594		1	10	Units : sec Int16
Delay for Input Contact 11	30595		1	10	Units : sec Int16
Delay for Input Contact 12	30596		1	10	Units : sec Int16
Delay for Input Contact 13	30597		1	10	Units : sec Int16
Delay for Input Contact 14	30598		1	10	Units : sec Int16
Delay for Input Contact 15	30599		1	10	Units : sec Int16
Delay for Input Contact 16	30600		1	10	Units : sec Int16
Include Input Contact Interface 1 Alarms In Summary	30601		1		0 = Not Included 1 = Included
Include Input Contact Interface 2 Alarms In Summary	30602		1		0 = Not Included 1 = Included
External Output Signals 1					
PRB Relay Trigger Event # 1	30613		1		Uint16
PRB Relay Trigger Event # 2	30614		1		Uint16
PRB Relay Trigger Event # 3	30615		1		Uint16
PRB Relay Trigger Event # 4	30616		1		Uint16
PRB Delay	30617		1	10	Uint16
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
External Output Signals 2					
PRB Relay Trigger Event # 1	30628		1		Uint16
PRB Relay Trigger Event # 2	30629		1		Uint16
PRB Relay Trigger Event # 3	30630		1		Uint16
PRB Relay Trigger Event # 4	30631		1		Uint16
PRB Delay	30632		1	10	Uint16
External Output Signals 16					
PRB Relay Trigger Event # 1	30838		1		Uint16
PRB Relay Trigger Event # 2	30839		1		Uint16
PRB Relay Trigger Event # 3	30840		1		Uint16
PRB Relay Trigger Event # 4	30841		1		Uint16
PRB Delay	30842		1	10	Uint16
Rectifier					
Rectifier Status	30853		1		0 = off 1 = on
System					
UPS Module Type	30864		1		0 = Single Module System 1 = Module (1 + 1) 2 = Module (1 + N) 3 = Module (N + 1) 4 = System Control Cabinet 5 = Main Static Switch
UPS System Output Source	30865		1		0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass
System Input Power Source	30866		1		0 = None 1 = Utility (mains) 2 = Generator
System Status	30867		1		1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
UPS Output Source	30868		1		1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Accumulated Energy	30869	40869	2	10	Units : kWH Uint32
Module Accumulated Energy	30871	40871	2	10	Units : kWH Uint32
Output kWh Reset Timestamp	30873		2		Units : Secs since Epoch(UTC)

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Output Peak kW Demand	30875		1		Units : kW Uint16
Output Peak kW Demand Hist	30876		1		Units : kW Uint16
Peak kW Demand Period	30877		1		1 = Hourly 2 = Daily 3 = Weekly 4 = Monthly 5 = Yearly
Peak kW Demand Timestamp	30878		2		Units : Secs since Epoch(UTC)
Regeneration Time Remaining	30880		1		Units : min Uint16
Ratings					
Bypass Nominal Voltage	30891		1		Units : VAC Uint16
System Input Nominal Voltage	30892		1		Units : VAC Uint16
System Input Nominal Frequency	30893		1	10	Units : Hz Uint16
System Output Nominal Voltage	30894		1		Units : VAC Uint16
System Output Nominal Frequency	30895		1	10	Units : Hz Uint16
Battery Cell Count - Lead Acid	30896		1		Uint16
Output Apparent Power Rating	30897		1		Units : kVA Uint16
Output Real Power Rating	30898		1		Units : kW Uint16
System UPS Module Count	30899		1		Uint16
System Output Maximum Amp Rating	30900		1		Units : A AC Uint16
Device Status					
Backfeed Breaker	30911		1		0 = Open 1 = Close 2 = Not Installed
Input Breaker (CB1/RIB)	30912		1		0 = Open 1 = Close 2 = Not Installed
Output Breaker (CB2/IOB)	30913		1		0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker	30914		1		0 = Open 1 = Close 2 = Not Installed
Rectifier Feed Breaker (RFB)	30915		1		0 = Open 1 = Close 2 = Not Installed

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Maintenance Bypass Breaker	30916		1		0 = Open 1 = Close 2 = Not Installed
Maintenance Isolation Breaker	30917		1		0 = Open 1 = Close 2 = Not Installed
Precharge Contactor	30918		1		0 = Open 1 = Close 2 = Not Installed
MultiModule					
Multi-module System Output Voltage RMS A-B	30929		1		Units : VAC Uint16
Multi-module System Output Voltage RMS B-C	30930		1		Units : VAC Uint16
Multi-module System Output Voltage RMS C-A	30931		1		Units : VAC Uint16
Multi-module System Output Voltage RMS A-N	30932		1		Units : VAC Uint16
Multi-module System Output Voltage RMS B-N	30933		1		Units : VAC Uint16
Multi-module System Output Voltage RMS C-N	30934		1		Units : VAC Uint16
Sum of MMS Output RMS Currents for Phase A	30935		1		Units : A AC Uint16
Sum of MMS Output RMS Currents for Phase B	30936		1		Units : A AC Uint16
Sum of MMS Output RMS Currents for Phase C	30937		1		Units : A AC Uint16
MMS Output Frequency	30938		1	10	Units : Hz Uint16
MMS Output Power	30939		1		Units : kW Uint16
MMS Output Apparent Power	30940		1		Units : kVA Uint16
MMS Output Power Factor Phase A	30941		1	100	Int16
MMS Output Power Factor Phase B	30942		1	100	Int16
MMS Output Power Factor Phase C	30943		1	100	Int16
MMS Output Pct Power Phase A	30944		1		Units : % Int16
MMS Output Pct Power Phase B	30945		1		Units : % Int16
MMS Output Pct Power Phase C	30946		1		Units : % Int16
MMS Output Pct Apparent Pwr (kVA) Phase A	30947		1		Units : % Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
MMS Output Pct Apparent Pwr (kVA) Phase B	30948		1		Units : % Int16
MMS Output Pct Apparent Pwr (kVA) Phase C	30949		1		Units : % Int16
Number of Redundant Modules	30950		1		Uint16
MMS Module Number	30951		1		Int16
Number of Modules in a MMS	30952		1		Uint16
Module Output Breaker for Module 1	30953		1		0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 2	30954		1		0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 3	30955		1		0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 4	30956		1		0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 5	30957		1		0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 6	30958		1		0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 7	30959		1		0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 8	30960		1		0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 1	30961		1		0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 2	30962		1		0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 3	30963		1		0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 4	30964		1		0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 5	30965		1		0 = Open 1 = Close 2 = Not Installed

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Bypass Isolation Breaker for Module 6	30966		1		0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 7	30967		1		0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 8	30968		1		0 = Open 1 = Close 2 = Not Installed
System Output Breaker	30969		1		0 = Open 1 = Close 2 = Not Installed
System Load Bank Breaker	30970		1		0 = Open 1 = Close 2 = Not Installed
System Isolation Output Breaker	30971		1		0 = Open 1 = Close 2 = Not Installed
SCC Event Summary	30972		1		0 = None 1 = Alarm 2 = Fault
MMS UPS Battery Status	30973		1		1 = Unknown 2 = Normal 3 = Low 4 = Depleted
MMS UPS Output Source	30974		1		1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
ModuleList 1					
MMS Inter-Module Comm Status	30985		1		0 = Failed 1 = Normal
MMS Event Summary	30986		1		0 = None 1 = Alarm 2 = Fault
MMS Module Inverter Status	30987		1		0 = off 1 = on
MMS Module Output Voltage Status	30988		1		0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
MMS Module Output Source	30989		1		0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass
MMS Module Total kW Output	30990		1		Units : kW Uint16
MMS Module Total kVA Output	30991		1		Units : kVA Uint16
MMS Module DC Bus Voltage	30992		1		Units : VDC Uint16
MMS Module Battery Current	30993		1		Units : A DC Int16
MMS Module Battery Time Remaining	30994		1		Units : min Uint16
ModuleList 2					
MMS Inter-Module Comm Status	31005		1		0 = Failed 1 = Normal
MMS Event Summary	31006		1		0 = None 1 = Alarm 2 = Fault
MMS Module Inverter Status	31007		1		0 = off 1 = on
MMS Module Output Voltage Status	31008		1		0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
MMS Module Output Source	31009		1		0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass
MMS Module Total kW Output	31010		1		Units : kW Uint16
MMS Module Total kVA Output	31011		1		Units : kVA Uint16
MMS Module DC Bus Voltage	31012		1		Units : VDC Uint16
MMS Module Battery Current	31013		1		Units : A DC Int16
MMS Module Battery Time Remaining	31014		1		Units : min Uint16
ModuleList 8					
MMS Inter-Module Comm Status	31125		1		0 = Failed 1 = Normal
MMS Event Summary	31126		1		0 = None 1 = Alarm 2 = Fault

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
MMS Module Inverter Status	31127		1		0 = off 1 = on
MMS Module Output Voltage Status	31128		1		0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
MMS Module Output Source	31129		1		0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass
MMS Module Total kW Output	31130		1		Units : kW Uint16
MMS Module Total kVA Output	31131		1		Units : kVA Uint16
MMS Module DC Bus Voltage	31132		1		Units : VDC Uint16
MMS Module Battery Current	31133		1		Units : A DC Int16
MMS Module Battery Time Remaining	31134		1		Units : min Uint16
Intelligent Paralleling					
Intelligent Parallel Operation State	31145		1		0 = disabled 1 = enabled
Intelligent Parallel Mode	31146		1		0 = Idle (Fast Recovery) 1 = Disconnect (More Efficient) 2 = Off (Most Efficient)
Intelligent Paralleling Shutdown Delay	31147		1		Units : min Uint16
Intelligent Parallel Minimum Redundancy	31148		1		Uint16
Intelligent Parallel Maximum Time in Standby	31149		1		Units : day Uint16
ECO Mode					
ECO Mode Operation State	31160	41160	1		0 = disabled 1 = enabled
Continuous Operation - ECO Mode	31161		1		0 = disabled 1 = enabled
Maximum Auto Suspensions - ECO Mode	31162		1		Uint16
Restart Delay - ECO Mode	31163		1		Units : min Uint16
Time Remaining - ECO Mode	31164		1		Units : min Uint16
EcoModeSchedule 1					
Schedule Operation State - ECO Mode	31175		1		0 = disabled 1 = enabled
Schedule Action - ECO Mode	31176		1		0 = stop 1 = start

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-52 Liebert *e*XL™—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Schedule Day of Week - ECO Mode	31177		1		0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday
Schedule Hour - ECO Mode	31178		1		Units : hr Uint16
Schedule Minute - ECO Mode	31179		1		Units : min Uint16
EcoModeSchedule 2					
Schedule Operation State - ECO Mode	31190		1		0 = disabled 1 = enabled
Schedule Action - ECO Mode	31191		1		0 = stop 1 = start
Schedule Day of Week - ECO Mode	31192		1		0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday
Schedule Hour - ECO Mode	31193		1		Units : hr Uint16
Schedule Minute - ECO Mode	31194		1		Units : min Uint16
EcoModeSchedule 16					
Schedule Operation State - ECO Mode	31400		1		0 = disabled 1 = enabled
Schedule Action - ECO Mode	31401		1		0 = stop 1 = start
Schedule Day of Week - ECO Mode	31402		1		0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday
Schedule Hour - ECO Mode	31403		1		Units : hr Uint16
Schedule Minute - ECO Mode	31404		1		Units : min Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-53 Liebert *e*XL™—Glossary

Data Label	Data Description
Auto Calibration Active	The system is automatically calibrating ADC channels.
Auto Calibration Failed	ADC channel calibration has failed.
Auto Restart In Progress	Auto restart is in progress
Auto Restart Inhibited - Ext	Auto restart inhibited due to an external signal
Auto Retransfer Time Remaining	Time remaining before an inverter overload or inverter fault can be cleared and auto retransfer from the bypass to the inverter can take place
Automatic Battery Test	Enable/disable the automatic battery test schedule.
Automatic Restart Failed	Automatic restart failed
Backfeed Breaker Open	The backfeed breaker is in the open position
Backfeed Breaker	Backfeed breaker
Battery - External Monitor 1	External battery monitor 1 - battery maintenance required
Battery - External Monitor 2	External battery monitor 2 - battery maintenance required
Battery Amp-Hours Consumed This Discharge	Battery amp-hours withdrawn this discharge.
Battery Breaker Operation	Indicates the type of breaker installed for the batteries.
Battery Capacity Low	Battery capacity is low
Battery Cell Count - Lead Acid	Battery cell count - lead acid
Battery Cell Count Adjust	The cell count adjustment for the batteries currently installed.
Battery Cell Count	The cell count of the attached battery.
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Circuit Breaker 5 Open	Battery circuit breaker 5 is open
Battery Circuit Breaker 6 Open	Battery circuit breaker 6 is open
Battery Circuit Breaker 7 Open	Battery circuit breaker 7 is open
Battery Circuit Breaker 8 Open	Battery circuit breaker 8 is open
Battery Commission Date	Date and time when battery placed into service
Battery Discharge Power	Instantaneous battery power while discharging
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging
Battery Disconnect Setting	Allow the battery overtemp to initiate a battery disconnect.
Battery Equalize Time	The duration used when the battery is being equalized.
Battery Equalize Voltage	The cell voltage that will be used when the battery is being equalized.
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Float Voltage	The cell voltage of the battery at float recharging.
Battery Low Shutdown	Battery disconnect due to end-of-discharge.
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Over Temp Limit Setting	The temperature setting that will initiate an over temperature limit.
Battery Over Temp Warn Setting	The temperature setting that will initiate an over temperature warning.
Battery Over Temperature Limit	A battery temperature sensor is reporting a value above a predetermined limit.
Battery Percentage Charge	The percentage of battery charge
Battery Recharge Method	The recharge method used for battery recharging.
Battery Recharge Voltage	The recharge cell voltage for the battery.
Battery Self Test Cycle Time	The time between automatic battery self test cycles.
Battery Self Test Duration	The duration of a successful battery self test cycle.
Battery Self Test Minimum Voltage	Minimum cell voltage acceptable during a successful battery test.

Table 3-53 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Battery Self Test Start Date	The date that the battery self tests will begin happening.
Battery Self Test Time of Test	The time of day that the automatic self test will be initiated.
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature Imbalance	Excessive temperature differences between battery sensors detected
Battery Temperature Sensor Fault	A battery temperature sensor fault has been detected
Battery Test Failed	Battery test failed
Battery Test Inhibited	Automatic (scheduled) battery tests are inhibited
Battery Time Remaining	The calculated available time on battery
Battery Total Discharge Time	The cumulative battery discharge time
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass - Manual Rexfr Inhibited	Manual transfer from bypass to inverter is inhibited.
Bypass - Manual Xfr Inhibited	Manual transfer from inverter to bypass is inhibited.
Bypass Auto Retransfer Failed	After performing a recoverable transfer to bypass, an attempt to auto retransfer from bypass to inverter failed
Bypass Auto Retransfer Primed	Automatic retransfer from bypass to inverter is possible
Bypass Auto Transfer Failed	An automatic transfer to static bypass failed
Bypass Excessive Pulse Parallel	The system has performed too many pulse parallel operations within a specified time interval
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Isolation Breaker for Module 1	Bypass isolation breaker for module 1
Bypass Isolation Breaker for Module 2	Bypass isolation breaker for module 2
Bypass Isolation Breaker for Module 3	Bypass isolation breaker for module 3
Bypass Isolation Breaker for Module 4	Bypass isolation breaker for module 4
Bypass Isolation Breaker for Module 5	Bypass isolation breaker for module 5
Bypass Isolation Breaker for Module 6	Bypass isolation breaker for module 6
Bypass Isolation Breaker for Module 7	Bypass isolation breaker for module 7
Bypass Isolation Breaker for Module 8	Bypass isolation breaker for module 8
Bypass Isolation Breaker	Bypass isolation breaker
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload Phase A	An overload exists on output phase A while operating on the bypass
Bypass Overload Phase B	An overload exists on output phase B while operating on the bypass
Bypass Overload Phase C	An overload exists on output phase C while operating on the bypass
Bypass Qualification Status	bypass qualification status
Bypass SS Overload Time Remain	The calculated time remaining before bypass static switch shutdown due to the present overload condition
Bypass Static Switch Overload	Bypass off due to static switch overload
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
Bypass Sync Phase Difference	The phase angle difference between the inverter output and bypass source
Bypass Undervoltage Warning	The voltage on one or more bypass phases is less than a specified percentage of the nominal voltage.

Table 3-53 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Cont Tie Active	Continuous Power Tie Active.
Continuous Operation - ECO Mode	This setting gives the user the ability to Enable/Disable ECO Mode continuous operation.
Controls Reset Required	A controls reset is required due to one or more critical settings changing
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Qualification Status	dc bus qualification status
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
DC Converter Status	The operating state of the dc converter.
Delay for Input Contact 01	The activation delay associated with input contact 1.
Delay for Input Contact 02	The activation delay associated with input contact 2.
Delay for Input Contact 03	The activation delay associated with input contact 3.
Delay for Input Contact 04	The activation delay associated with input contact 4.
Delay for Input Contact 05	The activation delay associated with input contact 5.
Delay for Input Contact 06	The activation delay associated with input contact 6.
Delay for Input Contact 07	The activation delay associated with input contact 7.
Delay for Input Contact 08	The activation delay associated with input contact 8.
Delay for Input Contact 09	The activation delay associated with input contact 9.
Delay for Input Contact 10	The activation delay associated with input contact 10.
Delay for Input Contact 11	The activation delay associated with input contact 11.
Delay for Input Contact 12	The activation delay associated with input contact 12.
Delay for Input Contact 13	The activation delay associated with input contact 13.
Delay for Input Contact 14	The activation delay associated with input contact 14.
Delay for Input Contact 15	The activation delay associated with input contact 15.
Delay for Input Contact 16	The activation delay associated with input contact 16.
ECO Mode Active	Conditions for Activation or Automatic Reactivation have been satisfied.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
ECO Mode Suspended	ECO Mode session is suspended.
EMO Shutdown	An Emergency Module Off command has been detected.
Equipment Over Temp Warning	Equipment over temperature warning is a summary event based on the detection of at least one measured temperature exceeding a threshold.
Equipment Temperature Sensor Fail	One or more temperature sensors report a temperature outside of the range of expected operation.
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Ground Fault	An AC phase to ground fault or three phase fault to ground exists on the output of the UPS.
Include Input Contact Interface 1 Alarms In Summary	Should the inputs on input contact interface 1 be included in the summary event when activated.
Include Input Contact Interface 2 Alarms In Summary	Should the inputs on input contact interface 2 be included in the summary event when activated.
Inlet Air Over Temperature	The inlet air exceeds the maximum temperature threshold
Inlet Air Temperature	The temperature of the inlet air
Inlet Air Warning Setting	The temperature setting that will cause an input temperature warning.
Input Breaker (CB1/RIB)	Input breaker (CB1/RIB)
Input Breaker Operation	Indicates the type of breaker installed for the Input.

Table 3-53 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Input Contact 01	The external input contact 1
Input Contact 02	The external input contact 2
Input Contact 03	The external input contact 3
Input Contact 04	The external input contact 4
Input Contact 05	The external input contact 5
Input Contact 06	The external input contact 6
Input Contact 07	The external input contact 7
Input Contact 08	The external input contact 8
Input Contact 09	The external input contact 9
Input Contact 10	The external input contact 10
Input Contact 11	The external input contact 11
Input Contact 12	The external input contact 12
Input Contact 13	The external input contact 13
Input Contact 14	The external input contact 14
Input Contact 15	The external input contact 15
Input Contact 16	The external input contact 16
Input Qualification Status	input qualification status
Input Undervoltage	One or more of the input phase voltages has dropped below the limit.
Intelligent Parallel Maximum Time in Standby	The maximum time a module can be in standby mode due to Intelligent Paralleling.
Intelligent Parallel Minimum Redundancy	This is the minimum Number of Redundant Modules that the system will allow before bringing one or more modules back to normal operation and terminating Intelligent Paralleling.
Intelligent Parallel Mode	This setting gives the user the ability to choose between different energy consumption modes while Intelligent Paralleling is active and module is in standby.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Intelligent Paralleling Shutdown Delay	This is the length of time the conditions for module standby must remain satisfied before the module goes into standby.
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Output Qualification Status	inverter output qualification status
Inverter Overload Phase A	Inverter is operating with an overload on phase A
Inverter Overload Phase B	Inverter is operating with an overload on phase B
Inverter Overload Phase C	Inverter is operating with an overload on phase C
Inverter Overload Time Remaining	The calculated time remaining before inverter shutdown
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
LBS Active - Master	This UPS system has been selected as the functional Master Load Bus Synchronization (LBS) system.
LBS Active - Slave	This UPS system is synchronized to the output bus of the UPS system that has been selected as the Master Load Bus Synchronization (LBS) system.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Loss of Redundancy	The multi-module collection doesn't have enough modules to satisfy the redundancy configuration.
Low Battery Warning Time	When battery time remaining falls to, or below, this value the low battery alarm is activated.

Table 3-53 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Main Battery Disconnect Open	Main battery disconnect is open
Main Controller Fault	A Main Controller fault has been detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
Maintenance Isolation Breaker	Maintenance isolation breaker
Manual Transfer Bypass Voltage High Limit	The manual bypass voltage high limit setting.
Manual Transfer Bypass Voltage Low Limit	The manual bypass voltage low limit setting.
Maximum Auto Suspensions - ECO Mode	This setting sets the maximum number of automatic ECO Mode suspensions in a session.
Maximum Load Exceeded Delay	The maximum load exceeded event delay time.
Maximum Load Exceeded Phase A	The maximum load current exceeded setting for phase A.
Maximum Load Exceeded Phase B	The maximum load current exceeded setting for phase B.
Maximum Load Exceeded Phase C	The maximum load current exceeded setting for phase C.
Memory Card Removed	The memory card on the control board has been removed.
MMS Event Summary	Summary of any active user alarm or fault of this module in a multi-module system
MMS Inter-Module Comm Status	Inter-module communication status of this module in a multi-module system
MMS Low Battery Warning	Multi-module system low battery warning
MMS Module Alarm Active	Active alarm or fault of any module in a multi-module system
MMS Module Battery Current	Battery current of this module in a multi-module system
MMS Module Battery Time Remaining	Battery time remaining for this module in a multi-module system
MMS Module DC Bus Voltage	DC bus voltage of this module in a multi-module system
MMS Module Inverter Status	Multi-module inverter status of this module (on/off)
MMS Module Number	MMS module number
MMS Module Output Source	Module output source in a multi-module system (normal/bypass/maintenance bypass/off)
MMS Module Output Voltage Status	Output voltage status of this module in multi-module system
MMS Module Total kVA Output	Total kVA output of this module in a multi-module system
MMS Module Total kW Output	Total kW output of this module in a multi-module system
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Frequency	The multi-module system output frequency
MMS Output Pct Apparent Pwr (kVA) Phase A	The multi-module system output apparent power on phase A as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase B	The multi-module system output apparent power on phase B as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase C	The multi-module system output apparent power on phase C as a percentage of the rated capacity
MMS Output Pct Power Phase A	The multi-module system output power on phase A as a percentage of the rated capacity
MMS Output Pct Power Phase B	The multi-module system output power on phase B as a percentage of the rated capacity
MMS Output Pct Power Phase C	The multi-module system output power on phase C as a percentage of the rated capacity
MMS Output Power Factor Phase A	The multi-module system output power factor for phase A
MMS Output Power Factor Phase B	The multi-module system output power factor for phase B
MMS Output Power Factor Phase C	The multi-module system output power factor for phase C
MMS Output Power	The sum total power of all system output modules
MMS Overload	Multi-module system overload

Table 3-53 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
MMS Retransfer Inhibit	The critical load can not be manually retransferred from bypass to inverter
MMS Transfer Inhibit	The critical load can not be manually transferred from inverter to bypass
MMS UPS Battery Status	Multi-module UPS battery status
MMS UPS Output Source	Multi-module UPS output source
Module Accumulated Energy	Total accumulated energy output for this module, since last energy reset.
Module In Standby - Intelligent Paralleling	Module is placed into standby operation per Intelligent Paralleling.
Module Output Breaker for Module 1	Module output breaker for module 1
Module Output Breaker for Module 2	Module output breaker for module 2
Module Output Breaker for Module 3	Module output breaker for module 3
Module Output Breaker for Module 4	Module output breaker for module 4
Module Output Breaker for Module 5	Module output breaker for module 5
Module Output Breaker for Module 6	Module output breaker for module 6
Module Output Breaker for Module 7	Module output breaker for module 7
Module Output Breaker for Module 8	Module output breaker for module 8
Module Output Breaker Open	The module output breaker is open.
Multi-module System Output Voltage RMS A-B	Multi-module system output RMS voltage between phases A and B
Multi-module System Output Voltage RMS A-N	Multi-module system output RMS voltage between phase B and Neutral
Multi-module System Output Voltage RMS B-C	Multi-module system output RMS voltage between phases B and C
Multi-module System Output Voltage RMS B-N	Multi-module system output RMS voltage between phase B and Neutral
Multi-module System Output Voltage RMS C-A	Multi-module system output RMS voltage between phases C and A
Multi-module System Output Voltage RMS C-N	Multi-module system output RMS voltage between phase C and Neutral
Multiple Fan Failure	Multiple fan failure
Number of Modules in a MMS	The number of modules in a multi-module system
Number of Redundant Modules	The number of redundant modules in a multi-module collective.
On Generator	A generator is supplying the power to the system
Outlet Air Overtemperature Limit	The difference between the outlet air temperature and inlet air temperature exceeds a specified maximum temperature.
Output Amp Over User Limit-Phs A	The phase A output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs B	The phase B output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs C	The phase C output has exceeded the user amperage threshold
Output Apparent Power Rating	Output apparent power rating
Output Breaker (CB2/IOB)	Output breaker (CB2/IOB)
Output Breaker Operation	Indicates the type of breaker installed for the output.
Output kWh Reset Timestamp	The date/time stamp when the User kWh accumulator was last reset to zero.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Of/Uf	The output frequency has exceeded a specified range for a specified period of time.
Output Peak kW Demand Hist	The Output Peak kW Demand for the last completed programmed time interval.
Output Peak kW Demand	The Output Peak kW Demand for the programmed time interval.
Output Qualification Status	output qualification status
Output Real Power Rating	Output real power rating

Table 3-53 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Parallel Cable Failure	The UPS parallel system communications is abnormal. A problem with the parallel cable may exist.
Parallel Comm Warning	Parallel communication bus warning
Peak kW Demand Period	The Peak kW Demand Period.
Peak kW Demand Timestamp	The date/time stamp when the Peak kW Demand accumulator was last reset.
Power Supply Failure	Power supply failure
PRB Delay	Programmable Relay Board activation delay time.
PRB Relay Trigger Event # 1	Programmable Relay Board Trigger Event # 1
PRB Relay Trigger Event # 2	Programmable Relay Board Trigger Event # 2
PRB Relay Trigger Event # 3	Programmable Relay Board Trigger Event # 3
PRB Relay Trigger Event # 4	Programmable Relay Board Trigger Event # 4
Precharge Circuit Failed	DC Bus precharge/discharge didn't reach specified level within a specified time.
Precharge Contactor	The Precharge Contactor is engaged to pre-charge the DC bus in preparation for starting the Rectifier.
Rectifier Failure	Rectifier failure - rectifier is off
Rectifier Feed Breaker (RFB)	Rectifier feed breaker (RFB)
Rectifier Status	rectifier status
Regeneration Active	Regeneration operation is active.
Regeneration Operation Failure	Regeneration operation has been terminated due to bypass source instability or unit misoperation.
Regeneration Operation Terminated	Regeneration operation is not active.
Regeneration Time Remaining	The time remaining until the termination of regeneration mode.
Restart Delay - ECO Mode	The time delay that the conditions to activate ECO Mode must be satisfied before ECO Mode can be reactivated during an active session.
SCC Event Summary	Summary of any active user alarms or faults on the SCC
Schedule Action - ECO Mode	This setting gives the user the ability to choose the action of a schedule entry to be either stop or start.
Schedule Day of Week - ECO Mode	This setting represents the day of the week when an associated ECO Mode schedule entry action will take effect.
Schedule Hour - ECO Mode	This setting represents the hour of the day when an associated schedule entry action will take effect.
Schedule Minute - ECO Mode	This setting represents the minute of the hour when an associated schedule entry action will take effect.
Schedule Operation State - ECO Mode	This setting gives the user the ability to either enable or disable a schedule entry if the action is Start.
Service Code Active	Service code is running
Service Required	Unit requires servicing.
Static Bypass Switch	Static Bypass Switch state - On/Off
Sum of MMS Output RMS Currents for Phase A	The sum of the multi-module system output RMS currents for phase A
Sum of MMS Output RMS Currents for Phase B	The sum of the multi-module system output RMS currents for phase B
Sum of MMS Output RMS Currents for Phase C	The sum of the multi-module system output RMS currents for phase C
System Accumulated Energy	Total accumulated energy output for the mms system, since last energy reset.
System Breaker(s) Close Failure	One or more breakers in the system failed to close
System Breaker(s) Open Failure	One or more breakers in the system failed to open
System Controller Error	System controller internal error
System Date and Time	The system date and time

Table 3-53 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
System Fan Failure - Redundant	Redundant system fan failure
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Power Problem	The input is not qualified to provide power to the system
System Input Power Source	System input power source
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Isolation Output Breaker	System isolation output breaker
System Load Bank Breaker	System load bank breaker
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Breaker	System output breaker
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Low Power Factor	The system output power factor is low, resulting in reduced output capacity
System Output Maximum Amp Rating	System output maximum amperage rating
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs A	The system output apparent power on phase A as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs B	The system output apparent power on phase B as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs C	The system output apparent power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
System UPS Module Count	Number of UPS modules in the system
Time Remaining - ECO Mode	Time remaining before current active ECO Mode session stops.
Total kW Hours Saved	Total kW hours saved by ECO Mode or Intelligent Paralleling.

Table 3-53 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Total System Operating Time	The cumulative operation time of the unit
UPS Module Type	UPS module type
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
UPS System Output Source	The UPS system's output power source
UPSC Communication Failure	The UPSC has failed to communicate in a designated time period.

Table 3-54 Liebert *e*XM™—Controller with LCD HMI—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
System Status				
Battery Equalize	10001	—	1	Active on Alarm
Battery Charging Inhibited	10002	—	1	Active on Alarm
On Generator	10003	—	1	Active on Alarm
Battery Self Test	10004	—	1	Active on Alarm
Battery Circuit Breaker 1 Open	10005	—	1	Active on Alarm
Battery Circuit Breaker 2 Open	10006	—	1	Active on Alarm
Battery Circuit Breaker 3 Open	10007	—	1	Active on Alarm
Battery Circuit Breaker 4 Open	10008	—	1	Active on Alarm
Main Battery Disconnect Open	10009	—	1	Active on Alarm
System Events				
System Input Power Problem	10020	—	1	Active on Alarm
Rectifier Failure	10021	—	1	Active on Alarm
Inverter Failure	10022	—	1	Active on Alarm
Bypass Not Available	10023	—	1	Active on Alarm
Battery Low	10024	—	1	Active on Alarm
LBS Inhibited	10025	—	1	Active on Alarm
System Fan Failure	10026	—	1	Active on Alarm
Equipment Over Temperature	10027	—	1	Active on Alarm
System Shutdown - EPO	10028	—	1	Active on Alarm
Bypass Static Switch Unavailable	10029	—	1	Active on Alarm
Bypass - Excess Auto Retransfers	10030	—	1	Active on Alarm
Parallel Comm Warning	10031	—	1	Active on Alarm
Power Supply Failure	10032	—	1	Active on Alarm
Battery Over Temperature	10033	—	1	Active on Alarm
System Input Phs Rotation Error	10034	—	1	Active on Alarm
Fuse Failure	10035	—	1	Active on Alarm
Inverter Overload	10036	—	1	Active on Alarm
MMS Overload	10037	—	1	Active on Alarm
Inverter Shutdown - Overload	10038	—	1	Active on Alarm
System Output Fault	10039	—	1	Active on Alarm
Internal Communications Failure	10040	—	1	Active on Alarm
Battery Charging Error	10041	—	1	Active on Alarm
System Input Current Imbalance	10042	—	1	Active on Alarm
Battery Not Qualified	10043	—	1	Active on Alarm
Battery Terminals Reversed	10044	—	1	Active on Alarm
Battery Converter Failure	10045	—	1	Active on Alarm
Load Sharing Fault	10046	—	1	Active on Alarm
DC Bus Abnormal	10047	—	1	Active on Alarm
Mains Input Neutral Lost	10048	—	1	Active on Alarm
Load Impact Transfer	10049	—	1	Active on Alarm
User Operation Invalid	10050	—	1	Active on Alarm
Battery Discharging	10051	—	1	Active on Alarm
UPS Output on Bypass	10052	—	1	Active on Alarm
Output Load on Maint. Bypass	10053	—	1	Active on Alarm
Battery Capacity Low	10054	—	1	Active on Alarm

Table 3-54 Liebert *e*XM™—Controller with LCD HMI—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
MMS On Battery	10055	—	1	Active on Alarm
Loss of Redundancy	10056	—	1	Active on Alarm
Top Outlet Fan Fault	10057	—	1	Active on Alarm
MMS Over Capacity	10058	—	1	Active on Alarm
Bypass Input Voltage Fault	10059	—	1	Active on Alarm
Power Module Over Temperature	10060	—	1	Active on Alarm
Excess ECO Suspends	10061	—	1	Active on Alarm
Battery Ground Fault	10062	—	1	Active on Alarm
System Input Current Limit	10063	—	1	Active on Alarm
Inverter Relay Fault	10064	—	1	Active on Alarm
Transfer to Bypass - System Overload	10065	—	1	Active on Alarm
Input Source Backfeed	10066	—	1	Active on Alarm
Loss of Synchronization	10067	—	1	Active on Alarm
Battery Converter Current Limit	10068	—	1	Active on Alarm
LBS Cable Failure	10069	—	1	Active on Alarm
Battery Charge Equalization Timeout	10070	—	1	Active on Alarm
Parallel Cable Failure	10071	—	1	Active on Alarm
Battery Fault	10072	—	1	Active on Alarm
Battery Room Alarm	10073	—	1	Active on Alarm
Battery Breaker 1 Open Failure	10074	—	1	Active on Alarm
Battery Breaker 2 Open Failure	10075	—	1	Active on Alarm
Battery Breaker 3 Open Failure	10076	—	1	Active on Alarm
Battery Breaker 4 Open Failure	10077	—	1	Active on Alarm
Bypass Backfeed Detected	10078	—	1	Active on Alarm

Table 3-55 Liebert *e*XM™—Controller with LCD HMI—Input and Holding

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Input					
System Input RMS A-B	30385	—	1	—	Units : VAC Uint16
System Input RMS B-C	30386	—	1	—	Units : VAC Uint16
System Input RMS C-A	30387	—	1	—	Units : VAC Uint16
System Input RMS Current Phase A	30388	—	1	—	Units : A AC Uint16
System Input RMS Current Phase B	30389	—	1	—	Units : A AC Uint16
System Input RMS Current Phase C	30390	—	1	—	Units : A AC Uint16
System Input Frequency	30391	—	1	10	Units : Hz Uint16
System Input RMS A-N	30392	—	1	—	Units : VAC Uint16
System Input RMS B-N	30393	—	1	—	Units : VAC Uint16
System Input RMS C-N	30394	—	1	—	Units : VAC Uint16
System Input Power Factor Phs A	30395	—	1	100	Uint16
System Input Power Factor Phs B	30396	—	1	100	Uint16
System Input Power Factor Phs C	30397	—	1	100	Uint16
Bypass					
Bypass Input Voltage RMS A-N	30408	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS B-N	30409	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS C-N	30410	—	1	—	Units : VAC Uint16
Bypass Input Frequency	30411	—	1	10	Units : Hz Uint16
Bypass Input Voltage RMS A-B	30412	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS B-C	30413	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS C-A	30414	—	1	—	Units : VAC Uint16
Battery					
Battery Time Remaining	30425	—	1	—	Units : min Uint16
Battery Volts for Cabinet	30426	—	1	—	Units : VDC Int16
Battery Temperature for Cabinet	30427	—	1	—	Units : deg C Int16
Battery Temperature for Cabinet	30428	—	1	—	Units : deg F Int16
DC Bus Current	30429	—	1	—	Units : A DC Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-55 Liebert *e*XM™—Controller with LCD HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
UPS Battery1 Status	30430	—	1	—	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Output					
System Output Voltage RMS A-N	30441	—	1	—	Units : VAC Uint16
System Output Voltage RMS B-N	30442	—	1	—	Units : VAC Uint16
System Output Voltage RMS C-N	30443	—	1	—	Units : VAC Uint16
System Output RMS Current Phs A	30444	—	1	—	Units : A AC Uint16
System Output RMS Current Phs B	30445	—	1	—	Units : A AC Uint16
System Output RMS Current Phs C	30446	—	1	—	Units : A AC Uint16
System Output Frequency	30447	—	1	10	Units : Hz Uint16
System Output Voltage RMS A-B	30448	—	1	—	Units : VAC Uint16
System Output Voltage RMS B-C	30449	—	1	—	Units : VAC Uint16
System Output Voltage RMS C-A	30450	—	1	—	Units : VAC Uint16
System Output Power Factor Phs A	30451	—	1	100	Uint16
System Output Power Factor Phs B	30452	—	1	100	Uint16
System Output Power Factor Phs C	30453	—	1	100	Uint16
System Output Pct Power Phase A	30454	—	1	—	Units : % Uint16
System Output Pct Power Phase B	30455	—	1	—	Units : % Uint16
System Output Pct Power Phase C	30456	—	1	—	Units : % Uint16
MMS Output Apparent Power	30457	—	1	—	Units : kVA Uint16
MMS Output Power	30458	—	1	—	Units : kW Uint16
Output Current Crest Factor Phs A	30459	—	1	10	Uint16
Output Current Crest Factor Phs B	30460	—	1	10	Uint16
Output Current Crest Factor Phs C	30461	—	1	10	Uint16
System Output Power Phase A	30462	—	1	—	Units : kW Uint16
System Output Power Phase B	30463	—	1	—	Units : kW Uint16
System Output Power Phase C	30464	—	1	—	Units : kW Uint16
System Output Apparent Power Phs A	30465	—	1	—	Units : kVA Uint16
System Output Apparent Power Phs B	30466	—	1	—	Units : kVA Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-55 Liebert *e*XM™—Controller with LCD HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Output Apparent Power Phs C	30467	—	1	—	Units : kVA Uint16
System Output Power	30468	—	1	—	Units : kW Uint16
System Output Apparent Power	30469	—	1	—	Units : kVA Uint16
System Status					
Inverter On/Off State	30480	—	1	—	0 = off 1 = on
Maintenance Bypass Breaker	30481	—	1	—	0 = Open 1 = Close 2 = Not Installed
UPS Output Source	30482	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Status	30483	—	1	—	1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
ECO Mode Operation State	30484	—	1	—	0 = disabled 1 = enabled
Input Breaker	30485	—	1	—	0 = Open 1 = Close 2 = Not Installed
Internal Bypass Breaker	30486	—	1	—	0 = Open 1 = Close 2 = Not Installed
Output Breaker	30487	—	1	—	0 = Open 1 = Close 2 = Not Installed
UPS Application Mode	30488	—	1	—	0 = UPS Mode 1 = Frequency converter mode
MMS UPS Output Source	30489	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Intelligent Parallel Operation State	30490	—	1	—	0 = disabled 1 = enabled
Advanced Efficiency Mode	30491	—	1	—	0 = unknown 1 = ECO mode 2 = Intelligent ECO mode 3 = Active Inverter ECO mode

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-55 Liebert *e*XM™—Controller with LCD HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Configuration					
System Input Nominal Voltage	30502	—	1	—	Units : VAC Uint16
System Input Nominal Frequency	30503	—	1	10	Units : Hz Uint16
System Input Nominal Current	30504	—	1	—	Units : A AC Uint16
Bypass Nominal Voltage	30505	—	1	—	Units : VAC Uint16
System Output Nominal Voltage	30506	—	1	—	Units : VAC Uint16
System Output Nominal Frequency	30507	—	1	10	Units : Hz Uint16
System Analog					
Total System Operating Time	30518	—	2	—	Units : hr Uint32
Average system efficiency	30520	—	1	10	Units : % Uint16
Inlet Air Temperature	30521	—	1	—	Units : deg C Uint16
Inlet Air Temperature	30522	—	1	—	Units : deg F Uint16
SystemAnalog					
System Date and Time	39998	49998	2	—	Secs since Epoch(UTC)

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-56 Liebert *e*XM™—Controller with LCD HMI—Glossary

Data Label	Data Description
Advanced Efficiency Mode	Advanced efficiency modes where the UPS supports the critical load using the static bypass.
Average system efficiency	Average system efficiency
Battery Breaker 1 Open Failure	Battery circuit breaker 1 failed to open
Battery Breaker 2 Open Failure	Battery circuit breaker 2 failed to open
Battery Breaker 3 Open Failure	Battery circuit breaker 3 failed to open
Battery Breaker 4 Open Failure	Battery circuit breaker 4 failed to open
Battery Capacity Low	Battery capacity is low
Battery Charge Equalization Timeout	The battery equalizing is time out.
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Converter Current Limit	The battery converter has reached is maximum current limit.
Battery Converter Failure	Battery converter failure. This is a summary event caused by one or more power sub-modules in a UPS module.
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Fault	A short circuit exists in the battery system.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Not Qualified	The UPS battery voltage is not qualified. This event will be detected even in the absence of battery disconnect or when it is open.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Room Alarm	The ambient temperature of the battery room is abnormal.
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass Backfeed Detected	The system detected a voltage on the bypass when none was expected
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage Fault	The system has detected the bypass voltage is unqualified.
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.

Table 3-56 Liebert *e*XM™—Controller with LCD HMI—Glossary (continued)

Data Label	Data Description
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Temperature	The temperature of the inlet air
Input Breaker	Input breaker
Input Source Backfeed	The battery is backfeeding the input source.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Internal Bypass Breaker	Internal bypass breaker
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Overload	Inverter in overload fault
Inverter Relay Fault	The inverter relay has malfunctioned.
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
LBS Cable Failure	Load Bus Sync communications is abnormal. A problem with the LBS cable may exist.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Load Impact Transfer	On bypass as result of load impact.
Load Sharing Fault	Difference between any phase inverter current of unit and the relevant average output current of parallel system is more than a specific percent of nominal current.
Loss of Redundancy	The multi-module collection doesn't have enough modules to satisfy the redundancy configuration.
Loss of Synchronization	The inverter and bypass are no longer synchronized.
Main Battery Disconnect Open	Main battery disconnect is open
Mains Input Neutral Lost	Loss of neutral in the input source is detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Power	The sum total power of all system output modules
MMS Over Capacity	The multi-module system load is larger than the apparent power limit setting.
MMS Overload	Multi-module system overload
MMS UPS Output Source	Multi-module UPS output source
On Generator	A generator is supplying the power to the system
Output Breaker	Output breaker
Output Current Crest Factor Phs A	Output current crest factor of Phase A.
Output Current Crest Factor Phs B	Output current crest factor of Phase B.
Output Current Crest Factor Phs C	Output current crest factor of Phase C.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Parallel Cable Failure	The UPS parallel system communications is abnormal. A problem with the parallel cable may exist.
Parallel Comm Warning	Parallel communication bus warning
Power Module Over Temperature	The Power Module has detected an over temperature condition.
Power Supply Failure	Power supply failure

Table 3-56 Liebert *e*XM™—Controller with LCD HMI—Glossary (continued)

Data Label	Data Description
Rectifier Failure	Rectifier failure - rectifier is off
System Date and Time	The system date and time
System Fan Failure	System fan failure - one or more fans have failed
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Current	The nominal (or rated) system input current
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Factor Phs A	The system input power factor for Phase A
System Input Power Factor Phs B	The system input power factor for Phase B
System Input Power Factor Phs C	The system input power factor for Phase C
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power Phs A	System output apparent power on phase A
System Output Apparent Power Phs B	System output apparent power on phase B
System Output Apparent Power Phs C	System output apparent power on phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power Phase A	The system output power on phase A.
System Output Power Phase B	The system output power on phase B.
System Output Power Phase C	The system output power on phase C.
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral

Table 3-56 Liebert *e*XM™—Controller with LCD HMI—Glossary (continued)

Data Label	Data Description
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
Top Outlet Fan Fault	Top outlet fan fault - one or more top outlet fans have failed.
Total System Operating Time	The cumulative operation time of the unit
Transfer to Bypass - System Overload	The UPS System has transferred to bypass because the active power modules cannot support the critical load.
UPS Application Mode	UPS application mode.
UPS battery1 status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
User Operation Invalid	User attempted an invalid operation.

Table 3-57 Liebert eXM™—Controller with Touchscreen HMI—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
Input				
Mains Input Neutral Lost	10001	—	1	Active on Alarm
System Input Phs Rotation Error	10002	—	1	Active on Alarm
System Input Power Problem	10003	—	1	Active on Alarm
Input Source Backfeed	10004	—	1	Active on Alarm
Bypass				
Bypass Not Available	10015	—	1	Active on Alarm
Bypass Static Switch Unavailable	10016	—	1	Active on Alarm
Bypass - Excess Auto Retransfers	10017	—	1	Active on Alarm
UPS Output on Bypass	10018	—	1	Active on Alarm
Output Load on Maint. Bypass	10019	—	1	Active on Alarm
Bypass Input Voltage Fault	10020	—	1	Active on Alarm
Bypass Backfeed Detected	10021	—	1	Active on Alarm
Bypass				
Main Battery Disconnect Open	10032	—	1	Active on Alarm
Battery Circuit Breaker 4 Open	10033	—	1	Active on Alarm
Battery Circuit Breaker 3 Open	10034	—	1	Active on Alarm
Battery Circuit Breaker 2 Open	10035	—	1	Active on Alarm
Battery Circuit Breaker 1 Open	10036	—	1	Active on Alarm
Battery Self Test	10037	—	1	Active on Alarm
Battery Charging Inhibited	10038	—	1	Active on Alarm
Battery Discharging	10039	—	1	Active on Alarm
Battery Manual Test In Progress	10040	—	1	Active on Alarm
Battery Auto Test In Progress	10041	—	1	Active on Alarm
Battery Test Passed	10042	—	1	Active on Alarm
Battery Test Failed	10043	—	1	Active on Alarm
Battery Over Temperature	10044	—	1	Active on Alarm
Battery Low	10045	—	1	Active on Alarm
Battery Ground Fault	10046	—	1	Active on Alarm
Battery Not Qualified	10047	—	1	Active on Alarm
Battery Terminals Reversed	10048	—	1	Active on Alarm
Battery Capacity Low	10049	—	1	Active on Alarm
Battery Converter Current Limit	10050	—	1	Active on Alarm
Battery Charge Equalization Timeout	10051	—	1	Active on Alarm
Battery Room Alarm	10052	—	1	Active on Alarm
Battery Breaker 1 Open Failure	10053	—	1	Active on Alarm
Battery Breaker 2 Open Failure	10054	—	1	Active on Alarm
Battery Breaker 3 Open Failure	10055	—	1	Active on Alarm
Battery Breaker 4 Open Failure	10056	—	1	Active on Alarm
Battery Equalize	10057	—	1	Active on Alarm
Inverter				
Loss of Synchronization	10068	—	1	Active on Alarm
Output				
Output Overload	10079	—	1	Active on Alarm
System Output Fault	10080	—	1	Active on Alarm

Table 3-57 Liebert *e*XM™—Controller with Touchscreen HMI—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
Power Modules 1				
Power Module Input Current Abnormal	10091	—	1	Active on Alarm
Rectifier Failure	10092	—	1	Active on Alarm
Inverter Failure	10093	—	1	Active on Alarm
DC Bus Abnormal	10094	—	1	Active on Alarm
Load Sharing Fault	10095	—	1	Active on Alarm
Inverter Relay Fault	10096	—	1	Active on Alarm
Battery Charging Error	10097	—	1	Active on Alarm
Battery Converter Failure	10098	—	1	Active on Alarm
Power Module Balancer of DC Bus Failure	10099	—	1	Active on Alarm
Inverter Shutdown - Overload	10100	—	1	Active on Alarm
Power Module Fuse Failure	10101	—	1	Active on Alarm
Power Module Power Supply Failure	10102	—	1	Active on Alarm
Power Module Fan Fault	10103	—	1	Active on Alarm
Power Module Over Temperature	10104	—	1	Active on Alarm
Power Modules 2				
Power Module Input Current Abnormal	10115	—	1	Active on Alarm
Rectifier Failure	10116	—	1	Active on Alarm
Inverter Failure	10117	—	1	Active on Alarm
DC Bus Abnormal	10118	—	1	Active on Alarm
Load Sharing Fault	10119	—	1	Active on Alarm
Inverter Relay Fault	10120	—	1	Active on Alarm
Battery Charging Error	10121	—	1	Active on Alarm
Battery Converter Failure	10122	—	1	Active on Alarm
Power Module Balancer of DC Bus Failure	10123	—	1	Active on Alarm
Inverter Shutdown - Overload	10124	—	1	Active on Alarm
Power Module Fuse Failure	10125	—	1	Active on Alarm
Power Module Power Supply Failure	10126	—	1	Active on Alarm
Power Module Fan Fault	10127	—	1	Active on Alarm
Power Module Over Temperature	10128	—	1	Active on Alarm
Power Modules 20				
Power Module Input Current Abnormal	10547	—	1	Active on Alarm
Rectifier Failure	10548	—	1	Active on Alarm
Inverter Failure	10549	—	1	Active on Alarm
DC Bus Abnormal	10550	—	1	Active on Alarm
Load Sharing Fault	10551	—	1	Active on Alarm
Inverter Relay Fault	10552	—	1	Active on Alarm
Battery Charging Error	10553	—	1	Active on Alarm
Battery Converter Failure	10554	—	1	Active on Alarm
Power Module Balancer of DC Bus Failure	10555	—	1	Active on Alarm
Inverter Shutdown - Overload	10556	—	1	Active on Alarm
Power Module Fuse Failure	10557	—	1	Active on Alarm
Power Module Power Supply Failure	10558	—	1	Active on Alarm
Power Module Fan Fault	10559	—	1	Active on Alarm
Power Module Over Temperature	10560	—	1	Active on Alarm

Table 3-57 Liebert *e*XM™—Controller with Touchscreen HMI—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
System Status				
Loss of Redundancy	10571	—	1	Active on Alarm
Parallel Cable Failure	10572	—	1	Active on Alarm
LBS Cable Failure	10573	—	1	Active on Alarm
Transfer to Bypass - System Overload	10574	—	1	Active on Alarm
Excess ECO Suspends	10575	—	1	Active on Alarm
User Operation Invalid	10576	—	1	Active on Alarm
Load Impact Transfer	10577	—	1	Active on Alarm
Internal Communications Failure	10578	—	1	Active on Alarm
MMS Overload	10579	—	1	Active on Alarm
Parallel Comm Warning	10580	—	1	Active on Alarm
Equipment Over Temperature	10581	—	1	Active on Alarm
LBS Inhibited	10582	—	1	Active on Alarm
On Generator	10583	—	1	Active on Alarm
LBS Active	10584	—	1	Active on Alarm
System Shutdown - EPO	10585	—	1	Active on Alarm
Top Outlet Fan Fault	10586	—	1	Active on Alarm

Table 3-58 Liebert *e*XM™—Controller with Touchscreen HMI—Input and Holding

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Input					
System Input RMS A-B	30385	—	1		Units : VAC Uint16
System Input RMS B-C	30386	—	1	—	Units : VAC Uint16
System Input RMS C-A	30387	—	1	—	Units : VAC Uint16
System Input RMS Current Phase A	30388	—	1	—	Units : A AC Uint16
System Input RMS Current Phase B	30389	—	1	—	Units : A AC Uint16
System Input RMS Current Phase C	30390	—	1	—	Units : A AC Uint16
System Input Frequency	30391	—	1	10	Units : Hz Uint16
System Input RMS A-N	30392	—	1	—	Units : VAC Uint16
System Input RMS B-N	30393	—	1	—	Units : VAC Uint16
System Input RMS C-N	30394	—	1	—	Units : VAC Uint16
System Input Power Factor Phs A	30395	—	1	100	Uint16
System Input Power Factor Phs B	30396	—	1	100	Uint16
System Input Power Factor Phs C	30397	—	1	100	Uint16
System Input Nominal Voltage	30398	—	1	—	Units : VAC Uint16
System Input Nominal Frequency	30399	—	1	10	Units : Hz Uint16
System Input Nominal Current	30400	—	1	—	Units : A AC Uint16
System Input Brown Out Count	30401	—	1	—	Uint16
System Input Black Out Count	30402	—	1	—	Uint16
Input Breaker	30403	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass					
Bypass Input Voltage RMS A-N	30414	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS B-N	30415	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS C-N	30416	—	1	—	Units : VAC Uint16
Bypass Input Frequency	30417	—	1	10	Units : Hz Uint16
Bypass Input Voltage RMS A-B	30418	—	1	—	Units : VAC Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-58 Liebert *e*XM™—Controller with Touchscreen HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Bypass Input Voltage RMS B-C	30419	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS C-A	30420	—	1	—	Units : VAC Uint16
Bypass Nominal Voltage	30421	—	1	—	Units : VAC Uint16
External Bypass Breaker	30422	—	1	—	0 = Open 1 = Close 2 = Not Installed
Battery					
Battery Time Remaining	30433	—	1	—	Units : min Uint16
DC Bus Current	30434	—	1	—	Units : A DC Int16
Time Until Next Auto Battery Test	30435	—	2	—	Units : min Uint32
Battery Percentage Charge	30437	—	1	—	Units : % Uint16
Number of Discharge Cycles	30438	—	1	—	Uint16
Accumulated Discharge Time	30439	—	1	—	Units : hr Uint16
Low Battery Warning Time	30440	—	1	—	Units : min Uint16
UPS Battery Status	30441	—	1	—	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Battery charge status.	30442	—	1	—	0 = fully charged 1 = charging 2 = discharging 3 = not charging (charger off)
Automatic Battery Test	30443	—	1	—	0 = disabled 1 = enabled
Battery Self Test Cycle Time	30444	—	1	—	Units : day Uint16
DC Bus Voltage	30445	—	1	—	Units : VDC Uint16
Battery Temperature	30446	—	1	—	Units : deg C Int16
Battery Temperature	30447	—	1	—	Units : deg F Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-58 Liebert *e*XM™—Controller with Touchscreen HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Battery Cabinets 1					
Battery Temperature for Cabinet	30458	—	1	—	Units : deg C Int16
Battery Temperature for Cabinet	30459	—	1	—	Units : deg F Int16
Battery Volts for Cabinet	30460	—	1	—	Units : VDC Uint16
Battery Cabinets 2					
Battery Temperature for Cabinet	30471	—	1	—	Units : deg C Int16
Battery Temperature for Cabinet	30472	—	1	—	Units : deg F Int16
Battery Volts for Cabinet	30473	—	1	—	Units : VDC Uint16
Battery Cabinets 8					
Battery Temperature for Cabinet	30549	—	1	—	Units : deg C Int16
Battery Temperature for Cabinet	30550	—	1	—	Units : deg F Int16
Battery Volts for Cabinet	30551	—	1	—	Units : VDC Uint16
Inverter					
Output Breaker	30562	—	1	—	0 = Open 1 = Close 2 = Not Installed
Inverter On/Off State	30563	—	1	—	0 = off 1 = on
Output					
System Output Voltage RMS A-N	30574	—	1	—	Units : VAC Uint16
System Output Voltage RMS B-N	30575	—	1	—	Units : VAC Uint16
System Output Voltage RMS C-N	30576	—	1	—	Units : VAC Uint16
System Output RMS Current Phs A	30577	—	1	—	Units : A AC Uint16
System Output RMS Current Phs B	30578	—	1	—	Units : A AC Uint16
System Output RMS Current Phs C	30579	—	1	—	Units : A AC Uint16
System Output Frequency	30580	—	1	10	Units : Hz Uint16
System Output Voltage RMS A-B	30581	—	1	—	Units : VAC Uint16
System Output Voltage RMS B-C	30582	—	1	—	Units : VAC Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-58 Liebert *e*XM™—Controller with Touchscreen HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Output Voltage RMS C-A	30583	—	1	—	Units : VAC Uint16
System Output Power Factor Phs A	30584	—	1	100	Uint16
System Output Power Factor Phs B	30585	—	1	100	Uint16
System Output Power Factor Phs C	30586	—	1	100	Uint16
System Output Pct Power Phase A	30587	—	1	—	Units : % Uint16
System Output Pct Power Phase B	30588	—	1	—	Units : % Uint16
System Output Pct Power Phase C	30589	—	1	—	Units : % Uint16
MMS Output Apparent Power	30590	—	1	—	Units : kVA Uint16
MMS Output Power	30591	—	1	—	Units : kW Uint16
Output Current Crest Factor Phs A	30592	—	1	10	Uint16
Output Current Crest Factor Phs B	30593	—	1	10	Uint16
Output Current Crest Factor Phs C	30594	—	1	10	Uint16
System Output Power Phase A	30595	—	1	—	Units : kW Uint16
System Output Power Phase B	30596	—	1	—	Units : kW Uint16
System Output Power Phase C	30597	—	1	—	Units : kW Uint16
System Output Apparent Power Phs A	30598	—	1	—	Units : kVA Uint16
System Output Apparent Power Phs B	30599	—	1	—	Units : kVA Uint16
System Output Apparent Power Phs C	30600	—	1	—	Units : kVA Uint16
System Output Power	30601	—	1	—	Units : kW Uint16
System Output Apparent Power	30602	—	1	—	Units : kVA Uint16
System Output Pct Pwr (VA) Phs A	30603	—	1	—	Units : % Uint16
System Output Pct Pwr (VA) Phs B	30604	—	1	—	Units : % Uint16
System Output Pct Pwr (VA) Phs C	30605	—	1	—	Units : % Uint16
System Output Nominal Voltage	30606	—	1	—	Units : VAC Uint16
System Output Nominal Frequency	30607	—	1	10	Units : Hz Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-58 Liebert *e*XM™—Controller with Touchscreen HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Power Modules 1					
Power Module Sleep Status	30618	—	1	—	0 = Sleeping 1 = Not Sleeping
Module Operating Status	30619	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Inverter Status	30620	—	1	—	0 = Inverter Inactive 1 = Inverter Active
Power Modules 2					
Power Module Sleep Status	30631	—	1	—	0 = Sleeping 1 = Not Sleeping
Module Operating Status	30632	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Inverter Status	30633	—	1	—	0 = Inverter Inactive 1 = Inverter Active
Power Modules 20					
Power Module Sleep Status	30865	—	1	—	0 = Sleeping 1 = Not Sleeping
Module Operating Status	30866	—	1	—	0 = Normal 1 = Warning 2 = Alarm 4 = Fault
Inverter Status	30867	—	1	—	0 = Inverter Inactive 1 = Inverter Active
Bypass Control Module					
Power Module Bypass Input Frequency	30878	—	1	10	Units : Hz Uint16
Power Module Bypass Input Voltage RMS A-N	30879	—	1	—	Units : VAC Uint16
Power Module Bypass Input Voltage RMS B-N	30880	—	1	—	Units : VAC Uint16
Power Module Bypass Input Voltage RMS C-N	30881	—	1	—	Units : VAC Uint16
Power Module Bypass Input Voltage RMS A-B	30882	—	1	—	Units : VAC Uint16
Power Module Bypass Input Voltage RMS B-C	30883	—	1	—	Units : VAC Uint16
Power Module Bypass Input Voltage RMS C-A	30884	—	1	—	Units : VAC Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-58 Liebert *e*XM™—Controller with Touchscreen HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Status					
System Set To Operate With	30895	—	1	—	0 = No Redundancy 1 = Redundancy
Number Of Active Power Modules	30896	—	1	—	Uint16
Number of Installed Power Modules	30897	—	1	—	Uint16
Inlet Air Temperature	30898	—	1	—	Units : deg C Uint16
Inlet Air Temperature	30899	—	1	—	Units : deg F Uint16
Average system efficiency	30900	—	1	10	Units : % Uint16
Maintenance Bypass Breaker	30901	—	1	—	0 = Open 1 = Close 2 = Not Installed
ECO Mode Operation State	30902	—	1	—	0 = disabled 1 = enabled
UPS Application Mode	30903	—	1	—	0 = UPS Mode 1 = Frequency converter mode
MMS UPS Output Source	30904	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Intelligent Parallel Operation State	30905	—	1	—	0 = disabled 1 = enabled
System Configuration					
Total System Operating Time	30916	—	2	—	Units : hr Uint32
System Capacity	30918	—	1	—	Units : kVA Uint16
UPS Output Source	30919	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-58 Liebert *e*XM™—Controller with Touchscreen HMI—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Status	30920	—	1	—	1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
System Date and Time	39998	49998	2		Units : Secs since Epoch(UTC)
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-59 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary

Data Label	Data Description
Accumulated Discharge Time	Total accumulated discharge time for the Battery Module since it was made.
Automatic Battery Test	Enable/disable the automatic battery test schedule.
Average system efficiency	Average system efficiency
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Breaker 1 Open Failure	Battery circuit breaker 1 failed to open
Battery Breaker 2 Open Failure	Battery circuit breaker 2 failed to open
Battery Breaker 3 Open Failure	Battery circuit breaker 3 failed to open
Battery Breaker 4 Open Failure	Battery circuit breaker 4 failed to open
Battery Capacity Low	Battery capacity is low
Battery Charge Equalization Timeout	The battery equalizing is time out.
Battery charge status.	Battery charge status.
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Converter Current Limit	The battery converter has reached is maximum current limit.
Battery Converter Failure	Battery converter failure. This is a summary event caused by one or more power sub-modules in a UPS module.
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Manual Test In Progress	Manual battery test is in progress
Battery Not Qualified	The UPS battery voltage is not qualified. This event will be detected even in the absence of battery disconnect or when it is open.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Percentage Charge	The percentage of battery charge
Battery Room Alarm	The ambient temperature of the battery room is abnormal.
Battery Self Test Cycle Time	The time between automatic battery self test cycles.
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature	The highest battery temperature among all Battery Cabinets
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Test Failed	Battery test failed
Battery Test Passed	Battery test passed
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass Backfeed Detected	The system detected a voltage on the bypass when none was expected
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage Fault	The system has detected the bypass voltage is unqualified.
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral

Table 3-59 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary (continued)

Data Label	Data Description
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
External Bypass Breaker	The status of the external bypass breaker.
Inlet Air Temperature	The temperature of the inlet air
Input Breaker	Input breaker
Input Source Backfeed	The battery is backfeeding the input source.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Relay Fault	The inverter relay has malfunctioned.
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Status	Status of the inverter output. Active means the inverter is online with regulated output voltage and ready to power the load. Inactive means the inverter is offline and not ready to power the load.
LBS Active	The Load Bus Sync option is active
LBS Cable Failure	Load Bus Sync communications is abnormal. A problem with the LBS cable may exist.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Load Impact Transfer	On bypass as result of load impact.
Load Sharing Fault	Difference between any phase inverter current of unit and the relevant average output current of parallel system is more than a specific percent of nominal current.
Loss of Redundancy	The system has an insufficient number of power modules to provide redundancy.
Loss of Synchronization	The inverter and bypass are no longer synchronized.
Low Battery Warning Time	When battery time remaining falls to, or below, this value the low battery alarm is activated.
Main Battery Disconnect Open	Main battery disconnect is open
Mains Input Neutral Lost	Loss of neutral in the input source is detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Power	The sum total power of all system output modules
MMS Overload	Multi-module system overload
MMS UPS Output Source	Multi-module UPS output source

Table 3-59 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary (continued)

Data Label	Data Description
Module Operating Status	The operating status for this Power Module.
Number Of Active Power Modules	The total number of active power modules.
Number of Discharge Cycles	The total number of battery discharge cycles for the Battery Module since it was made.
Number of Installed Power Modules	The total number of Power Modules installed.
On Generator	A generator is supplying the power to the system
Output Breaker	Output breaker
Output Current Crest Factor Phs A	Output current crest factor of Phase A.
Output Current Crest Factor Phs B	Output current crest factor of Phase B.
Output Current Crest Factor Phs C	Output current crest factor of Phase C.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Overload	An overload exists on the output.
Parallel Cable Failure	The UPS parallel system communications is abnormal. A problem with the parallel cable may exist.
Parallel Comm Warning	Parallel communication bus warning
Power Module Balancer of DC Bus Failure	Balancer of DC Bus in the power module has failed
Power Module Bypass Input Frequency	The bypass input frequency detected by power module
Power Module Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B detected by power module
Power Module Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral detected by power module
Power Module Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C detected by power module
Power Module Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral detected by power module
Power Module Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A detected by power module
Power Module Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral detected by power module
Power Module Fan Fault	The Power Module has detected a fan fault.
Power Module Fuse Failure	A summary event indicating one or more fuse failures in the power module
Power Module Input Current Abnormal	Input current of the power module is abnormal
Power Module Over Temperature	The Power Module has detected an over temperature condition.
Power Module Power Supply Failure	Power module power supply failure
Power Module Sleep Status	Sleep status of the Power module
Rectifier Failure	Rectifier failure - rectifier is off
System Capacity	System capacity supported by the installed power modules.
System Date and Time	The system date and time
System Input Black Out Count	The number of occurrences, since the last reset, where the input was not qualified to provide power to the system
System Input Brown Out Count	The number of occurrences, since the last reset, where the system input voltage has fallen below a pre-determined threshold for a specified amount of time
System Input Frequency	The system input frequency
System Input Nominal Current	The nominal (or rated) system input current
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)

Table 3-59 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary (continued)

Data Label	Data Description
System Input Power Factor Phs A	The system input power factor for Phase A
System Input Power Factor Phs B	The system input power factor for Phase B
System Input Power Factor Phs C	The system input power factor for Phase C
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power Phs A	System output apparent power on phase A
System Output Apparent Power Phs B	System output apparent power on phase B
System Output Apparent Power Phs C	System output apparent power on phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs A	The system output apparent power on phase A as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs B	The system output apparent power on phase B as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs C	The system output apparent power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power Phase A	The system output power on phase A.
System Output Power Phase B	The system output power on phase B.
System Output Power Phase C	The system output power on phase C.
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral

Table 3-59 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary (continued)

Data Label	Data Description
System Set To Operate With	If this point reports 'Redundancy' then the system is configured for redundancy and the 'Loss of Redundancy' alarm is enabled.
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
Time Until Next Auto Battery Test	The time until the next automatic battery test is started.
Top Outlet Fan Fault	Top outlet fan fault - one or more top outlet fans have failed.
Total System Operating Time	The cumulative operation time of the unit
Transfer to Bypass - System Overload	The UPS System has transferred to bypass because the active power modules cannot support the critical load.
UPS Application Mode	UPS application mode.
UPS Battery Status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
User Operation Invalid	User attempted an invalid operation.

Table 3-60 Liebert GXT2™ and Liebert GXT3™—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Audible Alarm Enabled	10002	2	1	—	—
Automatic Battery Test Enabled	10003	3	1	—	—
DC-to-DC Converter On	10042	—	1	—	—
Battery Charge Compensation	10046	—	1	—	—
Inverter Ready	10047	—	1	—	—
Power Factor Correction State	10050	—	1	—	—
Load Circuit 1 State	10057	—	1	—	—
Load Circuit 2 State	10058	—	1	—	—
Load Circuit 3 State	10059	—	1	—	—
Load Circuit 4 State	10060	—	1	—	—
Load Circuit 5 State	10061	—	1	—	—
Load Circuit 6 State	10062	—	1	—	—
Load Circuit 7 State	10063	—	1	—	—
Load Circuit 8 State	10064	—	1	—	—
Load Circuit 9 State	10065	—	1	—	—
Load Circuit 10 State	10066	—	1	—	—
Load Circuit 11 State	10067	—	1	—	—
Load Circuit 12 State	10068	—	1	—	—
Load Circuit 13 State	10069	—	1	—	—
Load Circuit 14 State	10070	—	1	—	—
Load Circuit 15 State	10071	—	1	—	—
Load Circuit 16 State	10072	—	1	—	—
Load On Inverter	10073	—	1	—	—
Bypass Active	10074	—	1	—	—
Replace Battery	10081	—	1	—	—
Battery Under Test	10082	—	1	—	—
Shutdown Reason - Over Temperature	10086	—	1	—	—
Shutdown Reason - Overload	10087	—	1	—	—
Shutdown Reason - Link Over Voltage	10088	—	1	—	—
Shutdown Reason - Output Short	10089	—	1	—	—
Shutdown Reason - Line Neutral Swap	10090	—	1	—	—
Shutdown Reason - Low Battery	10092	—	1	—	—
Shutdown Reason - Remote Shutdown	10093	—	1	—	—
Shutdown Reason - Input Under Voltage	10094	—	1	—	—
Shutdown Reason - PFC Startup	10095	—	1	—	—
Shutdown Reason - Hardware	10096	—	1	—	—
Load on Battery	10128	—	1	—	—
Output Off Pending	10151	—	1	—	—
Low Battery - Shutdown Imminent	10152	—	1	—	—
Output Overload	10154	—	1	—	—
Over Temperature Warning	10171	—	1	—	—
Battery Over Temperature CB Trip	10172	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Input Over Voltage	10187	—	1	—	—
Input Under Voltage	10188	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-60 Liebert GXT2™ and Liebert GXT3™—Status and Coil (continued)

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Bad Input Frequency	10190	—	1	—	—
Bypass Input Voltage/Frequency Fault	10202	—	1	—	—
Output Under Voltage	10218	—	1	—	—
Output Over Voltage	10219	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-61 Liebert GXT2™ and Liebert GXT3™—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Audible Alarm Enabled	10002	2	1	—	—
Automatic Battery Test Enabled	10003	3	1	—	—
DC-to-DC Converter On	10042	—	1	—	—
Battery Charge Compensation	10046	—	1	—	—
Inverter Ready	10047	—	1	—	—
Power Factor Correction State	10050	—	1	—	—
Load Circuit 1 State	10057	—	1	—	—
Load Circuit 2 State	10058	—	1	—	—
Load Circuit 3 State	10059	—	1	—	—
Load Circuit 4 State	10060	—	1	—	—
Load Circuit 5 State	10061	—	1	—	—
Load Circuit 6 State	10062	—	1	—	—
Load Circuit 7 State	10063	—	1	—	—
Load Circuit 8 State	10064	—	1	—	—
Load Circuit 9 State	10065	—	1	—	—
Load Circuit 10 State	10066	—	1	—	—
Load Circuit 11 State	10067	—	1	—	—
Load Circuit 12 State	10068	—	1	—	—
Load Circuit 13 State	10069	—	1	—	—
Load Circuit 14 State	10070	—	1	—	—
Load Circuit 15 State	10071	—	1	—	—
Load Circuit 16 State	10072	—	1	—	—
Load On Inverter	10073	—	1	—	—
Bypass Active	10074	—	1	—	—
Replace Battery	10081	—	1	—	—
Battery Under Test	10082	—	1	—	—
Shutdown Reason - Over Temperature	10086	—	1	—	—
Shutdown Reason - Overload	10087	—	1	—	—
Shutdown Reason - Link Over Voltage	10088	—	1	—	—
Shutdown Reason - Output Short	10089	—	1	—	—
Shutdown Reason - Line Neutral Swap	10090	—	1	—	—
Shutdown Reason - Low Battery	10092	—	1	—	—
Shutdown Reason - Remote Shutdown	10093	—	1	—	—
Shutdown Reason - Input Under Voltage	10094	—	1	—	—
Shutdown Reason - PFC Startup	10095	—	1	—	—
Shutdown Reason - Hardware	10096	—	1	—	—
Load on Battery	10128	—	1	—	—
Output Off Pending	10151	—	1	—	—
Low Battery - Shutdown Imminent	10152	—	1	—	—
Output Overload	10154	—	1	—	—
Over Temperature Warning	10171	—	1	—	—
Battery Over Temperature CB Trip	10172	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Input Over Voltage	10187	—	1	—	—
Input Under Voltage	10188	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-61 Liebert GXT2™ and Liebert GXT3™—Status and Coil (continued)

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Bad Input Frequency	10190	—	1	—	—
Bypass Input Voltage/Frequency Fault	10202	—	1	—	—
Output Under Voltage	10218	—	1	—	—
Output Over Voltage	10219	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-62 Liebert GXT2™ and Liebert GXT3™—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Bypass Lines	30004	40004	1	—	Bits 4 - 7
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Number of SubModules	30009	40009	1	—	—
Load Circuit Present	30013	40013	1	—	There are 16 possible Load Circuits. Each bit represents 1 Load Circuit. Load Circuit 1 is bit 0, Load Circuit 2 is bit 1 and so on. If the bit is 1, then the Load Circuit is supported.
Battery Cabinet Type	30018	40018	2	—	—
Battery Cabinet Number	30019	40019	1	—	—
Battery AmpHour	30020	40020	1	—	AH
Nominal Power Rating	30021	40021	2	—	VA
Nominal Input Voltage	30027	40027	1	—	V
Nominal Output Voltage	30028	40028	1	—	V
Nominal Static Bypass Switch Voltage	30029	40029	1	—	V
Nominal Input Current	30030	40030	1	—	A
Nominal Input Frequency	30031	40031	1	10	Hz
Nominal Output Frequency	30032	40032	1	10	Hz
Nominal Power Factor	30033	40033	1	100	—
Nominal Battery Voltage	30034	40034	1	—	V
Auto Restart Delay	30051	40051	1	—	Seconds
Device Low Battery Time	30053	40053	1	—	Minutes
Load (Apparent Power)	30102	—	2	—	VA
Load (Real Power)	30104	—	2	—	W
Load / Capacity	30106	—	1	—	%
Input Frequency	30107	—	1	10	Hz
Output Frequency	30108	—	1	10	Hz
Bypass Frequency	30109	—	1	10	Hz
Battery Charge Status	30112	—	1	—	1 - 100% Charged 2 - Less than 100% Charged 3 - Charging 4 - Discharging 5 - Float Charging 6 - Equalize Charging
Battery Voltage	30113	—	1	—	V
Battery Time Remaining	30115	—	1	—	Minutes
Battery Charge Percentage	30116	—	1	—	%
Ambient Temperature	30119	—	1	—	deg C
Battery Test Result	30130	—	1	—	1 - Unknown 2 - Passed 3 - Failed 4 - In Progress 5 - System Failure 6 - Inhibited
Input Voltage L1	30153	—	1	—	V
Bypass Voltage L1	30159	—	1	—	V
Output Voltage L1	30163	—	1	—	V
Output Current L1	30164	—	1	—	A

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-62 Liebert GXT2™ and Liebert GXT3™—Input and Holding (continued)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Input Maximum Voltage L1	30180	—	1	—	V
Input Minimum Voltage L1	30181	—	1	—	V
Output Maximum Voltage L1	30182	—	1	—	V
Output Minimum Voltage L1	30183	—	1	—	V
Black Out Count	30301	—	1	—	—
Brown Out Count	30302	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-63 Liebert GXT3™ and Liebert GXT4™—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
Input				
Input Undervoltage	10001		1	Active on Alarm
Input Overvoltage	10002		1	Active on Alarm
Bypass				
Bypass Not Available	10013		1	Active on Alarm
Battery				
Battery Self Test	10024		1	Active on Alarm
Battery Low	10025		1	Active on Alarm
Battery Under Voltage	10026		1	Active on Alarm
Battery Over Voltage	10027		1	Active on Alarm
Battery Test Failed	10028		1	Active on Alarm
Replace Battery	10029		1	Active on Alarm
Output				
Output Overload	10040		1	Active on Alarm
Output Undervoltage	10041		1	Active on Alarm
Output Overvoltage	10042		1	Active on Alarm
System Output Off	10043		1	Active on Alarm
System				
UPS Output on Bypass	10054		1	Active on Alarm
Battery Discharging	10055		1	Active on Alarm
System Input Power Problem	10056		1	Active on Alarm
Equipment Over Temperature	10057		1	Active on Alarm
Input Frequency Deviation	10058		1	Active on Alarm
Shutdown Pending	10059		1	Active on Alarm
Unspecified General Event	10060		1	Active on Alarm
Parallel Comm Warning	10061		1	Active on Alarm
Loss of Redundancy	10062		1	Active on Alarm
Charger Failure	10063		1	Active on Alarm
Rectifier Failure	10064		1	Active on Alarm
Inverter Failure	10065		1	Active on Alarm
Maintenance Bypass Breaker Closed	10066		1	Active on Alarm
System Fan Failure	10067		1	Active on Alarm
Emergency Power Off - Latched	10068		1	Active on Alarm
Input Wiring Fault	10069		1	Active on Alarm
DC to DC Converter Fault	10070		1	Active on Alarm

Table 3-64 Liebert GXT3™ and Liebert GXT4™—Input and Holding

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Protocol					
Server Class	30385		1		1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
Input					
System Input RMS L1-N	30396		1	10	Units : VAC Uint16
System Input RMS L2-N	30397		1	10	Units : VAC Uint16
System Input RMS L1-L2	30398		1	10	Units : VAC Uint16
System Input RMS Current L1	30399		1	10	Units : A AC Uint16
System Input RMS Current L2	30400		1	10	Units : A AC Uint16
System Input Frequency	30401		1	10	Units : Hz Uint16
System Input Max Voltage L1-N	30402		1	10	Units : VAC Uint16
System Input Min Voltage L1-N	30403		1	10	Units : VAC Uint16
System Input Max Voltage L2-N	30404		1	10	Units : VAC Uint16
System Input Min Voltage L2-N	30405		1	10	Units : VAC Uint16
System Input Nominal Voltage	30406		1		Units : VAC Uint16
System Input Nominal Current	30407		1		Units : A AC Uint16
System Input Nominal Frequency	30408		1		Units : Hz Uint16
Bypass					
Bypass Input Voltage RMS L1-N	30419		1	10	Units : VAC Uint16
Bypass Input Voltage RMS L1-L2	30420		1	10	Units : VAC Uint16
Bypass Input Voltage RMS L2-N	30421		1	10	Units : VAC Uint16
Bypass Input RMS Current	30422		1	10	Units : A AC Uint16
Bypass Input RMS Current Line 2	30423		1	10	Units : A AC Uint16
Bypass Input Frequency	30424		1	10	Units : Hz Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-64 Liebert GXT3™ and Liebert GXT4™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Bypass Nominal Voltage	30425		1		Units : VAC Uint16
Battery					
UPS Battery Status	30436		1		1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Battery Time Remaining	30437		1		Units : min Uint16
Battery Percentage Charge	30438		1		Units : % Uint16
Battery Charge Status	30439		1		0 = fully charged 1 = charging 2 = discharging 3 = not charging (charger off)
DC Bus Voltage	30440		1		Units : VDC Uint16
DC Bus Nominal Voltage	30441		1		Units : VDC Uint16
Battery Cabinet Type	30442		1		0 = Internal 1 = External 2 = LRT
Battery Rating	30443		1		Units : AH Uint16
Low Battery Warning Time	30444	40444	1		Units : min Uint16
Number of EBC Installed	30445		1		Uint16
Battery Charge Compensating	30446		1		0 = false 1 = true
Battery Charger State	30447		1		0 = off 1 = on
Nominal Battery Capacity	30448		1		Units : min Uint16
Battery Discharge Time	30449		1		Units : min Uint16
Battery Float Voltage	30450		1		Units : VDC Uint16
Battery Test Result	30451		1		0 = Unknown 1 = Passed 2 = Failed 3 = In Progress 4 = System Failure 5 = Inhibited
Automatic Battery Test	30452		1		0 = disabled 1 = enabled
Manual Battery Test		40453	1		1 = Start Test
Output					
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-64 Liebert GXT3™ and Liebert GXT4™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
System Output Voltage RMS L1-N	30464		1	10	Units : VAC Uint16
System Output Voltage RMS L1-L2	30465		1	10	Units : VAC Uint16
System Output RMS Current L1	30466		1	10	Units : A AC Uint16
System Output Voltage RMS L2-N	30467		1	10	Units : VAC Uint16
System Output RMS Current L2	30468		1	10	Units : A AC Uint16
System Output Frequency	30469		1	10	Units : Hz Uint16
System Output Max Voltage L1-N	30470		1	10	Units : VAC Uint16
System Output Min Voltage L1-N	30471		1	10	Units : VAC Uint16
System Output Max Voltage L2-N	30472		1	10	Units : VAC Uint16
System Output Min Voltage L2-N	30473		1	10	Units : VAC Uint16
System Output Power	30474		1		Units : W Uint16
System Output Power L1	30475		1		Units : W Uint16
System Output Power L2	30476		1		Units : W Uint16
System Output Pct Power	30477		1		Units : % Uint16
System Output Pct Power L1	30478		1		Units : % Uint16
System Output Pct Power L2	30479		1		Units : % Uint16
System Output Apparent Power	30480		1		Units : VA Uint16
System Output Apparent Power L1	30481		1		Units : VA Uint16
System Output Apparent Power L2	30482		1		Units : VA Uint16
System Output Nominal Voltage	30483		1		Units : VAC Uint16
Output Apparent Power Rating	30484		1		Units : VA Uint16
System Output Nominal Frequency	30485		1		Units : Hz Uint16
Output On Delay	30486	40486	1		Units : sec Uint16
Reboot With Delay	30487	40487	1		Units : sec Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-64 Liebert GXT3™ and Liebert GXT4™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Shutdown After Delay	30488	40488	1		Units : sec Uint16
UPS Output Source	30489		1		1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Power Factor Correction	30490		1		0 = off 1 = on
Nominal Power Factor	30491		1	100	Int16
Outlet Group 1					
Outlet Group Identifier	30502		1		Uint16
Outlet Group Power Control	30503	40503	1		0 = Off 1 = On 2 = Cycle Power
Outlet Group 2					
Outlet Group Identifier	30514		1		Uint16
Outlet Group Power Control	30515	40515	1		0 = Off 1 = On 2 = Cycle Power
ECO Mode					
ECO Mode Status	30526		1		0 = off 1 = on
ECO Mode Operation State	30527	40527	1		0 = disabled 1 = enabled
System					
System Status	30538		1		1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
System Input Black Out Count	30539		1		Uint16
System Input Brown Out Count	30540		1		Uint16
Auto Restart	30541	40541	1		0 = disabled 1 = enabled
Auto Restart Delay	30542	40542	1		Units : sec Uint16
Inverter On/Off State	30543		1		0 = off 1 = on
Inlet Air Temperature	30544		1		Units : deg C Int16
Inlet Air Temperature	30545		1		Units : deg F Int16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-64 Liebert GXT3™ and Liebert GXT4™—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Shutdown Reason	30546		1		0 = None 1 = Over Temperature 2 = Overload 3 = DC Bus Overload 4 = Output Short 5 = Line Swap 6 = Low Battery 7 = Remote Command 8 = Input Under Voltage 9 = Power Factor Correction Fail 10 = External Signal Command
DC Converter Status	30547		1		0 = off 1 = on
UPS Topology	30548		1		0 = unknown 1 = Offline 2 = Line Interactive 3 = Online
Bypass/Inverter Input Config	30549		1		1 = Single/Combined Source 2 = Dual/Separate Sources
Audible Alarm Control	30550	40550	1		0 = off 1 = on
Abort Command		40551	1		1 = Issue Command
Reset Power Statistics		40552	1		1 = Reset
Silence Audible Alarm		40553	1		1 = Silence Alarm
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-65 Liebert GXT3™ and Liebert GXT4™—Glossary

Data Label	Data Description
Abort Command	Attempt to abort a previously issued command to the device that is still pending
Audible Alarm Control	Audible Alarm Control
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
Auto Restart	When 'enabled', the UPS will automatically restart the load when utility power is restored after a battery discharge.
Automatic Battery Test	Enable/disable the automatic battery test schedule.
Battery Cabinet Type	Type of extended battery cabinets.
Battery Charge Compensating	Battery charge algorithm changed due to battery temperature
Battery Charge Status	Battery charge status.
Battery Charger State	Current state of the battery charger
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging
Battery Float Voltage	The cell voltage of the battery at float recharging.
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Over Voltage	The system has detected that the battery voltage has exceeded a predetermined limit.
Battery Percentage Charge	The percentage of battery charge
Battery Rating	Total rating of all parallel strings in the battery.
Battery Self Test	Battery self test is in progress
Battery Test Failed	Battery test failed
Battery Test Result	The outcome of the previous battery test.
Battery Time Remaining	The calculated available time on battery
Battery Under Voltage	Battery voltage is too low.
Bypass Input Frequency	The bypass input frequency
Bypass Input RMS Current Line 2	The bypass input RMS current for Line 2
Bypass Input RMS Current	The bypass input RMS current.
Bypass Input Voltage RMS L1-L2	The bypass input RMS voltage between Lines 1 and 2
Bypass Input Voltage RMS L1-N	The bypass input RMS voltage between Line 1 and Neutral
Bypass Input Voltage RMS L2-N	The bypass input RMS voltage between Line 2 and Neutral
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass/Inverter Input Config	Input source configuration for the bypass and inverter.
Charger Failure	Charger Failure - Charger is off
DC Bus Nominal Voltage	The nominal (or rated) voltage between the positive and negative terminals of the DC bus at the battery input
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
DC Converter Status	The operating state of the dc converter.
DC to DC Converter Fault	A failure has occurred in the battery discharge circuit.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
ECO Mode Status	Current ECO Mode Status
Emergency Power Off - Latched	System output is off - 'Emergency Power Off (EPO) - latched' requires manual reset
Equipment Over Temperature	Equipment over temperature summary event
Inlet Air Temperature	The temperature of the inlet air

Table 3-65 Liebert GXT3™ and Liebert GXT4™—Glossary

Data Label	Data Description
Input Frequency Deviation	The input frequency is outside of the normal range.
Input Overvoltage	One or more of the input phase voltages has exceeded the limit.
Input Undervoltage	One or more of the input phase voltages has dropped below the limit.
Input Wiring Fault	The neutral/ground conductors on the input wiring are not properly bonded, or the line/neutral conductors have been swapped.
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Loss of Redundancy	The multi-module collection doesn't have enough modules to satisfy the redundancy configuration.
Low Battery Warning Time	When battery time remaining falls to, or below, this value the low battery alarm is activated.
Maintenance Bypass Breaker Closed	The maintenance bypass breaker is closed.
Manual Battery Test	Command to initiate a manual battery test.
Nominal Battery Capacity	The nominal (or rated) battery capacity time at full load
Nominal Power Factor	The nominal (or rated) system power factor.
Number of EBC Installed	The total number of Extended Battery Cabinets installed.
Outlet Group Identifier	A runtime assigned outlet group identification number
Outlet Group Power Control	Outlet Group Power Control (OFF, ON, Cycle, etc)
Output Apparent Power Rating	Output apparent power rating
Output On Delay	When a value is written to this point the output will be turned on after the specified time has elapsed.
Output Overload	An overload exists on the output.
Output Overvoltage	One or more of the output phase voltages has exceeded the limit.
Output Undervoltage	One or more of the output phase voltages has dropped below the limit.
Parallel Comm Warning	Parallel communication bus warning
Power Factor Correction	The state of the power factor correction circuitry of the system
Reboot With Delay	When a value is written to this point the output will be turned off immediately and then turned back on after the specified time has elapsed.
Rectifier Failure	Rectifier failure - rectifier is off
Replace Battery	The battery is due for replacement.
Reset Power Statistics	Reset Power Statistics
Server Class	The general classification for this system
Shutdown After Delay	When a value is written to this point the system will shutdown after the specified time has elapsed and output will remain off.
Shutdown Pending	Shutdown is pending.
Shutdown Reason	The reason for the most recent shutdown
Silence Audible Alarm	Silence Audible Alarm
System Fan Failure	System fan failure - one or more fans have failed
System Input Black Out Count	The number of occurrences, since the last reset, where the input was not qualified to provide power to the system
System Input Brown Out Count	The number of occurrences, since the last reset, where the system input voltage has fallen below a pre-determined threshold for a specified amount of time
System Input Frequency	The system input frequency
System Input Max Voltage L1-N	The maximum system input voltage measurement for Line 1-N since the last reset
System Input Max Voltage L2-N	The maximum system input voltage measurement for Line 2-N since the last reset

Table 3-65 Liebert GXT3™ and Liebert GXT4™—Glossary

Data Label	Data Description
System Input Min Voltage L1-N	The minimum system input voltage measurement for Line 1-N since the last reset
System Input Min Voltage L2-N	The minimum system input voltage measurement for Line 2-N since the last reset
System Input Nominal Current	The nominal (or rated) system input current
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS Current L1	The system input RMS current for Line 1
System Input RMS Current L2	The system input RMS current for Line 2
System Input RMS L1-L2	The System Input RMS Voltage between Line 1 and Line 2
System Input RMS L1-N	The System Input RMS Voltage between Line 1 and Neutral
System Input RMS L2-N	The System Input RMS Voltage between Line 2 and Neutral
System Output Apparent Power L1	System output apparent power on Line 1
System Output Apparent Power L2	System output apparent power on Line 2
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Frequency	The system output frequency
System Output Max Voltage L1-N	The maximum system output voltage measurement for Line 1-N since the last reset.
System Output Max Voltage L2-N	The maximum system output voltage measurement for Line 2-N since the last reset.
System Output Min Voltage L1-N	The minimum system output voltage measurement for Line 1-N since the last reset.
System Output Min Voltage L2-N	The minimum system output voltage measurement for Line 2-N since the last reset.
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Off	The system output is off
System Output Pct Power L1	The system output power on Line 1 as a percentage of the rated capacity
System Output Pct Power L2	The system output power on Line 2 as a percentage of the rated capacity
System Output Pct Power	The system output power as a percentage of the rated capacity.
System Output Power L1	The system output power on Line 1.
System Output Power L2	The system output power on Line 2.
System Output Power	The sum total power of all system output phases
System Output RMS Current L1	The system output RMS current for Line 1
System Output RMS Current L2	The system output RMS current for Line 2
System Output Voltage RMS L1-L2	The system output RMS voltage between Lines 1 and 2
System Output Voltage RMS L1-N	The system output RMS voltage between Line 1 and Neutral
System Output Voltage RMS L2-N	The system output RMS voltage between Line 2 and Neutral
System Status	The operating status for the system
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
UPS Battery Status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
UPS Topology	UPS Topology

Table 3-66 Liebert HiNet™—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
DC-To-DC Converter On	10042	—	1	—	—
Load On Inverter	10073	—	1	—	—
Bypass Active	10074	—	1	—	—
Load On Battery	10128	—	1	—	—
Permanently On Bypass	10133	—	1	—	—
Bypass SCR Open Circuit	10149	—	1	—	—
Low Battery - Shutdown Imminent	10152	—	1	—	—
Output Overload	10154	—	1	—	—
Inverter Unsynchronized	10160	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Bypass Input Voltage/Frequency Fault	10202	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-67 Liebert HiNet™—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Bypass Lines	30004	40004	1	—	Bits 4 - 7
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Number of SubModules	30009	40009	1	—	-
Number of Battery Cells	30012	40012	1	—	-
Load (Apparent Power)	30102	—	2	—	VA
Load (Real Power)	30104	—	2	—	W
Input Frequency	30107	—	1	10	Hz
Output Frequency	30108	—	1	10	Hz
Battery Voltage	30113	—	1	—	V
Battery Current (Charge/Discharge)	30114	—	1	—	A
Battery Charge Percentage	30116	—	1	—	%
Ambient Temperature	30119	—	1	—	deg C
Input Voltage L1	30153	—	1	—	V
Input Current L1	30154	—	1	—	A
Output Voltage L1	30163	—	1	—	V
Output Current L1	30164	—	1	—	A
Input Voltage L2	30203	—	1	—	V
Input Current L2	30204	—	1	—	A
Input Voltage L3	30253	—	1	—	V
Input Current L3	30254	—	1	—	A

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-68 Liebert Nfinity®—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Automatic Battery Test Enabled	10003	3	1	—	—
Battery Charger On	10044	—	1	—	—
Inverter Ready	10047	—	1	—	—
Power Factor Correction State	10050	—	1	—	—
Load on Inverter	10073	—	1	—	—
Bypass Active	10074	—	1	—	—
Replace Battery	10081	—	1	—	—
Battery Under Test	10082	—	1	—	—
Load on Battery	10128	—	1	—	—
Load on Bypass	10129	—	1	—	—
Load on Manual Bypass	10132	—	1	—	—
Load Transferred to Bypass Due to UPS Fault	10134	—	1	—	—
Transfer Inhibit	10146	—	1	—	—
Output Off Pending	10151	—	1	—	—
Low Battery - Shutdown Imminent	10152	—	1	—	—
Output Overload	10154	—	1	—	—
UPS Overload	10155	—	1	—	—
Output Off	10158	—	1	—	—
Check Air Filter - Replace	10170	—	1	—	—
Transformer Over Temperature	10178	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Internal Device Communication Failure	10284	—	1	—	—
Device Active Alarm	10290	—	1	—	—
Main Control Warning	10291	—	1	—	—
Redundant Control Warning	10292	—	1	—	—
Control Module Failure	10293	—	1	—	—
Redundant Control Module Failed	10294	—	1	—	—
User Interface Module Failed	10295	—	1	—	—
UPS Power Not Redundant	10296	—	1	—	—
Power Module Failure	10298	—	1	—	—
Battery Module Failure	10299	—	1	—	—
Power Module Warning	10300	—	1	—	—
Battery Module Warning	10301	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-69 Liebert Nfinity®—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Bypass Lines	30004	40004	1	—	Bits 4 - 7
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Number of Power Mod.	30010	40010	1	—	—
Number of Battery Modules Installed	30011	40011	1	—	—
Device Maximum Frame Capacity	30023	40023	2	—	—
Device System Capacity	30025	40025	2	—	VA
Nominal Input Voltage	30027	40027	1	—	V
Nominal Output Voltage	30028	40028	1	—	V
Nominal Static Bypass Switch Voltage	30029	40029	1	—	V
Nominal Input Frequency	30031	40031	1	10	Hz
Nominal Output Frequency	30032	40032	1	10	Hz
Nominal Power Factor	30033	40033	1	100	—
Nominal Battery Voltage	30034	40034	1	—	V
Auto Restart Delay	30051	40051	1	—	Seconds
Device Auto Restart Percent Setpt	30052	40052	1	—	%
Device Low Battery Time	30053	40053	1	—	Minutes
Next Battery Auto Test Time	30057	40057	1	—	Minutes
Overload Alarm Limit	30067	40067	2	—	VA
Minimum Redundant Power Modules	30074	40074	1	—	—
Load (Apparent Power)	30102	—	2	—	VA
Load (Real Power)	30104	—	2	—	W
Load / Capacity	30106	—	1	—	%
Input Frequency	30107	—	1	10	Hz
Output Frequency	30108	—	1	10	Hz
Bypass Frequency	30109	—	1	10	Hz
Battery Charge Status	30112	—	1	—	1 - 100% Charged 2 - Less than 100% Charged 3 - Charging 4 - Discharging 5 - Float Charging 6 - Equalize Charging
Battery Voltage	30113	—	1	—	V
Battery Time Remaining	30115	—	1	—	Minutes
Battery Charge Percentage	30116	—	1	—	%
Battery Temperature	30117	—	1	—	deg C
Transformer Temperature	30121	—	1	—	deg C
Redundant Power Modules	30124	—	1	—	—
Active Power Module Count	30126	—	1	—	—
Battery Module Active Count	30127	—	1	—	—
Battery Test Result	30130	—	1	—	-
Input Voltage L1	30153	—	1	—	V
Input Current L1	30154	—	1	—	A
Bypass Voltage L1	30159	—	1	—	V
Bypass Current L1	30160	—	1	—	A
Output Voltage L1	30163	—	1	—	V

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-69 Liebert Nfinity®—Input and Holding (continued)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Output Current L1	30164	—	1	—	A
Power Module Failure Count	30304	—	1	—	—
Battery Module Failure Count	30305	—	1	—	—
Power Module Warning Count	30306	—	1	—	—
Battery Module Warning Count	30307	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-70 Liebert NX™—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Economode	10005	5	—	—	—
DC-To-DC Converter On	10042	—	—	—	—
Battery Charge Compensation	10046	—	—	—	—
Inverter Ready	10047	—	—	—	—
Power Factor Correction State	10050	—	—	—	—
Battery Charge Mode	10051	—	—	—	—
Load On Inverter	10073	—	—	—	—
Bypass Active	10074	—	—	—	—
Battery Under Test	10082	—	—	—	—
Load On Battery	10128	—	—	—	—
Overload Transfer To Bypass	10131	—	—	—	—
Input Switch Open	10137	—	—	—	—
Generator Disconnected	10141	—	—	—	—
Bypass Transfer Count Block	10147	—	—	—	—
Static Bypass Switch Disabled	10148	—	—	—	—
Low Battery - Shutdown Imminent	10152	—	—	—	—
Output Overload	10154	—	—	—	—
UPS Load Joint Mode	10156	—	—	—	—
Output Off	10158	—	—	—	—
Inverter Unsynchronized	10160	—	—	—	—
Main Neutral Lost	10161	—	—	—	—
Fan Failure	10169	—	—	—	—
Ambient Over Temperature	10173	—	—	—	—
Rectifier Over Temperature	10174	—	—	—	—
Rectifier Inductor Over Temperature	10175	—	—	—	—
Inverter Over Temperature	10176	—	—	—	—
Inverter Inductor Over Temperature	10177	—	—	—	—
Battery Converter Over Temperature	10179	—	—	—	—
DC Bus Balancer Over Temperature	10180	—	—	—	—
Input Power Supply Fail	10186	—	—	—	—
Input BrownOut	10189	—	—	—	—
Bad Input Frequency	10190	—	—	—	—
Bypass Phase Rotation Error	10191	—	—	—	—
Bypass Phase Loss	10201	—	—	—	—
Bypass Input Voltage/Frequency Fault	10202	—	—	—	—
Output Fuse Blown	10217	—	—	—	—
Output Over Voltage	10219	—	—	—	—
Charger Failed	10234	—	—	—	—
Battery Fault	10235	—	—	—	—
Battery Contact Fail	10236	—	—	—	—
Battery Converter Over Current	10237	—	—	—	—
Battery Converter Fail	10238	—	—	—	—
DC Bus Balancer Over Current	10239	—	—	—	—
DC Bus Balancer Fault	10240	—	—	—	—
DC Bus 1 Power Supply Fail	10251	—	—	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-70 Liebert NX™—Status and Coil (continued)

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Rectifier Fuse Fail	10257	—	—	—	—
Rectifier Startup Failure	10258	—	—	—	—
Rectifier Fault	10259	—	—	—	—
Rectifier Current Limit	10260	—	—	—	—
Inverter DC Voltage Low Shutdown	10262	—	—	—	—
Inverter Fault	10263	—	—	—	—
Inverter DC Offset Overload	10264	—	—	—	—
Inverter Contactor Fail	10265	—	—	—	—
Inverter Current Limit	10266	—	—	—	—
Parallel Low Battery Warning	10267	—	—	—	—
Load Share Fault	10268	—	—	—	—
Parallel System Fault	10269	—	—	—	—
Parallel Connection Error	10270	—	—	—	—
Parallel System Overload	10271	—	—	—	—
Parallel Transfer To Static Bypass Switch	10272	—	—	—	—
Inverter Communication Fail	10281	—	—	—	—
Rectifier Communication Failure	10282	—	—	—	—
Parallel Communication Fault	10283	—	—	—	—
Operation Fault	10289	—	—	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-71 Liebert NX™—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Bypass Lines	30004	40004	1	—	Bits 4 - 7
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Number of SubModules	30009	40009	1	—	—
Module Number	30014	40014	1	—	—
Device Module Count	30015	40015	1	—	—
Device Redundant Count	30016	40016	1	—	—
Device Module Mode	30017	40017	1	—	—
Nominal Power Rating	30021	40021	2	—	VA
Nominal Input Voltage	30027	40027	1	—	V
Nominal Output Voltage	30028	40028	1	—	V
Nominal Static Bypass Switch Voltage	30029	40029	1	—	V
Nominal Input Frequency	30031	40031	1	10	Hz
Nominal Output Frequency	30032	40032	1	10	Hz
Nominal Power Factor	30033	40033	1	100	—
Nominal DC Bus #1 Voltage	30035	40035	1	—	V
Nominal DC Bus #2 Voltage	30036	40036	1	—	—
Nominal Battery Float Voltage	30038	40038	1	—	V
Load Bus Sync Mode	30040	40040	1	—	—
Auto Restart Delay	30051	40051	1	—	Seconds
Device Low Battery Time	30053	40053	1	—	Minutes
Input Frequency	30107	—	1	10	Hz
Output Frequency	30108	—	1	10	Hz
Bypass Frequency	30109	—	1	10	Hz
Battery Charge Status	30112	—	1	—	1 - 100% Charged 2 - Less than 100% Charged 3 - Charging 4 - Discharging 5 - Float Charging 6 - Equalize Charging
Battery Voltage	30113	—	1	—	V
Battery Current (Charge/Discharge)	30114	—	1	—	A
Battery Time Remaining	30115	—	1	—	Minutes
Battery Charge Percentage	30116	—	1	—	%
Battery Temperature	30117	—	1	—	C
Ambient Temperature	30119	—	1	—	C
Parallel Load Source	30128	—	1	—	—
Rotary Breaker	30129	—	1	—	—
Battery Test Result	30130	—	1	—	1 - Unknown 2 - Passed 3 - Failed 4 - In Progress 5 - System Failure 6 - Inhibited
Input Voltage L1-L2	30151	—	1	—	V
Input Voltage L1	30153	—	1	—	V
Input Current L1	30154	—	1	—	A
Input Power Factor L1	30155	—	1	100	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-71 Liebert NX™—Input and Holding (continued)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Bypass Voltage L1	30159	—	1	—	V
Output Voltage L1	30163	—	1	—	V
Output Current L1	30164	—	1	—	A
Output Load L1	30165	—	1	—	—
Output Power Factor L1	30166	—	1	100	%
Apparent Output Power L1	30168	—	2	—	VA
Reactive Output Power L1	30170	—	2	—	VAR
Output Power L1	30172	—	2	—	W
Output Current Crest Factor L1	30186	—	1	—	%
Input Voltage L2-L3	30201	—	1	—	V
Input Voltage L2	30203	—	1	—	V
Input Current L2	30204	—	1	—	A
Input Power Factor L2	30205	—	1	100	—
Bypass Voltage L2	30209	—	1	—	V
Output Voltage L2	30213	—	1	—	V
Output Current L2	30214	—	1	—	A
Output Load L2	30215	—	1	—	%
Output Power Factor L2	30216	—	1	100	—
Apparent Output Power L2	30218	—	2	—	VA
Reactive Output Power L2	30220	—	2	—	VAR
Output Power L2	30222	—	2	—	W
Output Current Crest Factor L2	30236	—	1	—	%
Input Voltage L3-L1	30251	—	1	—	V
Input Voltage L3	30253	—	1	—	V
Input Current L3	30254	—	1	—	A
Input Power Factor L3	30255	—	1	100	—
Bypass Voltage L3	30259	—	1	—	V
Output Voltage L3	30263	—	1	—	V
Output Current L3	30264	—	1	—	A
Output Load L3	30265	—	1	—	%
Output Power Factor L3	30266	—	1	100	—
Apparent Output Power L3	30268	—	2	—	VA
Reactive Output Power L3	30270	—	2	—	VAR
Output Power L3	30272	—	2	—	W
Output Current Crest Factor L3	30286	—	1	—	%

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-72 Liebert NX™ 225-600kVA UPS—Chloride ManageUPS—Input and Holding [3]

Data Description	Input	Holding Register	# of Reg	Scale	Notes/Units
Identification					
Modbus Protocol Version	—	40002	1	—	XX.YY
Manufacturer	—	40003	1	—	0 = Chloride
Model	—	40004	1	—	8 = 80Net
UPS Software 1 Version	—	40005	1	—	HH Major – LL Minor
UPS Software 1 Date Year	—	40006	1	—	—
UPS Software 1 Date Month	—	40007	1	—	—
UPS Software 1 Date Day	—	40008	1	—	—
UPS Software 1 Code	—	40009	1	—	10HXXXXX code
UPS Software 2 Version	—	40010	1	—	HH Major – LL Minor
UPS Software 2 Date Year	—	40011	1	—	—
UPS Software 2 Date Month	—	40012	1	—	—
UPS Software 2 Date Day	—	40013	1	—	—
UPS Software 2 Code	—	40014	1	—	10HXXXXX code
Battery					
Battery Status	—	40020	1	—	1 = Unknown 2 = Battery Normal 3 = Battery Low 4 = Battery Depleted
Seconds On Battery	—	40021	1	—	Units: Seconds
Estimated Seconds Remaining	—	40022	1	—	Units: Seconds
Estimated Charge Remaining	—	40023	1	—	Units: %
Battery Voltage	—	40024	1	10	Units: V
Battery Current	—	40025	1	10	Units: A
Battery Temperature	—	40026	1	—	Units: Deg C
Input					
Line Bads	—	40032	1	—	—
Frequency	—	40033	1	10	Units: Hz
Number Lines	—	40034	1	—	
Voltage L1	—	40035	1	—	Units: V
Voltage L2	—	40036	1	—	Units: V
Voltage L3	—	40037	1	—	Units: V
Current L1	—	40038	1	10	Units: Amps
Current L2	—	40039	1	10	Units: A
Current L3	—	40040	1	10	Units: A
Real Power L1	—	40041	1	10	Units: kW
Real Power L2	—	40042	1	10	Units: kW
Real Power L3	—	40043	1	10	Units: kW
DC Voltage	—	40044	1	—	Units: V

1. If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
2. The Modbus mapping in this table assumes the default Modbus offset is 1. This value is configurable via the Web interface. If the Modbus offset is changed you will need to adjust the above Holding registers accordingly.
3. This mapping table defines Liebert NX 225-600kVA UPS support using the Chloride ManageUPS Net Adapter +B communication card.

Table 3-72 Liebert NX™ 225-600kVA UPS—Chloride ManageUPS—Input and Holding [3] (continued)

Data Description	Input	Holding Register	# of Reg	Scale	Notes/Units
Output					
Source	—	40050	1	—	1 = Other 2 = None 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Frequency	—	40051	1	10	Units: Hz
Number Lines	—	40052	1	—	—
Voltage L1	—	40053	1	—	Units: V
Voltage L2	—	40054	1	—	Units: V
Voltage L3	—	40055	1	—	Units: V
Current L1	—	40056	1	10	Units: A
Current L2	—	40057	1	10	Units: A
Current L3	—	40058	1	10	Units: A
Real Power L1	—	40059	1	10	Units: kW
Real Power L2	—	40060	1	10	Units: kW
Real Power L3	—	40061	1	10	Units: kW
Percent Load L1	—	40062	1	—	Units: %
Percent Load L2	—	40063	1	—	Units: %
Percent Load L3	—	40064	1	—	Units: %
Bypass					
Line Bads	—	40070	1	—	—
Frequency	—	40071	1	10	Units: Hz
Number Lines	—	40072	1	—	—
Voltage L1	—	40073	1	—	Units: V
Voltage L2	—	40074	1	—	Units: V
Voltage L3	—	40075	1	—	Units: V
Current L1	—	40076	1	10	Units: A
Current L2	—	40077	1	10	Units: A
Current L3	—	40078	1	10	Units: A
Alarms					
Alarms Present	—	40087	1	—	Bit 0
On Battery	—	40087	1	—	Bit 2
Low Battery	—	40087	1	—	Bit 3
Depleted Battery	—	40087	1	—	Bit 4
Temperature Bad	—	40087	1	—	Bit 5
Input Bad	—	40087	1	—	Bit 6
Output Overload	—	40088	1	—	Bit 0
On Bypass	—	40088	1	—	Bit 1
Bypass Bad	—	40088	1	—	Bit 2
Charger Failed	—	40088	1	—	Bit 5
Fan Failure	—	40089	1	—	Bit 0

1. If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
2. The Modbus mapping in this table assumes the default Modbus offset is 1. This value is configurable via the Web interface. If the Modbus offset is changed you will need to adjust the above Holding registers accordingly.
3. This mapping table defines Liebert NX 225-600kVA UPS support using the Chloride ManageUPS Net Adapter +B communication card.

Table 3-72 Liebert NX™ 225-600kVA UPS—Chloride ManageUPS—Input and Holding [3] (continued)

Data Description	Input	Holding Register	# of Reg	Scale	Notes/Units
General Fault	—	40089	1	—	Bit 2
Diagnostic Test Failed	—	40089	1	—	Bit 3
Communications Lost	—	40089	1	—	Bit 4
Shutdown Pending	—	40089	1	—	Bit 6
Test In Progress	—	40090	1	—	Bit 0
General Warning	—	40090	1	—	Bit 2
Condition					
Bypass	—	40091	1	—	0 = Bypass not present 1 = Bypass on 2 = Bypass off 3 = Bypass fault 4 = Bypass not prepared
Inverter	—	40092	1	—	0 = Inverter off 1 = Inverter turning on 2 = Inverter on 3 = Inverter fault 4 = Inverter turning off
Rectifier	—	40093	1	—	0 = Rectifier Off 1 = Rectifier Turning On 2 = Rectifier On 3 = Rectifier Fault
Battery Connected	—	40094	1	—	—
NonSynchronism	—	40095	1	—	—
Parallel Condition					
In Parallel Set	—	40101	1	—	0 = UPS is Single 1 = UPS is part of parallel set
Customer-Dedicated Information	—			—	—
Customer Info 1	—	40108	1	—	—
Customer Info 2	—	40109	1	—	—
Customer Info 3	—	40110	1	—	—
Customer Info 4	—	40111	1	—	—
Customer Info 5	—	40112	1	—	—

1. If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.
2. The Modbus mapping in this table assumes the default Modbus offset is 1. This value is configurable via the Web interface. If the Modbus offset is changed you will need to adjust the above Holding registers accordingly.
3. This mapping table defines Liebert NX 225-600kVA UPS support using the Chloride ManageUPS Net Adapter +B communication card.

Table 3-73 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Status and Coil

Data Label	Status	Coil	Number of Bits	Notes
Input				
Rectifier Failure	10001	—	1	Active on Alarm
System Input Phs Rotation Error	10002	—	1	Active on Alarm
System Input Current Limit	10003	—	1	Active on Alarm
System Input Power Problem	10004	—	1	Active on Alarm
Bypass				
Bypass Static Switch Unavailable	10015	—	1	Active on Alarm
Bypass Input Voltage Fault	10016	—	1	Active on Alarm
Bypass Not Available	10017	—	1	Active on Alarm
Bypass Overload	10018	—	1	Active on Alarm
Battery				
Battery Test Failed	10029	—	1	Active on Alarm
Battery Test Passed	10030	—	1	Active on Alarm
Battery Terminals Reversed	10031	—	1	Active on Alarm
Battery Over Voltage	10032	—	1	Active on Alarm
Battery Temperature Out of Range	10033	—	1	Active on Alarm
Battery Low	10034	—	1	Active on Alarm
Battery Over Temperature	10035	—	1	Active on Alarm
Battery Discharging	10036	—	1	Active on Alarm
Battery Auto Test In Progress	10037	—	1	Active on Alarm
Battery Manual Test In Progress	10038	—	1	Active on Alarm
Battery Ground Fault	10039	—	1	Active on Alarm
DC Bus Abnormal	10040	—	1	Active on Alarm
Output				
System Output Off	10051	—	1	Active on Alarm
Output Load on Maint. Bypass	10052	—	1	Active on Alarm
UPS Output on Bypass	10053	—	1	Active on Alarm
Inverter				
Inverter Failure	10065	—	1	Active on Alarm
Inverter Overload	10066	—	1	Active on Alarm
System Output Fault	10067	—	1	Active on Alarm
Output Of/Uf	10068	—	1	Active on Alarm
System Shutdown - Output Short	10069	—	1	Active on Alarm
Inverter Desaturation	10070	—	1	Active on Alarm
Booster-Charger				
Booster Failure	10081	—	1	Active on Alarm
Charger Failure	10082	—	1	Active on Alarm
System Status				
System Shutdown - EPO	10093	—	1	Active on Alarm
Generic DIC Fault	10094	—	1	Active on Alarm
Inlet Air Over Temperature	10095	—	1	Active on Alarm
Generic Test Event	10096	—	1	Active on Alarm
Fan Hours Exceeded	10097	—	1	Active on Alarm
Unit Shutdown	10098	—	1	Active on Alarm
Main Controller Fault	10099	—	1	Active on Alarm
Equipment Over Temperature	10100	—	1	Active on Alarm

Table 3-73 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Status and Coil (continued)

Data Label	Status	Coil	Number of Bits	Notes
Maximum Load Alarm	10101	—	1	Active on Alarm
Ground Fault	10102	—	1	Active on Alarm
Switch Gear				
Backfeed Breaker Open	10113	—	1	Active on Alarm
Input Breaker Open	10114	—	1	Active on Alarm
Output Breaker Open	10115	—	1	Active on Alarm
Maintenance Bypass Breaker Closed	10116	—	1	Active on Alarm
Battery Breaker Open	10117	—	1	Active on Alarm

Table 3-74 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Input and Holding

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Input					
System Input RMS A-B	30385	—	1	10	Units : VAC Uint16
System Input RMS B-C	30386	—	1	10	Units : VAC Uint16
System Input RMS C-A	30387	—	1	10	Units : VAC Uint16
System Input RMS Current Phase A	30388	—	1	10	Units : A AC Uint16
System Input RMS Current Phase B	30389	—	1	10	Units : A AC Uint16
System Input RMS Current Phase C	30390	—	1	10	Units : A AC Uint16
System Input Frequency	30391	—	1	10	Units : Hz Uint16
Rectifier Status	30392	—	1	—	0 = off 1 = on
Rectifier Module Temperatures 1					
Rectifier Phase A Temperature sensor	30403	—	1	—	Units : deg C Int16
Rectifier Phase A Temperature sensor	30404	—	1	—	Units : deg F Int16
Rectifier Phase B Temperature sensor	30405	—	1	—	Units : deg C Int16
Rectifier Phase B Temperature sensor	30406	—	1	—	Units : deg F Int16
Rectifier Phase C Temperature sensor	30407	—	1	—	Units : deg C Int16
Rectifier Phase C Temperature sensor	30408	—	1	—	Units : deg F Int16
Rectifier Module Temperatures 2		—		—	
Rectifier Phase A Temperature sensor	30419	—	1	—	Units : deg C Int16
Rectifier Phase A Temperature sensor	30420	—	1	—	Units : deg F Int16
Rectifier Phase B Temperature sensor	30421	—	1	—	Units : deg C Int16
Rectifier Phase B Temperature sensor	30422	—	1	—	Units : deg F Int16
Rectifier Phase C Temperature sensor	30423	—	1	—	Units : deg C Int16
Rectifier Phase C Temperature sensor	30424	—	1	—	Units : deg F Int16

Table 3-74 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Rectifier Module Temperatures 4					
Rectifier Phase A Temperature sensor	30451	—	1	—	Units : deg C Int16
Rectifier Phase A Temperature sensor	30452	—	1	—	Units : deg F Int16
Rectifier Phase B Temperature sensor	30453	—	1	—	Units : deg C Int16
Rectifier Phase B Temperature sensor	30454	—	1	—	Units : deg F Int16
Rectifier Phase C Temperature sensor	30455	—	1	—	Units : deg C Int16
Rectifier Phase C Temperature sensor	30456	—	1	—	Units : deg F Int16
Bypass					
Bypass Input Voltage RMS A-B	30467	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS B-C	30468	—	1	—	Units : VAC Uint16
Bypass Input Voltage RMS C-A	30469	—	1	—	Units : VAC Uint16
Bypass Input Frequency	30470	—	1	—	Units : Hz Uint16
Static Bypass Switch	30471	—	1	—	0 = off 1 = on
Bypass Qualification Status	30472	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Battery					
DC Bus Voltage	30483	—	1	—	Units : VDC Uint16
Battery Volts for Cabinet	30484	—	1	—	Units : VDC Int16
DC Bus Current	30485	—	1	—	Units : A DC Int16
Battery Time Remaining	30486	—	1	—	Units : min Uint16
Battery Percentage Charge	30487	—	1	—	Units : % Uint16
Battery Temperature for Cabinet	30488	—	1	—	Units : deg C Int16
Battery Temperature for Cabinet	30489	—	1	—	Units : deg F Int16
DC Bus Qualification Status	30490	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
UPS battery1 status	30491	—	1	—	1 = Unknown 2 = Normal 3 = Low 4 = Depleted

Table 3-74 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Output					
System Output Voltage RMS A-B	30502	—	1	10	Units : VAC Uint16
System Output Voltage RMS B-C	30503	—	1	10	Units : VAC Uint16
System Output Voltage RMS C-A	30504	—	1	10	Units : VAC Uint16
System Output RMS Current Phs A	30505	—	1	10	Units : A AC Uint16
System Output RMS Current Phs B	30506	—	1	10	Units : A AC Uint16
System Output RMS Current Phs C	30507	—	1	10	Units : A AC Uint16
System Output Frequency	30508	—	1	10	Units : Hz Uint16
System Output Apparent Power	30509	—	1	—	Units : kVA Uint16
System Output Power	30510	—	1	—	Units : kW Uint16
System Output Apparent Power Phs A	30511	—	1	—	Units : kVA Uint16
System Output Apparent Power Phs B	30512	—	1	—	Units : kVA Uint16
System Output Apparent Power Phs C	30513	—	1	—	Units : kVA Uint16
System Output Power Phase A	30514	—	1	—	Units : kW Uint16
System Output Power Phase B	30515	—	1	—	Units : kW Uint16
System Output Power Phase C	30516	—	1	—	Units : kW Uint16
System Output Pct Power Phase A	30517	—	1	—	Units : % Uint16
System Output Pct Power Phase B	30518	—	1	—	Units : % Uint16
System Output Pct Power Phase C	30519	—	1	—	Units : % Uint16
Output Percent Load	30520	—	1	—	Units : % Uint16
Temperature	30521	—	1	—	Units : deg C Int16
Temperature	30522	—	1	—	Units : deg F Int16
UPS Output Source	30523	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Load Power Source	30524	—	1	—	0 = Load Off 1 = UPS 2 = Maintenance Bypass

Table 3-74 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Inverter					
Inverter Overload Time Remaining	30535	—	1	—	Units : sec Uint16
Inverter On/Off State	30536	—	1	—	0 = off 1 = on
Inverter Synchronization Source	30537	—	1	—	0 = External 1 = Self clock (internal) 2 = Output 3 = Bypass
Inverter Module Temperatures 1					
Inverter Phase A Temperature sensor	30548	—	1	—	Units : deg C Int16
Inverter Phase A Temperature sensor	30549	—	1	—	Units : deg F Int16
Inverter Phase B Temperature sensor	30550	—	1	—	Units : deg C Int16
Inverter Phase B Temperature sensor	30551	—	1	—	Units : deg F Int16
Inverter Phase C temperature sensor	30552	—	1	—	Units : deg C Int16
Inverter Phase C temperature sensor	30553	—	1	—	Units : deg F Int16
Inverter Module Temperatures 2					
Inverter Phase A Temperature sensor	30564	—	1	—	Units : deg C Int16
Inverter Phase A Temperature sensor	30565	—	1	—	Units : deg F Int16
Inverter Phase B Temperature sensor	30566	—	1	—	Units : deg C Int16
Inverter Phase B Temperature sensor	30567	—	1	—	Units : deg F Int16
Inverter Phase C temperature sensor	30568	—	1	—	Units : deg C Int16
Inverter Phase C temperature sensor	30569	—	1	—	Units : deg F Int16
Inverter Module Temperatures 4					
Inverter Phase A Temperature sensor	30596	—	1	—	Units : deg C Int16
Inverter Phase A Temperature sensor	30597	—	1	—	Units : deg F Int16
Inverter Phase B Temperature sensor	30598	—	1	—	Units : deg C Int16
Inverter Phase B Temperature sensor	30599	—	1	—	Units : deg F Int16
Inverter Phase C temperature sensor	30600	—	1	—	Units : deg C Int16
Inverter Phase C temperature sensor	30601	—	1	—	Units : deg F Int16
Booster-Charger					
Battery Recharge Voltage	30612	—	1	100	Units : VDC Uint16

Table 3-74 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Max Charge Current	30613	—	1	—	Units : A DC Int16
Booster On/Off State	30614	—	1	—	0 = off 1 = on
Charger On/Off State	30615	—	1	—	0 = off 1 = on
Booster Charger Module Temperatures 1					
Booster-Charger Temperature	30626	—	1	—	Units : deg C Int16
Booster-Charger Temperature	30627	—	1	—	Units : deg F Int16
Booster Charger Module Temperatures 2		—		—	
Booster-Charger Temperature	30638	—	1	—	Units : deg C Int16
Booster-Charger Temperature	30639	—	1	—	Units : deg F Int16
Booster Charger Module Temperatures 4		—		—	
Booster-Charger Temperature	30662	—	1	—	Units : deg C Int16
Booster-Charger Temperature	30663	—	1	—	Units : deg F Int16
System Status					
System Status	30674	—	1	—	1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
UPS Operating Mode	30675	—	1	—	0 = Idle 1 = Double Conversion Mode (VFI) 2 = Interactive Mode (VI) 3 = Stand-By Mode (VFD) 4 = CR Mode (CR) 5 = ECO Mode (DIM)
ECO Mode Operation State	30676	—	1	—	0 = disabled 1 = enabled
Ratings					
Output Apparent Power Rating	30687	—	1	—	Units : kVA Uint16
System Input Nominal Voltage	30688	—	1	—	Units : VAC Uint16
System Input Nominal Frequency	30689	—	1	—	Units : Hz Uint16

Table 3-75 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Glossary

Data Label	Data Description
Backfeed Breaker Open	The backfeed breaker is in the open position
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Breaker Open	The battery circuit is open.
Battery Discharging	The battery is discharging
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Manual Test In Progress	Manual battery test is in progress
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Over Voltage	The system has detected that the battery voltage has exceeded a predetermined limit.
Battery Percentage Charge	The percentage of battery charge
Battery Recharge Voltage	The recharge cell voltage for the battery.
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature Out of Range	Battery temperature is outside of acceptable range.
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Test Failed	Battery test failed
Battery Test Passed	Battery test passed
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Booster Failure	Booster failure - boost is off
Booster On/Off State	Booster on/off state
Booster-Charger Temperature	Temperature measured at the charger stage
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage Fault	The system has detected the bypass voltage is unqualified.
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload	Bypass overloaded, reduce load immediately.
Bypass Qualification Status	bypass qualification status
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
Charger Failure	Charger Failure - Charger is off
Charger On/Off State	Charger on/off state
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Qualification Status	dc bus qualification status
DC Bus Voltage	The voltage between the postivie and negative terminals of the internal DC Bus.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Fan Hours Exceeded	Operating hours for the unit blower fan have exceeded the threshold.
Generic DIC Fault	The control board reports a fault - Service required.
Generic Test Event	A generic test event designed to evaluate system handling of events
Ground Fault	An AC phase to ground fault or three phase fault to ground exists on the output of the UPS.
Inlet Air Over Temperature	The inlet air exceeds the maximum temperature threshold
Input Breaker Open	The main input breaker is open.

Table 3-75 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Glossary (continued)

Data Label	Data Description
Inverter Desaturation	Inverter Desaturation
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Overload Time Remaining	The calculated time remaining before inverter shutdown
Inverter Overload	Inverter in overload fault
Inverter Phase A Temperature sensor	Inverter temperature sensor reading for Phase A.
Inverter Phase B Temperature sensor	Inverter temperature sensor reading for Phase B.
Inverter Phase C temperature sensor	Inverter temperature sensor reading for Phase C.
Inverter Synchronization Source	The reference source for inverter synchronization
Load Power Source	Load power source
Main Controller Fault	A Main Controller fault has been detected.
Maintenance Bypass Breaker Closed	The maintenance bypass breaker is closed.
Max Charge Current	The maximum allowed current to be used for charging the batteries.
Maximum Load Alarm	Maximum load alarm indicating load setting has been exceeded.
Output Apparent Power Rating	Output apparent power rating
Output Breaker Open	The output breaker is open.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Of/Uf	The output frequency has exceeded a specified range for a specified period of time.
Output Percent Load	The percentage of the system's total rated output current that is flowing from the system.
Rectifier Failure	Rectifier failure - rectifier is off
Rectifier Phase A Temperature sensor	Rectifier temperature sensor reading for Phase A.
Rectifier Phase B Temperature sensor	Rectifier temperature sensor reading for Phase B.
Rectifier Phase C Temperature sensor	Rectifier temperature sensor reading for Phase C.
Rectifier Status	rectifier status
Static Bypass Switch	Static Bypass Switch state - On/Off
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power Phs A	System output apparent power on phase A
System Output Apparent Power Phs B	System output apparent power on phase B
System Output Apparent Power Phs C	System output apparent power on phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Off	The system output is off
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity

Table 3-75 Liebert NX 225-600kVA UPS—IS-UNITY-DP—Glossary (continued)

Data Label	Data Description
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Power Phase A	The system output power on phase A.
System Output Power Phase B	The system output power on phase B.
System Output Power Phase C	The system output power on phase C.
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Shutdown - Output Short	Shutdown was due to a short on the output.
System Status	The operating status for the system
Temperature	Temperature measured at the temperature sensor
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
UPS battery1 status	UPS battery status
UPS Operating Mode	UPS Operating Mode
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source

Table 3-76 Liebert NXL™—60Hz, UL version (Model 40)—Status and Coil

Data Label	Status	Coil	# of Bits	Notes	NXL Type
Battery Self Test	10082	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Low Shutdown	10092	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Shutdown - REPO	10093	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
UPS Output on Bypass	10129	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Output Load on Maint. Bypass	10132	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Main Battery Disconnect Open	10136	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Bypass - Excess Auto Retransfers	10147	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Battery Low	10152	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Shutdown - EPO	10157	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Output Off	10158	—	1	Active on Alarm	Deprecated
Battery Over Temperature	10172	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Inlet Air Over Temperature	10173	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Input Current Imbalance	10185	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Input Phs Rotation Error	10191	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Rectifier Failure	10259	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Inverter Failure	10263	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Main Controller Fault	10293	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Bypass Not Available	10321	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Overload Phase A	10322	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Overload Phase B	10323	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Overload Phase C	10324	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Auto Retransfer Failed	10325	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Static Switch Unavailable	10326	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Static Switch Overload	10327	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Excessive Pulse Parallel	10328	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Auto Transfer Failed	10329	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Frequency Error	10330	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass - Manual Rexfr Inhibited	10331	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass - Manual Xfr Inhibited	10332	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Bypass Static Switch Off Extrnl	10333	—	1	Active on Alarm	CE only
BatteryCharging	10600	—	1	Active on Alarm	SMS, 1+N, N+1
Battery Charging Reduced-Extrnl	10334	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Capacity Low	10335	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Discharging	10336	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Temperature Imbalance	10337	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Temperature Sensor Fault	10338	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Charging Inhibited	10339	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Circuit Breaker 1 Open	10340	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Circuit Breaker 2 Open	10341	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Circuit Breaker 3 Open	10342	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Circuit Breaker 4 Open	10343	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Circuit Breaker 5 Open	10344	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Circuit Breaker 6 Open	10345	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Circuit Breaker 7 Open	10346	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Circuit Breaker 8 Open	10347	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery - External Monitor 1	10348	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS

Table 3-76 Liebert NXL™—60Hz, UL version (Model 40)—Status and Coil (continued)

Data Label	Status	Coil	# of Bits	Notes	NXL Type
Battery - External Monitor 2	10349	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Over Temperature	10350	—	1	Active on Warning	N+1, 1+N, 1+1, SMS
DC Bus Ground Fault - Positive	10351	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
DC Bus Ground Fault - Negative	10352	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Output Low Power Factor	10353	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Leading Power Factor	10354	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Output Amp Over User Limit-Phs A	10355	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Output Amp Over User Limit-Phs B	10356	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Output Amp Over User Limit-Phs C	10357	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Output Fault	10358	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Inverter Overload Phase A	10359	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Inverter Overload Phase B	10360	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Inverter Overload Phase C	10361	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Inverter Inhibit - External	10362	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Inverter Shutdown - Overload	10363	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Inverter Off - External	10364	—	1	Active on Alarm	CE only
Inverter Static Switch SCR Short	10365	—	1	Active on Alarm	CE only
Equipment Over Temperature	10366	—	1	Active on Warning	SCC, N+1, 1+N, 1+1, SMS
Equipment Over Temperature	10367	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Equipment Temperature Sensor Fail	10368	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 01	10369	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 02	10370	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 03	10371	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 04	10372	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 05	10373	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 06	10374	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 07	10375	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 08	10376	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 09	10377	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 10	10378	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 11	10379	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 12	10380	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 13	10381	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 14	10382	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 15	10383	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Contact 16	10384	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Rectifier Operation Inhibit-Ext	10385	—	1	Active on Alarm	Deprecated
System Fan Failure - Redundant	10386	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Multiple Fan Failure	10387	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Auto Restart In Progress	10388	—	1	Active on Alarm	SCC, SMS
Automatic Restart Failed	10389	—	1	Active on Alarm	SCC, SMS
Fuse Failure	10390	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
System Breaker(s) Open Failure	10391	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
System Breaker(s) Close Failure	10392	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Input Filter Cycle Lock	10393	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Service Code Active	10394	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS

Table 3-76 Liebert NXL™—60Hz, UL version (Model 40)—Status and Coil (continued)

Data Label	Status	Coil	# of Bits	Notes	NXL Type
LBS Inhibited	10396	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
Controls Reset Required	10397	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Battery Test Failed	10398	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Auto Restart Inhibited - Ext	10399	—	1	Active on Alarm	SCC, SMS
Battery Test Inhibited	10400	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Equalize	10401	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Backfeed Breaker Open	10402	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
On Generator	10403	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Power Supply Failure	10404	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Battery Ground Fault	10405	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Battery Charging Error	10406	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Input Power Problem	10407	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
System Input Current Limit	10408	—	1	Active on Alarm	N+1, 1+N, 1+1, SMS
Internal Communications Failure	10409	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
System Controller Error	10410	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Output					
Output Of/Uf	10510	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
MultiModule					
Parallel Comm Warning	10521	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1
System Comm Fail	10522	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1
Loss of Redundancy	10523	—	1	Active on Alarm	SCC, 1+N, 1+1
BPSS Startup Inhibit	10524	—	1	Active on Alarm	Deprecated
MMS Transfer Inhibit	10525	—	1	Active on Alarm	SCC, 1+N, 1+1
MMS Retransfer Inhibit	10526	—	1	Active on Alarm	SCC, 1+N, 1+1
MMS Loss of Sync Pulse	10527	—	1	Active on Alarm	Deprecated
MMS Overload	10528	—	1	Active on Alarm	SCC
MMS On Battery	10529	—	1	Active on Alarm	SCC, 1+N, 1+1
MMS Low Battery Warning	10530	—	1	Active on Alarm	SCC, 1+N, 1+1
MMS Module Alarm Active	10531	—	1	Active on Alarm	SCC
MMS Sharing Calib Active	10532	—	1	Active on Alarm	SCC
Intelligent Paralleling					
Module In Standby - Intelligent Paralleling	10543	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1
ECO Mode					
ECO Mode Active	10554	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
ECO Mode Suspended	10555	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
Excess ECO Suspends	10556	—	1	Active on Alarm	SCC, N+1, 1+N, 1+1, SMS
System					
LBS Active - Master	10567	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
LBS Active - Slave	10568	—	1	Active on Alarm	SCC, 1+N, 1+1, SMS
EMO Shutdown	10575	—	1	Active on Alarm	SMS, 1+N, N+1, SCC
Cont Tie Active	10576	—	1	Active on Alarm	SMS, 1+N, N+1, SCC
User kWh Reset	10577	—	1	Active on Alarm	SMS, 1+N, N+1, SCC
Peak kW Reset	10578	—	1	Active on Alarm	SMS, 1+N, N+1, SCC
Environment					
Outlet Air Overtemperature Limit	10580	—	1	Active on Alarm	SCC, SMS, 1+N, N+1

Table 3-76 Liebert NXL™—60Hz, UL version (Model 40)—Status and Coil (continued)

Data Label	Status	Coil	# of Bits	Notes	NXL Type
Service Reminder					
Service Required	10590	—	1	Active on Alarm	SMS, 1+N, N+1, SCC

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
System Date and Time	30005	—	2	—	Masks: Year 0xFFFF 0000 Mon 0x0000 FF00 Day 0x0000 00FF	SCC, N+1, 1+N, 1+1, SMS
System Date and Time	30007	—	2	—	Masks: Hour 0xFF00 0000 Min 0x00FF 0000 Sec 0x0000 FF00	SCC, N+1, 1+N, 1+1, SMS
Output Apparent Power Rating	30021	—	2	—	kVA	SCC, N+1, 1+N, 1+1, SMS
System Input Nominal Voltage	30027	—	1	—	VAC	SCC, N+1, 1+N, 1+1, SMS
System Output Nominal Voltage	30028	—	1	—	VAC	SCC, N+1, 1+N, 1+1, SMS
Bypass Nominal Voltage	30029	—	1	—	VAC	SCC, 1+N, 1+1, SMS
System Input Nominal Frequency	30031	—	1	10	Hz	SCC, N+1, 1+N, 1+1, SMS
System Output Nominal Frequency	30032	—	1	10	Hz	SCC, N+1, 1+N, 1+1, SMS
System Output Apparent Power	30102	—	2	—	kVA	N+1, 1+N, 1+1, SMS
System Output Power	30104	—	2	—	kW	N+1, 1+N, 1+1, SMS
System Input Frequency	30107	—	1	10	Hz	N+1, 1+N, 1+1, SMS
System Output Frequency	30108	—	1	10	Hz	N+1, 1+N, 1+1, SMS
Bypass Input Frequency	30109	—	1	10	Hz	SCC, 1+N, 1+1, SMS
Battery Volts at Main Disconnect	30113	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Time Remaining	30115	—	1	—	min	N+1, 1+N, 1+1, SMS
Battery Percentage Charge	30116	—	1	—	—	N+1, 1+N, 1+1, SMS
Inlet Air Temperature	30119	—	1	—	deg C	SCC, N+1, 1+N, 1+1, SMS
System Input RMS A-B	30151	—	1	—	VAC	N+1, 1+N, 1+1, SMS
System Input RMS Current Phase A	30154	—	1	—	A AC	N+1, 1+N, 1+1, SMS
Bypass Input Voltage RMS A-B	30157	—	1	—	VAC	SCC, 1+N, 1+1, SMS
System Output Voltage RMS A-B	30161	—	1	—	VAC	N+1, 1+N, 1+1, SMS
System Output Voltage RMS A-N	30162	—	1	—	VAC	N+1, 1+N, 1+1, SMS

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
System Output RMS Current Phs A	30164	—	1	—	A AC	N+1, 1+N, 1+1, SMS
System Output Pct Power Phase A	30165	—	1	—	%	N+1, 1+N, 1+1, SMS
System Output Power Factor Phs A	30166	—	1	100	—	N+1, 1+N, 1+1, SMS
System Input RMS B-C	30201	—	1	—	VAC	N+1, 1+N, 1+1, SMS
System Input RMS Current Phase B	30204	—	1	—	A AC	N+1, 1+N, 1+1, SMS
Bypass Input Voltage RMS B-C	30207	—	1	—	VAC	SCC, 1+N, 1+1, SMS
System Output Voltage RMS B-C	30211	—	1	—	VAC	N+1, 1+N, 1+1, SMS
System Output Voltage RMS B-N	30212	—	1	—	VAC	N+1, 1+N, 1+1, SMS
System Output RMS Current Phs B	30214	—	1	—	A AC	N+1, 1+N, 1+1, SMS
System Output Pct Power Phase B	30215	—	1	—	%	N+1, 1+N, 1+1, SMS
System Output Power Factor Phs B	30216	—	1	100	—	N+1, 1+N, 1+1, SMS
System Input RMS C-A	30251	—	1	—	VAC	N+1, 1+N, 1+1, SMS
System Input RMS Current Phase C	30254	—	1	—	A AC	N+1, 1+N, 1+1, SMS
Bypass Input Voltage RMS C-A	30257	—	1	—	VAC	SCC, 1+N, 1+1, SMS
System Output Voltage RMS C-A	30261	—	1	—	VAC	N+1, 1+N, 1+1, SMS
System Output Voltage RMS C-N	30262	—	1	—	VAC	N+1, 1+N, 1+1, SMS
System Output RMS Current Phs C	30264	—	1	—	A AC	N+1, 1+N, 1+1, SMS
System Output Pct Power Phase C	30265	—	1	—	%	N+1, 1+N, 1+1, SMS
System Output Power Factor Phs C	30266	—	1	100	—	N+1, 1+N, 1+1, SMS
Battery Discharge Time	30309	—	1	—	sec	N+1, 1+N, 1+1, SMS
Battery Amp-Hours Consumed This Discharge	30310	—	1	—	AH	N+1, 1+N, 1+1, SMS
Input Qualification Status	30312	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High	N+1, 1+N, 1+1, SMS
Bypass Sync Phase Difference	30313	—	1	—	deg	SCC, 1+N, 1+1, SMS
Bypass SS Overload Time Remain	30314	—	1	—	sec	SCC, 1+N, 1+1, SMS

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
Bypass Qualification Status	30315	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High	SCC, 1+N, 1+1, SMS
Total Bypass Operating Time	30830	—	2	—	Units : hr	SMS, 1+N, SCC
Battery Total Discharge Time	30316	—	1	—	hr	N+1, 1+N, 1+1, SMS
Battery Discharge Power	30317	—	1	—	W	N+1, 1+N, 1+1, SMS
Battery Last Discharge Date	30318	—	2	—	Masks: Year 0xFFFF 0000 Mon 0x0000 FF00 Day 0x0000 00FF	N+1, 1+N, 1+1, SMS
Battery Last Discharge Date	30320	—	2	—	Masks: Hour 0xFF00 0000 Min 0x00FF 0000 Sec 0x0000 FF00	N+1, 1+N, 1+1, SMS
Battery Commission Date	30322	—	2	—	Masks: Year 0xFFFF 0000 Mon 0x0000 FF00 Day 0x0000 00FF	N+1, 1+N, 1+1, SMS
Battery Commission Date	30324	—	2	—	Masks: Hour 0xFF00 0000 Min 0x00FF 0000 Sec 0x0000 FF00	N+1, 1+N, 1+1, SMS
DC Bus Voltage	30326	—	1	—	VDC	N+1, 1+N, 1+1, SMS
DC Bus Current	30327	—	1	—	A DC	N+1, 1+N, 1+1, SMS
DC Bus Qualification Status	30328	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High	N+1, 1+N, 1+1, SMS
System Output Pct Pwr (VA) Phs A	30329	—	1	—	%	N+1, 1+N, 1+1, SMS
System Output Pct Pwr (VA) Phs B	30330	—	1	—	%	N+1, 1+N, 1+1, SMS
System Output Pct Pwr (VA) Phs C	30331	—	1	—	%	N+1, 1+N, 1+1, SMS
Output Qualification Status	30332	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High	N+1, 1+N, 1+1, SMS
Inverter Overload Time Remaining	30333	—	1	—	sec	N+1, 1+N, 1+1, SMS
Inverter Output Qualification Status	30334	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High	N+1, 1+N, 1+1, SMS
Total System Operating Time	30335	—	2	—	hr	SCC, N+1, 1+N, 1+1, SMS

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
Rectifier Pulse Count	30337	—	1	—	0 = 6 Pulse 1 = 12 Pulse 2 = 18 Pulse 3 = 24 Pulse	N+1, 1+N, 1+1, SMS
Rectifier Input Passive Filter	30338	—	1	—	0 = Not Installed 1 = Installed	N+1, 1+N, 1+1, SMS
Rectifier Passive Filter Switch	30339	—	1	—	0 = Not Installed 1 = Installed	N+1, 1+N, 1+1, SMS
Rectifier Active Filter	30340	—	1	—	0 = Not Installed 1 = Installed	N+1, 1+N, 1+1, SMS
Rectifier Status	30341	—	1	—	0 = off 1 = on	N+1, 1+N, 1+1, SMS
System Status	30342	—	1	—	1 = Normal Operation 2 = Startup 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation	SCC, N+1, 1+N, 1+1, SMS
UPS Module Type	30343	—	1	—	0 = Single Module System 1 = Module (1 + 1) 2 = Module (1 + N) 3 = Module (N + 1) 4 = System Control Cabinet 5 = Main Static Switch	SCC, N+1, 1+N, 1+1, SMS
Static Switch Type	30344	—	1	—	0 = Not Applicable 1 = Continuous Duty 2 = Momentary Duty	SCC, 1+N, 1+1, SMS
System Input Power Source	30345	—	1	—	0 = None 1 = Utility (mains) 2 = Generator	SCC, N+1, 1+N, 1+1, SMS
Output Real Power Rating	30346	—	2	—	kW	SCC, N+1, 1+N, 1+1, SMS
Input Isolation Transformer	30348	—	1	—	0 = Not Installed 1 = Installed	SCC, N+1, 1+N, 1+1, SMS
System Output Maximum Amp Rating	30350	—	1	—	A AC	SCC, 1+N, 1+1
Output Wire Configuration	30353	—	1	—	0 = Two Wire (single phase + return) 1 = Two Wire (2 phase, no neutral) 2 = Three Wire (2 phase + neutral) 3 = Three Wire (3-phase, no neutral) 4 = Four Wire (3 phases + neutral)	SCC, N+1, 1+N, 1+1, SMS
Battery Cell Count - Lead Acid	30354	—	1	—	—	SCC, N+1, 1+N, 1+1, SMS
Battery Cell Count-Nickel Cadmium	30355	—	1	—	—	SCC, N+1, 1+N, 1+1, SMS

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
UPS System Output Source	30356	—	1	—	0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass	SCC, 1+N, 1+1, SMS
Static Bypass Switch	30357	—	1	—	0 = off 1 = on	SCC, 1+N, 1+1, SMS
Battery Volts for Cabinet 1	30358	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Volts for Cabinet 2	30359	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Volts for Cabinet 3	30360	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Volts for Cabinet 4	30361	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Volts for Cabinet 5	30362	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Volts for Cabinet 6	30363	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Volts for Cabinet 7	30364	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Volts for Cabinet 8	30365	—	1	—	VDC	N+1, 1+N, 1+1, SMS
Battery Temperature for Cabinet 1	30366	—	1	—	deg C	N+1, 1+N, 1+1, SMS
Battery Temperature for Cabinet 2	30367	—	1	—	deg C	N+1, 1+N, 1+1, SMS
Battery Temperature for Cabinet 3	30368	—	1	—	deg C	N+1, 1+N, 1+1, SMS
Battery Temperature for Cabinet 4	30369	—	1	—	deg C	N+1, 1+N, 1+1, SMS
Battery Temperature for Cabinet 5	30370	—	1	—	deg C	N+1, 1+N, 1+1, SMS
Battery Temperature for Cabinet 6	30371	—	1	—	deg C	N+1, 1+N, 1+1, SMS
Battery Temperature for Cabinet 7	30372	—	1	—	deg C	N+1, 1+N, 1+1, SMS
Battery Temperature for Cabinet 8	30373	—	1	—	deg C	N+1, 1+N, 1+1, SMS
Backfeed Breaker	30374	—	1	—	0 = Open 1 = Close 2 = Not Installed	N+1, 1+N, 1+1, SMS
SBS Load Disconnect	30375	—	1	—	0 = Open 1 = Close 2 = Not Installed	Deprecated
Input Breaker (CB1/RIB)	30376	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, N+1, 1+N, 1+1, SMS
Trap Filter Disconnect	30377	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, N+1, 1+N, 1+1, SMS
Output Breaker (CB2/IOB)	30378	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, N+1, 1+N, 1+1, SMS

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
Internal Bypass Breaker (CB3)	30379	—	1	—	0 = Open 1 = Close 2 = Not Installed	Deprecated
Bypass Isolation Breaker (BIB)	30380	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, 1+N, 1+1, SMS
Rectifier Feed Breaker (RFB)	30381	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS
Maintenance Bypass Breaker (MBB)	30382	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, 1+N, 1+1, SMS
Maintenance Isolation Breaker (MIB)	30383	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, 1+N, 1+1, SMS
Output Series Static Switch	30384	—	1	—	0 = Open 1 = Close 2 = Not Installed	LEU/LAP only
Module Output Breaker (MOB)	30385	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, 1+N, 1+1
Battery Amp-Hours Consumed	30386	—	2	—	AH	N+1, 1+N, 1+1, SMS
Auto Retransfer Time Remaining	30388	—	1	—	sec	SCC, 1+N, 1+1, SMS
Inverter On/Off State	30389	—	1	—	0 = off 1 = on	SCC, N+1, 1+N, 1+1, SMS
UPS Battery Status	30390	—	1	—	1 = Unknown 2 = Normal 3 = Low 4 = Depleted	N+1, 1+N, 1+1, SMS
UPS Output Source	30391	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer	SCC, 1+N, 1+1, SMS
System Date and Time	39998	49998	2	—	—	SCC, N+1, 1+N, 1+1, SMS
Environment						
Total kW Hours Saved	30491	—	2	—	Units : kWH	SCC, N+1, 1+N, 1+1, SMS
System Date and Time	39998	49998	2	—	Secs since Epoch(UTC)	SCC, N+1, 1+N, 1+1, SMS

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
System						
Bypass Input Wire Configuration	30496	—	1	—	0 = Two Wire (single phase + return) 1 = Two Wire (2 phase, no neutral) 2 = Three Wire (2 phase + neutral) 3 = Three Wire (3 phase, no neutral) 4 = Four Wire (3 phases + neutral)	SCC, 1+N, 1+1, SMS
Configuration Description	30497	—	1	—	0 = Single Module System 33 1 = Single Module System 34 2 = Single Module System 44 3 = 1+1 33 4 = 1+1 34 5 = 1+1 44 6 = 1+N 33 7 = 1+N 34 8 = 1+N 44 9 = N+1 33 10 = N+1 34 11 = N+1 44 12 = SCC w/Continuous Duty SS 33 13 = SCC w/ Continuous Duty SS 44 14 = SCC w/ Momentary Duty SS 15 = Main Static Switch	SCC, N+1, 1+N, 1+1, SMS
System Accumulated Energy	30810	40810	2	10	Units: kWH	SCC, 1+N, N+1
Module Accumulated Energy	30812	40812		10	Units: kWH	SMS, 1+N, N+1, SCC
Output kWh Reset Timestamp	30814	—	2	—	Secs since Epoch(UTC)	SMS, 1+N, N+1, SCC
Output Peak kW Demand	30816	—		—	Units: kWH	SMS, 1+N, N+1, SCC
Output Peak kW Demand Hist	30817	—	1	—	Units: kW	SMS, 1+N, N+1, SCC
Peak kW Demand Period	30818	—	1	—	1 = Hourly 2 = Daily 3 = Weekly 4 = Monthly 5 = Yearly	SMS, 1+N, N+1, SCC
Peak kW Demand Timestamp	30819	—	2	—	Secs since Epoch(UTC)	SMS, 1+N, N+1, SCC
Ratings						
System UPS Module Count	30501	—	1	—	—	SCC, 1+N, 1+1, SMS

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
MultiModule						
Multi-module System Output Voltage RMS A-B	30505	—	1	—	Units : VAC	1+N, SCC
Multi-module System Output Voltage RMS B-C	30506	—	1	—	Units : VAC	1+N, SCC
Multi-module System Output Voltage RMS C-A	30507	—	1	—	Units : VAC	1+N, SCC
Multi-module System Output Voltage RMS A-N	30508	—	1	—	Units : VAC	1+N, SCC
Multi-module System Output Voltage RMS B-N	30509	—	1	—	Units : VAC	1+N, SCC
Multi-module System Output Voltage RMS C-N	30510	—	1	—	Units : VAC	1+N, SCC
Sum of MMS Output RMS Currents for Phase A	30511	—	1	—	Units : A AC	1+N, SCC
Sum of MMS Output RMS Currents for Phase B	30512	—	1	—	Units : A AC	1+N, SCC
Sum of MMS Output RMS Currents for Phase C	30513	—	1	—	Units : A AC	1+N, SCC
MMS Output Frequency	30514	—	1	10	Units : Hz	1+N, SCC
MMS Output Power	30515	—	1	—	Units : kW	1+N, SCC
MMS Output Apparent Power	30516	—	1	—	Units : kVA	1+N, SCC
MMS Output Power Factor Phase A	30517	—	1	100	—	1+N, SCC
MMS Output Power Factor Phase B	30518	—	1	100	—	1+N, SCC
MMS Output Power Factor Phase C	30519	—	1	100	—	1+N, SCC
MMS Output Pct Power Phase A	30520	—	1	—	Units : %	1+N, SCC
MMS Output Pct Power Phase B	30521	—	1	—	Units : %	1+N, SCC
MMS Output Pct Power Phase C	30522	—	1	—	Units : %	1+N, SCC
MMS Output Pct Apparent Pwr (kVA) Phase A	30523	—	1	—	Units : %	1+N, SCC
MMS Output Pct Apparent Pwr (kVA) Phase B	30524	—	1	—	Units : %	1+N, SCC
MMS Output Pct Apparent Pwr (kVA) Phase C	30525	—	1	—	Units : %	1+N, SCC
Number of Redundant Modules	30526	—	1	—	—	1+N, SCC
MMS Module Number	30527	—	1	—	—	1+N, SCC
Number of Modules in an MMS	30528	—	1	—	—	1+N, SCC
Module Output Breaker for Module 1 (MOB1)	30529	—	1	—	0 = Open 1 = Close 2 = Not Installed	1+N, SCC
Module Output Breaker for Module 2 (MOB2)	30530	—	1	—	0 = Open 1 = Close 2 = Not Installed	1+N, SCC
Module Output Breaker for Module 3 (MOB3)	30531	—	1	—	0 = Open 1 = Close 2 = Not Installed	1+N, SCC

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
Module Output Breaker for Module 4 (MOB4)	30532	—	1	—	0 = Open 1 = Close 2 = Not Installed	1+N, SCC
Module Output Breaker for Module 5 (MOB5)	30533	—	1	—	0 = Open 1 = Close 2 = Not Installed	1+N, SCC
Module Output Breaker for Module 6 (MOB6)	30534	—	1	—	0 = Open 1 = Close 2 = Not Installed	1+N, SCC
Module Output Breaker for Module 7 (MOB7)	30535	—	1	—	0 = Open 1 = Close 2 = Not Installed	1+N, SCC
Module Output Breaker for Module 8 (MOB8)	30536	—	1	—	0 = Open 1 = Close 2 = Not Installed	1+N, SCC
Bypass Isolation Breaker for Module 1 (BIB1)	30537	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS, 1+N
Bypass Isolation Breaker for Module 2 (BIB2)	30538	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS, 1+N
Bypass Isolation Breaker for Module 3 (BIB3)	30539	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS, 1+N
Bypass Isolation Breaker for Module 4 (BIB4)	30540	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS, 1+N
Bypass Isolation Breaker for Module 5 (BIB5)	30541	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS, 1+N
Bypass Isolation Breaker for Module 6 (BIB6)	30542	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS, 1+N
Bypass Isolation Breaker for Module 7 (BIB7)	30543	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS, 1+N
Bypass Isolation Breaker for Module 8 (BIB8)	30544	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC, SMS, 1+N
System Output Breaker (UOB)	30545	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC
System Load Bank Breaker (LBB)	30546	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC
System Isolation Output Breaker (IOB)	30547	—	1	—	0 = Open 1 = Close 2 = Not Installed	SCC
SCC Event Summary	30548	—	1	—	0 = None 1 = Alarm 2 = Fault	SCC
MMS UPS Battery Status	30549	—	1	—	1 = Unknown 2 = Normal 3 = Low 4 = Depleted	SCC, N+1, 1+N,

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
MMS UPS Output Source	30550	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer	SCC, 1+N,
ModuleList 1						
MMS Inter-Module Comm Status	30554	—	1	—	0 = Failed 1 = Normal	1+N, SCC
MMS Event Summary	30555	—	1	—	0 = None 1 = Alarm 2 = Fault	1+N, SCC
MMS Module Inverter Status	30556	—	1	—	0 = off 1 = on	SCC, 1+N
MMS Module Output Voltage Status	30557	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High	1+N, SCC
MMS Module Output Source	30558	—	1	—	0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass	1+N, SCC
MMS Module Total kW Output	30559	—	1	—	Units : kW	SCC
MMS Module Total kVA Output	30560	—	1	—	Units : kVA	SCC
MMS Module DC Bus Voltage	30561	—	1	—	Units : VDC	SCC
MMS Module Battery Current	30562	—	1	—	Units : A DC	SCC
MMS Module Battery Time Remaining	30563	—	1	—	Units : min	SCC
ModuleList 2						
MMS Inter-Module Comm Status	30567	—	1	—	0 = Failed 1 = Normal	1+N, SCC
MMS Event Summary	30568	—	1	—	0 = None 1 = Alarm 2 = Fault	1+N, SCC
MMS Module Inverter Status	30569	—	1	—	0 = off 1 = on	1+N, SCC
MMS Module Output Voltage Status	30570	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High	1+N, SCC
MMS Module Output Source	30571	—	1	—	0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass	1+N, SCC
MMS Module Total kW Output	30572	—	1	—	Units : kW	SCC
MMS Module Total kVA Output	30573	—	1	—	Units : kVA	SCC
MMS Module DC Bus Voltage	30574	—	1	—	Units : VDC	SCC
MMS Module Battery Current	30575	—	1	—	Units : A DC	SCC
MMS Module Battery Time Remaining	30576	—	1	—	Units : min	SCC

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
ModuleList 8						
MMS Inter-Module Comm Status	30645	—	1	—	0 = Failed 1 = Normal	1+N, SCC
MMS Event Summary	30646	—	1	—	0 = None 1 = Alarm 2 = Fault	1+N, SCC
MMS Module Inverter Status	30647	—	1	—	0 = off 1 = on	1+N, SCC
MMS Module Output Voltage Status	30648	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High	1+N, SCC
MMS Module Output Source	30649	—	1	—	0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass	1+N, SCC
MMS Module Total kW Output	30650	—	1	—	Units : kW	SCC
MMS Module Total kVA Output	30651	—	1	—	Units : kVA	SCC
MMS Module DC Bus Voltage	30652	—	1	—	Units : VDC	SCC
MMS Module Battery Current	30653	—	1	—	Units : A DC	SCC
MMS Module Battery Time Remaining	30654	—	1	—	Units : min	SCC
Intelligent Paralleling						
Intelligent Parallel Operation State	30658	—	1	—	0 = disabled 1 = enabled	N+1, 1+N, SCC
Intelligent Parallel Mode	30659	—	1	—	1 = Disconnect (More Efficient)	N+1, 1+N, SCC
Intelligent Paralleling Shutdown Delay	30660	—	1	—	Units : min	N+1, 1+N, SCC
Intelligent Parallel Minimum Redundancy	30661	—	1	—	—	N+1, 1+N, SCC
Intelligent Parallel Maximum Time in Standby	30662	—	1	—	Units : day	N+1, 1+N, SCC
ECO Mode						
ECO Mode Operation State	30666	40666	1	—	0 = disabled 1 = enabled	SMS, 1+N, SCC
Continuous Operation - ECO Mode	30667	—	1	—	0 = disabled 1 = enabled	SMS, 1+N, SCC
Maximum Auto Suspensions - ECO Mode	30668	—	1	—	—	SMS, 1+N, SCC
Restart Delay - ECO Mode	30669	—	1	—	Units : min	SMS, 1+N, SCC
Time Remaining - ECO Mode	30670	—	1	—	Units : min	SMS, 1+N, SCC

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-77 Liebert NXL™—60Hz, UL version (Model 40)—Input and Holding (continued)

Data Label	Input Register	Holding Register	# of Regs	Scale	Units / Notes	NXL Types
EcoModeSchedule 1						
Schedule Operation State - ECO Mode	30674	—	1	—	0 = disabled 1 = enabled	SMS, 1+N, SCC
Schedule Action - ECO Mode	30675	—	1	—	0 = stop 1 = start	SMS, 1+N, SCC
Schedule Day of Week - ECO Mode	30676	—	1	—	0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday	SMS, 1+N, SCC
Schedule Hour - ECO Mode	30677	—	1	—	Units : hr	SMS, 1+N, SCC
Schedule Minute - ECO Mode	30678	—	1	—	Units : min	SMS, 1+N, SCC
EcoModeSchedule 2						
Schedule Operation State - ECO Mode	30682	—	1	—	0 = disabled 1 = enabled	SMS, 1+N, SCC
Schedule Action - ECO Mode	30683	—	1	—	0 = stop 1 = start	SMS, 1+N, SCC
Schedule Day of Week - ECO Mode	30684	—	1	—	0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday	SMS, 1+N, SCC
Schedule Hour - ECO Mode	30685	—	1	—	Units : hr	SMS, 1+N, SCC
Schedule Minute - ECO Mode	30686	—	1	—	Units : min	SMS, 1+N, SCC
EcoModeSchedule 16						
Schedule Operation State - ECO Mode	30794	—	1	—	0 = disabled 1 = enabled	SMS, 1+N, SCC
Schedule Action - ECO Mode	30795	—	1	—	0 = stop 1 = start	SMS, 1+N, SCC
Schedule Day of Week - ECO Mode	30796	—	1	—	0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday	SMS, 1+N, SCC
Schedule Hour - ECO Mode	30797	—	1	—	Units : hr	SMS, 1+N, SCC
Schedule Minute - ECO Mode	30798	—	1	—	Units : min	SMS, 1+N, SCC
Battery						
Total Number of Battery Discharges	30821	—	1	—	—	SMS, 1+N, N+1

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-78 Liebert NXL™—60Hz, UL version (Model 40)—Glossary

Data Label	Data Description
Auto Restart In Progress	Auto restart is in progress
Auto Restart Inhibited - Ext	Auto restart inhibited due to an external signal
Auto Retransfer Time Remaining	Time remaining before an inverter overload or inverter fault can be cleared and auto retransfer from the bypass to the inverter can take place
Automatic Restart Failed	Automatic restart failed
Backfeed Breaker Open	The backfeed breaker is in the open position
Backfeed Breaker	Backfeed breaker
Battery - External Monitor 1	External battery monitor 1 - battery maintenance required
Battery - External Monitor 2	External battery monitor 2 - battery maintenance required
Battery Amp-Hours Consumed This Discharge	Battery amp-hours withdrawn this discharge.
Battery Amp-Hours Consumed	Cumulative battery amp-hours withdrawn over the life of the battery
Battery Capacity Low	Battery capacity is low
Battery Cell Count - Lead Acid	Battery cell count - lead acid
Battery Cell Count-Nickel Cadmium	Battery cell count - nickel cadmium
Battery Charging	The UPS battery is charging (battery charge percentage lower than 98)
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Charging Reduced-Extrnl	Using a reduced battery charging algorithm due to an external signal
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Circuit Breaker 5 Open	Battery circuit breaker 5 is open
Battery Circuit Breaker 6 Open	Battery circuit breaker 6 is open
Battery Circuit Breaker 7 Open	Battery circuit breaker 7 is open
Battery Circuit Breaker 8 Open	Battery circuit breaker 8 is open
Battery Commission Date	Date and time when battery placed into service
Battery Discharge Power	Instantaneous battery power while discharging
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Last Discharge Date	The date and time of the last battery discharge
Battery Low Shutdown	Battery disconnect due to end-of-discharge.
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Percentage Charge	The percentage of battery charge
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature Imbalance	Excessive temperature differences between battery sensors detected
Battery Temperature Sensor Fault	A battery temperature sensor fault has been detected
Battery Test Failed	Battery test failed
Battery Test Inhibited	Automatic (scheduled) battery tests are inhibited
Battery Time Remaining	The calculated available time on battery
Battery Total Discharge Time	The cumulative battery discharge time
Battery Volts at Main Disconnect	The voltage between the positive and the negative battery terminals of the common battery disconnect

Table 3-78 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass - Manual Rexfr Inhibited	Manual transfer from bypass to inverter is inhibited.
Bypass - Manual Xfr Inhibited	Manual transfer from inverter to bypass is inhibited.
Bypass Auto Retransfer Failed	After performing a recoverable transfer to bypass, an attempt to auto retransfer from bypass to inverter failed
Bypass Auto Transfer Failed	An automatic transfer to static bypass failed
Bypass Excessive Pulse Parallel	The system has performed too many pulse parallel operations within a specified time interval
Bypass Frequency Error	The bypass frequency is outside the inverter synchronization limits
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Isolation Breaker (BIB)	Bypass isolation breaker (BIB)
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload Phase A	An overload exists on output phase A while operating on the bypass
Bypass Overload Phase B	An overload exists on output phase B while operating on the bypass
Bypass Overload Phase C	An overload exists on output phase C while operating on the bypass
Bypass Qualification Status	bypass qualification status
Bypass SS Overload Time Remain	The calculated time remaining before bypass static switch shutdown due to the present overload condition
Bypass Static Switch Off Extrnl	Bypass static switch is off due to the state of an external signal
Bypass Static Switch Overload	Bypass off due to static switch overload
Bypass Static Switch Unavailable	The static bypass switch is off, and unable to operate
Bypass Sync Phase Difference	The phase angle difference between the inverter output and bypass source
Controls Reset Required	A controls reset is required due to one or more critical settings changing
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Ground Fault - Negative	A ground fault has been detected on the negative DC Bus link
DC Bus Ground Fault - Positive	A ground fault has been detected on the positive DC Bus link
DC Bus Qualification Status	DC bus qualification status
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
Equipment Over Temperature	Equipment over temperature summary event
Equipment Temperature Sensor Fail	One or more temperature sensors report a temperature outside of the range of expected operation.
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Over Temperature	The inlet air exceeds the maximum temperature threshold
Inlet Air Temperature	The temperature of the inlet air
Input Breaker (CB1/RIB)	Input breaker (CB1/RIB)
Input Contact 01	The external input contact 1
Input Contact 02	The external input contact 2
Input Contact 03	The external input contact 3
Input Contact 04	The external input contact 4

Table 3-78 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
Input Contact 05	The external input contact 5
Input Contact 06	The external input contact 6
Input Contact 07	The external input contact 7
Input Contact 08	The external input contact 8
Input Contact 09	The external input contact 9
Input Contact 10	The external input contact 10
Input Contact 11	The external input contact 11
Input Contact 12	The external input contact 12
Input Contact 13	The external input contact 13
Input Contact 14	The external input contact 14
Input Contact 15	The external input contact 15
Input Contact 16	The external input contact 16
Input Filter Cycle Lock	The input filter disconnect is open due to exceeding the maximum number of cycles.
Input Isolation Transformer	Input isolation transformer
Input Qualification Status	input qualification status
Internal Bypass Breaker (CB3)	Internal bypass breaker (CB3)
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter Inhibit - External	Restart of the inverter is inhibited by an external signal
Inverter Off - External	Inverter is off (operation is inhibited) due to external signal state
Inverter On/Off State	inverter on/off state
Inverter Output Qualification Status	inverter output qualification status
Inverter Overload Phase A	Inverter is operating with an overload on phase A
Inverter Overload Phase B	Inverter is operating with an overload on phase B
Inverter Overload Phase C	Inverter is operating with an overload on phase C
Inverter Overload Time Remaining	The calculated time remaining before inverter shutdown
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Static Switch SCR Short	The system has detected a short across one or more inverter static switch Silicon Controlled Rectifiers (SCR)
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Leading Power Factor	The leading output Power Factor has fallen below a specified value
Main Battery Disconnect Open	Main battery disconnect is open
Main Controller Fault	A Main Controller fault has been detected.
Maintenance Bypass Breaker (MBB)	Maintenance bypass breaker (MBB)
Maintenance Isolation Breaker (MIB)	Maintenance isolation breaker (MIB)
Module Output Breaker (MOB)	Module output breaker (MOB)
Multiple Fan Failure	Multiple fan failure
On Generator	A generator is supplying the power to the system
Output Amp Over User Limit-Phs A	The phase A output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs B	The phase B output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs C	The phase C output has exceeded the user amperage threshold
Output Apparent Power Rating	Output apparent power rating
Output Breaker (CB2/IOB)	Output breaker (CB2/IOB)
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Qualification Status	output qualification status

Table 3-78 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
Output Real Power Rating	Output real power rating
Output Series Static Switch	output series static switch
Output Wire Configuration	Output wire configuration
Power Supply Failure	Power supply failure
Rectifier Active Filter	Rectifier input active filter configuration
Rectifier Failure	Rectifier failure - rectifier is off
Rectifier Feed Breaker (RFB)	Rectifier feed breaker (RFB)
Rectifier Input Passive Filter	Rectifier input passive filter configuration
Rectifier Operation Inhibit-Ext	The operation of the rectifier is inhibited by an external signal
Rectifier Passive Filter Switch	Rectifier input passive filter switch configuration
Rectifier Pulse Count	Rectifier pulse count per cycle configuration
Rectifier Status	rectifier status
SBS Load Disconnect	SBS load disconnect
Service Code Active	Service code is running
Static Bypass Switch	Static Bypass Switch state - On/Off
Static Switch Type	Static switch type configuration
System Breaker(s) Close Failure	One or more breakers in the system failed to close
System Breaker(s) Open Failure	One or more breakers in the system failed to open
System Controller Error	System controller internal error
System Date and Time	The system date and time
System Fan Failure - Redundant	Redundant system fan failure
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Problem	The input is not qualified to provide power to the system
System Input Power Source	System input power source
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Low Power Factor	The system output power factor is low, resulting in reduced output capacity
System Output Maximum Amp Rating	System output maximum amperage rating
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Off	The system output is off
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity

Table 3-78 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
System Output Pct Pwr (VA) Phs A	The system output apparent power on phase A as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs B	The system output apparent power on phase B as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs C	The system output apparent power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Shutdown - REPO	System shutdown due to Remote Emergency Power Off (REPO)
System Status	The operating status for the system
Total Bypass Operating Time	The cumulative bypass time of the unit.
Total System Operating Time	The cumulative operation time of the unit
Trap Filter Disconnect	Trap filter disconnect
UPS Battery Status	UPS battery status
UPS Module Type	UPS module type
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
UPS System Output Source	The UPS system's output power source

Table 3-79 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Status and Coil

Data Description	Status	Coil	Number of Bits	Notes / Units
Input				
System Input Power Problem	10001	—	1	Active on Alarm
System Input Phs Rotation Error	10002	—	1	Active on Alarm
System Input Current Limit	10003	—	1	Active on Alarm
System Input Current Imbalance	10004	—	1	Active on Alarm
Bypass				
Bypass Not Available	10015	—	1	Active on Alarm
Bypass Overload Phase A	10016	—	1	Active on Alarm
Bypass Overload Phase B	10017	—	1	Active on Alarm
Bypass Overload Phase C	10018	—	1	Active on Alarm
Bypass Auto Retransfer Failed	10019	—	1	Active on Alarm
Bypass Static Switch Overload	10020	—	1	Active on Alarm
Bypass Static Switch Unavailable	10021	—	1	Active on Alarm
Bypass Auto Transfer Failed	10022	—	1	Active on Alarm
Bypass Frequency Error	10023	—	1	Active on Alarm
Bypass - Manual Rexfr Inhibited	10024	—	1	Active on Alarm
Bypass - Manual Xfr Inhibited	10025	—	1	Active on Alarm
Battery				
Battery Automatic Test Inhibited	10036	—	1	Active on Alarm
Battery Capacity Low	10037	—	1	Active on Alarm
Battery Discharging	10038	—	1	Active on Alarm
Battery Temperature Imbalance	10039	—	1	Active on Alarm
Battery Equalize	10040	—	1	Active on Alarm
Battery Auto Test In Progress	10041	—	1	Active on Alarm
Main Battery Disconnect Open	10042	—	1	Active on Alarm
Battery Low	10043	—	1	Active on Alarm
Battery Temperature Sensor Fault	10044	—	1	Active on Alarm
Battery Circuit Breaker 1 Open	10045	—	1	Active on Alarm
Battery Circuit Breaker 2 Open	10046	—	1	Active on Alarm
Battery Circuit Breaker 3 Open	10047	—	1	Active on Alarm
Battery Circuit Breaker 4 Open	10048	—	1	Active on Alarm
Battery Circuit Breaker 5 Open	10049	—	1	Active on Alarm
Battery Circuit Breaker 6 Open	10050	—	1	Active on Alarm
Battery - External Monitor 1	10051	—	1	Active on Alarm
Battery - External Monitor 2	10052	—	1	Active on Alarm
Battery Ground Fault	10053	—	1	Active on Alarm
Battery Over Temperature Limit	10054	—	1	Active on Alarm
Battery Low Shutdown	10055	—	1	Active on Alarm
Battery Over Temperature	10056	—	1	Active on Alarm
Battery Test Failed	10057	—	1	Active on Alarm
Unexpected Main Battery Disconnect Closure	10058	—	1	Active on Alarm
Battery Over Voltage	10059	—	1	Active on Alarm
Battery Fuse Fault	10060	—	1	Active on Alarm
Main Battery Disconnect Forced To Unlock	10061	—	1	Active on Alarm
Battery Test Manually Stopped	10062	—	1	Active on Alarm
Battery Test Passed	10063	—	1	Active on Alarm

Table 3-79 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Status and Coil (continued)

Data Description	Status	Coil	Number of Bits	Notes / Units
BatteryCharging	10600	—	1	Active on Alarm
DC Bus				
DC Bus Low Fault	10074	—	1	Active on Alarm
Output				
System Shutdown - EPO	10085	—	1	Active on Alarm
System Shutdown - REPO	10086	—	1	Active on Alarm
System Output Low Power Factor	10088	—	1	Active on Alarm
Output Amp Over User Limit-Phs A	10089	—	1	Active on Alarm
Output Amp Over User Limit-Phs B	10090	—	1	Active on Alarm
Output Amp Over User Limit-Phs C	10091	—	1	Active on Alarm
System Output Fault	10092	—	1	Active on Alarm
Output Of/Uf	10093	—	1	Active on Alarm
Inverter				
Inverter Failure	10104	—	1	Active on Alarm
Inverter Overload Phase A	10105	—	1	Active on Alarm
Inverter Overload Phase B	10106	—	1	Active on Alarm
Inverter Overload Phase C	10107	—	1	Active on Alarm
Inverter Inhibit - External	10108	—	1	Active on Alarm
Inverter Shutdown - Overload	10109	—	1	Active on Alarm
Inverter Static Switch SCR Short	10110	—	1	Active on Alarm
Environment				
Inlet Air Over Temperature	10121	—	1	Active on Alarm
Outlet Air Overtemperature Limit	10122	—	1	Active on Alarm
Equipment Temperature Sensor Fail	10123	—	1	Active on Alarm
External Input Signals				
Input Contact 01	10134	—	1	Active on Alarm
Input Contact 02	10135	—	1	Active on Alarm
Input Contact 03	10136	—	1	Active on Alarm
Input Contact 04	10137	—	1	Active on Alarm
Input Contact 05	10138	—	1	Active on Alarm
Input Contact 06	10139	—	1	Active on Alarm
Input Contact 07	10140	—	1	Active on Alarm
Input Contact 08	10141	—	1	Active on Alarm
Input Contact 09	10142	—	1	Active on Alarm
Input Contact 10	10143	—	1	Active on Alarm
Input Contact 11	10144	—	1	Active on Alarm
Input Contact 12	10145	—	1	Active on Alarm
Input Contact 13	10146	—	1	Active on Alarm
Input Contact 14	10147	—	1	Active on Alarm
Input Contact 15	10148	—	1	Active on Alarm
Input Contact 16	10149	—	1	Active on Alarm
Rectifier				
Rectifier Failure	10160	—	1	Active on Alarm
Vdc Backfeed	10162	—	1	Active on Alarm
Rectifier Configuration Change Request	10163	—	1	Active on Alarm

Table 3-79 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Status and Coil (continued)

Data Description	Status	Coil	Number of Bits	Notes / Units
System				
System Fan Failure - Redundant	10174	—	1	Active on Alarm
Multiple Fan Failure	10175	—	1	Active on Alarm
Internal Communications Failure	10176	—	1	Active on Alarm
UPS Output on Bypass	10177	—	1	Active on Alarm
Output Load on Maint. Bypass	10178	—	1	Active on Alarm
Backfeed Breaker Open	10179	—	1	Active on Alarm
Auto Restart In Progress	10180	—	1	Active on Alarm
Power Supply Failure	10181	—	1	Active on Alarm
Auto Restart Inhibited - Ext	10183	—	1	Active on Alarm
Automatic Restart Failed	10184	—	1	Active on Alarm
Main Controller Fault	10185	—	1	Active on Alarm
Fuse Failure	10186	—	1	Active on Alarm
System Controller Error	10187	—	1	Active on Alarm
System Breaker(s) Open Failure	10188	—	1	Active on Alarm
System Breaker(s) Close Failure	10189	—	1	Active on Alarm
Input Filter Cycle Lock	10190	—	1	Active on Alarm
EMO Shutdown	10191	—	1	Active on Alarm
Service Code Active	10192	—	1	Active on Alarm
LBS Active	10193	—	1	Active on Alarm
LBS Inhibited	10194	—	1	Active on Alarm
Regeneration Active	10195	—	1	Active on Alarm
Regeneration Operation Terminated	10196	—	1	Active on Alarm
Regeneration Operation Failure	10197	—	1	Active on Alarm
Leading Power Factor	10198	—	1	Active on Alarm
Controls Reset Required	10199	—	1	Active on Alarm
MultiModule				
Loss of Redundancy	10212	—	1	Active on Alarm
MMS Overload	10215	—	1	Active on Alarm
MMS On Battery	10216	—	1	Active on Alarm
MMS Module Alarm Active	10218	—	1	Active on Alarm
Program Input Signals				
Program Input Contact 01	10229	—	1	Active on Alarm
Program Input Contact 02	10230	—	1	Active on Alarm
Program Input Contact 03	10231	—	1	Active on Alarm
Program Input Contact 04	10232	—	1	Active on Alarm
Program Input Contact 05	10233	—	1	Active on Alarm
Program Input Contact 06	10234	—	1	Active on Alarm
Program Input Contact 07	10235	—	1	Active on Alarm
Program Input Contact 08	10236	—	1	Active on Alarm
Program Input Contact 09	10237	—	1	Active on Alarm
Program Input Contact 10	10238	—	1	Active on Alarm
Program Input Contact 11	10239	—	1	Active on Alarm
Program Input Contact 12	10240	—	1	Active on Alarm

Table 3-79 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Status and Coil (continued)

Data Description	Status	Coil	Number of Bits	Notes / Units
Intelligent Paralleling				
IP Inhibit	10251	—	1	Active on Alarm
ECO Mode				
ECO Mode Active	10262	—	1	Active on Alarm
ECO Mode Suspended	10263	—	1	Active on Alarm
Excess ECO Suspends	10264	—	1	Active on Alarm

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Input					
System Input RMS A-B	30385	—	1	10	Units : VAC Uint16
System Input RMS B-C	30386	—	1	10	Units : VAC Uint16
System Input RMS C-A	30387	—	1	10	Units : VAC Uint16
System Input RMS Current Phase A	30388	—	1	—	Units : A AC Uint16
System Input RMS Current Phase B	30389	—	1	—	Units : A AC Uint16
System Input RMS Current Phase C	30390	—	1	—	Units : A AC Uint16
System Input Frequency	30391	—	1	100	Units : Hz Uint16
Input Qualification Status	30392	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Bypass					
Bypass Input Voltage RMS A-B	30403	—	1	10	Units : VAC Uint16
Bypass Input Voltage RMS B-C	30404	—	1	10	Units : VAC Uint16
Bypass Input Voltage RMS C-A	30405	—	1	10	Units : VAC Uint16
Bypass Input Frequency	30406	—	1	100	Units : Hz Uint16
Bypass Sync Phase Difference	30407	—	1	—	Units : deg Int16
Bypass SS Overload Time Remain	30408	—	1	—	Units : sec Uint16
Static Bypass Switch	30409	—	1	—	0 = off 1 = on
Bypass Qualification Status	30410	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Auto Retransfer Time Remaining	30411	—	1	—	Units : sec Uint16
Total Bypass Operating Time	30830	—	2	—	Units : hr
Battery					
Battery Total Discharge Time	30422	—	1	—	Units : hr Uint16
Battery Percentage Charge	30423	—	1	—	Uint16
Battery Volts at Main Disconnect	30424	—	1	—	Units : VDC Uint16
Battery Volts for Cabinet 1	30425	—	1	—	Units : VDC Uint16
Battery Volts for Cabinet 2	30426	—	1	—	Units : VDC Uint16
Battery Volts for Cabinet 3	30427	—	1	—	Units : VDC Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Battery Volts for Cabinet 4	30428	—	1	—	Units : VDC Uint16
Battery Volts for Cabinet 5	30429	—	1	—	Units : VDC Uint16
Battery Volts for Cabinet 6	30430	—	1	—	Units : VDC Uint16
Battery Temperature for Cabinet	30431	—	1	10	Units : deg C Int16
Battery Temperature for Cabinet 1	30432	—	1	10	Units : deg F Int16
Battery Temperature for Cabinet 2	30433	—	1	10	Units : deg C Int16
Battery Temperature for Cabinet 2	30434	—	1	10	Units : deg F Int16
Battery Temperature for Cabinet 3	30435	—	1	10	Units : deg C Int16
Battery Temperature for Cabinet 3	30436	—	1	10	Units : deg F Int16
Battery Temperature for Cabinet 4	30437	—	1	10	Units : deg C Int16
Battery Temperature for Cabinet 4	30438	—	1	10	Units : deg F Int16
Battery Temperature for Cabinet 5	30439	—	1	10	Units : deg C Int16
Battery Temperature for Cabinet 5	30440	—	1	10	Units : deg F Int16
Battery Temperature for Cabinet 6	30441	—	1	10	Units : deg C Int16
Battery Temperature for Cabinet 6	30442	—	1	10	Units : deg F Int16
Battery Amp-Hours Consumed This Discharge	30443	—	1	—	Units : AH Uint16
Battery Time Remaining	30444	—	1	—	Units : min Uint16
Battery Discharge Time	30445	—	1	—	Units : sec Uint16
Battery Discharge Power	30446	—	1	—	Units : W Uint16
Battery Last Discharge Date	30447	—	2	—	Secs since Epoch(UTC)
Battery Amp-Hours Consumed	30449	—	2	—	Units : AH Uint32
UPS Battery Status	30451	—	1	—	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
The main battery disconnect status.	30452	—	1	—	0 = Open 1 = Closed 2 = Disabled
Battery SCR Status	30453	—	1	—	0 = OK 1 = Fault 2 = unknown
Main Battery Disconnect Switch Lock Status	30454	—	1	—	0 = Locked 1 = Unlocked 2 = unknown

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
DC Bus					
DC Bus Voltage	30465	—	1	—	Units : VDC Uint16
DC Bus Current	30466	—	1	—	Units : A DC Int16
DC Bus Qualification Status	30467	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Output					
System Output Voltage RMS A-B	30478	—	1	10	Units : VAC Uint16
System Output Voltage RMS B-C	30479	—	1	10	Units : VAC Uint16
System Output Voltage RMS C-A	30480	—	1	10	Units : VAC Uint16
System Output Voltage RMS A-N	30481	—	1	10	Units : VAC Uint16
System Output Voltage RMS B-N	30482	—	1	10	Units : VAC Uint16
System Output Voltage RMS C-N	30483	—	1	10	Units : VAC Uint16
System Output RMS Current Phs A	30484	—	1	—	Units : A AC Uint16
System Output RMS Current Phs B	30485	—	1	—	Units : A AC Uint16
System Output RMS Current Phs C	30486	—	1	—	Units : A AC Uint16
System Output Frequency	30487	—	1	100	Units : Hz Uint16
System Output Power	30488	—	1	—	Units : kW Uint16
System Output Apparent Power	30489	—	1	—	Units : kVA Uint16
System Output Power Factor Phs A	30490	—	1	100	Uint16
System Output Power Factor Phs B	30491	—	1	100	Uint16
System Output Power Factor Phs C	30492	—	1	100	Uint16
System Output Pct Power Phase A	30493	—	1	—	Units : % Uint16
System Output Pct Power Phase B	30494	—	1	—	Units : % Uint16
System Output Pct Power Phase C	30495	—	1	—	Units : % Uint16
System Output Pct Pwr (VA) Phs A	30496	—	1	—	Units : % Uint16
System Output Pct Pwr (VA) Phs B	30497	—	1	—	Units : % Uint16
System Output Pct Pwr (VA) Phs C	30498	—	1	—	Units : % Uint16
Output Qualification Status	30499	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Inverter					
Inverter Overload Time Remaining	30510	—	1	—	Units : sec Uint16
Inverter Output Qualification Status	30511	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
Inverter On/Off State	30512	—	1	—	0 = off 1 = on
Environment					
Inlet Air Temperature	30523	—	1	—	Units : deg C Int16
Inlet Air Temperature	30524	—	1	—	Units : deg F Int16
Total System Operating Time	30525	—	2	—	Units : hr Uint32
System Date and Time	30527	40527	2	—	Secs since Epoch(UTC)
System Date and Time	39998	49998	2	—	Secs since Epoch(UTC)
Rectifier					
Rectifier Pulse Count	30539	—	1	—	0 = 6 Pulse 1 = 12 Pulse 2 = 18 Pulse 3 = 24 Pulse
Rectifier Input Passive Filter	30540	—	1	—	0 = Not Installed 1 = Installed
Rectifier Passive Filter Switch	30541	—	1	—	0 = Not Installed 1 = Installed
Rectifier Active Filter	30542	—	1	—	0 = Not Installed 1 = Installed
Rectifier Status	30543	—	1	—	0 = off 1 = on
System					
UPS Module Type	30554	—	1	—	0 = Single Module System 1 = Module (1 + 1) 2 = Module (1 + N) 3 = Module (N + 1) 4 = System Control Cabinet 5 = Main Static Switch
Bypass Input Wire Configuration	30555	—	1	—	0 = Two Wire (single phase + return) 1 = Two Wire (2 phase, no neutral) 2 = Three Wire (2 phase + neutral) 3 = Three Wire (3 phase, no neutral) 4 = Four Wire (3 phases + neutral)

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Output Wire Configuration	30556	—	1	—	0 = Two Wire (single phase + return) 1 = Two Wire (2 phase, no neutral) 2 = Three Wire (2 phase + neutral) 3 = Three Wire (3 phase, no neutral) 4 = Four Wire (3 phases + neutral)
Static Switch Type	30557	—	1	—	0 = Not Applicable 1 = Continuous Duty 2 = Momentary Duty
Configuration Description	30558	—	1	—	0 = Single Module System 33 1 = Single Module System 34 2 = Single Module System 44 3 = 1+1 33 4 = 1+1 34 5 = 1+1 44 6 = 1+N 33 7 = 1+N 34 8 = 1+N 44 9 = N+1 33 10 = N+1 34 11 = N+1 44 12 = SCC w/Continuous Duty SS 33 13 = SCC w/Continuous Duty SS 44 14 = SCC w/Momentary Duty SS 15 = Main Static Switch
UPS System Output Source	30559	—	1	—	0 = None 1 = Inverter 2 = Bypass
System Input Power Source	30560	—	1	—	0 = None 1 = Utility (mains) 2 = Generator
System Status	30561	—	1	—	1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
UPS Output Source	30562	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Fan Status	30563	—	1	—	0 = Unknown 1 = Normal 2 = Failure
System Fan Redundant Status	30564	—	1	—	0 = Unknown 1 = Redundancy Available 2 = Loss of Redundancy
System Fan Capacity Status	30565	—	1	—	0 = Unknown 1 = Normal 2 = Failure

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Ratings					
Bypass Nominal Voltage	30576	—	1	—	Units : VAC Uint16
System Input Nominal Voltage	30577	—	1	—	Units : VAC Uint16
System Input Nominal Frequency	30578	—	1	10	Units : Hz Uint16
System Output Nominal Voltage	30579	—	1	—	Units : VAC Uint16
System Output Nominal Frequency	30580	—	1	10	Units : Hz Uint16
Battery Cell Count - Lead Acid	30581	—	1	—	Uint16
Battery Cell Count-Nickel Cadmium	30582	—	1	—	Uint16
Output Apparent Power Rating	30583	—	1	—	Units : kVA Uint16
Output Real Power Rating	30584	—	1	—	Units : kW Uint16
Input Isolation Transformer	30585	—	1	—	0 = Not Installed 1 = Installed
System UPS Module Count	30586	—	1	—	Uint16
System Output Maximum Amp Rating	30587	—	1	—	Units : A AC Uint16
System Redundant UPS Modules	30588	—	1	—	Uint16
Device Status					
Backfeed Breaker	30599	—	1	—	0 = Open 1 = Close 2 = Not Installed
SBS Load Disconnect	30600	—	1	—	0 = Open 1 = Close 2 = Not Installed
Input Breaker	30601	—	1	—	0 = Open 1 = Close 2 = Not Installed
Trap Filter Disconnect	30602	—	1	—	0 = Open 1 = Close 2 = Not Installed
Output Breaker	30603	—	1	—	0 = Open 1 = Close 2 = Not Installed
Internal Bypass Breaker	30604	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker	30605	—	1	—	0 = Open 1 = Close 2 = Not Installed
Maintenance Bypass Breaker	30606	—	1	—	0 = Open 1 = Close 2 = Not Installed
Maintenance Isolation Breaker	30607	—	1	—	0 = Open 1 = Close 2 = Not Installed
Output Series Static Switch	30608	—	1	—	0 = Off 1 = On 2 = Not Installed

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Module Output Breaker	30609	—	1	—	0 = Open 1 = Close 2 = Not Installed
MultiModule					
Multi-module System Output Voltage RMS A-B	30620	—	1	10	Units : VAC Uint16
Multi-module System Output Voltage RMS B-C	30621	—	1	10	Units : VAC Uint16
Multi-module System Output Voltage RMS C-A	30622	—	1	10	Units : VAC Uint16
Multi-module System Output Voltage RMS A-N	30623	—	1	10	Units : VAC Uint16
Multi-module System Output Voltage RMS B-N	30624	—	1	10	Units : VAC Uint16
Multi-module System Output Voltage RMS C-N	30625	—	1	10	Units : VAC Uint16
Sum of MMS Output RMS Currents for Phase A	30626	—	1	—	Units : A AC Uint16
Sum of MMS Output RMS Currents for Phase B	30627	—	1	—	Units : A AC Uint16
Sum of MMS Output RMS Currents for Phase C	30628	—	1	—	Units : A AC Uint16
MMS Output Frequency	30629	—	1	10	Units : Hz Uint16
MMS Output Power	30630	—	1	—	Units : kW Uint16
MMS Output Apparent Power	30631	—	1	—	Units : kVA Uint16
MMS Output Power Factor Phase A	30632	—	1	100	Int16
MMS Output Power Factor Phase B	30633	—	1	100	Int16
MMS Output Power Factor Phase C	30634	—	1	100	Int16
MMS Output Pct Power Phase A	30635	—	1	—	Units : % Int16
MMS Output Pct Power Phase B	30636	—	1	—	Units : % Int16
MMS Output Pct Power Phase C	30637	—	1	—	Units : % Int16
MMS Output Pct Apparent Pwr (kVA) Phase A	30638	—	1	—	Units : % Uint16
MMS Output Pct Apparent Pwr (kVA) Phase B	30639	—	1	—	Units : % Uint16
MMS Output Pct Apparent Pwr (kVA) Phase C	30640	—	1	—	Units : % Uint16
Number of Redundant Modules	30641	—	1	—	Uint16
MMS Module Number	30642	—	1	—	Int16
Number of Modules in a MMS	30643	—	1	—	Uint16
Module Output Breaker for Module 1	30644	—	1	—	0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 2	30645	—	1	—	0 = Open 1 = Close 2 = Not Installed

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Module Output Breaker for Module 3	30646	—	1	—	0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 4	30647	—	1	—	0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 5	30648	—	1	—	0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 6	30649	—	1	—	0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 7	30650	—	1	—	0 = Open 1 = Close 2 = Not Installed
Module Output Breaker for Module 8	30651	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 1	30652	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 2	30653	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 3	30654	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 4	30655	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 5	30656	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 6	30657	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 7	30658	—	1	—	0 = Open 1 = Close 2 = Not Installed
Bypass Isolation Breaker for Module 8	30659	—	1	—	0 = Open 1 = Close 2 = Not Installed
System Output Breaker	30660	—	1	—	0 = Open 1 = Close 2 = Not Installed
System Load Bank Breaker	30661	—	1	—	0 = Open 1 = Close 2 = Not Installed
System Isolation Output Breaker	30662	—	1	—	0 = Open 1 = Close 2 = Not Installed
SCC Event Summary	30663	—	1	—	0 = None 1 = Alarm 2 = Fault

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
MMS UPS Output Source	30665	—	1	—	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
ModuleList 1					
MMS Inter-Module Comm Status	30676	—	1	—	0 = Failed 1 = Normal
MMS Event Summary	30677	—	1	—	0 = None 1 = Alarm 2 = Fault
MMS Module Inverter Status	30678	—	1	—	0 = off 1 = on
MMS Module Output Voltage Status	30679	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
MMS Module Output Source	30680	—	1	—	0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass
ModuleList 2					
MMS Inter-Module Comm Status	30691	—	1	—	0 = Failed 1 = Normal
MMS Event Summary	30692	—	1	—	0 = None 1 = Alarm 2 = Fault
MMS Module Inverter Status	30693	—	1	—	0 = off 1 = on
MMS Module Output Voltage Status	30694	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
MMS Module Output Source	30695	—	1	—	0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass
ModuleList 8					
MMS Inter-Module Comm Status	30781	—	1	—	0 = Failed 1 = Normal
MMS Event Summary	30782	—	1	—	0 = None 1 = Alarm 2 = Fault
MMS Module Inverter Status	30783	—	1	—	0 = off 1 = on
MMS Module Output Voltage Status	30784	—	1	—	0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High
MMS Module Output Source	30785	—	1	—	0 = Off 1 = Normal 2 = Bypass 3 = Maintenance Bypass

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
Intelligent Paralleling					
Intelligent Parallel Operation State	30796	—	1	—	0 = disabled 1 = enabled
Intelligent Parallel Minimum Redundancy	30797	—	1	—	Uint16
Intelligent Parallel Maximum Time in Standby	30798	—	1	—	Units : day Uint16
ECO Mode					
ECO Mode Operation State	30809	40809	1	—	0 = disabled 1 = enabled
Continuous Operation - ECO Mode	30810	—	1	—	0 = disabled 1 = enabled
Maximum Auto Suspensions - ECO Mode	30811	—	1	—	Uint16
Restart Delay - ECO Mode	30812	—	1	—	Units : min Uint16
Time Remaining - ECO Mode	30813	—	1	—	Units : min Uint16
EcoModeSchedule 1					
Schedule Operation State - ECO Mode	30824	—	1	—	0 = disabled 1 = enabled
Schedule Action - ECO Mode	30825	—	1	—	0 = stop 1 = start
Schedule Day of Week - ECO Mode	30826	—	1	—	0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday
Schedule Hour - ECO Mode	30827	—	1	—	Units : hr Uint16
Schedule Minute - ECO Mode	30828	—	1	—	Units : min Uint16
EcoModeSchedule 2					
Schedule Operation State - ECO Mode	30839	—	1	—	0 = disabled 1 = enabled
Schedule Action - ECO Mode	30840	—	1	—	0 = stop 1 = start
Schedule Day of Week - ECO Mode	30841	—	1	—	0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday
Schedule Hour - ECO Mode	30842	—	1	—	Units : hr Uint16
Schedule Minute - ECO Mode	30843	—	1	—	Units : min Uint16

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-80 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Input and Holding (continued)

Data Label	Input	Holding	# of Reg	Scale	Notes/Units
EcoModeSchedule 14					
Schedule Operation State - ECO Mode	31019	—	1	—	0 = disabled 1 = enabled
Schedule Action - ECO Mode	31020	—	1	—	0 = stop 1 = start
Schedule Day of Week - ECO Mode	31021	—	1	—	0 = Unknown 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday
Schedule Hour - ECO Mode	31022	—	1	—	Units : hr Uint16
Schedule Minute - ECO Mode	31023	—	1	—	Units : min Uint16
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-81 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Glossary

Data Label	Data Description
Auto Restart In Progress	Auto restart is in progress
Auto Restart Inhibited - Ext	Auto restart inhibited due to an external signal
Auto Retransfer Time Remaining	Time remaining before an inverter overload or inverter fault can be cleared and auto retransfer from the bypass to the inverter can take place
Automatic Restart Failed	Automatic restart failed
Backfeed Breaker Open	The backfeed breaker is in the open position
Backfeed Breaker	Backfeed breaker
Battery - External Monitor 1	External battery monitor 1 - battery maintenance required
Battery - External Monitor 2	External battery monitor 2 - battery maintenance required
Battery Amp-Hours Consumed This Discharge	Battery amp-hours withdrawn this discharge.
Battery Amp-Hours Consumed	Cumulative battery amp-hours withdrawn over the life of the battery
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Automatic Test Inhibited	Automatic (scheduled) battery tests are inhibited
Battery Capacity Low	Battery capacity is low
Battery Cell Count - Lead Acid	Battery cell count - lead acid
Battery Cell Count-Nickel Cadmium	Battery cell count - nickel cadmium
Battery Charging	The UPS battery is charging (battery charge percentage lower than 98)
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Circuit Breaker 5 Open	Battery circuit breaker 5 is open
Battery Circuit Breaker 6 Open	Battery circuit breaker 6 is open
Battery Discharge Power	Instantaneous battery power while discharging
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Fuse Fault	One or more battery fuse faults has occurred.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Last Discharge Date	The date and time of the last battery discharge
Battery Low Shutdown	The battery voltage has dropped to the End of Discharge value.
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Over Temperature Limit	A battery temperature sensor is reporting a value above a predetermined limit.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Over Voltage	The system has detected that the battery voltage has exceeded a predetermined limit.
Battery Percentage Charge	The percentage of battery charge
Battery SCR Status	The status of the battery SCR.
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature Imbalance	Excessive temperature differences between battery sensors detected
Battery Temperature Sensor Fault	A battery temperature sensor fault has been detected
Battery Test Failed	Battery test failed
Battery Test Manually Stopped	The battery test was manually stopped prior to completion
Battery Test Passed	Battery test passed
Battery Time Remaining	The calculated available time on battery
Battery Total Discharge Time	The cumulative battery discharge time

Table 3-81 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Battery Volts at Main Disconnect	The voltage between the positive and the negative battery terminals of the common battery disconnect
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Manual Rexfr Inhibited	Manual transfer from bypass to inverter is inhibited.
Bypass - Manual Xfr Inhibited	Manual transfer from inverter to bypass is inhibited.
Bypass Auto Retransfer Failed	After performing a recoverable transfer to bypass, an attempt to auto retransfer from bypass to inverter failed
Bypass Auto Transfer Failed	An automatic transfer to static bypass failed
Bypass Frequency Error	The bypass frequency is outside the inverter synchronization limits
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Wire Configuration	Bypass input wire configuration
Bypass Isolation Breaker for Module 1	Bypass isolation breaker for module 1
Bypass Isolation Breaker for Module 2	Bypass isolation breaker for module 2
Bypass Isolation Breaker for Module 3	Bypass isolation breaker for module 3
Bypass Isolation Breaker for Module 4	Bypass isolation breaker for module 4
Bypass Isolation Breaker for Module 5	Bypass isolation breaker for module 5
Bypass Isolation Breaker for Module 6	Bypass isolation breaker for module 6
Bypass Isolation Breaker for Module 7	Bypass isolation breaker for module 7
Bypass Isolation Breaker for Module 8	Bypass isolation breaker for module 8
Bypass Isolation Breaker	Bypass isolation breaker
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload Phase A	An overload exists on output phase A while operating on the bypass
Bypass Overload Phase B	An overload exists on output phase B while operating on the bypass
Bypass Overload Phase C	An overload exists on output phase C while operating on the bypass
Bypass Qualification Status	bypass qualification status
Bypass SS Overload Time Remain	The calculated time remaining before bypass static switch shutdown due to the present overload condition
Bypass Static Switch Overload	Bypass off due to static switch overload
Bypass Static Switch Unavailable	The static bypass switch is off, and unable to operate
Bypass Sync Phase Difference	The phase angle difference between the inverter output and bypass source
Configuration Description	Configuration description
Continuous Operation - ECO Mode	This setting gives the user the ability to Enable/Disable ECO Mode continuous operation.
Controls Reset Required	A controls reset is required due to one or more critical settings changing
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Low Fault	The DC Bus voltage has reached a critical low level.
DC Bus Qualification Status	dc bus qualification status
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
ECO Mode Active	Conditions for Activation or Automatic Reactivation have been satisfied.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
ECO Mode Suspended	ECO Mode session is suspended.
EMO Shutdown	An Emergency Module Off command has been detected.

Table 3-81 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Equipment Temperature Sensor Fail	One or more temperature sensors report a temperature outside of the range of expected operation.
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Over Temperature	The inlet air exceeds the maximum temperature threshold
Inlet Air Temperature	The temperature of the inlet air
Input Breaker	Input breaker
Input Contact 01	The external input contact 1
Input Contact 02	The external input contact 2
Input Contact 03	The external input contact 3
Input Contact 04	The external input contact 4
Input Contact 05	The external input contact 5
Input Contact 06	The external input contact 6
Input Contact 07	The external input contact 7
Input Contact 08	The external input contact 8
Input Contact 09	The external input contact 9
Input Contact 10	The external input contact 10
Input Contact 11	The external input contact 11
Input Contact 12	The external input contact 12
Input Contact 13	The external input contact 13
Input Contact 14	The external input contact 14
Input Contact 15	The external input contact 15
Input Contact 16	The external input contact 16
Input Filter Cycle Lock	The input filter disconnect is open due to exceeding the maximum number of cycles.
Input Isolation Transformer	Input isolation transformer
Input Qualification Status	input qualification status
Intelligent Parallel Maximum Time in Standby	The maximum time a module can be in standby mode due to Intelligent Paralleling.
Intelligent Parallel Minimum Redundancy	This is the minimum Number of Redundant Modules that the system will allow before bringing one or more modules back to normal operation and terminating Intelligent Paralleling.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter Inhibit - External	Restart of the inverter is inhibited by an external signal
Inverter On/Off State	inverter on/off state
Inverter Output Qualification Status	inverter output qualification status
Inverter Overload Phase A	Inverter is operating with an overload on phase A
Inverter Overload Phase B	Inverter is operating with an overload on phase B
Inverter Overload Phase C	Inverter is operating with an overload on phase C
Inverter Overload Time Remaining	The calculated time remaining before inverter shutdown
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Static Switch SCR Short	The system has detected a short across one or more inverter static switch Silicon Controlled Rectifiers (SCR)
IP Inhibit	The intelligent paralleling operation is inhibited.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied

Table 3-81 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Leading Power Factor	The leading output Power Factor has fallen below a specified value
Loss of Redundancy	The multi-module collection doesn't have enough modules to redundantly support the load.
Main Battery Disconnect Forced To Unlock	The main battery disconnect is forced to the unlocked state.
Main Battery Disconnect Open	Main battery disconnect is open
Main Battery Disconnect Switch Lock Status	The main battery disconnect switch lock status.
Main Controller Fault	A Main Controller fault has been detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
Maintenance Isolation Breaker	Maintenance isolation breaker
Maximum Auto Suspensions - ECO Mode	This setting sets the maximum number of automatic ECO Mode suspensions in a session.
MMS Event Summary	Summary of any active user alarm or fault of this module in a multi-module system
MMS Inter-Module Comm Status	Inter-module communication status of this module in a multi-module system
MMS Module Alarm Active	Active alarm or fault of any module in a multi-module system
MMS Module Inverter Status	Multi-module inverter status of this module (on/off)
MMS Module Number	MMS module number
MMS Module Output Source	Module output source in a multi-module system (normal/bypass/maintenance bypass/off)
MMS Module Output Voltage Status	Output voltage status of this module in multi-module system
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Frequency	The multi-module system output frequency
MMS Output Pct Apparent Pwr (kVA) Phase A	The multi-module system output apparent power on phase A as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase B	The multi-module system output apparent power on phase B as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase C	The multi-module system output apparent power on phase C as a percentage of the rated capacity
MMS Output Pct Power Phase A	The multi-module system output power on phase A as a percentage of the rated capacity
MMS Output Pct Power Phase B	The multi-module system output power on phase B as a percentage of the rated capacity
MMS Output Pct Power Phase C	The multi-module system output power on phase C as a percentage of the rated capacity
MMS Output Power Factor Phase A	The multi-module system output power factor for phase A
MMS Output Power Factor Phase B	The multi-module system output power factor for phase B
MMS Output Power Factor Phase C	The multi-module system output power factor for phase C
MMS Output Power	The sum total power of all system output modules
MMS Overload	Multi-module system overload
MMS UPS Output Source	Multi-module UPS output source
Module Output Breaker for Module 1	Module output breaker for module 1
Module Output Breaker for Module 2	Module output breaker for module 2
Module Output Breaker for Module 3	Module output breaker for module 3
Module Output Breaker for Module 4	Module output breaker for module 4
Module Output Breaker for Module 5	Module output breaker for module 5
Module Output Breaker for Module 6	Module output breaker for module 6
Module Output Breaker for Module 7	Module output breaker for module 7
Module Output Breaker for Module 8	Module output breaker for module 8

Table 3-81 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Module Output Breaker	Module output breaker
Multi-module System Output Voltage RMS A-B	Multi-module system output RMS voltage between phases A and B
Multi-module System Output Voltage RMS A-N	Multi-module system output RMS voltage between phase A and Neutral
Multi-module System Output Voltage RMS B-C	Multi-module system output RMS voltage between phases B and C
Multi-module System Output Voltage RMS B-N	Multi-module system output RMS voltage between phase B and Neutral
Multi-module System Output Voltage RMS C-A	Multi-module system output RMS voltage between phases C and A
Multi-module System Output Voltage RMS C-N	Multi-module system output RMS voltage between phase C and Neutral
Multiple Fan Failure	Multiple fan failure
Number of Modules in a MMS	The number of modules in a multi-module system
Number of Redundant Modules	The number of redundant modules in a multi-module collective.
Outlet Air Overtemperature Limit	The difference between the outlet air temperature and inlet air temperature exceeds a specified maximum temperature.
Output Amp Over User Limit-Phs A	The phase A output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs B	The phase B output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs C	The phase C output has exceeded the user amperage threshold
Output Apparent Power Rating	Output apparent power rating
Output Breaker	Output breaker
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Of/Uf	The output frequency has exceeded a specified range for a specified period of time.
Output Qualification Status	output qualification status
Output Real Power Rating	Output real power rating
Output Series Static Switch	output series static switch
Output Wire Configuration	Output wire configuration
Power Supply Failure	Power supply failure
Program Input Contact 01	When the signal from [Program Input Contact 01] is active the function assigned to this contact is executed.
Program Input Contact 02	When the signal from [Program Input Contact 02] is active the function assigned to this contact is executed.
Program Input Contact 03	When the signal from [Program Input Contact 03] is active the function assigned to this contact is executed.
Program Input Contact 04	When the signal from [Program Input Contact 04] is active the function assigned to this contact is executed.
Program Input Contact 05	When the signal from [Program Input Contact 05] is active the function assigned to this contact is executed.
Program Input Contact 06	When the signal from [Program Input Contact 06] is active the function assigned to this contact is executed.
Program Input Contact 07	When the signal from [Program Input Contact 07] is active the function assigned to this contact is executed.
Program Input Contact 08	When the signal from [Program Input Contact 08] is active the function assigned to this contact is executed.
Program Input Contact 09	When the signal from [Program Input Contact 09] is active the function assigned to this contact is executed.
Program Input Contact 10	When the signal from [Program Input Contact 10] is active the function assigned to this contact is executed.
Program Input Contact 11	When the signal from [Program Input Contact 11] is active the function assigned to this contact is executed.

Table 3-81 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Program Input Contact 12	When the signal from [Program Input Contact 12] is active the function assigned to this contact is executed.
Rectifier Active Filter	Rectifier input active filter configuration
Rectifier Configuration Change Request	This event indicates that the battery is not configured and PFC is not enabled.
Rectifier Failure	Rectifier failure - rectifier is off
Rectifier Input Passive Filter	Rectifier input passive filter configuration
Rectifier Passive Filter Switch	Rectifier input passive filter switch configuration
Rectifier Pulse Count	Rectifier pulse count per cycle configuration
Rectifier Status	rectifier status
Regeneration Active	Regeneration operation is active.
Regeneration Operation Failure	Regeneration operation has been terminated due to bypass source instability or unit misoperation.
Regeneration Operation Terminated	Regeneration operation is not active.
Restart Delay - ECO Mode	The time delay that the conditions to activate ECO Mode must be satisfied before ECO Mode can be reactivated during an active session.
SCC Event Summary	Summary of any active user alarms or faults on the SCC
Schedule Action - ECO Mode	This setting gives the user the ability to choose the action of a schedule entry to be either stop or start.
Schedule Day of Week - ECO Mode	This setting represents the day of the week when an associated ECO Mode schedule entry action will take effect.
Schedule Hour - ECO Mode	This setting represents the hour of the day when an associated schedule entry action will take effect.
Schedule Minute - ECO Mode	This setting represents the minute of the hour when an associated schedule entry action will take effect.
Schedule Operation State - ECO Mode	This setting gives the user the ability to either enable or disable a schedule entry if the action is Start.
Service Code Active	Service code is running
Static Bypass Switch	Static Bypass Switch state - On/Off
Static Switch Type	Static switch type configuration
Sum of MMS Output RMS Currents for Phase A	The sum of the multi-module system output RMS currents for phase A
Sum of MMS Output RMS Currents for Phase B	The sum of the multi-module system output RMS currents for phase B
Sum of MMS Output RMS Currents for Phase C	The sum of the multi-module system output RMS currents for phase C
System Breaker(s) Close Failure	One or more breakers in the system failed to close
System Breaker(s) Open Failure	One or more breakers in the system failed to open
System Controller Error	System controller internal error
System Date and Time	The system date and time
System Fan Capacity Status	System fan capacity status
System Fan Failure - Redundant	Redundant system fan failure
System Fan Redundant Status	System fan redundant status
System Fan Status	System fan status
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage

Table 3-81 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Problem	The input is not qualified to provide power to the system
System Input Power Source	System input power source
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Isolation Output Breaker	System isolation output breaker
System Load Bank Breaker	System load bank breaker
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Breaker	System output breaker
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Low Power Factor	The system output power factor is low, resulting in reduced output capacity
System Output Maximum Amp Rating	System output maximum amperage rating
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs A	The system output apparent power on phase A as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs B	The system output apparent power on phase B as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs C	The system output apparent power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Redundant UPS Modules	Number of redundant UPS modules in the system
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Shutdown - REPO	System shutdown due to Remote Emergency Power Off (REPO)
System Status	The operating status for the system
System UPS Module Count	Number of UPS modules in the system
The main battery disconnect status.	Main Battery Disconnect Status
Time Remaining - ECO Mode	Time remaining before current active ECO Mode session stops.
Total Bypass Operating Time	The cumulative bypass time of the unit.

Table 3-81 Liebert NXL™—50Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Total System Operating Time	The cumulative operation time of the unit
Trap Filter Disconnect	Trap filter disconnect
Unexpected Main Battery Disconnect Closure	The main battery disconnect has closed unexpectedly.
UPS Battery Status	UPS battery status
UPS Module Type	UPS module type
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
UPS System Output Source	The UPS system's output power source
VDC Backfeed	The voltage between battery and DC bus measurements is out of tolerance.

Table 3-82 Liebert PowerSure™ Interactive (before July 2008)—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Audible Alarm Enabled	10002	2	1	—	—
Automatic Battery Test Enabled	10003	3	1	—	—
Battery Charge Compensation	10046	—	1	—	—
Inverter Ready	10047	—	1	—	—
Load Circuit 1 State	10057	—	1	—	—
Load Circuit 2 State	10058	—	1	—	—
Load Circuit 3 State	10059	—	1	—	—
Load Circuit 4 State	10060	—	1	—	—
Load Circuit 5 State	10061	—	1	—	—
Load Circuit 6 State	10062	—	1	—	—
Load Circuit 7 State	10063	—	1	—	—
Load Circuit 8 State	10064	—	1	—	—
Load Circuit 9 State	10065	—	1	—	—
Load Circuit 10 State	10066	—	1	—	—
Load Circuit 11 State	10067	—	1	—	—
Load Circuit 12 State	10068	—	1	—	—
Load Circuit 13 State	10069	—	1	—	—
Load Circuit 14 State	10070	—	1	—	—
Load Circuit 15 State	10071	—	1	—	—
Load Circuit 16 State	10072	—	1	—	—
Load On Inverter	10073	—	1	—	—
Boost Mode On	10075	—	1	—	—
Buck Mode On	10076	—	1	—	—
Battery Under Test	10082	—	1	—	—
Shutdown Reason - Over Temperature	10086	—	1	—	—
Shutdown Reason - Overload	10087	—	1	—	—
Shutdown - Output Short	10089	—	1	—	—
Shutdown Reason - Remote Shutdown	10093	—	1	—	—
Load On Battery	10128	—	1	—	—
Output Off Pending	10151	—	1	—	—
Low Battery - Shutdown Imminent	10152	—	1	—	—
Output Overload	10154	—	1	—	—
Over Temperature Warning	10171	—	1	—	—
Battery Over Temperature CB Trip	10172	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Input Over Voltage	10187	—	1	—	—
Input Under Voltage	10188	—	1	—	—
Bad Input Frequency	10190	—	1	—	—
Output Under Voltage	10218	—	1	—	—
Output Over Voltage	10219	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-83 Liebert PowerSure™ Interactive (before July 2008)—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Bypass Lines	30004	40004	1	—	Bits 4 - 7
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Number of SubModules	30009	40009	1	—	-
Load Circuit Present	30013	40013	1	—	There are 16 possible Load Circuits. Each bit represents 1 load circuit. Load Circuit 1 is bit 0, Load Circuit 2 is bit 1 and so on. If the bit is 1, then the Load Circuit is supported.
Nominal Power Rating	30021	40021	2	—	VA
Nominal Input Voltage	30027	40027	1	—	V
Nominal Output Voltage	30028	40028	1	—	V
Nominal Input Current	30030	40030	1	—	A
Nominal Input Frequency	30031	40031	1	10	Hz
Nominal Output Frequency	30032	40032	1	10	Hz
Nominal Power Factor	30033	40033	1	100	—
Nominal Battery Voltage	30034	40034	1	—	V
Auto Restart Delay	30051	40051	1	—	Seconds
Device Low Battery Time	30053	40053	1	—	Minutes
Load (Apparent Power)	30102	—	2	—	VA
Load / Capacity	30106	—	1	—	%
Input Frequency	30107	—	1	10	Hz
Output Frequency	30108	—	1	10	Hz
Battery Charge Status	30112	—	1	—	1 - 100% Charged 2 - Less than 100% Charged 3 - Charging 4 - Discharging 5 - Float Charging 6 - Equalize Charging
Battery Voltage	30113	—	1	—	V
Battery Time Remaining	30115	—	1	—	Minutes
Battery Charge Percentage	30116	—	1	—	%
Battery Test Result	30130	—	1	—	1 - Unknown 2 - Passed 3 - Failed 4 - In Progress 5 - System Failure 7 - Inhibited
Input Voltage L1	30153	—	1	—	V
Output Voltage L1	30163	—	1	—	V
Output Current L1	30164	—	1	—	A
Input Maximum Voltage L1	30180	—	1	—	V
Input Minimum Voltage L1	30181	—	1	—	V
Output Maximum Voltage L1	30182	—	1	—	V
Output Minimum Voltage L1	30183	—	1	—	V
Black Out Count	30301	—	1	—	—
Brown Out Count	30302	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-84 Liebert PowerSure™ Interactive 2—Status and Coil

Applies only to PSI units manufactured before June 1, 2008 (Julian date 08153)

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Audible Alarm Enabled	10002	2	1	—	—
Automatic Battery Test Enabled	10003	3	1	—	—
DC-To-DC Converter On	10042	—	1	—	—
Battery Charger On	10044	—	1	—	—
Load Circuit 1 State	10057	—	1	—	—
Load Circuit 2 State	10058	—	1	—	—
Load Circuit 3 State	10059	—	1	—	—
Load Circuit 4 State	10060	—	1	—	—
Load Circuit 5 State	10061	—	1	—	—
Load Circuit 6 State	10062	—	1	—	—
Load Circuit 7 State	10063	—	1	—	—
Load Circuit 9 State	10065	—	1	—	—
Load Circuit 10 State	10066	—	1	—	—
Load Circuit 11 State	10067	—	1	—	—
Load Circuit 12 State	10068	—	1	—	—
Load Circuit 13 State	10069	—	1	—	—
Load Circuit 14 State	10070	—	1	—	—
Load Circuit 15 State	10071	—	1	—	—
Load Circuit 16 State	10072	—	1	—	—
Load On Inverter	10073	—	1	—	—
Boost Mode On	10075	—	1	—	—
Buck Mode On	10076	—	1	—	—
Replace Battery	10081	—	1	—	—
Battery Under Test	10082	—	1	—	—
Shutdown Reason - Over Temperature	10086	—	1	—	—
Shutdown Reason - Overload	10087	—	1	—	—
Shutdown Reason - Output Short	10089	—	1	—	—
Shutdown Reason - Line Neutral Swap	10090	—	1	—	—
Shutdown Reason - Low Battery	10092	—	1	—	—
Shutdown Reason - Remote Shutdown	10093	—	1	—	—
Shutdown Reason - Input Under Voltage	10094	—	1	—	—
Shutdown Reason - Hardware	10096	—	1	—	—
Load On Battery	10128	—	1	—	—
Output Off Pending	10151	—	1	—	—
Low Battery - Shutdown Imminent	10152	—	1	—	—
Output Overload	10154	—	1	—	—
Over Temperature Warning	10171	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Input Over Voltage	10187	—	1	—	—
Input Under Voltage	10188	—	1	—	—
Input BrownOut	10189	—	1	—	—
Bad Input Frequency	10190	—	1	—	—
Output Under Voltage	10218	—	1	—	—
Output Over Voltage	10219	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-84 Liebert PowerSure™ Interactive 2—Status and Coil (continued)

Applies only to PSI units manufactured before June 1, 2008 (Julian date 08153)

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Charger Failed	10234	—	1	—	—
Battery Under Voltage	10241	—	1	—	—
Battery Over Voltage	10242	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-85 Liebert PowerSure™ Interactive 2—Input and Holding

Applies only to PSI units manufactured before June 1, 2008 (Julian date 08153)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Number of SubModules	30009	40009	1	—	—
Load Circuit Present	30013	40013	1	—	There are 16 possible Load Circuits. Each bit represents 1 load circuit. Load Circuit 1 is bit 0, Load Circuit 2 is bit 1 and so on. If the bit is 1, then the Load Circuit is supported.
Nominal Power Rating	30021	40021	2	—	VA
Nominal Input Voltage	30027	40027	1	—	V
Nominal Output Voltage	30028	40028	1	—	V
Nominal Input Current	30030	40030	1	—	A
Nominal Input Frequency	30031	40031	1	10	Hz
Nominal Output Frequency	30032	40032	1	10	Hz
Nominal Power Factor	30033	40033	1	100	—
Nominal Battery Voltage	30034	40034	1	—	V
Nominal Battery Capacity	30037	40037	1	—	Minutes
Nominal Battery Float Voltage	30038	40038	1	—	V
Auto Restart Delay	30051	40051	1	—	Seconds
Device Low Battery Time	30053	40053	1	—	Minutes
Ambient Temperature Warning Point	30069	40069	1	—	deg C
Over Temperature Limit Point	30072	40072	1	—	deg C
Load (Apparent Power)	30102	—	2	—	VA
Load (Real Power)	30104	—	2	—	W
Load / Capacity	30106	—	1	—	%
Input Frequency	30107	—	1	10	Hz
Output Frequency	30108	—	1	10	Hz
Battery Charge Status	30112	—	1	—	1 - 100% Charged 2 - Less than 100% Charged 3 - Charging 4 - Discharging 5 - Float Charging 6 - Equalize Charging
Battery Voltage	30113	—	1	—	V
Battery Time Remaining	30115	—	1	—	Minutes
Battery Charge Percentage	30116	—	1	—	%
Ambient Temperature	30119	—	1	—	deg C
Battery Test Result	30130	—	1	—	—
Input Voltage L1	30153	—	1	—	V
Input Current L1	30154	—	1	—	A
Output Voltage L1	30163	—	1	—	V
Output Current L1	30164	—	1	—	A
Input Maximum Voltage L1	30180	—	1	—	V
Input Minimum Voltage L1	30181	—	1	—	V
Output Maximum Voltage L1	30182	—	1	—	V
Output Minimum Voltage L1	30183	—	1	—	V

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-85 Liebert PowerSure™ Interactive 2—Input and Holding (continued)

Applies only to PSI units manufactured before June 1, 2008 (Julian date 08153)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Black Out Count	30301	—	1	—	—
Brown Out Count	30302	—	1	—	—
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-86 Liebert Series 300™ UPS—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Automatic Restart Enabled	10001	1	1	—	—
Battery Charge Compensation	10046	—	1	—	—
Inverter Ready	10047	—	1	—	—
Load Circuit 1 State	10057	—	1	—	—
Load Circuit 2 State	10058	—	1	—	—
Load Circuit 3 State	10059	—	1	—	—
Load Circuit 4 State	10060	—	1	—	—
Load Circuit 5 State	10061	—	1	—	—
Load Circuit 6 State	10062	—	1	—	—
Load Circuit 7 State	10063	—	1	—	—
Load Circuit 8 State	10064	—	1	—	—
Load Circuit 9 State	10065	—	1	—	—
Load Circuit 10 State	10066	—	1	—	—
Load Circuit 11 State	10067	—	1	—	—
Load Circuit 12 State	10068	—	1	—	—
Load Circuit 13 State	10069	—	1	—	—
Load Circuit 14 State	10070	—	1	—	—
Load Circuit 15 State	10071	—	1	—	—
Load Circuit 16 State	10072	—	1	—	—
Load On Inverter	10073	—	1	—	—
Bypass Active	10074	—	1	—	—
Buck On	10076	—	1	—	—
Replace Battery	10081	—	1	—	—
Battery Under Test	10082	—	1	—	—
Load On Battery	10128	—	1	—	—
Low Battery - Shutdown Imminent	10152	—	1	—	—
Output Overload	10154	—	1	—	—
Over Temperature Warning	10171	—	1	—	—
Battery Over Temperature CB Trip	10172	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Input Over Voltage	10187	—	1	—	—
Input Under Voltage	10188	—	1	—	—
Bad Input Frequency	10190	—	1	—	—
Bypass Input Voltage/Frequency Fault	10202	—	1	—	—
Output Under Voltage	10218	—	1	—	—
Output Over Voltage	10219	—	1	—	—
Battery Charger Fail	10234	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-87 Liebert Series 300™ UPS—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Bypass Lines	30004	40004	1	—	Bits 4 - 7
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Number of SubModules	30009	40009	1	—	—
Load Circuit Present	30013	40013	1	—	There are 16 possible Load Circuits. Each bit represents 1 Load Circuit. Load Circuit 1 is bit 0, Load Circuit 2 is bit 1 and so on. If the bit is 1, then the Load Circuit is supported.
Nominal Power Rating	30021	40021	2	—	VA
Nominal Input Voltage	30027	40027	1	—	V
Nominal Output Voltage	30028	40028	1	—	V
Nominal Static Bypass Switch Voltage	30029	40029	1	—	V
Nominal Input Current	30030	40030	1	—	A
Nominal Input Frequency	30031	40031	1	10	Hz
Nominal Output Frequency	30032	40032	1	10	Hz
Nominal Power Factor	30033	40033	1	100	—
Nominal Battery Voltage	30034	40034	1	—	V
Device Low Battery Time	30053	40053	1	—	Minutes
Load (Apparent Power)	30102	—	2	—	VA
Load (Real Power)	30104	—	2	—	W
Load / Capacity	30106	—	1	—	%
Input Frequency	30107	—	1	10	Hz
Output Frequency	30108	—	1	10	Hz
Bypass Frequency	30109	—	1	10	Hz
Battery Charge Status	30112	—	1	—	1 - 100% Charged 2 - Less than 100% Charged
Battery Voltage	30113	—	1	—	V
Battery Current	30114	—	1	—	A
Battery Time Remaining	30115	—	1	—	Minutes
Battery Charge Percentage	30116	—	1	—	%
Battery Test Result	30130	—	1	—	1 - Unknown 2 - Passed 3 - Failed 4 - In Progress 5 - System Failure 6 - Inhibited
Input Voltage L1	30153	—	1	—	V
Input Current	30154	—	1	—	A
Bypass Voltage L1	30159	—	1	—	V
Bypass Current L1	30160	—	1	—	A
Output Voltage L1	30163	—	1	—	V
Output Current L1	30164	—	1	—	A
Input Voltage L2	30203	—	1	—	V
Input Current L2	30204	—	1	—	A
Bypass Voltage L2	30209	—	1	—	V
Bypass Current L2	30210	—	1	—	A
Output Voltage L2	30213	—	1	—	V

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-87 Liebert Series 300™ UPS—Input and Holding (continued)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Output Current L2	30214	—	1	—	A
Input Voltage L3	30253	—	1	—	V
Input Current L3	30254	—	1	—	A
Bypass Voltage L3	30259	—	1	—	V
Bypass Current L3	30260	—	1	—	A
Output Voltage L3	30263	—	1	—	V
Output Current L3	30264	—	1	—	A
Black Out Count	30301	—	1	—	—
Brown Out Count	30302	—	1	—	—
Transient Count	30301	—	1	—	—
Silent Audible Alarm	—	40101	—	—	Any value
Battery Start	—	40102	1	—	1=Start, 0=Abort
Open UPS Output Switch	—	40104	—	—	Delay time in Seconds, last digit will be ignored
Reboot UPS Output Switch	—	40105	1	—	Delay time in Seconds, last digit will be ignored
Close UPS Output Switch	—	40106	—	—	Delay time in Seconds, last digit will be ignored
Transfer Load to Bypass	—	40107	1	—	Any value
Transfer Load to Inverter	—	40108	—	—	Any value
Reset UPS Statistic data	—	40111	1	—	Any value
Turn UPS Outlets On	—	40112	1	—	Bitmap mask for Outlet 1-16. All bits set to 1 will be turned On
Turn UPS Outlets Off	—	40113	1	—	Bitmap mask for Outlet 1-16. All bits set to 1 will be turned Off

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-88 Liebert Series 600™ UPS—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Auto Retransfer Primed	10049	—	1	—	—
Load On Inverter	10073	—	1	—	—
Load On Bypass	10074	—	1	—	—
Battery data Buffer Full	10084	—	1	—	—
Shutdown Reason - Hardware	10096	—	1	—	—
Load On Battery	10128	—	1	—	—
Load On Bypass	10129	—	1	—	—
Manual Reset Transfer	10130	—	1	—	—
Emergency Transfer	10134	—	1	—	—
Battery Switch Open	10136	—	1	—	—
Input Switch Open	10137	—	1	—	—
Output Switch open	10138	—	1	—	—
SBS Unable	10148	—	1	—	—
Low Battery - Shutdown Imminent	10152	—	1	—	—
Output Frequency Off	10153	—	1	—	—
Output Overload	10154	—	1	—	—
System Emergency Off	10157	—	1	—	—
Reverse Power	10159	—	1	—	—
Fan Fail	10169	—	1	—	—
Over Temperature Warning	10171	—	1	—	—
Ambient Over Temperature	10173	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Input Phase Rotation Error	10191	—	1	—	—
Bypass Input Voltage Fail	10202	—	1	—	—
Output Under Voltage	10218	—	1	—	—
Output Over Voltage	10219	—	1	—	—
DC Ground Fault	10233	—	1	—	—
DC Cap Fuse Blown	10252	—	1	—	—
Rectifier Fuse Blown	10257	—	1	—	—
Inverter Fuse Blown	10261	—	1	—	—
Customer Alarm 1	10313	—	1	—	—
Customer Alarm 2	10314	—	1	—	—
Customer Alarm 3	10315	—	1	—	—
Customer Alarm 4	10316	—	1	—	—
Customer Alarm 5	10317	—	1	—	—
Customer Alarm 6	10318	—	1	—	—
Customer Alarm 7	10319	—	1	—	—
Customer Alarm 8	10320	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-89 Liebert Series 600™ UPS—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Bypass Lines	30004	40004	1	—	Bits 4 - 7
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Nominal Power Rating	30021	40021	2	—	VA
Nominal Input Voltage	30027	40027	1	—	V
Nominal Output Voltage	30028	40028	1	—	V
Nominal Static Bypass Switch Voltage	30029	40029	1	—	V
Nominal Input Current	30030	40030	1	—	A
Nominal Output Frequency	30032	40032	1	10	Hz
Nominal Power Factor	30033	40033	1	100	—
Nominal Battery Voltage	30034	40034	1	—	V
Silence Alarm	—	40101	1	—	—
Load (Apparent Power)	30102	—	2	—	VA
Load (Real Power)	30104	—	2	—	W
Load / Capacity	30106	—	1	—	%
Output Frequency	30108	—	1	10	Hz
Bypass Frequency	30109	—	1	10	Hz
Battery Charge Status	30112	—	1	—	1 - 100% Charged 2 - Less than 100% Charged
Battery Voltage	30113	—	1	—	V
Battery Current	30114	—	1	—	A
Battery Time Remaining	30115	—	1	—	Minutes
Battery Charge Percentage	30116	—	1	—	%
Input Voltage L1	30153	—	1	—	V
Input Current L1	30154	—	1	—	A
Bypass Voltage L1	30159	—	1	—	V
Bypass Current L1	30160	—	1	—	A
Output Voltage L1	30163	—	1	—	V
Output Current L1	30164	—	1	—	A
Input Voltage L2	30203	—	1	—	V
Input Current L2	30204	—	1	—	A
Bypass Voltage L2	30209	—	1	—	V
Bypass Current L2	30210	—	1	—	A
Output Voltage L2	30213	—	1	—	V
Output Current L2	30214	—	1	—	A
Input Voltage L3	30253	—	1	—	V
Input Current L3	30254	—	1	—	A
Bypass Voltage L3	30259	—	1	—	V
Bypass Current L3	30260	—	1	—	A
Output Voltage L3	30263	—	1	—	V
Output Current L3	30264	—	1	—	A
Battery Discharge Count	30308	—	1	—	—
Battery Discharge duration	30309	—	1	—	Seconds
Battery Amp-Hour	30310	—	1	—	AH
Battery Watt-Hour	30311	—	2	—	WH

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-90 Liebert Series 610™ SCC UPS—Status and Coil

Data Description	Status	Coil	Number of Bits	Scale	Notes / Units
Auto Retransfer Primed	10049	—	1	—	—
Load On Inverter	10073	—	1	—	—
Load On Bypass	10074	—	1	—	—
Load On Bypass	10129	—	1	—	—
Manual Reset Transfer	10130	—	1	—	—
Emergency Transfer	10134	—	1	—	—
Output Switch open	10138	—	1	—	—
SBS Unable	10148	—	1	—	—
Output Frequency Off	10153	—	1	—	—
Output Overload	10154	—	1	—	—
System Emergency Off	10157	—	1	—	—
Input Power Supply Fail	10186	—	1	—	—
Input Phase Rotation Error	10191	—	1	—	—
Bypass Input Voltage Fail	10202	—	1	—	—
Output Under Voltage	10218	—	1	—	—
Output Over Voltage	10219	—	1	—	—
Module Alarm Active	10304	—	1	—	—
Customer Alarm 1	10313	—	1	—	—
Customer Alarm 2	10314	—	1	—	—
Customer Alarm 3	10315	—	1	—	—
Customer Alarm 4	10316	—	1	—	—
Customer Alarm 5	10317	—	1	—	—
Customer Alarm 6	10318	—	1	—	—
Customer Alarm 7	10319	—	1	—	—
Customer Alarm 8	10320	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-91 Liebert Series 610 SCC UPS—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Number of Input Lines	30004	40004	1	—	Bits 12 - 15
Number of Bypass Lines	30004	40004	1	—	Bits 4 - 7
Number of Output Lines	30004	40004	1	—	Bits 8 - 11
Nominal Power Rating	30021	40021	2	—	VA
Nominal Input Voltage	30027	40027	1	—	V
Nominal Output Voltage	30028	40028	1	—	V
Nominal Static Bypass Switch Voltage	30029	40029	1	—	V
Nominal Output Frequency	30032	40032	1	10	Hz
Nominal Power Factor	30033	40033	1	100	—
Silence Alarm	—	40101	1	—	—
Load (Apparent Power)	30102	—	2	—	VA
Load (Real Power)	30104	—	2	—	W
Load / Capacity	30106	—	1	—	%
Output Frequency	30108	—	1	10	Hz
Bypass Frequency	30109	—	1	10	Hz
Input Voltage L1	30153	—	1	—	V
Bypass Voltage L1	30159	—	1	—	V
Bypass Current L1	30160	—	1	—	A
Output Voltage L1	30163	—	1	—	V
Output Current L1	30164	—	1	—	A
Input Voltage L2	30203	—	1	—	V
Bypass Voltage L2	30209	—	1	—	V
Bypass Current L2	30210	—	1	—	A
Output Voltage L2	30213	—	1	—	V
Output Current L2	30214	—	1	—	A
Input Voltage L3	30253	—	1	—	V
Bypass Voltage L3	30259	—	1	—	V
Bypass Current L3	30260	—	1	—	A
Output Voltage L3	30263	—	1	—	V
Output Current L3	30264	—	1	—	A

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-92 Liebert HiPulse™ and Liebert SICE 7200™—Input and Holding—SMM/SSM

Controller	Multi Module Series - SMM				
Liebert Products	Liebert HiPulse Liebert SICE 7200				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Output Voltage L1-L2	—	40001	1	—	V
Output Voltage L2-L3	—	40002	1	—	V
Output Voltage L3-L1	—	40003	1	—	V
Output Amps L1	—	40004	1	—	A
Output Amps L2	—	40005	1	—	A
Output Amps L3	—	40006	1	—	A
Power L1	—	40007	1	—	kW
Power L2	—	40008	1	—	kW
Power L3	—	40009	1	—	kW
Bypass Frequency	—	40010	1	10	Hz
Inverter Frequency	—	40011	1	10	Hz
Battery Voltage	—	40012	1	—	V
Battery Amperage	—	40013	1	—	A
Apparent Power L1	—	40014	1	—	kVA
Apparent Power L2	—	40015	1	—	kVA
Apparent Power L3	—	40016	1	—	kVA
% Load L1	—	40017	1	—	%
% Load L2	—	40018	1	—	%
% Load L3	—	40019	1	—	%
% Battery Charge	—	40020	1	—	—
Battery Temperature	—	40021	1	—	deg C
Battery Time Remaining	—	40022	1	—	Minutes
Alarm Points					
Communications	—	40289	1	—	Bit 0
Bypass Switch Open	—	40289	1	—	Bit 1
Output Switch Open	—	40289	1	—	Bit 2
Rectifier Switch Open	—	40289	1	—	Bit 3
Battery CB Open	—	40289	1	—	Bit 4
Manual Bypass Closed	—	40289	1	—	Bit 5
Bypass Absent	—	40289	1	—	Bit 6
Bypass Overvoltage	—	40289	1	—	Bit 7
Bypass Undervoltage	—	40289	1	—	Bit 8
Bypass Frequency Error	—	40289	1	—	Bit 9
Byp Phase Rotation Error	—	40289	1	—	Bit 10
Bypass SCR Failure	—	40290	1	—	Bit 0
Bypass Off	—	40290	1	—	Bit 1
Bypass Off	—	40290	1	—	Bit 2
Load On Bypass	—	40290	1	—	Bit 3
Bypass Overtemperature	—	40290	1	—	Bit 4
Rectifier Under Voltage	—	40290	1	—	Bit 5
Rectifier Block	—	40290	1	—	Bit 6
Rectifier Block	—	40290	1	—	Bit 7
Rectifier Current Limit	—	40290	1	—	Bit 8

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-92 Liebert HiPulse™ and Liebert SICE 7200™—Input and Holding—SMM/SSM (continued)

Controller	Multi Module Series - SMM				
Liebert Products	Liebert HiPulse Liebert SICE 7200				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Rectifier Overtemperature	—	40290	1	—	Bit 9
Rectifier Fuse Failure	—	40290	1	—	Bit 10
Inverter Voltage Fault	—	40291	1	—	Bit 0
Inverter Disable	—	40291	1	—	Bit 1
Inverter Disable	—	40291	1	—	Bit 2
Inverter Current Limit	—	40291	1	—	Bit 3
Inverter Overtemperature	—	40291	1	—	Bit 4
Inverter Non Sync	—	40291	1	—	Bit 5
Inverter Overvoltage	—	40291	1	—	Bit 6
Inverter Undervoltage	—	40291	1	—	Bit 7
Inverter Fuse Failure	—	40291	1	—	Bit 8
Output Overvoltage	—	40291	1	—	Bit 9
Output Undervoltage	—	40291	1	—	Bit 10
Output Undervoltage	—	40292	1	—	Bit 0
Output Waveform Error	—	40292	1	—	Bit 1
Inverter Frequency Error	—	40292	1	—	Bit 2
Inverter Parallel Error	—	40292	1	—	Bit 3
Contactor Failure	—	40292	1	—	Bit 4
Battery Test	—	40292	1	—	Bit 5
Battery Test Failed	—	40292	1	—	Bit 6
Battery On Load	—	40292	1	—	Bit 7
Battery End of Discharge	—	40292	1	—	Bit 8
Boost Time Expired	—	40292	1	—	Bit 9
DC Overvoltage	—	40292	1	—	Bit 10
DC Undervoltage	—	40293	1	—	Bit 0
Battery Fuse Failure	—	40293	1	—	Bit 1
DC Overvoltage	—	40293	1	—	Bit 2
Transfer Count Block	—	40293	1	—	Bit 3
Overload Shutdown	—	40293	1	—	Bit 4
Overtemperature SD	—	40293	1	—	Bit 5
Emergency Stop	—	40293	1	—	Bit 6
Overload Present	—	40293	1	—	Bit 7
Overload Shutdown TO	—	40293	1	—	Bit 8
Display Error	—	40293	1	—	Bit 9
Display Error	—	40293	1	—	Bit 10
Inverter Over Capacity	—	40293	1	—	Bit 11
Bypass ECO Mode	—	40293	1	—	Bit 12
Fan Failure	—	40293	1	—	Bit 13
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-93 Liebert SICE 7200™—Input and Holding—SSC

Controller	System Control Cabinet - SSC
Liebert Products	Liebert SICE 7200

Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Output Voltage L1-L2	—	40001	1	—	V
Output Voltage L2-L3	—	40002	1	—	V
Output Voltage L3-L1	—	40003	1	—	V
Output Amps L1	—	40004	1	—	A
Output Amps L2	—	40005	1	—	A
Output Amps L3	—	40006	1	—	A
Power L1	—	40007	1	—	kW
Power L2	—	40008	1	—	kW
Power L3	—	40009	1	—	kW
Bypass Frequency	—	40010	1	10	Hz
Battery Voltage	—	40012	1	—	V
Battery Amperage	—	40013	1	—	A
Apparent Power L1	—	40014	1	—	kVA
Apparent Power L2	—	40015	1	—	kVA
Apparent Power L3	—	40016	1	—	kVA
% Load L1	—	40017	1	—	%
% Load L2	—	40018	1	—	%
% Load L3	—	40019	1	—	%
% Battery Charge	—	40020	1	—	%
Battery Temperature	—	40021	1	—	deg C
Battery Time Remaining	—	40022	1	—	Minutes
Communications	—	40289	1	—	Bit 0
Bypass Switch Open	—	40289	1	—	Bit 1
Output Switch Open	—	40289	1	—	Bit 2
Battery CB Open	—	40289	1	—	Bit 3
Manual Bypass Closed	—	40289	1	—	Bit 4
Bypass Absent	—	40289	1	—	Bit 5
Bypass Overvoltage	—	40289	1	—	Bit 6
Bypass Undervoltage	—	40289	1	—	Bit 7
Bypass Frequency Error	—	40289	1	—	Bit 8
Bypass Ph Rotation Error	—	40289	1	—	Bit 9
Bypass SCR Failure	—	40289	1	—	Bit 10
Bypass Off	—	40290	1	—	Bit 0
Bypass Off	—	40290	1	—	Bit 1
Load On Bypass	—	40290	1	—	Bit 2
Bypass Overtemperature	—	40290	1	—	Bit 3
Inverter Non Sync	—	40290	1	—	Bit 4
Output Overvoltage	—	40290	1	—	Bit 5
Output Undervoltage	—	40290	1	—	Bit 6
Output Undervoltage	—	40290	1	—	Bit 7
Output Waveform Error	—	40290	1	—	Bit 8
Transfer Count Block	—	40290	1	—	Bit 9

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-93 Liebert SICE 7200™—Input and Holding—SSC (continued)

Controller	System Control Cabinet - SSC
Liebert Products	Liebert SICE 7200

Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Overload Shutdown	—	40290	1	—	Bit 10
Overtemperature Shutdown	—	40291	1	—	Bit 0
Emergency Stop	—	40291	1	—	Bit 1
Overload Present	—	40291	1	—	Bit 2
Overload Shutdown TO	—	40291	1	—	Bit 3
Display Error	—	40291	1	—	Bit 4
Display Error	—	40291	1	—	Bit 5
Invewrter Over Capacity	—	40291	1	—	Bit 6
Parallel Bus Open	—	40291	1	—	Bit 7
Battery Ground Fault	—	40291	1	—	Bit 8
Bypass Backfeed	—	40291	1	—	Bit 9
Bypass Sync Inhibited	—	40291	1	—	Bit 10
Bypass ECO Mode	—	40291	1	—	Bit 11
Fan Failure	—	40291	1	—	Bit 12

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-94 Liebert Npower™—Input and Holding—IMP

Controller	Single Module Series - SMS				
Liebert Products	Liebert Npower - SMS				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Status Points (View)					
Input Voltage A-B	—	40001	1	—	V
Input Voltage B-C	—	40002	1	—	V
Input Voltage C-A	—	40003	1	—	V
Bypass Voltage A-B	—	40004	1	—	V
Bypass Voltage B-C	—	40005	1	—	V
Bypass Voltage C-A	—	40006	1	—	V
Battery Voltage	—	40007	1	—	V
Battery Current	—	40008	1	10	A
Battery Temperature	—	40009	1	—	deg C
Output Voltage A-B	—	40010	1	—	V
Output Voltage B-C	—	40011	1	—	V
Output Voltage C-A	—	40012	1	—	V
Output Current A	—	40013	1	10	A
Output Current B	—	40014	1	10	A
Output Current C	—	40015	1	10	A
Output kVA A	—	40016	1	—	kVA
Output kVA B	—	40017	1	—	kVA
Output kVA C	—	40018	1	—	kVA
Output kW A	—	40019	1	—	kW
Output kW B	—	40020	1	—	kW
Output kW C	—	40021	1	—	kW
Output Frequency	—	40022	1	10	Hz
Rated kVA Percentage	—	40023	1	—	%
Rated kW Percentage	—	40024	1	—	%
Alarm Points					
Communications Loss	—	40289	1	—	Bit 0
Battery Fuse Fail	—	40289	1	—	Bit 1
Battery Low Transfer	—	40289	1	—	Bit 2
DC Over Voltage Transient	—	40289	1	—	Bit 3
Input Phase Rotation Error	—	40289	1	—	Bit 4
Rectifier/Trap Fuse Fail	—	40289	1	—	Bit 5 Any of Rectifier / Trap Fuse
Bypass Frequency Error	—	40289	1	—	Bit 6
Bypass Overload Shutdown	—	40289	1	—	Bit 7
Bypass Phase Rotation Error	—	40289	1	—	Bit 8
Inverter Over Voltage Transfer	—	40289	1	—	Bit 9
Inverter Fuse Fail	—	40289	1	—	Bit 10
Output Over Voltage Transfer	—	40289	1	—	Bit 11
Output Under Voltage Transfer	—	40289	1	—	Bit 12
SBS SCR Open	—	40289	1	—	Bit 13
SBS SCR Short	—	40289	1	—	Bit 14
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

Table 3-94 Liebert Npower™—Input and Holding—IMP (continued)

Controller	Single Module Series - SMS				
Liebert Products	Liebert Npower - SMS				
Available Points					
Data Description	**Input Register**	**Holding Register**	**# of Reg.**	**Scale**	**Notes / Units**
Inverter Over Current Transfer	—	40289	1	—	Bit 15
Equipment Over Temperature	—	40290	1	—	Bit 0 Any of Battery / Heatsink / Ambient / Timeout Shutdown
Battery Ground Fault CB Trip	—	40290	1	—	Bit 1
Power Supply Fail	—	40290	1	—	Bit 2 Any of Input / Bypass / Output / F1 / SWGR / MM / Option / AuEPO / LBS Power Fail
EPO Shutdown	—	40290	1	—	Bit 3
Rectifier Fail	—	40290	1	—	Bit 4
Inverter Fail	—	40290	1	—	Bit 5
Hardware Shutdown	—	40290	1	—	Bit 6
Battery Discharge	—	40290	1	—	Bit 7
Input Current Imbalance	—	40290	1	—	Bit 8
Input Line fail	—	40290	1	—	Bit 9
Input Under Voltage	—	40290	1	—	Bit 10
Input Over Voltage	—	40290	1	—	Bit 11
Input Over Current	—	40290	1	—	Bit 12
Battery CB Open	—	40290	1	—	Bit 13
Bypass Sync Error	—	40290	1	—	Bit 14
Bypass Voltage Out of Tolerance	—	40290	1	—	Bit 15
Bypass Line Fail	—	40291	1	—	Bit 0
Inverter Over Current	—	40291	1	—	Bit 1
Output OF/UF	—	40291	1	—	Bit 2
Inverter Overload	—	40291	1	—	Bit 3 Any of Inverter Phase A / B / C Overload
Excessive Auto Retransfer	—	40291	1	—	Bit 4
Equipment Over Temperature Warning	—	40291	1	—	Bit 5 Any of AuBattery / Ambient / Heatsink / Inlet Over Temp Warning
Fan Fail	—	40291	1	—	Bit 6 Any of Power Pole Fan 1 / 2 / 3, Primary Fan 1 / 2 / 3 and System Fan Fail
SBS Unable	—	40291	1	—	Bit 7
Inverter Off By User	—	40291	1	—	Bit 8
Battery low Warning	—	40291	1	—	Bit 9
Battery Test Fail	—	40291	1	—	Bit 10
User Shutdown	—	40291	1	—	Bit 11
Load On Bypass	—	40291	1	—	Bit 12
Input Contact Alarms	—	40291	1	—	Bit 13 Any of Input Contact 1-8 Alarms
Generic Alarms	—	40291	1	—	Bit 14 Any other alarm conditions that are not mapped
Bypass Overload	—	40291	1	—	Bit 15 Any of Bypass A / B / C Overload
If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.					

3.4 Battery Monitoring Products

Table 3-95 Alber® BDSU™—Status and Coil

Data Description	Status	Coil	Number of Bits	Notes / Units
Battery Entity				
Battery Discharging Battery 1 - 32	10001-10032	—	1	Active on Alarm
String Entity				
High Ambient Temperature String 1 - 32	10033-10064	—	1	Active on Alarm
Low Ambient Temperature String 1 - 32	10065-10096	—	1	Active on Alarm
Low Ambient Temperature Probe Two String 1 - 32	10097-10128	—	1	Active on Alarm
High Ambient Temperature Probe Two String 1 - 32	10129-10160	—	1	Active on Alarm
Low Overall Voltage String 1 - 32	10161-10192	—	1	Active on Alarm
High Overall Voltage String 1 - 32	10193-10224	—	1	Active on Alarm
High Battery String Current String 1 - 32	10225-10256	—	1	Active on Alarm
Low Battery String Float Current String 1 - 32	10257-10288	—	1	Active on Alarm
High Battery String Float Current String 1 - 32	10289-10320	—	1	Active on Alarm
High Battery String Ripple Current String 1 - 32	10321-10352	—	1	Active on Alarm
Battery String Discharge Detected String 1 - 32	10353-10384	—	1	Active on Alarm
Maximum Discharge Time Exceeded String 1 - 32	10385-10416	—	1	Active on Alarm
Discharge Low Overall Voltage String 1 - 32	10417-10448	—	1	Active on Alarm
Discharge Low Cell Voltage String 1 - 32	10449-10480	—	1	Active on Alarm
Discharge High Battery String Current String 1 - 32	10481-10512	—	1	Active on Alarm
Excessive Cell to Cell Temperature Deviation String 1 - 32	10513-10544	—	1	Active on Alarm
Excessive Cell to Ambient Temperature Deviation String 1 - 32	10545-10576	—	1	Active on Alarm
Thermal Runaway Detected String 1 - 32	10577-10608	—	1	Active on Alarm
Battery String Equalize String 1 - 32	10609-10640	—	1	Active on Alarm
Battery String Offline String 1 - 32	10641-10672	—	1	Active on Alarm
Thermal Runaway Cell to Ambient Temperature Event String 1 - 32	13233-13264	—	1	Active on Alarm
Thermal Runaway Cell to Cell Temperature Event String 1 - 32	13265-13296	—	1	Active on Alarm
Thermal Runaway Charger Current Level One Event String 1 - 32	13297-13328	—	1	Active on Alarm

Table 3-95 Alber® BDSU™—Status and Coil (continued)

Data Description	Status	Coil	Number of Bits	Notes / Units
Thermal Runaway Charger Current Level Two Event String 1 - 32	13329-13360	—	1	Active on Alarm
Ground Fault Detected String 1 - 32	14041-14072	—	1	Active on Alarm
Cell Entity (Cells 1 – 320)				
Low Cell Voltage Cell 1 - 320	10673-10992	—	1	Active on Alarm
High Cell Voltage Cell 1 - 320	10993-11312	—	1	Active on Alarm
Low Cell Temperature Cell 1 - 320	11313-11632	—	1	Active on Alarm
High Cell Temperature Cell 1 - 320	11633-11952	—	1	Active on Alarm
Low Internal Resistance Cell 1 - 320	11953-12272	—	1	Active on Alarm
High Internal Resistance Cell 1 - 320	12273-12592	—	1	Active on Alarm
High Intercell Resistance Cell 1 - 320	12593-12912	—	1	Active on Alarm
Discharge Low Cell Voltage Cell 1 - 320	12913-13232	—	1	Active on Alarm
Intertier Resistance High Cell 1 - 320	13361-13680	—	1	Active on Alarm
Cell Entity (Cells 321 – 360)				
Low Cell Voltage Cell 321 - 360	13681-13720	—	1	Active on Alarm
High Cell Voltage Cell 321 – 360	13721-13760	—	1	Active on Alarm
Low Cell Temperature Cell 321 – 360	13761-13800	—	1	Active on Alarm
High Cell Temperature Cell 321 – 360	13801-13840	—	1	Active on Alarm
Low Internal Resistance Cell 321 – 360	13841-13780	—	1	Active on Alarm
High Internal Resistance Cell 321 – 360	13881-13920	—	1	Active on Alarm
High Intercell Resistance Cell 321 – 360	13921-12860	—	1	Active on Alarm
Discharge Low Cell Voltage Cell 321 – 360	13961-14000	—	1	Active on Alarm
Intertier Resistance High Cell 321 - 360	14001-14040	—	1	Active on Alarm

Table 3-96 Alber® BDSU™—Input and Holding

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Battery Measurement and Control					
System Status	30385	—	1	—	1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation
Battery Entity					
Battery Name Battery 1 - 32	30386-31057	—	21	—	Each 16-bit register is a single Unicode character of a null terminated string
Battery Rating Battery 1 - 32	31186-31217	—	1	—	Units : AH
Battery Time Remaining Battery 1 - 32	31058-31121	—	2	—	Units : sec
Battery Discharge Time Battery 1 - 32	31122-31185	—	2	—	Units : sec
Ordinal Position of Battery Battery 1 - 32	31218-31249	—	1	—	—
String Entity					
Battery String Name String 1 - 32	31250-31921	—	21	—	Each 16-bit register is a single Unicode character of a null terminated string
Installation Date String 1 - 32	33170-33233	—	2	—	Secs since Epoch(UTC)
Cell/Monobloc Rating String 1 - 32	33234-33265	—	1	—	Units : AH
String Ambient Temperature 1 String 1 - 32	31922-31953	—	1	Scale : x / 10	Units : deg C
String Ambient Temperature 2 String 1 - 32	31954-31985	—	1	Scale : x / 10	Units : deg C
String Ambient Temperature 1 String 1 - 32	31986-32017	—	1	Scale : x / 10	Units : deg F
String Ambient Temperature 2 String 1 - 32	32018-32049	—	1	Scale : x / 10	Units : deg F
String Overall Voltage String 1 - 32	32050-32081	—	1	Scale : x / 10	Units : VDC
String Current String 1 - 32	32082-32113	—	1	—	Units : A DC
Float Current String 1 - 32	32114-32145	—	1	—	Units : mA DC
Ripple Current String 1 - 32	32146-32177	—	1	—	Units : A AC
Total Active Alarms on a Battery String String 1 - 32	32178-32209	—	1	—	Units : 0
Discharge State String 1 - 32	32210-32241	—	1	—	0 = Not In Progress 1 = In Progress
Battery String Discharge Time String 1 - 32	32338-32401	—	2	—	Units : sec
Cell to Cell Temperature Deviation Threshold String 1 - 32	33042-33073	—	1	—	Units : deg C

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-96 Alber® BDSU™—Input and Holding (continued)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Cell to Cell Temperature Deviation Threshold String 1 - 32	33074-33105	—	1	—	Units : deg F
Cell to Ambient Temperature Deviation Threshold String 1 - 32	33106-33137	—	1	—	Units : deg C
Cell to Ambient Temperature Deviation Threshold String 1 - 32	33138-33169	—	1	—	Units : deg F
Battery String Alarm Reset or Acknowledge String 1 - 32	—	43490-43521	1	—	2 = Reset 4 = Acknowledge
Battery String Time-To-Go String 1 - 32	32242-32305	—	2	—	Units : min
Amp-Hours Remaining in Battery String String 1 - 32	32306-32337	—	1	—	Units : AH
Low Ambient Temperature Global Threshold String 1 - 32	32402-32433	—	1	Scale : x / 10	Units : deg C
Low Ambient Temperature Global Threshold String 1 - 32	32434-32465	—	1	Scale : x / 10	Units : deg F
High Ambient Temperature Global Threshold String 1 - 32	32466-32497	—	1	Scale : x / 10	Units : deg C
High Ambient Temperature Global Threshold String 1 - 32	32498-32529	—	1	Scale : x / 10	Units : deg F
Battery String Overall Voltage Low Threshold String 1 - 32	32530-32561	—	1	Scale : x / 10	Units : VDC
Battery String Overall Voltage High Threshold String 1 - 32	32562-32593	—	1	Scale : x / 10	Units : VDC
Battery String Current High Threshold String 1 - 32	32594-32625	—	1	—	Units : A DC
Battery String Float Current Low Threshold String 1 - 32	32626-32657	—	1	—	Units : mA DC
Battery String Float Current High Threshold String 1 - 32	32658-32689	—	1	—	Units : mA DC
Battery String Ripple Current High Threshold String 1 - 32	32690-32721	—	1	—	Units : A AC
Cell Voltage Low Global Threshold String 1 - 32	32722-32753	—	1	Scale : x / 1000	Units : VDC
Cell Voltage High Global Threshold String 1 - 32	32754-32785	—	1	Scale : x / 1000	Units : VDC
Cell Temperature Low Global Threshold String 1 - 32	32786-32817	—	1	Scale : x / 10	Units : deg C
Cell Temperature Low Global Threshold String 1 - 32	32818-32849	—	1	Scale : x / 10	Units : deg F
Cell Temperature High Global Threshold String 1 - 32	32850-32881	—	1	Scale : x / 10	Units : deg C

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-96 Alber® BDSU™—Input and Holding (continued)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Cell Temperature High Global Threshold String 1 - 32	32882-32913	—	1	Scale : x / 10	Units : deg F
Internal Resistance Low Global Threshold String 1 - 32	32914-32945	—	1	—	Units : microOhm
Internal Resistance High Global Threshold String 1 - 32	32946-32977	—	1	—	Units : microOhm
Intercell Resistance High Global Threshold String 1 - 32	32978-33009	—	1	—	Units : microOhm
Intertier Resistance High Global Threshold String 1 - 32	33010-33041	—	1	—	Units : microOhm
Cell to Cell Temperature Deviation Threshold String 1 - 32	39027-39058	—	1	Scale : x / 10	Units : deg C
Cell to Cell Temperature Deviation Threshold String 1 - 32	39059-39090	—	1	Scale : x / 10	Units : deg F
Cell to Ambient Temperature Deviation Threshold String 1 - 32	39091-39122	—	1	Scale : x / 10	Units : deg C
Cell to Ambient Temperature Deviation Threshold String 1 - 32	39123-39154	—	1	Scale : x / 10	Units : deg F
Discharge Low Cell Voltage Threshold String 1 - 32	33266-33297	—	1	Scale : x / 1000	Units : VDC
Discharge Low Overall Voltage Threshold String 1 - 32	33298-33329	—	1	Scale : x / 10	Units : VDC
Discharge Battery String Current High Threshold String 1 - 32	33330-33361	—	1	—	Units : A DC
Discharge Maximum Time String 1 - 32	33362-33393	—	1	—	Units : min
Startup Date String 1 - 32	33394-33457	—	2	—	Secs since Epoch(UTC)
Battery String Commissioned Status String 1 - 32	33458-33489	—	1	—	0 = Not Commissioned 1 = Commissioned
Cell to Cell Temperature Deviation Threshold String 1 - 32	39027-39058	—	1	Scale : x / 10	Units : deg C
Cell to Cell Temperature Deviation Threshold String 1 - 32	39059-39090	—	1	Scale : x / 10	Units : deg F
Cell to Ambient Temperature Deviation Threshold String 1 - 32	39091-39122	—	1	Scale : x / 10	Units : deg C
Cell to Ambient Temperature Deviation Threshold String 1 - 32	39123-39152	—	1	Scale : x / 10	Units : deg F
Ordinal Position of String String 1 - 32	33522-33553	—	1	—	—
Index of Parent Battery String 1 - 32	33554-33585	—	1	—	—

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-96 Alber® BDSU™—Input and Holding (continued)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Cell Entity (Cells 1 – 320)					
Cell Voltage Cell 1 - 320	33586-33905	—	1	Scale : x / 1000	Units : VDC
Cell Temperature Cell 1 - 320	33906-34225	—	1	Scale : x / 10	Units : deg C
Cell Temperature Cell 1 - 320	34226-34545	—	1	Scale : x / 10	Units : deg F
Internal Resistance Value Cell 1 - 320	34546-34865	—	1	—	Units : microOhm
Intercell Resistance Value Cell 1 - 320	34866-35185	—	1	—	Units : microOhm
Cell Voltage Low Threshold Cell 1 - 320	35186-35505	—	1	Scale : x / 1000	Units : VDC
Cell Voltage High Threshold Cell 1 - 320	35506-35825	—	1	Scale : x / 1000	Units : VDC
Cell Temperature Low Threshold Cell 1 - 320	35826-36145	—	1	Scale : x / 10	Units : deg C
Cell Temperature Low Threshold Cell 1 - 320	36146-36465	—	1	Scale : x / 10	Units : deg F
Cell Temperature High Threshold Cell 1 - 320	36466-36785	—	1	Scale : x / 10	Units : deg C
Cell Temperature High Threshold Cell 1 - 320	36786-37105	—	1	Scale : x / 10	Units : deg F
Internal Resistance Low Threshold Cell 1 - 320	37106-37425	—	1	—	Units : microOhm
Internal Resistance High Threshold Cell 1 - 320	37426-37745	—	1	—	Units : microOhm
Intercell Resistance High Threshold Cell 1 - 320	37746-38065	—	1	—	Units : microOhm
Ordinal Position of Cell Cell 1 - 320	38066-38385	—	1	—	—
Index of Parent String Cell 1 - 320	38386-38705	—	1		—
Index of Parent Battery Cell 1 - 320	38706-39025	—	1		—
Cell Entity (Cells 321 – 360)					
Cell Voltage Cell 321 - 360	39155-39194	—	1	Scale : x / 1000	Units : VDC
Cell Temperature Cell 321 – 360	39195-39234	—	1	Scale : x / 10	Units : deg C
Cell Temperature Cell 321 – 360	39235-39274	—	1	Scale : x / 10	Units : deg F
Internal Resistance Value Cell 321 – 360	39275-39314	—	1	—	Units : microOhm
Intercell Resistance Value Cell 321 – 360	39315-39354	—	1	—	Units : microOhm
Cell Voltage Low Threshold Cell 321 – 360	39355-39394	—	1	Scale : x / 1000	Units : VDC

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

Table 3-96 Alber® BDSU™—Input and Holding (continued)

Data Description	Input Register	Holding Register	# of Reg.	Scale	Notes / Units
Cell Voltage High Threshold Cell 321 – 360	39395-39434	—	1	Scale : x / 1000	Units : VDC
Cell Temperature Low Threshold Cell 321 – 360	39435-39474	—	1	Scale : x / 10	Units : deg C
Cell Temperature Low Threshold Cell 321 – 360	39475-39514	—	1	Scale : x / 10	Units : deg F
Cell Temperature High Threshold Cell 321 - 360	39515-39554	—	1	Scale : x / 10	Units : deg C
Cell Temperature High Threshold Cell 321 – 360	39555-39594	—	1	Scale : x / 10	Units : deg F
Internal Resistance Low Threshold Cell 321 – 360	39595-39634	—	1	—	Units : microOhm
Internal Resistance High Threshold Cell 321 – 360	39635-39674	—	1	—	Units : microOhm
Intercell Resistance High Threshold Cell 321 – 360	39675-39714	—	1	—	Units : microOhm
Ordinal Position of Cell Cell 321 – 360	39715-39754	—	1	—	—
Index of Parent String Cell 321 – 360	39755-39794	—	1	—	—
Index of Parent Battery Cell 321 - 360	39795-39834	—	1	—	—
Device Status and Control					
Group Status	39026	—	1	—	1 = Normal Operation 2 = StartUp 4 = Unknown - No System Support for System Status 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation 64 = Unknown - Communication Failure
UXCM Device					
System Date and Time	39998	49998	2	—	Secs since Epoch(UTC)

If the Scale column has a value for a Data Description, divide the Modbus value by the value in the Scale column to get the scaled value.

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4.0 BACnet Communications

4.1 BACnet Protocol Implementation Conformance Statement

The Liebert IntelliSlot IS-UNITY-DP™, IS-WEBADPT, and IS-IPBML cards provide BACnet IP to Emerson Network Power® devices via the BACnet protocol. The IS-UNITY-DP card supports the BACnet MSTP protocol as well. Data points of the managed device are mapped to BACnet objects that are automatically created in the card when the device is discovered.

The BACnet implementation does not include a BACnet Broadcast Management Device (BBMD).

The IS-UNITY-DP and IS-IPBML cards support Foreign Device Registration. They allow you to register as a Foreign Device, add the IP address of the BBMD, and set the Foreign Device Time-to-Live.

The BACnet protocol support in the IS-UNITY-DP card has been tested by the BACnet Testing Laboratories (BTL) and certified to be compliant with the BACnet protocol standards. The BACnet Protocol Implementation Conformance Statement for the IS-UNITY-DP card is available to download from our public product website found **here**.

The following sections contain the BACnet implementation listings of Services and Objects supported in the IS-WEBADPT and IS-IPBML cards.

4.1.1 Segmentation Capability

Not supported.

4.1.2 Supported Services

Service	Initiate	Execute
Alarm and Event Services		
• AcknowledgeAlarm	—	—
• ConfirmedCOVNotification	x	—
• UnconfirmedCOVNotification	x	—
• ConfirmedEventNotification	—	—
• UnconfirmedEventNotification	—	—
• GetAlarmSummary	—	—
• GetEnrollmentSummary	—	—
• GetEventInformation	—	—
• LifeSafetyOperation	—	—
• SubscribeCOV	—	x
• SubscribeCOVProperty	—	—
File Access Services		
• AtomicReadFile	—	—
• AtomicWriteFile	—	—
Object Access Services		
• AddListElement	—	—
• RemoveListElement	—	—
• CreateObject	—	—
• DeleteObject	—	—
• ReadProperty	—	x
• ReadPropertyConditional	—	—
• ReadPropertyMultiple	—	x
• WriteProperty	—	x
• WritePropertyMultiple	—	x
• ReadRange	—	—

Service	Initiate	Execute
Remote Device Management Services		
• DeviceCommunicationControl	—	—
• ConfirmedPrivateTransfer	—	—
• UnconfirmedPrivateTransfer	—	—
• ReinitializeDevice	—	—
• ConfirmedTextMessage	—	—
• UnconfirmedTextMessage	—	—
• TimeSynchronization	—	x (IS-IPBML, IS-UNITY-DP only)
• UTCTimeSynchronization	—	x (IS-IPBML, IS-UNITY-DP only)
• Who-Has	—	x
• I-Have	x	—
• Who-Is	—	x
• I-Am	x	—
Virtual Terminal Services		
• VT-Open	—	—
• VT-Close	—	—
• VT-Data	—	—

4.1.3 Standard Object Types SupportedObject Properties

Object Type	X = Supported
Accumulator	—
Analog Input	X
Analog Output	X
Analog Value	X
Averaging	—
Binary Input	X
Binary Output	X
Binary Value	X
Calendar	—
Command	—
Device	X
Event Enrollment	—
File	—
Group	—
Life Safety Point	—
Life Safety Zone	—
Loop	—
Multistate Input	X
Multistate Output	X
Multistate Value	X
Notification Class	—
Program	—
Pulse Converter	—
Schedule	—
Trend Log	—
Access Door	—
Event Log	—
Load Control	—
Structured View	—
Trend Log Multiple	—

The following object properties are supported.



NOTE
*All properties are **read-only** unless otherwise noted*

Device Object

The Device object represents the agent (the card) rather than the managed device.

Device Object Property	Comments
Object_Identifier	The card must be configured with a unique Device Instance Number to avoid interference with other cards on the same BACnet network.
Object_Name	Writable. If the Device Object Name is changed from the default, the configured name must be unique to avoid interference with other cards on the same BACnet network.
Object_Type	—
System_Status	—
Vendor_Name	—
Vendor_Identifier	—
Model_Name	—
Firmware_Revision	—
Application_Software_Version	—
Location	—
Description	—
Protocol_Version	—
Protocol_Revision	—
Protocol_Services_Supported	—
Protocol_Object_Types_Supported	—
Object_List	—
Max_APDU_Length_Accepted	—
Segmentation_Supported	—
Local_Time	—
Local_Date	—
UTC_Offset	—
Daylight_Savings_Status	—
APDU_Timeout	Writable. Range: 1-65,535 ms. Default 3000 ms.
Number_Of_APDU_Retries	Writable. Range: 0-8. Default 3.
Device_Address_Binding	—
Database_Revision	—
Active_COV_Subscriptions	—

Analog Object

Analog Object Property	Analog Input	Analog Output	Analog Value	Comments
Object_Identifier	x	x	x	—
Object_Name	x	x	x	—
Object_Type	x	x	x	—
Present_Value	x	x	x	Writable if any of these conditions apply: • Object is Analog Output • Object is Analog Value and associated device Data Description is writable • Out_Of_Service is True
Description	x	x	x	—
Status_Flags	x	x	x	—
Event_State	x	x	x	—
Reliability	x	x	x	—
Out_Of_Service	x	x	x	Writable. Values: True/False. Default: False.
Units	x	x	x	See **Units** below this table.
Priority_Array		x	(x)	Support for this property on Analog Value objects is device-dependent.
Relinquish_Default	—	x	(x)	Support for this property on Analog Value objects is device-dependent. The value is equal to the Present_Value so that if all entries in the Priority_Array are relinquished, the Present_Value does not change.
COV_Increment	x	x	x	Writable. Default: 0.5.

Units

Possible values of the Units property include the BACnet Engineering Units defined in the BACnet standard, plus these additional proprietary units values:

Value	Units
256	Ampere-Hours
257	MilliHertz (.001 Hertz)
258	GigaHertz (1,000,000,000 Hertz)
259	PSI - Absolute
260	Total Harmonic Distortion (%)
261	Microhms (.000001 Ohms)
262	Bytes
263	Kilobytes
264	Megabytes
265	Gigabytes
266	Terabytes
267	Volt-Ampere-Hours
268	Kilovolt-Ampere-Hours
269	Volt-Ampere-Reactive-Hours
270	Kilovolt-Ampere-Reactive-Hours
271	Grams of Water per Cubic Meter of Air
272	Torrs
273	MilliTorrs

Binary Object Properties

Binary Object Property	Binary Input	Binary Output	Binary Value	Comments
Object_Identifier	x	x	x	—
Object_Name	x	x	x	—
Object_Type	x	x	x	—
Present_Value	x	x	x	Writable if any of these conditions apply: • Object is Binary Output • Object is Binary Value and associated device Data Description is writable • Out_Of_Service is True
Description	x	x	x	—
Status_Flags	x	x	x	—
Event_State	x	x	x	—
Reliability	x	x	x	—
Out_Of_Service	x	x	x	Writable. Values: True/False. Default: False.
Polarity	x	x	—	—
Inactive_Text	x	x	x	—
Active_text	x	x	x	—
Priority_Array	—	x	(x)	Support for this property on Binary Value objects is device-dependent.
Relinquish_Default	—	x	(x)	Support for this property on Binary Value objects is device-dependent. The value is equal to the Present_Value so that if all entries in the Priority_Array are relinquished, the Present_Value does not change.

Multistate Object Properties

Multistate Object Property	Multistate Input	Multistate Output	Multistate Value	Comments
Object_Identifier	x	x	x	—
Object_Name	x	x	x	—
Object_Type	x	x	x	—
Present_Value	x	x	x	Writable if any of these conditions apply: • Object is Multistate Output • Object is Multistate Value and associated device Data Description is writable • Out_Of_Service is True
Description	x	x	x	—
Status_Flags	x	x	x	—
Event_State	x	x	x	—
Reliability	x	x	x	—
Out_Of_Service	x	x	x	Writable. Values: True/False. Default: False.
Number_Of_States	x	x	x	—
State_Text	x	x	x	—
Priority_Array	—	x	(x)	Support for this property on Multistate Value objects is device-dependent.
Relinquish_Default	—	x	(x)	Support for this property on Multistate Value objects is device-dependent. The value is equal to the Present_Value so that if all entries in the Priority_Array are relinquished, the Present_Value does not change.

4.2 Thermal Management Products

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Air: Supply Air						
Supply Air Over Temperature	Binary_Value	1	5015_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Under Temperature	Binary_Value	2	5019_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Sensor Issue	Binary_Value	3	5026_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air: Return Air						
Return Air Over Temperature	Binary_Value	14	5023_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Under Temperature	Binary_Value	15	5335_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Sensor Issue	Binary_Value	16	5147_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air: External Sensors						
Ext Air Sensor A Over Temperature	Binary_Value	27	4601_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temperature	Binary_Value	28	4608_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Issue	Binary_Value	29	4618_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ambient Air Sensor Issue	Binary_Value	30	5573_1_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Humidity						
High Return Humidity	Binary_Value	41	5034_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Humidity	Binary_Value	42	5036_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dew Point Over Temperature	Binary_Value	43	5578_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Dew Point Under Temperature	Binary_Value	44	5579_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Return Humidity Sensor Issue	Binary_Value	45	5902_1	RD	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Humidity: External Sensors						
Ext Air Sensor A High Humidity	Binary_Value	53	5349_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Low Humidity	Binary_Value	54	5351_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Dew Point Over Temperature	Binary_Value	55	4615_1_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Under Temperature	Binary_Value	56	5577_1_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Compressors						
Ext Compressor Lockout	Binary_Value	65	5067_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Capacity Reduced	Binary_Value	66	5513_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Compressor 1						
Compressor Hours Exceeded	Binary_Value	77	5269_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure	Binary_Value	78	5270_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure	Binary_Value	79	5271_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle	Binary_Value	80	5352_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue	Binary_Value	81	5146_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload	Binary_Value	82	5272_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp Sensor Issue	Binary_Value	83	5354_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Over Temp	Binary_Value	84	5355_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Pressure Transducer Issue	Binary_Value	85	5514_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Pressure Transducer Issue	Binary_Value	86	5148_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Superheat Over Threshold	Binary_Value	87	5604_1_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Compressor Low Differential Pressure Lockout	Binary_Value	88	5903_1_1	RD	Active on Alarm	6, 7, 8, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Compressor 2						
Compressor Hours Exceeded	Binary_Value	97	5269_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure	Binary_Value	98	5270_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure	Binary_Value	99	5271_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle	Binary_Value	100	5352_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue	Binary_Value	101	5146_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload	Binary_Value	102	5272_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp Sensor Issue	Binary_Value	103	5354_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Over Temp	Binary_Value	104	5355_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Pressure Transducer Issue	Binary_Value	105	5514_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Pressure Transducer Issue	Binary_Value	106	5148_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Superheat Over Threshold	Binary_Value	107	5604_1_2	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Compressor Low Differential Pressure Lockout	Binary_Value	108	5903_1_2	RD	Active on Alarm	6, 7, 8, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Free Cooling/Chilled Water						
Free Cooling Valve Hours Exceeded	Binary_Value	117	5306_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Free Cooling Lockout	Binary_Value	118	5361_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Temp Sensor Issue	Binary_Value	119	5362_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Reheat						
Hot Water / Hot Gas Valve Hours Exceeded	Binary_Value	130	5365_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Reheater Over Temperature	Binary_Value	131	5068_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Reheat Lockout	Binary_Value	132	5070_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater 1						
Electric Reheater Hours Exceeded	Binary_Value	143	5368_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater 2						
Electric Reheater Hours Exceeded	Binary_Value	154	5368_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater 3						
Electric Reheater Hours Exceeded	Binary_Value	165	5368_1_3	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Humidifier						
Humidifier Hours Exceeded	Binary_Value	176	5037_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Humidifier Lockout	Binary_Value	177	5044_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Control Board Not Detected	Binary_Value	178	5045_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Cylinder Worn	Binary_Value	179	5042_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Issue	Binary_Value	180	5043_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Low Water	Binary_Value	181	5041_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Over Current	Binary_Value	182	5040_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Under Current	Binary_Value	183	5039_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier						
Dehumidifier Hours Exceeded	Binary_Value	194	5038_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Fan						
Fan Hours Exceeded	Binary_Value	205	5054_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Main Fan Overload	Binary_Value	206	5376_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Issue	Binary_Value	207	4729_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condensers						
Condenser VFD Issue	Binary_Value	219	5072_1	RD	Active on Alarm	1, 2, 4, 6, 10
Ext Condenser Pump High Water	Binary_Value	220	5106_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
External Condenser TVSS Issue	Binary_Value	1060	6105_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
External Condenser VFD Issue	Binary_Value	1061	6106_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser 1						
Condenser Issue	Binary_Value	231	5377_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser 2						
Condenser Issue	Binary_Value	242	5377_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Events						
Customer Input 1	Binary_Value	253	4270_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 2	Binary_Value	254	4271_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Customer Input 3	Binary_Value	255	4272_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 4	Binary_Value	256	4273_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Air Blower	Binary_Value	257	5415_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Flow	Binary_Value	258	5105_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Glycol Pump On	Binary_Value	259	5107_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
BMS Communications Timeout	Binary_Value	260	5115_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Unit On	Binary_Value	261	5416_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Clogged Air Filter	Binary_Value	262	5118_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Loss of Air Flow	Binary_Value	263	5053_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Service Required	Binary_Value	264	4726_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Master Unit Communication Lost	Binary_Value	265	5120_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
RAM Battery Issue	Binary_Value	266	5119_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Shutdown - Loss Of Power	Binary_Value	267	4714_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Power Shutdown	Binary_Value	268	5121_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Smoke Detected	Binary_Value	269	4720_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Chilled Water Loss of Flow	Binary_Value	270	4980_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Chilled Water Over Temp	Binary_Value	271	4626_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Code Missing	Binary_Value	272	5418_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Communication Lost	Binary_Value	273	5419_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Water Leakage Detector Sensor Issue	Binary_Value	274	5114_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Water Under Floor	Binary_Value	275	4723_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Over Temperature	Binary_Value	276	5104_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
External Fire Detected	Binary_Value	277	5108_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unspecified General Event	Binary_Value	278	5588_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Temperature Control Sensor Issue	Binary_Value	279	5617_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Airflow Sensor Issue	Binary_Value	280	5906_1	RD	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Ext Air Damper Position Issue	Binary_Value	281	5907_1	RD	Active on Alarm	3, 5, 6, 7, 8, 9, 11, 12, 13, 14
Ext Power Source A Failure	Binary_Value	282	5908_1	RD	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Ext Power Source B Failure	Binary_Value	283	5909_1	RD	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Mixed Mode Lockout	Binary_Value	284	5924_1	RD	Active on Alarm	6, 7, 8, 11, 12, 13, 14
Unit Events: Chilled Water Valve 1						
Chilled Water Control Valve Failure	Binary_Value	288	4703_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Unit Events: Chilled Water Valve 2						
Chilled Water Control Valve Failure	Binary_Value	299	4703_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Unit Events: Messages						
Unit Off	Binary_Value	310	5110_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit On	Binary_Value	311	5109_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Partial Shutdown	Binary_Value	312	5112_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Shutdown	Binary_Value	313	5113_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Standby	Binary_Value	314	5111_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Maintenance Due	Binary_Value	315	5116_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Maintenance Completed	Binary_Value	316	5117_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Events: iCOM DO Board 1						
Digital Output Board Not Detected	Binary_Value	327	5417_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Events: iCOM DO Board 2						
Digital Output Board Not Detected	Binary_Value	338	5417_1_2	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Events: iCOM DO Board 3						
Digital Output Board Not Detected	Binary_Value	349	5417_1_3	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Remote Sensors						
Remote Sensor Average Over Temperature	Binary_Value	361	5593_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Average Under Temperature	Binary_Value	362	5594_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Average Over Temperature	Binary_Value	363	5595_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Average Under Temperature	Binary_Value	364	5596_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor 1						
Remote Sensor Over Temperature	Binary_Value	376	5597_1_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature	Binary_Value	377	5598_1_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue	Binary_Value	378	5060_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Remote Sensor 2						
Remote Sensor Over Temperature	Binary_Value	390	5597_1_2	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature	Binary_Value	391	5598_1_2	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue	Binary_Value	392	5060_1_2	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor 10						
Remote Sensor Over Temperature	Binary_Value	502	5597_1_10	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temperature	Binary_Value	503	5598_1_10	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Issue	Binary_Value	504	5060_1_10	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air Economizer						
Air Economizer Emergency Override	Binary_Value	516	5600_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air Economizer Reduced Airflow	Binary_Value	517	5601_1	RD	Active on Alarm	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electronic Expansion Valves						
EEV Unspecified General Event	Binary_Value	540	5625_1	RD	Active on Alarm	4, 6, 7, 8, 11, 13, 14
Static Pressure						
Static Pressure Sensor Issue	Binary_Value	563	5629_1	RD	Active on Alarm	3, 5, 6, 7, 8, 9, 11, 12, 13, 14
High Static Pressure	Binary_Value	564	5630_1	RD	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Low Static Pressure	Binary_Value	565	5631_1	RD	Active on Alarm	3, 5, 6, 7, 8, 11, 12, 13, 14
Static Pressure Sensor Out of Range	Binary_Value	566	5910_1	RD	Active on Alarm	3, 5, 6, 7, 8, 9, 11, 12, 13, 14
EconoPhase						
Pump Unspecified General Event	Binary_Value	623	5636_1	RD	Active on Alarm	4, 6, 7, 8, 11, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Power Measurement 1						
Input Undervoltage	Binary_Value	1001	5568_1	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost	Binary_Value	1040	5967_1	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Power Measurement 2						
Input Undervoltage	Binary_Value	1002	5568_2	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost	Binary_Value	1041	5967_2	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Power Measurement 6						
Input Undervoltage	Binary_Value	1006	5568_6	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Modbus Power Meter Communication Lost	Binary_Value	1045	5967_6	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Fluid 1						
Fluid Temperature Sensor Issue	Binary_Value	1021	5911_1	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Fluid Flow Sensor Issue	Binary_Value	1022	5912_1	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Fluid 2						
Fluid Temperature Sensor Issue	Binary_Value	1031	5911_2	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Fluid Flow Sensor Issue	Binary_Value	1032	5912_2	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Air: Auxiliary Air						
Aux Air Temp Device Communication Lost	Binary_Value	1050	5966_1_1	RD	Active on Alarm	5, 8, 11, 12, 13, 14
Liebert Condensers						
Condenser Unit Unspecified General Event	Binary_Value	643	5637_1	RD	Active on Alarm	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Liebert Condenser 1						
Condenser Outside Air Temp Out of Operating Range	Binary_Value	1082	5536_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Control Board Issue	Binary_Value	1084	5537_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Outside Air Temp Sensor Issue	Binary_Value	1086	5535_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Communication Lost	Binary_Value	1088	5531_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Condenser Remote Shutdown	Binary_Value	1090	6100_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser TVSS Issue	Binary_Value	218	5073_1_1	RD	Active on Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Liebert Condenser 2						
Condenser Outside Air Temp Out of Operating Range	Binary_Value	1083	5536_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Control Board Issue	Binary_Value	1085	5537_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Outside Air Temp Sensor Issue	Binary_Value	1087	5535_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Communication Lost	Binary_Value	1089	5531_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Remote Shutdown	Binary_Value	1091	6100_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser TVSS Issue	Binary_Value	1092	5073_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser Circuit 1						
Condenser Circuit Unspecified General Event	Binary_Value	644	5638_1_1	RD	Active on Alarm	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Refrigerant Pressure Sensor Issue	Binary_Value	1104	5541_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Under Threshold	Binary_Value	1106	5540_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Over Threshold	Binary_Value	1108	5539_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temp Sensor Issue	Binary_Value	1110	5544_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Under Temp	Binary_Value	1112	5543_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Condenser Supply Refrigerant Over Temp	Binary_Value	1114	5542_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Max Fan Speed Override	Binary_Value	1116	5545_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser Circuit 2						
Condenser Circuit Unspecified General Event	Binary_Value	896	5638_1_2	RD	Active on Alarm	
Condenser Refrigerant Pressure Sensor Issue	Binary_Value	1105	5541_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Under Threshold	Binary_Value	1107	5540_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Refrigerant Pressure Over Threshold	Binary_Value	1109	5539_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temp Sensor Issue	Binary_Value	1111	5544_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Under Temp	Binary_Value	1113	5543_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Over Temp	Binary_Value	1115	5542_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Max Fan Speed Override	Binary_Value	1117	5545_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser 1: Fan 1						
Condenser Fan Issue	Binary_Value	1128	5277_1_1_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser 1: Fan 2						
Condenser Fan Issue	Binary_Value	1129	5277_1_1_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser1: Fan 4						
Condenser Fan Issue	Binary_Value	1131	5277_1_1_4	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser 2: Fan 1						
Condenser Fan Issue	Binary_Value	1132	5277_1_2_1	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14

Table 4-1 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™ Binary Data (continued)

Controller	Liebert iCOM® v4					
Data Description	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (See Table 4-2)**
Liebert Condenser 2: Fan 2						
Condenser Fan Issue	Binary_Value	1133	5277_1_2_2	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser 2: Fan 4						
Condenser Fan Issue	Binary_Value	1135	5277_1_2_4	RD	Active on Alarm	3, 5, 7, 8, 9, 11, 12, 13, 14
PCW-PDX						
Compressor 1B Thermal Overload	Binary_Value	1146	6092_1	RD	Active on Alarm	9
Compressor 2B Thermal Overload	Binary_Value	1147	6093_1	RD	Active on Alarm	9
Compressor 1B Hours Exceeded	Binary_Value	1148	6094_1	RD	Active on Alarm	9
Compressor 2B Hours Exceeded	Binary_Value	1149	6095_1	RD	Active on Alarm	9
Team Static Pressure Sensor Failure	Binary_Value	1150	6303_1	RD	Active on Alarm	9
Heating Lockout	Binary_Value	1151	6304_1	RD	Active on Alarm	9
Free Cooling Stopped - High Room Temp	Binary_Value	1152	6305_1	RD	Active on Alarm	9
PCW-PDX - Cold Aisle						
Cold Aisle Temperature/Humidity Team Sensor Failure	Binary_Value	1163	6306_1_1	RD	Active on Alarm	9
PCW-PDX - Cold Aisle Sensor 1						
Cold Aisle Air Sensor Failure	Binary_Value	1174	6309_1_1	RD	Active on Alarm	9
PCW-PDX Cold Aisle Sensor 2						
Cold Aisle Air Sensor Failure	Binary_Value	1185	6309_1_2	RD	Active on Alarm	9
PCW-PDX Cold Aisle Sensor 3						
Cold Aisle Air Sensor Failure	Binary_Value	1196	6309_1_3	RD	Active on Alarm	9
Chilled Water						
Chilled Water Inlet Temperature Control Active	Binary_Value	1207	6310_1	RD	Active on Alarm	9
Chilled Water - Chilled Water Circuit 1						
Chilled Water Inlet Temperature Sensor Failure	Binary_Value	1218	6313_1_1	RD	Active on Alarm	
Chilled Water Outlet Temperature Sensor Failure	Binary_Value	1219	6314_1_1	RD	Active on Alarm	
Chilled Water Flow Meter Sensor Failure	Binary_Value	1220	6315_1_1	RD	Active on Alarm	
Chilled Water - Chilled Water Circuit 2						
Chilled Water Inlet Temperature Sensor Failure	Binary_Value	1231	6313_1_2	RD	Active on Alarm	
Chilled Water Outlet Temperature Sensor Failure	Binary_Value	1232	6314_1_2	RD	Active on Alarm	
Chilled Water Flow Meter Sensor Failure	Binary_Value	1233	6315_1_2	RD	Active on Alarm	

Table 4-2 Extra Notes key to Table 4-1

Number	Description
1	This point is supported on: iCOM controller version 1.04.042.STD
2	This point is supported on: iCOM controller version 2.00.11R for US iCOM controller version 2.00.12R (for Japan and China – language corrections only)
3	This point is supported on: iCOM controller version 2.01.29.07R
4	This point is supported on: iCOM controller version 2.02.21R
5	This point is supported on: iCOM controller version 2.01.45R
6	This point is supported on: iCOM controller version 2.03.27.06R
7	This point is supported on: iCOM controller version 2.03.33R
8	This point is supported on: iCOM controller version 2.04.32R
9	This point is supported on: iCOM controller version A9HB-1.04.23-R (Similar to Liebert PDX and to be replaced by separate family branch.)
10	This point is supported on: iCOM controller version 1.04.37O-STD
11	This point is supported on: iCOM controller version 2.05.12T
12	This point is supported on: iCOM controller version 2.01.53R
13	This point is supported on: iCOM controller version 2.04.???R (TBD)
14	This point is supported on: iCOM controller version 2.05.19R

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Air						
Air Temperature Set Point	Analog_Value	1	5008_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Set Point	Analog_Value	10001	5008_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Proportional Band	Analog_Value	2	5325_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Proportional Band	Analog_Value	10002	5325_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Dead Band	Analog_Value	3	5011_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Dead Band	Analog_Value	10003	5011_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Air Temperature Control Integration Time	Analog_Value	4	5326_1	RW	Units: min	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's High Air Temperature	Analog_Value	5	5327_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's High Air Temperature	Analog_Value	10005	5327_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's High Air Temperature Time	Analog_Value	6	5328_1	RD	Units: Seconds since Midnight	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's Low Air Temperature	Analog_Value	7	5329_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's Low Air Temperature	Analog_Value	10007	5329_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's Low Air Temperature Time	Analog_Value	8	5330_1	RD	Units: Seconds since Midnight	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air: Supply Air						
Supply Air Temperature	Analog_Value	19	5002_1_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Temperature	Analog_Value	10019	5002_1_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Temperature Set Point	Analog_Value	20	5331_1_1	RW	Units: deg C	1, 9, 10
Supply Air Temperature Set Point	Analog_Value	10020	5331_1_1_deg_F	RW	Units: deg F	1, 9, 10
High Supply Air Temperature Threshold	Analog_Value	21	5014_1_1	RW	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
High Supply Air Temperature Threshold	Analog_Value	10021	5014_1_1_deg_F	RW	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Low Supply Air Temperature Threshold	Analog_Value	22	5018_1_1	RW	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Low Supply Air Temperature Threshold	Analog_Value	10022	5018_1_1_deg_F	RW	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air: Return Air						
High Return Air Temperature Threshold	Analog_Value	33	5022_1_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Air Temperature Threshold	Analog_Value	10033	5022_1_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Air Temperature Threshold	Analog_Value	34	5334_1_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Air Temperature Threshold	Analog_Value	10034	5334_1_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air: External Sensors						
Ext Air Sensor A Temperature	Analog_Value	45	4594_1_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Temperature	Analog_Value	10045	4594_1_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor B Temperature	Analog_Value	46	4597_1_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor B Temperature	Analog_Value	10046	4597_1_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor C Temperature	Analog_Value	47	5336_1_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor C Temperature	Analog_Value	10047	5336_1_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Over Temp Threshold	Analog_Value	48	5337_1_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Ext Air Sensor A Over Temp Threshold	Analog_Value	10048	5337_1_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temp Threshold	Analog_Value	49	5338_1_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temp Threshold	Analog_Value	10049	5338_1_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Outside Air Temperature	Analog_Value	50	5574_1_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Outside Air Temperature	Analog_Value	10050	5574_1_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Humidity						
Return Humidity	Analog_Value	60	5028_1	RD	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidity Set Point	Analog_Value	61	5029_1	RW	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Humidity Set Point	Analog_Value	62	5339_1	RW	Units: % RH	1, 9, 10
Humidity Proportional Band	Analog_Value	63	5341_1	RW	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidity Dead Band	Analog_Value	64	5032_1	RW	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidity Control Integration Time	Analog_Value	65	5342_1	RW	Units: min	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Humidity Threshold	Analog_Value	66	5033_1	RW	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Humidity Threshold	Analog_Value	67	5035_1	RW	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Today's High Humidity	Analog_Value	68	5343_1	RD	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's High Humidity Time	Analog_Value	69	5344_1	RD	Units: Seconds since Midnight	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's Low Humidity	Analog_Value	70	5345_1	RD	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Today's Low Humidity Time	Analog_Value	71	5346_1	RD	Units: Seconds since Midnight	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dew Point Proportional Band	Analog_Value	72	6258_1	RW	Units: deg C	11, 14
Dew Point Proportional Band	Analog_Value	10072	6258_1_deg_F	RW	Units: deg F	11, 14
Dew Point Dead Band	Analog_Value	73	6259_1	RW	Units: deg C	11, 14
Dew Point Dead Band	Analog_Value	10073	6259_1_deg_F	RW	Units: deg F	11, 14
Humidity: External Sensors						
Ext Air Sensor A Humidity	Analog_Value	82	4595_1_1	RD	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor B Humidity	Analog_Value	83	4598_1_1	RD	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor C Humidity	Analog_Value	84	5347_1_1	RD	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A High Humidity Threshold	Analog_Value	85	5348_1_1	RW	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Low Humidity Threshold	Analog_Value	86	5350_1_1	RW	Units: % RH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Dew Point Temp	Analog_Value	87	4596_1_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Air Sensor A Dew Point Temp	Analog_Value	10087	4596_1_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Ext Dew Point Over Temp Threshold	Analog_Value	88	4614_1_1	RW	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Over Temp Threshold	Analog_Value	10088	4614_1_1_deg_F	RW	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Under Temp Threshold	Analog_Value	89	5576_1_1	RW	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Ext Dew Point Under Temp Threshold	Analog_Value	10089	5576_1_1_deg_F	RW	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Compressor 1						
Compressor Hours	Analog_Value	97	5267_1_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Hours Threshold	Analog_Value	98	5268_1_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp	Analog_Value	99	5353_1_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp	Analog_Value	10099	5353_1_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Digital Scroll Compressor Loading	Analog_Value	100	5619_1_1	RD	Units: %	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Tandem 'B' Compressor Hours	Analog_Value	101	6241_1_1	RW	Units: hr	8, 11, 12, 13, 14
Compressor 2						
Compressor Hours	Analog_Value	110	5267_1_2	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Hours Threshold	Analog_Value	111	5268_1_2	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Temp	Analog_Value	112	5353_1_2	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Dig Scroll Comp Discharge Temp	Analog_Value	10112	5353_1_2_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Digital Scroll Compressor Loading	Analog_Value	113	5619_1_2	RD	Units: %	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Tandem 'B' Compressor Hours	Analog_Value	114	6241_1_2	RW	Units: hr	8, 11, 12, 13, 14
Free Cooling/Chilled Water						
Free Cooling Internal Temperature Delta	Analog_Value	123	5356_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Internal Temperature Delta	Analog_Value	10123	5356_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Fluid Temperature	Analog_Value	124	5358_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Fluid Temperature	Analog_Value	10124	5358_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Minimum Chilled Water Temp Set Point	Analog_Value	125	5360_1	RW	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Minimum Chilled Water Temp Set Point	Analog_Value	10125	5360_1_deg_F	RW	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Valve Hours	Analog_Value	126	5304_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling Valve Hours Threshold	Analog_Value	127	5305_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Chilled Water Valve Hours	Analog_Value	128	5614_1	RW	Units: hr	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Chilled Water Valve Operating Hours Threshold	Analog_Value	129	6452_1	RW	Units: hr	12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Reheat						
Hot Water / Hot Gas Valve Hours	Analog_Value	138	5363_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Hot Water / Hot Gas Valve Hours Threshold	Analog_Value	139	5364_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater 1						
Electric Reheater Hours	Analog_Value	150	5366_1_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Threshold	Analog_Value	151	5367_1_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater 2						
Electric Reheater Hours	Analog_Value	162	5366_1_2	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Threshold	Analog_Value	163	5367_1_2	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater 3						
Electric Reheater Hours	Analog_Value	174	5366_1_3	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Electric Reheater Hours Threshold	Analog_Value	175	5367_1_3	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier						
Humidifier Hours	Analog_Value	186	5369_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Hours Threshold	Analog_Value	187	5370_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Infrared Humidifier Flush Rate	Analog_Value	188	5445_1	RW	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier						
Dehumidifier Hours	Analog_Value	199	5371_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier Hours Threshold	Analog_Value	200	5372_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan						
Fan Speed Maximum Set Point	Analog_Value	211	5050_1	RW	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Hours	Analog_Value	212	5374_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Hours Threshold	Analog_Value	213	5375_1	RW	Units: hr	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Speed Minimum Set Point	Analog_Value	214	5051_1	RW	Units: %	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Temperature Set Point	Analog_Value	215	5585_1	RW	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Temperature Set Point	Analog_Value	10215	5585_1_deg_F	RW	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Analog Inputs 1						
Analog Input Reading	Analog_Value	224	5378_1	RD		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Analog Inputs 2						
Analog Input Reading	Analog_Value	235	5378_2	RD		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Analog Inputs 4						
Analog Input Reading	Analog_Value	257	5378_4	RD		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Information						
BMS Timeout Period	Analog_Value	268	5075_1	RW	Units: min	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Auto Restart Delay	Analog_Value	269	4710_1	RW	Units: sec	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Standby Units	Analog_Value	270	5314_1	RW		2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Unit Operations						
Return Air Temperature Set Point	Analog_Value	32	5333_1	RW	Units: deg C	1, 9, 10
Return Air Temperature Set Point	Analog_Value	10032	5333_1_deg_F	RW	Units: deg F	1, 9, 10
Return Air Temperature	Analog_Value	31	4291_1	RD	Units: deg C	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Temperature	Analog_Value	10031	4291_1_deg_F	RD	Units: deg F	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Speed	Analog_Value	280	5077_1	RD	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Utilization	Analog_Value	281	5078_1	RD	Units: %	1, 9, 10
Free Cooling Valve Open Position	Analog_Value	282	5379_1	RD	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Maintenance Ramp	Analog_Value	283	4870_1	RD	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Calculated Next Maintenance Month	Analog_Value	284	4868_1	RD		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Calculated Next Maintenance Year	Analog_Value	285	4869_1	RD		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Hot Water / Hot Gas Valve Open Position	Analog_Value	286	5380_1	RD	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Reheat Utilization	Analog_Value	287	5080_1	RD	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Utilization	Analog_Value	288	5081_1	RD	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier Utilization	Analog_Value	289	5079_1	RD	Units: %	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Cooling Capacity	Analog_Value	290	5490_1	RD	Units: %	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Adjusted Humidity	Analog_Value	291	5606_1	RD	Units: % RH	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Dew Point	Analog_Value	292	5004_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Return Dew Point	Analog_Value	10292	5004_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Actual Air Temperature Set Point	Analog_Value	293	5607_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Actual Air Temperature Set Point	Analog_Value	10293	5607_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Actual Humidity Set Point	Analog_Value	294	5608_1	RD	Units: % RH	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Dew Point Set Point	Analog_Value	295	5575_1	RW	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Dew Point Set Point	Analog_Value	10295	5575_1_deg_F	RW	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Cooling Control Temperature	Analog_Value	296	5615_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Cooling Control Temperature	Analog_Value	10296	5615_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Control Temperature	Analog_Value	297	5616_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Fan Speed Control Temperature	Analog_Value	10297	5616_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Unit Cooling Load	Analog_Value	298	5904_1	RD	Units: kW	5, 8, 11, 12, 13, 14
Unit Calculated Airflow	Analog_Value	299	6134_1	RD	Units: m3/h	12, 13, 14
Time						
System Date and Time	Analog_Value	300	4293_1	RW		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Remote Sensors						
Remote Sensor Over Temp Threshold	Analog_Value	312	5589_1	RW	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Over Temp Threshold	Analog_Value	10312	5589_1_deg_F	RW	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temp Threshold	Analog_Value	313	5590_1	RW	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Under Temp Threshold	Analog_Value	10313	5590_1_deg_F	RW	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Average Temperature	Analog_Value	314	5007_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Average Temperature	Analog_Value	10314	5007_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Maximum Temperature	Analog_Value	315	5006_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Maximum Temperature	Analog_Value	10315	5006_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Average Temperature	Analog_Value	316	5591_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Remote Sensor System Average Temperature	Analog_Value	10316	5591_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Maximum Temperature	Analog_Value	317	5592_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor System Maximum Temperature	Analog_Value	10317	5592_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor 1						
Remote Sensor Temperature	Analog_Value	329	5059_1_1	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature	Analog_Value	10329	5059_1_1_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor 2						
Remote Sensor Temperature	Analog_Value	341	5059_1_2	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature	Analog_Value	10341	5059_1_2_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor 10						
Remote Sensor Temperature	Analog_Value	437	5059_1_10	RD	Units: deg C	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Remote Sensor Temperature	Analog_Value	10437	5059_1_10_deg_F	RD	Units: deg F	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Static Pressure						
Static Pressure Set Point	Analog_Value	461	5626_1	RW	Units: Pa	3, 5, 7, 8, 9, 11, 12, 13, 14
Unit Static Pressure	Analog_Value	462	5627_1	RD	Units: Pa	3, 5, 7, 8, 11, 12, 13, 14
System Static Pressure	Analog_Value	463	5628_1	RD	Units: Pa	3, 5, 7, 8, 9, 11, 12, 13, 14
Static Pressure Set Point	Analog_Value	2121	5626_1	RW	Units: Pa	3, 5, 7, 8, 9, 11, 12, 13, 14
Unit Static Pressure	Analog_Value	2122	5627_1	RD	Units: Pa	3, 5, 7, 8, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
System Static Pressure	Analog_Value	2123	5628_1	RD	Units: Pa	3, 5, 7, 8, 9, 11, 12, 13, 14
EconoPhase: Pump 1						
Pump Hours	Analog_Value	523	5298_1_1	RW	Units: hr	6, 7, 8, 11, 13, 14
Pump Speed	Analog_Value	522	5634_1_1	RD	Units: %	13, 14
Pump Inlet Refrigerant Temperature	Analog_Value	535	5635_1_1	RD	Units: deg C	13, 14
Pump Inlet Refrigerant Temperature	Analog_Value	10535	5635_1_1_deg_F	RD	Units: deg F	13, 14
Pump Outlet Refrigerant Temperature	Analog_Value	537	5639_1_1	RD	Units: deg C	13, 14
Pump Outlet Refrigerant Temperature	Analog_Value	10537	5639_1_1_deg_F	RD	Units: deg F	13, 14
EconoPhase: Pump 2						
Pump Hours	Analog_Value	526	5298_1_2	RW	Units: hr	6, 7, 8, 11, 13, 14
Pump Speed	Analog_Value	525	5634_1_2	RD	Units: %	13, 14
Pump Inlet Refrigerant Temperature	Analog_Value	538	5635_1_2	RD	Units: deg C	13, 14
Pump Inlet Refrigerant Temperature	Analog_Value	10538	5635_1_2_deg_F	RD	Units: deg F	13, 14
Pump Outlet Refrigerant Temperature	Analog_Value	540	5639_1_2	RD	Units: deg C	13, 14
Pump Outlet Refrigerant Temperature	Analog_Value	10540	5639_1_2_deg_F	RD	Units: deg F	13, 14
Power Measurement 1						
System Input RMS A-N	Analog_Value	810	4096_1	RD	Units: VAC	5, 8, 9, 11, 12, 13, 14
System Input RMS B-N	Analog_Value	811	4098_1	RD	Units: VAC	5, 8, 9, 11, 12, 13, 14
System Input RMS C-N	Analog_Value	812	4100_1	RD	Units: VAC	5, 8, 9, 11, 12, 13, 14
System Input RMS Current Phase A	Analog_Value	813	4113_1	RD	Units: A AC	5, 8, 9, 11, 12, 13, 14
System Input RMS Current Phase B	Analog_Value	814	4114_1	RD	Units: A AC	5, 8, 9, 11, 12, 13, 14
System Input RMS Current Phase C	Analog_Value	815	4115_1	RD	Units: A AC	5, 8, 9, 11, 12, 13, 14
Instantaneous Power	Analog_Value	816	5901_1	RD	Units: W	5, 8, 9, 11, 12, 13, 14
Energy Consumption	Analog_Value	817	5900_1	RW	Units: kWH	5, 8, 9, 11, 12, 13, 14
System Input RMS A-B	Analog_Value	1900	4097_1	RD	Units: VAC	5, 8, 9, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
System Input RMS B-C	Analog_Value	1901	4099_1	RD	Units: VAC	5, 8, 9, 11, 12, 13, 14
System Input RMS C-A	Analog_Value	1902	4101_1	RD	Units: VAC	5, 8, 9, 11, 12, 13, 14
Power Measurement 2						
System Input RMS A-N	Analog_Value	820	4096_2	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS B-N	Analog_Value	821	4098_2	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS C-N	Analog_Value	822	4100_2	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS Current Phase A	Analog_Value	823	4113_2	RD	Units: A AC	5, 8, 11, 12, 13, 14
System Input RMS Current Phase B	Analog_Value	824	4114_2	RD	Units: A AC	5, 8, 11, 12, 13, 14
System Input RMS Current Phase C	Analog_Value	825	4115_2	RD	Units: A AC	5, 8, 11, 12, 13, 14
Instantaneous Power	Analog_Value	826	5901_2	RD	Units: W	5, 8, 11, 12, 13, 14
Energy Consumption	Analog_Value	827	5900_2	RW	Units: kWH	5, 8, 11, 12, 13, 14
System Input RMS A-B	Analog_Value	1910	4097_2	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS B-C	Analog_Value	1911	4099_2	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS C-A	Analog_Value	1912	4101_2	RD	Units: VAC	5, 8, 11, 12, 13, 14
Power Measurement 10						
System Input RMS A-N	Analog_Value	860	4096_6	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS B-N	Analog_Value	861	4098_6	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS C-N	Analog_Value	862	4100_6	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS Current Phase A	Analog_Value	863	4113_6	RD	Units: A AC	5, 8, 11, 12, 13, 14
System Input RMS Current Phase B	Analog_Value	864	4114_6	RD	Units: A AC	5, 8, 11, 12, 13, 14
System Input RMS Current Phase C	Analog_Value	865	4115_6	RD	Units: A AC	5, 8, 11, 12, 13, 14
Instantaneous Power	Analog_Value	866	5901_6	RD	Units: W	5, 8, 11, 12, 13, 14
Energy Consumption	Analog_Value	867	5900_6	RW	Units: kWH	5, 8, 11, 12, 13, 14
System Input RMS A-B	Analog_Value	1950	4097_6	RD	Units: VAC	5, 8, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
System Input RMS B-C	Analog_Value	1951	4099_6	RD	Units: VAC	5, 8, 11, 12, 13, 14
System Input RMS C-A	Analog_Value	1952	4101_6	RD	Units: VAC	5, 8, 11, 12, 13, 14
Fluid 1						
Fluid Input Temperature	Analog_Value	871	5897_1	RD	Units: deg C	5, 8, 11, 12, 13, 14
Fluid Input Temperature	Analog_Value	10871	5897_1_deg_F	RD	Units: deg F	5, 8, 11, 12, 13, 14
Fluid Output Temperature	Analog_Value	872	5898_1	RD	Units: deg C	5, 8, 11, 12, 13, 14
Fluid Output Temperature	Analog_Value	10872	5898_1_deg_F	RD	Units: deg F	5, 8, 11, 12, 13, 14
Fluid 2						
Fluid Input Temperature	Analog_Value	1871	5897_2	RD	Units: deg C	5, 8, 11, 12, 13, 14
Fluid Input Temperature	Analog_Value	11871	5897_2_deg_F	RD	Units: deg F	5, 8, 11, 12, 13, 14
Fluid Output Temperature	Analog_Value	1872	5898_2	RD	Units: deg C	5, 8, 11, 12, 13, 14
Fluid Output Temperature	Analog_Value	11872	5898_2_deg_F	RD	Units: deg F	5, 8, 11, 12, 13, 14
Circuit						
Fluid Flow Rate	Analog_Value	881	5899_1	RD	Units: l/min	5, 8, 11, 12, 13, 14
Circuit 2						
Fluid Flow Rate	Analog_Value	891	5899_2	RD	Units: l/min	5, 8, 11, 12, 13, 14
Unit Operations: Cooling Load 1						
Circuit Cooling Load	Analog_Value	901	5905_1_1	RD	Units: kW	5, 8, 11, 12, 13, 14
Unit Operations: Cooling Load 2						
Circuit Cooling Load	Analog_Value	911	5905_1_2	RD	Units: kW	5, 8, 11, 12, 13, 14
Air: Auxiliary Air						
Raw Auxiliary Air Temperature	Analog_Value	1960	5964_1_1	RW	Units: deg C	5, 8, 11, 12, 13, 14
Raw Auxiliary Air Temperature	Analog_Value	11960	5964_1_1_deg_F	RW	Units: deg F	5, 8, 11, 12, 13, 14
Actual Auxiliary Air Temperature	Analog_Value	1961	5965_1_1	RD	Units: deg C	5, 8, 11, 12, 13, 14
Actual Auxiliary Air Temperature	Analog_Value	11961	5965_1_1_deg_F	RD	Units: deg F	5, 8, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Liebert Condensers						
Expected Condenser Unit Count	Analog_Value	1981	6101_1	RD		3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condensers: Low Noise Mode						
Condenser Low Noise Mode Max Fan Speed	Analog_Value	529	5548_1_1	RW	Units: %	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Normal Mode Max Fan Speed	Analog_Value	530	5549_1_1	RW	Units: %	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode Start Time	Analog_Value	531	5552_1_1	RW	Units: Seconds since Midnight	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode Stop Time	Analog_Value	532	5553_1_1	RW	Units: Seconds since Midnight	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode - Interval Days	Analog_Value	533	5550_1_1	RW	1 = Monday 2 = Tuesday 4 = Wednesday 8 = Thursday 16 = Friday 32 = Saturday 64 = Sunday	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode - Full Days	Analog_Value	534	5551_1_1	RW	1 = Monday 2 = Tuesday 4 = Wednesday 8 = Thursday 16 = Friday 32 = Saturday 64 = Sunday	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Liebert Condenser 1						
Condenser Outside Air Temperature	Analog_Value	1992	5534_1_1	RD	Units: deg C	3, 5, 7, 8, 11, 12, 13, 14
Condenser Outside Air Temperature	Analog_Value	11992	5534_1_1_deg_F	RD	Units: deg F	3, 5, 7, 8, 11, 12, 13, 14
Liebert Condenser 2						
Condenser Outside Air Temperature	Analog_Value	1993	5534_1_2	RD	Units: deg C	3, 5, 7, 8, 11, 12, 13, 14
Condenser Outside Air Temperature	Analog_Value	11993	5534_1_2_deg_F	RD	Units: deg F	3, 5, 7, 8, 11, 12, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Liebert Condenser Circuit 1						
Condenser Refrigerant Pressure	Analog_Value	2004	6103_1_1	RD	Units: bar	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temperature	Analog_Value	2006	6102_1_1	RD	Units: deg C	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temperature	Analog_Value	12006	6102_1_1_deg_F	RD	Units: deg F	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser Circuit 2						
Condenser Refrigerant Pressure	Analog_Value	2005	6103_1_2	RD	Units: bar	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temperature	Analog_Value	2007	6102_1_2	RD	Units: deg C	3, 5, 7, 8, 9, 11, 12, 13, 14
Condenser Supply Refrigerant Temperature	Analog_Value	12007	6102_1_2_deg_F	RD	Units: deg F	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condenser 1 Fan 1						
Condenser Fan Speed	Analog_Value	2018	5276_1_1_1	RD	Units: %	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power	Analog_Value	2026	5538_1_1_1	RD	Units: W	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Current	Analog_Value	2034	6244_1_1_1	RD	Units: A AC	8, 11, 13, 14
Liebert Condenser 1 Fan 2						
Condenser Fan Speed	Analog_Value	2019	5276_1_1_2	RD	Units: %	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power	Analog_Value	2027	5538_1_1_2	RD	Units: W	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Current	Analog_Value	2035	6244_1_1_2	RD	Units: A AC	8, 11, 13, 14
Liebert Condenser 1 Fan 4						
Condenser Fan Speed	Analog_Value	2021	5276_1_1_4	RD	Units: %	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power	Analog_Value	2029	5538_1_1_4	RD	Units: W	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Current	Analog_Value	2037	6244_1_1_4	RD	Units: A AC	8, 11, 13, 14

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Liebert Condenser 2 Fan 1						
Condenser Fan Speed	Analog_Value	2022	5276_1_2_1	RD	Units: %	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power	Analog_Value	2030	5538_1_2_1	RD	Units: W	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Current	Analog_Value	2038	6244_1_2_1	RD	Units: A AC	8, 11, 13, 14
Liebert Condenser 2 Fan 2						
Condenser Fan Speed	Analog_Value	2023	5276_1_2_2	RD	Units: %	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power	Analog_Value	2031	5538_1_2_2	RD	Units: W	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Current	Analog_Value	2039	6244_1_2_2	RD	Units: A AC	8, 11, 13, 14
Liebert Condenser 2 Fan 4						
Condenser Fan Speed	Analog_Value	2025	5276_1_2_4	RD	Units: %	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Power	Analog_Value	2033	5538_1_2_4	RD	Units: W	3, 5, 7, 8, 11, 12, 13, 14
Condenser Fan Current	Analog_Value	2041	6244_1_2_4	RD	Units: A AC	8, 11, 13, 14
PCW-PDX						
Actual Cold Aisle Humidity	Analog_Value	2044	6085_1	RD	Units: % RH	9
Actual Cold Aisle Temperature	Analog_Value	2045	6086_1	RD	Units: deg C	9
Actual Cold Aisle Temperature	Analog_Value	12045	6086_1_deg_F	RD	Units: deg F	9
Cold Aisle Cascade Fan Speed Max Set Point	Analog_Value	2046	6087_1	RD	Units: %	9
Cold Aisle Fan Speed Min Set Point	Analog_Value	2047	6088_1	RD	Units: %	9
Cold Aisle Fan Speed Max Set Point	Analog_Value	2048	6089_1	RD	Units: %	9
Humidification Fan Speed Min Set Point	Analog_Value	2049	6096_1	RD	Units: %	9
Heating Fan Speed Min Set Point	Analog_Value	2050	6097_1	RD	Units: %	9
Dehumidification Fan Speed Min Set Point	Analog_Value	2051	6098_1	RD	Units: %	9
Back Draft Control Fan Speed	Analog_Value	2052	6099_1	RD	Units: %	9
Air Filter Differential Pressure	Analog_Value	2053	6302_1	RD	Units: Pa	9
Air Filter Differential Pressure	Analog_Value	2213	6302_1	RD	Units: Pa	9

Table 4-3 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Analog Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-4)**
Super Saver						
Super Saver Call For Cooling	Analog_Value	2100	6234_1	RD	Units: %	9, 11, 14
Thermal Control Override						
Thermal Control Override - Temperature Call	Analog_Value	2135	6263_1	RW	Units: %	11, 14
Thermal Control Override - Humidity Call	Analog_Value	2136	6265_1	RW	Units: %	11, 14
PCW-PDX - Cold Aisle Sensor 1						
Cold Aisle Sensor Air Temperature	Analog_Value	2147	6307_1_1	RD	Units: deg C	9
Cold Aisle Sensor Air Temperature	Analog_Value	12147	6307_1_1_deg_F	RD	Units: deg F	9
Cold Aisle Sensor Humidity	Analog_Value	2148	6308_1_1	RD	Units: % RH	9
PCW-PDX - Cold Aisle Sensor 2						
Cold Aisle Sensor Air Temperature	Analog_Value	2159	6307_1_2	RD	Units: deg C	9
Cold Aisle Sensor Air Temperature	Analog_Value	12159	6307_1_2_deg_F	RD	Units: deg F	9
Cold Aisle Sensor Humidity	Analog_Value	2160	6308_1_2	RD	Units: % RH	9
PCW-PDX - Cold Aisle Sensor 3						
Cold Aisle Sensor Air Temperature	Analog_Value	2171	6307_1_3	RD	Units: deg C	9
Cold Aisle Sensor Air Temperature	Analog_Value	12171	6307_1_3_deg_F	RD	Units: deg F	9
Cold Aisle Sensor Humidity	Analog_Value	2172	6308_1_3	RD	Units: % RH	9
Chilled Water - Chilled Water Circuit 1						
Chilled Water Inlet Temperature	Analog_Value	2189	6311_1_1	RD	Units: deg C	9
Chilled Water Inlet Temperature	Analog_Value	12189	6311_1_1_deg_F	RD	Units: deg F	9
Chilled Water Outlet Temperature	Analog_Value	2190	6312_1_1	RD	Units: deg C	9
Chilled Water Outlet Temperature	Analog_Value	12190	6312_1_1_deg_F	RD	Units: deg F	9
Chilled Water - Chilled Water Circuit 2						
Chilled Water Inlet Temperature	Analog_Value	2201	6311_1_2	RD	Units: deg C	9
Chilled Water Inlet Temperature	Analog_Value	12201	6311_1_2_deg_F	RD	Units: deg F	9
Chilled Water Outlet Temperature	Analog_Value	2202	6312_1_2	RD	Units: deg C	9
Chilled Water Outlet Temperature	Analog_Value	12202	6312_1_2_deg_F	RD	Units: deg F	9
EconoPhase						
Pump Hours Threshold	Analog_Value	505	5299_1	RW	Units: hr	13, 14

Table 4-4 Extra Notes key to Table 4-3

Number	Description
1	This point is supported on: iCOM controller version 1.04.042.STD
2	This point is supported on: iCOM controller version 2.00.11R for US iCOM controller version 2.00.12R (for Japan and China – language corrections only)
3	This point is supported on: iCOM controller version 2.01.29.07R
4	This point is supported on: iCOM controller version 2.02.21R
5	This point is supported on: iCOM controller version 2.01.45R
6	This point is supported on: iCOM controller version 2.03.27.06R
7	This point is supported on: iCOM controller version 2.03.33R
8	This point is supported on: iCOM controller version 2.04.32R
9	This point is supported on: iCOM controller version A9HB-1.04.23-R (Similar to Liebert PDX and to be replaced by separate family branch.)
10	This point is supported on: iCOM controller version 1.04.37O-STD
11	This point is supported on: iCOM controller version 2.05.12T
12	This point is supported on: iCOM controller version 2.01.53R
13	This point is supported on: iCOM controller version 2.04.???R (TBD)
14	This point is supported on: iCOM controller version 2.05.19R

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Protocol						
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air						
Air Temperature Control Type	MultiState_Value	12	5324_1	RW	1 = Proportional 2 = Prop+Integral 3 = Intelligent	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Air Temperature Control Sensor	MultiState_Value	13	5012_1	RW	1 = Supply 2 = Remote 3 = Return	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air - Supply Air						
Supply Air Temperature Sensor Control	MultiState_Value	23	5332_1_1	RW	1 = Disabled 2 = Limit 3 = Control 4 = Temp Only	1, 9, 10
Humidity						
Humidity Control Type	MultiState_Value	34	5340_1	RW	1 = Relative 2 = Compensated 3 = Predictive	1, 9, 10
Humidity Control Type	MultiState_Value	35	5603_1	RW	1 = Relative 2 = Compensated 3 = Predictive 4 = Dew Point	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Humidity Control Sensor	MultiState_Value	36	5618_1	RW	1 = Supply 2 = Remote 3 = Return	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Compressors - Compressor 1						
Compressor State	MultiState_Value	45	5264_1_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Capacity Control State	MultiState_Value	46	5265_1_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Tandem 'B' Compressor State	MultiState_Value	47	6243_1_1	RD	1 = off 2 = on	8, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Compressors - Compressor 2						
Compressor State	MultiState_Value	57	5264_1_2	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Capacity Control State	MultiState_Value	58	5265_1_2	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Tandem 'B' Compressor State	MultiState_Value	59	6243_1_2	RD	1 = off 2 = on	8, 11, 12, 13, 14
Free Cooling/Chilled Water						
Free Cooling Status	MultiState_Value	69	5302_1	RD	1 = off 2 = on 3 = No Support	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Free Cooling Internal Control Mode	MultiState_Value	70	5581_1	RW	1 = Disabled 2 = Contact 3 = Temperature 4 = Set Point	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Minimum Chilled Water Temp Set Point Enable	MultiState_Value	71	5359_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Main Chilled Water Valve	MultiState_Value	72	5605_1	RW	1 = Valve 1 2 = Valve 2	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Free Cooling Status	MultiState_Value	69	6260_1	RD	1 = off 2 = start 3 = on	11, 12, 13, 14
Free Cooling Internal Control Mode	MultiState_Value	70	5357_1	RW	1 = Disabled 2 = Contact 3 = Value	1, 9, 10
Fan						
Fan Control Mode	MultiState_Value	82	5373_1	RW	1 = Auto 2 = Manual 3 = Economy 4 = Delta	1, 9, 10
Fan Control Sensor	MultiState_Value	83	5586_1	RW	1 = Supply 2 = Remote 3 = Return 4 = Manual	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Unit Information						
System Status	MultiState_Value	93	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Operating State	MultiState_Value	94	4706_1	RD	1 = off 2 = on = standby	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Control Mode	MultiState_Value	95	4707_1	RD	1 = Internal (Auto) 2 = External (Manual)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Operating State Reason	MultiState_Value	96	5074_1	RD	1 = Reason Unknown 2 = Network Display 3 = Alarm 4 = Schedule 5 = Remote System 6 = External Input 7 = Local Display	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Operations						
Fan State	MultiState_Value	107	5381_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Cooling State	MultiState_Value	108	5382_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Free Cooling State	MultiState_Value	109	5383_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Maintenance Tracking State	MultiState_Value	110	5384_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Hot Water / Hot Gas State	MultiState_Value	111	5385_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Electric Reheat State	MultiState_Value	112	5386_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dehumidifier State	MultiState_Value	113	5387_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier State	MultiState_Value	114	5388_1	RD	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
System On/Off Control	MultiState_Value	115	5143_1	RW	1 = off 2 = on	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Local Fan Override	MultiState_Value	500	6175_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
Local Cooling Override	MultiState_Value	501	6176_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
Local Electric Heat Override	MultiState_Value	502	6177_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection	8, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Local Humidifier Override	MultiState_Value	503	6178_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
Local Dehumidifier Override	MultiState_Value	504	6179_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection	8, 11, 12, 13, 14
System Event Configuration						
Customer Input 1 - Event Control	MultiState_Value	126	4718_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 1 - Event Type	MultiState_Value	127	4719_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 2 - Event Control	MultiState_Value	128	5098_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 2 - Event Type	MultiState_Value	129	5099_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 3 - Event Control	MultiState_Value	130	5100_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 3 - Event Type	MultiState_Value	131	5101_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Customer Input 4 - Event Control	MultiState_Value	132	5102_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Customer Input 4 - Event Type	MultiState_Value	133	5103_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Free Cooling Lockout - Event Control	MultiState_Value	134	5389_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Free Cooling Lockout - Event Type	MultiState_Value	135	5390_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Condenser Pump High Water - Event Control	MultiState_Value	136	5122_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Condenser Pump High Water - Event Type	MultiState_Value	137	5123_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Glycol Pump On - Event Control	MultiState_Value	138	5129_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Glycol Pump On - Event Type	MultiState_Value	139	5130_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Unit On - Event Control	MultiState_Value	140	5391_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Standby Unit On - Event Type	MultiState_Value	141	5392_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Humidifier Lockout - Event Control	MultiState_Value	142	5086_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Humidifier Lockout - Event Type	MultiState_Value	143	5087_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Flow - Event Control	MultiState_Value	144	5082_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Ext Loss of Flow - Event Type	MultiState_Value	145	5083_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Over Temperature - Event Control	MultiState_Value	146	5090_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Over Temperature - Event Type	MultiState_Value	147	5091_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Reheat Lockout - Event Control	MultiState_Value	148	5084_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Reheat Lockout - Event Type	MultiState_Value	149	5085_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Power Shutdown - Event Control	MultiState_Value	150	5141_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Power Shutdown - Event Type	MultiState_Value	151	5142_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Issue - Event Control	MultiState_Value	152	5131_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Humidifier Issue - Event Type	MultiState_Value	153	5132_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Master Unit Communication Lost - Event Control	MultiState_Value	154	5133_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Master Unit Communication Lost - Event Type	MultiState_Value	155	5134_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Service Required - Event Control	MultiState_Value	156	4727_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Service Required - Event Type	MultiState_Value	157	4728_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Shutdown - Loss Of Power - Event Control	MultiState_Value	158	4715_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Shutdown - Loss Of Power - Event Type	MultiState_Value	159	4716_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Smoke Detected - Event Control	MultiState_Value	160	4721_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Smoke Detected - Event Type	MultiState_Value	161	4722_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Water Under Floor - Event Control	MultiState_Value	162	4724_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Water Under Floor - Event Type	MultiState_Value	163	4725_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Compressor Lockout - Event Control	MultiState_Value	164	5088_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Compressor Lockout - Event Type	MultiState_Value	165	5089_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Clogged Air Filter - Event Control	MultiState_Value	166	5135_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Clogged Air Filter - Event Type	MultiState_Value	167	5136_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Loss of Air Blower - Event Control	MultiState_Value	168	5393_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Ext Loss of Air Blower - Event Type	MultiState_Value	169	5394_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
System Event Configuration - Compressor 1						
Compressor High Head Pressure - Event Control	MultiState_Value	180	5316_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure - Event Type	MultiState_Value	181	5317_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure - Event Control	MultiState_Value	182	5318_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure - Event Type	MultiState_Value	183	5319_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue - Event Control	MultiState_Value	184	5395_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue - Event Type	MultiState_Value	185	5396_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle - Event Control	MultiState_Value	186	5397_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle - Event Type	MultiState_Value	187	5398_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload - Event Control	MultiState_Value	188	5320_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload - Event Type	MultiState_Value	189	5321_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Over Temp - Event Ctrl	MultiState_Value	190	5399_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Dig Scroll Comp Discharge Over Temp - Event Type	MultiState_Value	191	5400_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
System Event Configuration Compressor 2						
Compressor High Head Pressure - Event Control	MultiState_Value	202	5316_1_2	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor High Head Pressure - Event Type	MultiState_Value	203	5317_1_2	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure - Event Control	MultiState_Value	204	5318_1_2	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Low Suction Pressure - Event Type	MultiState_Value	205	5319_1_2	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue - Event Control	MultiState_Value	206	5395_1_2	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Pump Down Issue - Event Type	MultiState_Value	207	5396_1_2	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle - Event Control	MultiState_Value	208	5397_1_2	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Short Cycle - Event Type	MultiState_Value	209	5398_1_2	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload - Event Control	MultiState_Value	210	5320_1_2	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressor Thermal Overload - Event Type	MultiState_Value	211	5321_1_2	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Dig Scroll Comp Discharge Over Temp - Event Ctrl	MultiState_Value	212	5399_1_2	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Dig Scroll Comp Discharge Over Temp - Event Type	MultiState_Value	213	5400_1_2	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
System Event Configuration - Air						
Ext Air Sensor A Event Control	MultiState_Value	224	5401_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Sensor Event Control	MultiState_Value	225	5402_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A High Humidity - Event Control	MultiState_Value	226	5403_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A High Humidity - Event Type	MultiState_Value	227	5404_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Low Humidity - Event Control	MultiState_Value	228	5405_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Low Humidity - Event Type	MultiState_Value	229	5406_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Over Temp - Event Control	MultiState_Value	230	4602_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Over Temp - Event Type	MultiState_Value	231	4603_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temp - Event Control	MultiState_Value	232	4609_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Ext Air Sensor A Under Temp - Event Type	MultiState_Value	233	4610_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
High Return Humidity - Event Control	MultiState_Value	234	5137_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
High Return Humidity - Event Type	MultiState_Value	235	5138_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Humidity - Event Control	MultiState_Value	236	5139_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Low Return Humidity - Event Type	MultiState_Value	237	5140_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Over Temp - Event Control	MultiState_Value	238	5024_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Over Temp - Event Type	MultiState_Value	239	5025_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Under Temp - Event Control	MultiState_Value	240	5407_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Return Air Under Temp - Event Type	MultiState_Value	241	5408_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Supply Air Over/Under Temperature - Event Control	MultiState_Value	242	5587_1_1	RW	1 = disabled 2 = enabled	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
System Event Configuration - Fan						
Fan Hours Exceeded - Event Control	MultiState_Value	252	5409_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Hours Exceeded - Event Type	MultiState_Value	253	5410_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Fan Issue - Event Control	MultiState_Value	254	4730_1_1	RW	1 = disabled 2 = enabled	1, 9, 10
Fan Issue - Event Type	MultiState_Value	255	4731_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 9, 10
Main Fan Overload - Event Control	MultiState_Value	256	5411_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Main Fan Overload - Event Type	MultiState_Value	257	5412_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
System Event Configuration - Condenser						
Condenser Issue - Event Control	MultiState_Value	268	5413_1_1	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser Issue - Event Type	MultiState_Value	269	5414_1_1	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser Issue - Event Control	MultiState_Value	280	5413_1_2	RW	1 = disabled 2 = enabled	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Condenser Issue - Event Type	MultiState_Value	281	5414_1_2	RW	1 = Message 2 = Warning 3 = Alarm	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Unit Events						
System Event Acknowledge/Reset	MultiState_Value	292	4717_1	WO	1 = Reset 2 = Acknowledge	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Compressors						
Compressor Lockout	MultiState_Value	304	5580_1	RW	1 = disabled 2 = enabled	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Reheat						
Reheater Lockout	MultiState_Value	316	5582_1	RW	1 = disabled 2 = enabled	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Humidifier						
Humidifier Lockout	MultiState_Value	328	5583_1	RW	1 = disabled 2 = enabled	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air Economizer						
Air Economizer Availability	MultiState_Value	340	5599_1	RD	1 = Not Available 2 = Available	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Air Economizer Control Source	MultiState_Value	341	5602_1	RW	1 = disabled 2 = internal 3 = external	2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
EconoPhase - Pump 1						
Pump State	MultiState_Value	364	5633_1_1	RD	1 = off 2 = on	7, 8, 11, 13, 14
PRE Operational Mode	MultiState_Value	363	5632_1_1	RD	1 = Bootup 2 = Idle 3 = Manual 4 = Pump Automatic 5 = Test	13, 14
EconoPhase - Pump 2						
Pump State	MultiState_Value	369	5633_1_2	RD	1 = off 2 = on	7, 8, 11, 13, 14
PRE Operational Mode	MultiState_Value	368	5632_1_2	RD	1 = Bootup 2 = Idle 3 = Manual 4 = Pump Automatic 5 = Test	13, 14
Liebert Condensers						
Condenser Refrigerant Type	MultiState_Value	395	5533_1	RD	1 = R22 2 = R407C 3 = R410A	3, 5, 7, 8, 11, 12, 13, 14
Liebert Condensers - Low Noise Mode						
Condenser Low Noise Mode State	MultiState_Value	374	5546_1_1	RD	1 = Inactive 2 = Active (Interval) 3 = Active (Full Day)	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Condenser Low Noise Mode Schedule Control	MultiState_Value	375	5547_1_1	RW	1 = disabled 2 = enabled	3, 4, 5, 6, 7, 8, 11, 12, 13, 14
Liebert Condensers - Condenser 1						
Condenser Fan Reversal Requested	MultiState_Value	406	6104_1_1	RD	1 = false 2 = true	3, 5, 7, 8, 9, 11, 12, 13, 14
Liebert Condensers - Condenser 2						
Condenser Fan Reversal Requested	MultiState_Value	407	6104_1_2	RD	1 = false 2 = true	3, 5, 7, 8, 9, 11, 12, 13, 14
PCW-PDX						
Cold Aisle Humidity Calculation Method	MultiState_Value	438	6081_1	RD	1 = Highest 2 = Average	9
Cold Aisle Temperature Calculation Method	MultiState_Value	439	6082_1	RD	1 = Highest 2 = Average	9
Cold Aisle Control Enable	MultiState_Value	440	6083_1	RD	1 = disabled 2 = enabled	9
Cold Aisle Force Max Fan/Cooling - Ext Control	MultiState_Value	441	6084_1	RD	1 = disabled 2 = enabled	9

Table 4-5 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Multistate Data (continued)

Controller	Liebert iCOM® v4					
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**	**Extra Notes (see Table 4-6)**
Static Pressure Control Enable	MultiState_Value	442	6090_1	RD	1 = disabled 2 = enabled	
Chilled Water Valve Reset Enable	MultiState_Value	443	6091_1	RD	1 = disabled 2 = enabled	9
Underfloor Static Pressure Control Enable	MultiState_Value	529	6300_1	RD	1 = disabled 2 = enabled 3 = visualization only	9
Return Damper Status	MultiState_Value	531	6301_1	RD	1 = closed 2 = open	9
Thermal Control Override						
Thermal Control Override	MultiState_Value	516	6261_1	RW	1 = disabled 2 = enabled	11, 14
Thermal Control Override - Temperature Control Type	MultiState_Value	517	6262_1	RW	1 = Cooling 2 = Heating	11, 14
Thermal Control Override - Humidity Control Type	MultiState_Value	518	6264_1	RW	1 = Dehumidification 2 = Humidification	11, 14

Table 4-6 Extra Notes key to Table 4-5

Number	Description
1	This point is supported on: iCOM controller version 1.04.042.STD
2	This point is supported on: iCOM controller version 2.00.11R for US iCOM controller version 2.00.12R (for Japan and China – language corrections only)
3	This point is supported on: iCOM controller version 2.01.29.07R
4	This point is supported on: iCOM controller version 2.02.21R
5	This point is supported on: iCOM controller version 2.01.45R
6	This point is supported on: iCOM controller version 2.03.27.06R
7	This point is supported on: iCOM controller version 2.03.33R
8	This point is supported on: iCOM controller version 2.04.32R
9	This point is supported on: iCOM controller version A9HB-1.04.23-R (Similar to Liebert PDX and to be replaced by separate family branch.)
10	This point is supported on: iCOM controller version 1.04.37O-STD
11	This point is supported on: iCOM controller version 2.05.12T
12	This point is supported on: iCOM controller version 2.01.53R
13	This point is supported on: iCOM controller version 2.04.???R (TBD)
14	This point is supported on: iCOM controller version 2.05.19R

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary

Data Label	Data Description
Actual Air Temperature Set Point	The actual set point being used for air temperature control. This value may differ from [Air Temperature Set Point] if compensation is applied by the control.
Actual Auxiliary Air Temperature	Actual auxiliary air temperature value being used for control. This value may differ from the raw value received from the auxiliary device if filtering is applied.
Actual Cold Aisle Humidity	Actual humidity value being used for cold aisle humidity control. The value is calculated from multiple humidity measurements using [Cold Aisle Humidity Calculation Method].
Actual Cold Aisle Temperature	Actual temperature value being used for cold aisle temperature control. The value is calculated from multiple temperature measurements using [Cold Aisle Temperature Calculation Method].
Actual Humidity Set Point	The actual set point being used for humidity control. This value may differ from [Humidity Set Point] if compensation is applied by the control.
Adjusted Humidity	Humidity value being used for control. This value may differ from the actual measured [Return Humidity] based on several factors which may include, but are not limited to, selection of humidity control sensor and humidity control type.
Air Economizer Availability	Indicates if the outside air conditions are appropriate for cooling with the air economizer or glycol freecooling.
Air Economizer Control Source	Source of control of the air economizer.
Air Economizer Emergency Override	Indoor room temperature has exceeded its upper threshold and the outdoor air damper has been opened for emergency cooling.
Air Economizer Reduced Airflow	Air economizer filter is dirty and needs to be cleaned or replaced.
Air Filter Differential Pressure	Differential pressure across the air filter.
Air Temperature Control Integration Time	Time value used when system is under integral air temperature control.
Air Temperature Control Sensor	Sensor from which air temperature measurements will be used for cooling and heating control.
Air Temperature Control Type	Type of algorithm used to control the system's output air temperature.
Air Temperature Dead Band	Value that is divided evenly to form a temperature range above and below [Air Temperature Set Point]. If measured air temperature is within this range, no heating or cooling will occur.
Air Temperature Proportional Band	Value that is divided evenly to form proportional temperature control bands above and below [Air Temperature Set Point].
Air Temperature Set Point	Desired air temperature. This set point is dependent upon which sensor is selected for control.
Airflow Sensor Issue	Airflow sensor is disconnected or the signal is out of range.
Ambient Air Sensor Issue	Ambient air sensor is disconnected or the signal is out of range.
Analog Input Reading	Generic analog input reading (unitless).
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
Aux Air Temp Device Communication Lost	Communication with external auxiliary device providing an air temperature value has been lost.
Back Draft Control Fan Speed	Fan speed when in back draft control mode.
BMS Communications Timeout	Building Management System (or external monitoring system) has not communicated with the system within the expected timeframe.
BMS Timeout Period	Timeframe within which the Building Management System (or external monitoring system) must communicate with the system to avoid a timeout.
Calculated Next Maintenance Month	Calculated month of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Year].
Calculated Next Maintenance Year	Calculated year of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Month].

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Chilled Water Control Valve Failure	Chilled water valve out of position. Chilled water control valve position does not match expected value.
Chilled Water Flow Meter Sensor Failure	Chilled water flow meter sensor is disconnected or the signal is out of range.
Chilled Water Inlet Temperature Control Active	Chilled water inlet temperature control is active.
Chilled Water Inlet Temperature Sensor Failure	Chilled water inlet temperature sensor is disconnected or the signal is out of range.
Chilled Water Inlet Temperature	Temperature of the water entering the hydraulic circuit of the chilled water unit.
Chilled Water Outlet Temperature Sensor Failure	Chilled water outlet temperature sensor is disconnected or the signal is out of range.
Chilled Water Outlet Temperature	Temperature of the water exiting the hydraulic circuit of the chilled water unit.
Chilled Water Valve Hours	Operating hours for chilled water valve since last reset of this value.
Chilled Water Valve Operating Hours Threshold	Operating hours threshold for the chilled water valve. When the number of operating hours reaches this threshold, an event is generated.
Chilled Water Valve Reset Enable	Enable/disable the ability to reset the chilled water valve.
Circuit Cooling Load	The amount of heat energy currently being removed by a single refrigeration circuit.
Clogged Air Filter - Event Control	Enable/disable the activation of the [Clogged Air Filter] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Clogged Air Filter - Event Type	The event type for the [Clogged Air Filter] event.
Clogged Air Filter	Air filter is dirty and needs to be (cleaned or) replaced.
Cold Aisle Air Sensor Failure	Cold aisle sensor measuring air temperature and humidity is disconnected or the signal is out of range.
Cold Aisle Cascade Fan Speed Max Set Point	Cold aisle maximum fan speed when system is in cascade mode and one or more units in the system are in standby.
Cold Aisle Control Enable	Enable/disable cold aisle control.
Cold Aisle Fan Speed Max Set Point	Cold aisle maximum fan speed when system is not in cascade mode OR when system is in cascade mode and no units in the system are in standby.
Cold Aisle Fan Speed Min Set Point	Cold aisle minimum fan speed.
Cold Aisle Force Max Fan/Cooling - Ext Control	The cold aisle fan speed and system cooling can be forced to 100% via an external input signal. Use this value to enable/disable that feature.
Cold Aisle Humidity Calculation Method	Algorithm used to calculate a single cold aisle humidity value from multiple humidity measurements.
Cold Aisle Sensor Air Temperature	Air temperature measured by cold aisle sensor.
Cold Aisle Sensor Humidity	Humidity measured by cold aisle sensor.
Cold Aisle Temperature Calculation Method	Algorithm used to calculate a single cold aisle temperature value from multiple temperature measurements.
Cold Aisle Temperature/Humidity Team Sensor Failure	Cold aisle team sensor measuring air temperature and humidity is disconnected or the signal is out of range.
Compressor 1B Hours Exceeded	Fixed compressor 1B run hours have exceeded the threshold.
Compressor 1B Thermal Overload	Fixed compressor 1B is shut down due to thermal overload.
Compressor 2B Hours Exceeded	Fixed compressor 2B run hours have exceeded the threshold.
Compressor 2B Thermal Overload	Fixed compressor 2B is shut down due to thermal overload.
Compressor Capacity Control State	Compressor capacity control state. When 'ON', the cooling capacity of the compressor has been reduced.
Compressor Capacity Reduced	Compressor capacity has been reduced.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Compressor High Head Pressure - Event Control	Enable/disable the activation of the [Compressor High Head Pressure] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor High Head Pressure - Event Type	The event type for the [Compressor High Head Pressure] event.
Compressor High Head Pressure	Compressor is shut down due to high head pressure.
Compressor High Pressure Transducer Issue	Compressor high pressure transducer is disconnected or the signal is out of range.
Compressor Hours Exceeded	[Compressor Hours] has exceeded [Compressor Hours Threshold].
Compressor Hours Threshold	Threshold value used in the [Compressor Hours Exceeded] event.
Compressor Hours	Operating hours for compressor since last reset of this value.
Compressor Lockout	Enable/disable the use of the compressor.
Compressor Low Differential Pressure Lockout	Compressor exceeded maximum startup attempts due to low differential pressure. Compressor is shutdown and has been disabled.
Compressor Low Pressure Transducer Issue	Compressor low pressure transducer is disconnected or the signal is out of range.
Compressor Low Suction Pressure - Event Control	Enable/disable the activation of the [Compressor Low Suction Pressure] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor Low Suction Pressure - Event Type	The event type for the [Compressor Low Suction Pressure] event.
Compressor Low Suction Pressure	Compressor is shut down due to low suction pressure.
Compressor Pump Down Issue - Event Control	Enable/disable the activation of the [Compressor Pump Down Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor Pump Down Issue - Event Type	The event type for the [Compressor Pump Down Issue] event.
Compressor Pump Down Issue	Unable to pump down suction-side pressure during compressor shutdown.
Compressor Short Cycle - Event Control	Enable/disable the activation of the [Compressor Short Cycle] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor Short Cycle - Event Type	The event type for the [Compressor Short Cycle] event.
Compressor Short Cycle	Compressor short cycle. A short cycle is defined as turning on and off a number of times over a set time period.
Compressor State	Compressor operational state.
Compressor Superheat Over Threshold	Compressor discharge refrigerant superheat temperature has exceeded an upper threshold.
Compressor Thermal Overload - Event Control	Enable/disable the activation of the [Compressor Thermal Overload] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor Thermal Overload - Event Type	The event type for the [Compressor Thermal Overload] event.
Compressor Thermal Overload	Compressor is shut down due to thermal overload.
Compressor Utilization	Present compressor utilization expressed as a percentage of the maximum rated capacity.
Condenser Circuit Unspecified General Event	One or more unspecified condenser circuit events active. See local unit display for further details.
Condenser Communication Lost	Communication with condenser unit has been lost.
Condenser Control Board Issue	The condenser control board is reporting an issue.
Condenser Fan Current	Condenser fan's measured input current.
Condenser Fan Issue	Condenser fan is not operating within its operational parameters.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Condenser Fan Power	Condenser fan's measured input power.
Condenser Fan Reversal Requested	Request the condenser fans to rotate in the reverse direction.
Condenser Fan Speed	Condenser fan speed expressed as a percentage of the maximum rated speed.
Condenser Issue - Event Control	Enable/disable the activation of the [Condenser Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Condenser Issue - Event Type	The event type for the [Condenser Issue] event.
Condenser Issue	Condenser is not operating within its operational parameters.
Condenser Low Noise Mode - Full Days	Days of the week selected for low noise mode full day scheduling.
Condenser Low Noise Mode - Interval Days	Days of the week selected for low noise mode interval scheduling.
Condenser Low Noise Mode Max Fan Speed	Maximum fan speed when condenser is placed in low noise mode.
Condenser Low Noise Mode Schedule Control	Enable/disable scheduled control of condenser low noise mode.
Condenser Low Noise Mode Start Time	The time of day at which the condenser will transition into low noise mode.
Condenser Low Noise Mode State	State of condenser low noise mode scheduler control.
Condenser Low Noise Mode Stop Time	The time of day at which the condenser will transition out of low noise mode.
Condenser Max Fan Speed Override	Fan speed exceeding the maximum set point in order to alleviate a high temperature or pressure condition.
Condenser Normal Mode Max Fan Speed	Maximum fan speed when condenser is not in low noise mode.
Condenser Outside Air Temp Out of Operating Range	[Condenser Outside Air Temperature] is either above an upper threshold or below a lower threshold.
Condenser Outside Air Temp Sensor Issue	Condenser outside air temperature sensor is disconnected or the signal is out of range.
Condenser Outside Air Temperature	Condenser ambient outside air temperature.
Condenser Refrigerant Pressure Over Threshold	Condenser refrigerant pressure has exceeded a threshold.
Condenser Refrigerant Pressure Sensor Issue	Condenser refrigerant pressure sensor is disconnected or the signal is out of range.
Condenser Refrigerant Pressure Under Threshold	Condenser refrigerant pressure has dropped below a threshold.
Condenser Refrigerant Pressure	Pressure of the refrigerant in a condenser circuit.
Condenser Refrigerant Type	Condenser refrigerant type.
Condenser Remote Shutdown	Condenser is shut down by a remote signal.
Condenser Supply Refrigerant Over Temp	Condenser supply refrigerant temperature has exceeded a threshold.
Condenser Supply Refrigerant Temp Sensor Issue	Condenser supply refrigerant temperature sensor is disconnected or the signal is out of range.
Condenser Supply Refrigerant Temperature	Temperature of the supply refrigerant in a condenser circuit.
Condenser Supply Refrigerant Under Temp	Condenser supply refrigerant temperature has dropped below a specified threshold.
Condenser TVSS Issue	The condenser Transient Voltage Surge Suppressor or Surge Protection Device has failed.
Condenser Unit Unspecified General Event	One or more unspecified condenser unit events active. See local unit display for further details.
Condenser VFD Issue	The condenser fan Variable Frequency Drive is offline.
Cooling Capacity	Cooling capacity in use, expressed as a percentage of the maximum rated capacity.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Cooling Control Temperature	Temperature value being used for cooling capacity control. This value is compared against the temperature set point to determine the amount of cooling to be applied.
Cooling State	Cooling operational state.
Customer Input 1 - Event Control	Enable/disable the activation of the [Customer Input 1] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 1 - Event Type	The event type for the [Customer Input 1] event.
Customer Input 1	Customer Input 1
Customer Input 2 - Event Control	Enable/disable the activation of the [Customer Input 2] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 2 - Event Type	The event type for the [Customer Input 2] event.
Customer Input 2	Customer Input 2
Customer Input 3 - Event Control	Enable/disable the activation of the [Customer Input 3] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 3 - Event Type	The event type for the [Customer Input 3] event.
Customer Input 3	Customer Input 3
Customer Input 4 - Event Control	Enable/disable the activation of the [Customer Input 4] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 4 - Event Type	The event type for the [Customer Input 4] event.
Customer Input 4	Customer Input 4
Dehumidification Fan Speed Min Set Point	Minimum fan speed when system dehumidification is active.
Dehumidifier Hours Exceeded	Operating hours for the dehumidifier have exceeded the threshold.
Dehumidifier Hours Threshold	Threshold value used in the [Dehumidifier Hours Exceeded] event.
Dehumidifier Hours	Operating hours for dehumidifier since last reset of this value.
Dehumidifier State	Dehumidifier operational state.
Dehumidifier Utilization	Present dehumidifier utilization expressed as a percentage of the maximum rated capacity.
Dew Point Dead Band	Value that is divided evenly to form a range above and below [Dew Point Set Point]. If measured humidity is within this range, no humidification or dehumidification will occur. This parameter is used when [Humidity Control Type] is set to Dew Point.
Dew Point Over Temperature	Dew point temperature reading has exceeded the upper threshold.
Dew Point Proportional Band	Value that is divided evenly to form proportional humidity control bands above and below [Dew Point Set Point]. This parameter is used when [Humidity Control Type] is set to Dew Point.
Dew Point Set Point	Desired dew point temperature.
Dew Point Under Temperature	Dew point temperature reading has dropped below the lower threshold.
Dig Scroll Comp Discharge Over Temp - Event Ctrl	Enable/disable the activation of the [Dig Scroll Comp Discharge Over Temp] event.
Dig Scroll Comp Discharge Over Temp - Event Type	The event type for the [Dig Scroll Comp Discharge Over Temp] event.
Dig Scroll Comp Discharge Temp Sensor Issue	Digital scroll compressor discharge temperature sensor is disconnected or the signal is out of range.
Dig Scroll Comp Discharge Temp	Digital scroll compressor discharge temperature.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Dig Scroll Comp Over Temp	Digital scroll compressor is shut down due to head temperature exceeding an upper threshold.
Digital Output Board Not Detected	Digital output board is required to be connected, but no signal is detected.
Digital Scroll Compressor Loading	Present digital scroll compressor utilization expressed as a percentage of the maximum rated capacity.
EEV Unspecified General Event	One or more unspecified electronic expansion valve events active. See local unit display for further details.
Electric Reheat State	Electric reheater operational state.
Electric Reheater Hours Exceeded	[Electric Reheater Hours] has exceeded [Electric Reheaters Hours Threshold].
Electric Reheater Hours Threshold	Threshold value used in the [Electric Reheater Hours Exceeded] event.
Electric Reheater Hours	Operating hours for electric reheater since last reset of this value.
Energy Consumption	Energy consumption since the last reset of this value.
Expected Condenser Unit Count	Number of physical condenser units that are expected to be connected to the system.
Ext Air Damper Position Issue	Air damper position does not match expected value, as indicated by an external input signal.
Ext Air Sensor A Dew Point Temp	Dew point temperature as measured by external air sensor A.
Ext Air Sensor A Event Control	Enable/disable the activation of events related to measurements by the external air sensor A.
Ext Air Sensor A High Humidity - Event Control	Enable/disable the activation of the [Ext Air Sensor A High Humidity] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A High Humidity - Event Type	The event type for the [Ext Air Sensor A High Humidity] event.
Ext Air Sensor A High Humidity Threshold	Threshold value used in the [External Air Sensor A High Humidity] event.
Ext Air Sensor A High Humidity	[Ext Air Sensor A Humidity] has exceeded [Ext Air Sensor A High Humidity Threshold].
Ext Air Sensor A Humidity	Relative humidity as measured by external air sensor A.
Ext Air Sensor A Issue	The external air sensor A is disconnected or the signal is out of range.
Ext Air Sensor A Low Humidity - Event Control	Enable/disable the activation of the [Ext Air Sensor A Low Humidity] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Low Humidity - Event Type	The event type for the [Ext Air Sensor A Low Humidity] event.
Ext Air Sensor A Low Humidity Threshold	Threshold value used in the [External Air Sensor A Low Humidity] event.
Ext Air Sensor A Low Humidity	[Ext Air Sensor A Humidity] has dropped below [Ext Air Sensor A Low Humidity Threshold].
Ext Air Sensor A Over Temp - Event Control	Enable/disable the activation of the [External Air Sensor A Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Over Temp - Event Type	The event type for the [External Air Sensor A Over Temperature] event.
Ext Air Sensor A Over Temp Threshold	Threshold value used in the [External Air Sensor A Over Temperature] event.
Ext Air Sensor A Over Temperature	[Ext Air Sensor A Temperature] has exceeded [External Air Sensor A Over Temp Threshold].
Ext Air Sensor A Temperature	Air temperature as measured by external air sensor A.
Ext Air Sensor A Under Temp - Event Control	Enable/disable the activation of the [Ext Air Sensor A Under Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Under Temp - Event Type	The event type for the [Ext Air Sensor A Under Temperature] event.
Ext Air Sensor A Under Temp Threshold	Threshold value used in the [External Air Sensor A Under Temperature] event.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Ext Air Sensor A Under Temperature	[Ext Air Sensor A Temperature] has dropped below [Ext Air Sensor A Under Temp Threshold].
Ext Air Sensor B Humidity	Relative humidity as measured by external air sensor B.
Ext Air Sensor B Temperature	Air temperature as measured by external air sensor B.
Ext Air Sensor C Humidity	Relative humidity as measured by external air sensor C.
Ext Air Sensor C Temperature	Air temperature as measured by external air sensor C.
Ext Compressor Lockout - Event Control	Enable/disable the activation of the [Ext Compressor Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Compressor Lockout - Event Type	The event type for the [Ext Compressor Lockout] event.
Ext Compressor Lockout	The compressor is shut down and disabled by an external input signal.
Ext Condenser Pump High Water - Event Control	Enable/disable the activation of the [Ext Condenser Pump High Water] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Condenser Pump High Water - Event Type	The event type for the [Ext Condenser Pump High Water] event.
Ext Condenser Pump High Water	High water is detected in the condensate pump by the auxiliary float, as indicated by an external input signal.
Ext Dew Point Over Temp Threshold	Threshold value used in the [Ext Dew Point Over Temperature] event.
Ext Dew Point Over Temperature	At least one dew point temperature reading ([Ext Air Sensor A Dew Point Temp], [Ext Air Sensor B Dew Point Temp]...) has exceeded [Ext Dew Point Over Temp Threshold].
Ext Dew Point Under Temp Threshold	Threshold value used in the [Ext Dew Point Under Temperature] event.
Ext Dew Point Under Temperature	At least one dew point temperature reading ([Ext Air Sensor A Dew Point Temp], [Ext Air Sensor B Dew Point Temp]...) has dropped below [Ext Dew Point Under Temp Threshold].
Ext Free Cooling Lockout - Event Control	Enable/disable the activation of the [Ext Free Cooling Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Free Cooling Lockout - Event Type	The event type for the [Ext Free Cooling Lockout] event.
Ext Free Cooling Lockout	Free cooling is disabled by an external input signal.
Ext Humidifier Lockout - Event Control	Enable/disable the activation of the [Ext Humidifier Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Humidifier Lockout - Event Type	The event type for the [Ext Humidifier Lockout] event.
Ext Humidifier Lockout	The humidifier is shut down and disabled by an external input signal.
Ext Loss of Air Blower - Event Control	Enable/disable the activation of the [Ext Loss of Air Blower] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Loss of Air Blower - Event Type	The event type for the [Ext Loss of Air Blower] event.
Ext Loss of Air Blower	Loss of air blower is detected, as indicated by an external input signal.
Ext Loss of Flow - Event Control	Enable/disable the activation of the [Ext Loss of Flow] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Loss of Flow - Event Type	The event type for the [Ext Loss of Flow] event.
Ext Loss of Flow	Loss of flow is detected, as indicated by an external input signal.
Ext Over Temperature - Event Control	Enable/disable the activation of the [Ext Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Ext Over Temperature - Event Type	The event type for the [Ext Over Temperature] event.
Ext Over Temperature	A temperature has exceeded its threshold, as indicated by an external input signal.
Ext Power Source A Failure	Unit main power source A failure, as indicated by an external input signal.
Ext Power Source B Failure	Unit main power source B failure, as indicated by an external input signal.
Ext Reheat Lockout - Event Control	Enable/disable the activation of the [Ext Reheat Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Reheat Lockout - Event Type	The event type for the [Ext Reheat Lockout] event.
Ext Reheat Lockout	The reheater is shut down and disabled by an external input signal.
Ext Standby Glycol Pump On - Event Control	Enable/disable the activation of the [Ext Standby Glycol Pump On] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Standby Glycol Pump On - Event Type	The event type for the [Ext Standby Glycol Pump On] event.
Ext Standby Glycol Pump On	The standby glycol pump is on, as indicated by an external input signal.
Ext Standby Unit On - Event Control	Enable/disable the activation of the [Ext Standby Unit On] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Standby Unit On - Event Type	The event type for the [Ext Standby Unit On] event.
Ext Standby Unit On	Standby unit is on, as indicated by an external input signal.
External Condenser TVSS Issue	The condenser Transient Voltage Surge Suppressor or Surge Protection Device has failed, as indicated by an external input signal.
External Condenser VFD Issue	The condenser fan Variable Frequency Drive is offline, as indicated by an external input signal.
External Fire Detected	Fire detected, as indicated by an external input signal.
Fan Control Mode	Fan control mode.
Fan Control Sensor	Sensor to be used for fan speed control.
Fan Hours Exceeded - Event Control	Enable/disable the activation of the [Fan Hours Exceeded] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Fan Hours Exceeded - Event Type	The event type for the [Fan Hours Exceeded] event.
Fan Hours Exceeded	Operating hours for the unit blower fan have exceeded the threshold.
Fan Hours Threshold	Threshold value used in the [Fan Hours Exceeded] event.
Fan Hours	Operating hours for fan since last reset of this value.
Fan Issue - Event Control	Enable/disable the activation of the [Fan Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Fan Issue - Event Type	The event type for the [Fan Issue] event.
Fan Issue	One or more fans are not operating within their operational parameters.
Fan Speed Control Temperature	Temperature value being used for fan speed control. This value is compared against the fan speed temperature set point to determine the fan speed.
Fan Speed Maximum Set Point	Maximum fan speed. This value may only be modified if iCOM is enabled to allow fan speed changes by the BMS.
Fan Speed Minimum Set Point	Minimum fan speed.
Fan Speed Temperature Set Point	If fan is in decoupled mode and not under manual control, the fan speed will vary depending on the delta between the selected fan control sensor temperature and this set point.
Fan Speed	Fan speed expressed as a percentage of the maximum rated speed.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Fan State	Fan operational state.
Fluid Flow Rate	Flow rate of fluid used for cooling.
Fluid Flow Sensor Issue	The fluid flow sensor is disconnected or the signal is out of range.
Fluid Input Temperature	Temperature of the fluid entering the cooling coil.
Fluid Output Temperature	Temperature of the fluid exiting the cooling coil.
Fluid Temperature Sensor Issue	The fluid temperature sensor is disconnected or the signal is out of range.
Free Cooling Fluid Temperature	Free cooling fluid temperature.
Free Cooling Internal Control Mode	Free cooling internal control mode
Free Cooling Internal Control Mode	Free cooling internal control mode
Free Cooling Internal Temperature Delta	Minimum temperature delta required between supply fluid and internal ambient air temperatures in order to enable free cooling.
Free Cooling State	Free cooling operational state.
Free Cooling Status	Free cooling status.
Free Cooling Status	Free cooling status.
Free Cooling Stopped - High Room Temp	Free cooling is temporarily disabled due to room temperature exceeding a preset delta above the the set point.
Free Cooling Temp Sensor Issue	The free cooling fluid temperature sensor is disconnected or the signal is out of range.
Free Cooling Valve Hours Exceeded	[Free Cooling Valve Hours] has exceeded [Free Cooling Valve Hours Threshold].
Free Cooling Valve Hours Threshold	Threshold value used in the [Free Cooling Valve Hours Exceeded] event.
Free Cooling Valve Hours	Operating hours for free cooling valve since last reset of this value.
Free Cooling Valve Open Position	Free cooling valve open position.
Heating Fan Speed Min Set Point	Minimum fan speed when system heating is active.
Heating Lockout	Heating is shut down and disabled.
High Power Shutdown - Event Control	Enable/disable the activation of the [High Power Shutdown] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
High Power Shutdown - Event Type	The event type for the [High Power Shutdown] event.
High Power Shutdown	Supply to high power components has been shutdown.
High Return Air Temperature Threshold	Threshold value used in the [Return Air Over Temperature] event.
High Return Humidity - Event Control	Enable/disable the activation of the [High Return Humidity] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
High Return Humidity - Event Type	The event type for the [High Return Humidity] event.
High Return Humidity Threshold	Threshold value used in the [High Return Humidity] event.
High Return Humidity	Return air high humidity event.
High Static Pressure	High static pressure event.
High Supply Air Temperature Threshold	Threshold value used in the [Supply Air Over Temperature] event.
Hot Water / Hot Gas State	Hot water / hot gas operational state.
Hot Water / Hot Gas Valve Hours Exceeded	[Hot Water / Hot Gas Valve Hours] has exceeded [Hot Water / Hot Gas Valve Hours Threshold].
Hot Water / Hot Gas Valve Hours Threshold	Threshold value used in the [Hot Water / Hot Gas Valve Hours Exceeded] event.
Hot Water / Hot Gas Valve Hours	Operating hours for hot water / hot gas valve since last reset of this value.
Hot Water / Hot Gas Valve Open Position	Hot water / hot gas valve open position.
Humidification Fan Speed Min Set Point	Minimum fan speed when system humidification is active.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Humidifier Control Board Not Detected	Humidifier control board is required to be connected, but no signal is detected.
Humidifier Cylinder Worn	Humidifier cylinder is not operating properly and needs to be replaced.
Humidifier Hours Exceeded	Operating hours for the humidifier have exceeded the threshold.
Humidifier Hours Threshold	Threshold value used in the [Humidifier Hours Exceeded] event.
Humidifier Hours	Operating hours for humidifier since last reset of this value.
Humidifier Issue - Event Control	Enable/disable the activation of the [Humidifier Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Humidifier Issue - Event Type	The event type for the [Humidifier Issue] event.
Humidifier Issue	Humidifier issue detected, causing it to be locked out.
Humidifier Lockout	Enable/disable the use of the humidifier.
Humidifier Low Water	The water level in the humidifier has dropped below its threshold.
Humidifier Over Current	The electrical current to the humidifier has exceeded its upper threshold.
Humidifier State	Humidifier operational state.
Humidifier Under Current	The electrical current to the humidifier has dropped below its lower threshold.
Humidifier Utilization	Present humidifier utilization expressed as a percentage of the maximum rated capacity.
Humidity Control Integration Time	Time value used to add an integral term to humidity control. If set to 0, time will not be a factor in the control algorithm.
Humidity Control Sensor	Sensor from which humidity measurements will be used for humidification and dehumidification control.
Humidity Control Type	Type of algorithm to use for control of output humidity.
Humidity Control Type	Type of algorithm to use for control of output humidity.
Humidity Dead Band	Value that is divided evenly to form a range above and below [Humidity Set Point]. If measured humidity is within this range, no humidification or dehumidification will occur.
Humidity Proportional Band	Value that is divided evenly to form proportional humidity control bands above and below [Humidity Set Point]. This setting applies to Relative, Predictive and Compensated [Humidity Control Type] selections.
Humidity Set Point	Desired relative humidity.
Infrared Humidifier Flush Rate	A multiple of an internal time constant that determines the flush duration of the infrared humidifier water pan.
Input Undervoltage	One or more of the input phase voltages has dropped below the limit.
Instantaneous Power	Total electrical power currently being consumed.
Local Cooling Override	The local unit override status for cooling capacity.
Local Dehumidifier Override	The local unit override status for the dehumidifier.
Local Electric Heat Override	The local unit override status for electric heat.
Local Fan Override	The local unit override status for fan speed.
Local Humidifier Override	The local unit override status for the humidifier.
Loss of Air Flow	No air flow through the unit due to failure of all fans.
Low Return Air Temperature Threshold	Threshold value used in the [Return Air Under Temperature] event.
Low Return Humidity - Event Control	Enable/disable the activation of the [Low Return Humidity] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Low Return Humidity - Event Type	The event type for the [Low Return Humidity] event.
Low Return Humidity Threshold	Threshold value used in the [Low Return Humidity] event.
Low Return Humidity	Return air low humidity event.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Low Static Pressure	Low static pressure event.
Low Supply Air Temperature Threshold	Threshold value used in the [Supply Air Under Temperature] event.
Main Chilled Water Valve	The primary valve in a dual valve chilled water system.
Main Fan Overload - Event Control	Enable/disable the activation of the [Main Fan Overload] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Main Fan Overload - Event Type	The event type for the [Main Fan Overload] event.
Main Fan Overload	Main fan is shut down due to thermal overload.
Maintenance Completed	Maintenance has been completed on the unit.
Maintenance Due	The calculated maintenance date has been reached.
Maintenance Ramp	The ratio of operations performed to the calculated operations available between maintenance intervals.
Maintenance Tracking State	Maintenance tracking operational state.
Master Unit Communication Lost - Event Control	Enable/disable the activation of the [Master Unit Communication Lost] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Master Unit Communication Lost - Event Type	The event type for the [Master Unit Communication Lost] event.
Master Unit Communication Lost	Communication with master unit has been lost.
Minimum Chilled Water Temp Set Point Enable	Enable/disable the activation of [Minimum Chilled Water Temp Set Point].
Minimum Chilled Water Temp Set Point	Minimum desired chilled water temperature.
Mixed Mode Lockout	Mixed mode has been entered too many times over a rolling time period and has been temporarily disabled. Mixed mode is defined as the use of a compressor on one refrigeration circuit and the use of a refrigerant pump on the other circuit.
Modbus Power Meter Communication Lost	Communication with Modbus power meter has been lost.
Outside Air Temperature	Ambient outside air temperature.
PRE Operational Mode	Pumped Refrigerant Economizer operational mode.
Pump Hours Threshold	Threshold value used in the [Pump Hours Exceeded] event.
Pump Hours	Operating hours for pump since last reset of this value.
Pump Inlet Refrigerant Temperature	Refrigerant temperature at the inlet of the pump.
Pump Outlet Refrigerant Temperature	Refrigerant temperature at the outlet of the pump.
Pump Speed	Pump speed expressed as a percentage of the maximum rated speed.
Pump State	Pump operational state.
Pump Unspecified General Event	One or more unspecified pump events active. See local unit display for further details.
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Raw Auxiliary Air Temperature	Air temperature value sent by an external auxiliary device, with no additional filtering by the receiving system. This may be an aggregated value from multiple sensors.
Reheat Utilization	Present reheating utilization expressed as a percentage of the maximum rated capacity.
Reheater Lockout	Enable/disable the use of the reheater.
Reheater Over Temperature	The temperature of the reheater has exceeded its threshold.
Remote Sensor Average Over Temperature	[Remote Sensor Average Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor Average Temperature	Average value of remote sensor temperature measurements.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Remote Sensor Average Under Temperature	[Remote Sensor Average Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Remote Sensor Issue	Remote sensor is disconnected or the signal is out of range.
Remote Sensor Maximum Temperature	Maximum value of remote sensor temperature measurements.
Remote Sensor Over Temp Threshold	Threshold value used in the remote air sensor over temperature events.
Remote Sensor Over Temperature	[Remote Sensor Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor System Average Over Temperature	[Remote Sensor System Average Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor System Average Temperature	Average value of remote sensor temperature measurements among a group of interconnected units in a single system.
Remote Sensor System Average Under Temperature	[Remote Sensor System Average Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Remote Sensor System Maximum Temperature	Maximum value of remote sensor temperature measurements among a group of interconnected units in a single system.
Remote Sensor Temperature	Air temperature as measured by remote sensor.
Remote Sensor Under Temp Threshold	Threshold value used in the remote air sensor under temperature events.
Remote Sensor Under Temperature	[Remote Sensor Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Return Air Over Temp - Event Control	Enable/disable the activation of the [Return Air Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Return Air Over Temp - Event Type	The event type for the [Return Air Over Temperature] event.
Return Air Over Temperature	Return air high temperature event.
Return Air Sensor Event Control	Enable/disable the activation of events related to measurements by the return air sensor.
Return Air Sensor Issue	The air sensor at the inlet of the unit is disconnected or the signal is out of range.
Return Air Temperature Set Point	Desired air temperature at the inlet of the unit.
Return Air Temperature	The temperature of the inlet air
Return Air Under Temp - Event Control	Enable/disable the activation of the [Return Air Under Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Return Air Under Temp - Event Type	The event type for the [Return Air Under Temperature] event.
Return Air Under Temperature	[Return Air Temperature] has dropped below [Low Return Air Temperature Threshold].
Return Damper Status	Status of the return damper.
Return Dew Point	Dew point temperature measured at the inlet of the unit.
Return Humidity Sensor Issue	The humidity sensor at the inlet of the unit is disconnected or the signal is out of range.
Return Humidity Set Point	Desired relative humidity at the inlet of the unit.
Return Humidity	Relative humidity measured at the inlet of the unit.
Server Class	The general classification for this system
Service Required - Event Control	Enable/disable the activation of the [Service Required] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Service Required - Event Type	The event type for the [Service Required] event.
Service Required	Unit requires servicing.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Shutdown - Loss Of Power - Event Control	Enable/disable the activation of the [Shutdown - Loss Of Power] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Shutdown - Loss Of Power - Event Type	The event type for the [Shutdown - Loss Of Power] event.
Shutdown - Loss Of Power	System lost power. This event becomes active when the unit is powered on following an unexpected loss of power. This event remains active for 90 minutes.
Smoke Detected - Event Control	Enable/disable the activation of the [Smoke Detected] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Smoke Detected - Event Type	The event type for the [Smoke Detected] event.
Smoke Detected	Smoke detected.
Standby Units	The number of standby units.
Static Pressure Control Enable	Enable/disable underfloor static pressure control.
Static Pressure Sensor Issue	The static pressure sensor is disconnected or the signal is out of range.
Static Pressure Sensor Out of Range	Static pressure sensor signal is out of its configured range.
Static Pressure Set Point	Desired static pressure.
Super Saver Call For Cooling	Call for cooling value used for Super Saver functionality. A higher call for cooling value indicates a need for a lower coolant temperature.
Supply Air Over Temperature	Supply air high temperature event.
Supply Air Over/Under Temperature - Event Control	Enable/disable the activation of the [Supply Air Over Temperature] and [Supply Air Under Temperature] events.
Supply Air Sensor Issue	The air sensor at the outlet of the unit is disconnected or the signal is out of range.
Supply Air Temperature Sensor Control	Control mode to be used with the supply air temperature sensor.
Supply Air Temperature Set Point	Desired supply air temperature.
Supply Air Temperature	Air temperature measured at the outlet of the unit.
Supply Air Under Temperature	Supply air low temperature event.
Supply Chilled Water Loss of Flow	Supply chilled water or glycol flow is too low.
Supply Chilled Water Over Temp	Chilled water temperature is too high, as indicated by an external input signal.
System Date and Time	The system date and time
System Event Acknowledge/Reset	Reset and/or acknowledge all events.
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System On/Off Control	Turn system functionality on or off.
System Static Pressure	Static pressure measurement among a group of interconnected units in a single system.
System Status	The operating status for the system
Tandem 'B' Compressor Hours	Operating hours for the 'B' compressor in a tandem configuration since last reset of this value.

Table 4-7 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX/PCW™—Glossary (continued)

Data Label	Data Description
Tandem 'B' Compressor State	Operational state for the 'B' compressor in a tandem configuration.
Team Static Pressure Sensor Failure	The team static pressure sensor is disconnected or the signal is out of range.
Temperature Control Sensor Issue	The air sensor selected for cooling control is disconnected or the signal is out of range.
Thermal Control Override - Temperature Call	If [Thermal Control Override] is enabled, this value sets the percent call for cooling or heating.
Thermal Control Override - Humidity Call	If [Thermal Control Override] is enabled, this value sets the percent call for humidification or dehumidification.
Thermal Control Override - Humidity Control Type	If [Thermal Control Override] is enabled, this value selects if the humidity override is applied to humidification or dehumidification.
Thermal Control Override - Temperature Control Type	If [Thermal Control Override] is enabled, this value selects if the temperature override is applied to cooling or heating.
Thermal Control Override	Override internal programmatic control of thermal conditions. This includes, but may not be limited to, temperature and humidity. The ability to enable this override may require additional system configuration.
Today's High Air Temperature Time	[Today's High Air Temperature] was measured at this time.
Today's High Air Temperature	The highest external air temperature measured since midnight.
Today's High Humidity Time	[Today's High Humidity] was measured at this time
Today's High Humidity	The highest external humidity measured since midnight.
Today's Low Air Temperature Time	[Today's Low Air Temperature] was measured at this time.
Today's Low Air Temperature	The lowest external air temperature measured since midnight.
Today's Low Humidity Time	[Today's Low Humidity] was measured at this time
Today's Low Humidity	The lowest external humidity measured since midnight.
Underfloor Static Pressure Control Enable	Enable/disable the underfloor static pressure control.
Unit Calculated Airflow	Total airflow calculated for the unit.
Unit Code Missing	Unit code has not been entered and saved.
Unit Communication Lost	Master has lost communication with one or more networked units.
Unit Control Mode	Unit control mode.
Unit Cooling Load	The total amount of heat energy currently being removed by the unit.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Operating State Reason	The reason the unit is in the current operating state.
Unit Operating State	Current operating state of the unit.
Unit Partial Shutdown	An event has occurred requiring some system components to be shutdown and disabled.
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
Unit Standby	Unit was placed in standby mode.
Unit Static Pressure	Static pressure measurement for a single unit.
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
Water Leakage Detector Sensor Issue	The water leakage detector sensor is disconnected or the signal is out of range.
Water Under Floor - Event Control	Enable/disable the activation of the [Water Under Floor] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Water Under Floor - Event Type	The event type for the [Water Under Floor] event.
Water Under Floor	Water under the floor is detected.

Table 4-8 Liebert CRV™—Binary Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Air					
Supply Air Over Temperature	Binary_Value	1	5015_1	RD	Active on Alarm
Supply Air Under Temperature	Binary_Value	2	5019_1	RD	Active on Alarm
Return Air Over Temperature	Binary_Value	3	5023_1	RD	Active on Alarm
Supply Air Sensor Issue	Binary_Value	4	5026_1	RD	Active on Alarm
Return Air Sensor Issue	Binary_Value	5	5147_1	RD	Active on Alarm
Air - Auxiliary Air					
Aux Air Temp Device Communication Lost	Binary_Value	6	5966_1_1	RD	Active on Alarm
Humidity					
High Return Humidity	Binary_Value	16	5034_1	RD	Active on Alarm
Low Return Humidity	Binary_Value	17	5036_1	RD	Active on Alarm
Humidifier Hours Exceeded	Binary_Value	18	5037_1	RD	Active on Alarm
Dehumidifier Hours Exceeded	Binary_Value	19	5038_1	RD	Active on Alarm
Humidifier Under Current	Binary_Value	20	5039_1	RD	Active on Alarm
Humidifier Over Current	Binary_Value	21	5040_1	RD	Active on Alarm
Humidifier Low Water	Binary_Value	22	5041_1	RD	Active on Alarm
Humidifier Cylinder Worn	Binary_Value	23	5042_1	RD	Active on Alarm
Humidifier Issue	Binary_Value	24	5043_1	RD	Active on Alarm
Ext Humidifier Lockout	Binary_Value	25	5044_1	RD	Active on Alarm
Humidifier Control Board Not Detected	Binary_Value	26	5045_1	RD	Active on Alarm
Return Humidity Out Of Proportional Band	Binary_Value	27	5046_1	RD	Active on Alarm
Fans					
Loss of Air Flow	Binary_Value	38	5053_1	RD	Active on Alarm
Fan Hours Exceeded	Binary_Value	39	5054_1	RD	Active on Alarm
Top Fan Issue	Binary_Value	40	5055_1	RD	Active on Alarm
Bottom Fan Issue	Binary_Value	41	5056_1	RD	Active on Alarm
Remote Sensors					
Remote Sensor Average Under Temperature	Binary_Value	43	5594_1	RD	Active on Alarm
Remote Sensor Average Over Temperature	Binary_Value	44	5593_1	RD	Active on Alarm
Remote Sensor System Average Under Temperature	Binary_Value	45	5596_1	RD	Active on Alarm
Remote Sensor System Average Over Temperature	Binary_Value	46	5595_1	RD	Active on Alarm
Remote Sensor Average Low Humidity	Binary_Value	47	6227_1	RD	Active on Alarm
Remote Sensor Average High Humidity	Binary_Value	48	6228_1	RD	Active on Alarm
Remote Sensor System Average Low Humidity	Binary_Value	49	6229_1	RD	Active on Alarm
Remote Sensor System Average High Humidity	Binary_Value	50	6230_1	RD	Active on Alarm
Remote Sensors - Remote Sensor 1					
Remote Sensor Issue	Binary_Value	52	5060_1_1	RD	Active on Alarm
Remote Sensor Low Humidity	Binary_Value	53	6225_1_1	RD	Active on Alarm
Remote Sensor High Humidity	Binary_Value	54	6226_1_1	RD	Active on Alarm
Remote Sensor Under Temperature	Binary_Value	55	5598_1_1	RD	Active on Alarm
Remote Sensor Over Temperature	Binary_Value	56	5597_1_1	RD	Active on Alarm

Table 4-8 Liebert CRV™—Binary Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Remote Sensors - Remote Sensor 2					
Remote Sensor Issue	Binary_Value	63	5060_1_2	RD	Active on Alarm
Remote Sensor Low Humidity	Binary_Value	64	6225_1_2	RD	Active on Alarm
Remote Sensor High Humidity	Binary_Value	65	6226_1_2	RD	Active on Alarm
Remote Sensor Under Temperature	Binary_Value	66	5598_1_2	RD	Active on Alarm
Remote Sensor Over Temperature	Binary_Value	67	5597_1_2	RD	Active on Alarm
Remote Sensors - Remote Sensor 10					
Remote Sensor Issue	Binary_Value	151	5060_1_10	RD	Active on Alarm
Remote Sensor Low Humidity	Binary_Value	152	6225_1_10	RD	Active on Alarm
Remote Sensor High Humidity	Binary_Value	153	6226_1_10	RD	Active on Alarm
Remote Sensor Under Temperature	Binary_Value	154	5598_1_10	RD	Active on Alarm
Remote Sensor Over Temperature	Binary_Value	155	5597_1_10	RD	Active on Alarm
Compressor					
Compressor 1 High Head Pressure	Binary_Value	162	4669_1	RD	Active on Alarm
Compressor 1 Low Suction Pressure	Binary_Value	163	5062_1	RD	Active on Alarm
Compressor 1 Hours Exceeded	Binary_Value	164	5063_1	RD	Active on Alarm
Dig Scroll Comp 1 Temp Sensor Issue	Binary_Value	165	5064_1	RD	Active on Alarm
Dig Scroll Comp 1 Over Temp	Binary_Value	166	5065_1	RD	Active on Alarm
Compressor 1 Low Pressure Transducer Issue	Binary_Value	167	5066_1	RD	Active on Alarm
Compressor 1 High Pressure Transducer Issue	Binary_Value	168	5148_1	RD	Active on Alarm
Ext Compressor Lockout	Binary_Value	169	5067_1	RD	Active on Alarm
Compressor 1 Short Cycle	Binary_Value	170	4681_1	RD	Active on Alarm
Compressor 1 Pump Down Issue	Binary_Value	171	5146_1	RD	Active on Alarm
Compressor Capacity Reduced	Binary_Value	172	5513_1	RD	Active on Alarm
Compressor Superheat Over Threshold	Binary_Value	173	5604_1	RD	Active on Alarm
Reheater					
Reheater Over Temperature	Binary_Value	182	5068_1	RD	Active on Alarm
Electric Reheater 1 Hours Exceeded	Binary_Value	183	5069_1	RD	Active on Alarm
Ext Reheat Lockout	Binary_Value	184	5070_1	RD	Active on Alarm
Electric Reheater Hours Exceeded	Binary_Value	185	5368_1	RD	Active on Alarm
Condenser					
Condenser 1 Issue	Binary_Value	195	5071_1	RD	Active on Alarm
Condenser VFD Issue	Binary_Value	196	5072_1	RD	Active on Alarm
Condenser TVSS Issue	Binary_Value	197	5073_1	RD	Active on Alarm
External Condenser VFD Issue	Binary_Value	198	6106_1	RD	Active on Alarm
External Condenser TVSS Issue	Binary_Value	199	6105_1	RD	Active on Alarm

Table 4-8 Liebert CRV™—Binary Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Chilled Water					
Supply Chilled Water Over Temp	Binary_Value	208	4626_1	RD	Active on Alarm
Chilled Water Control Valve Failure	Binary_Value	209	4703_1	RD	Active on Alarm
Supply Chilled Water Loss of Flow	Binary_Value	210	4980_1	RD	Active on Alarm
System Events					
Customer Input 1	Binary_Value	221	4270_1	RD	Active on Alarm
Customer Input 2	Binary_Value	222	4271_1	RD	Active on Alarm
Customer Input 3	Binary_Value	223	4272_1	RD	Active on Alarm
Customer Input 4	Binary_Value	224	4273_1	RD	Active on Alarm
Smoke Detected	Binary_Value	225	4720_1	RD	Active on Alarm
Water Under Floor	Binary_Value	226	4723_1	RD	Active on Alarm
Service Required	Binary_Value	227	4726_1	RD	Active on Alarm
Shutdown - Loss Of Power	Binary_Value	228	4714_1	RD	Active on Alarm
Ext Over Temperature	Binary_Value	229	5104_1	RD	Active on Alarm
Ext Loss of Flow	Binary_Value	230	5105_1	RD	Active on Alarm
Ext Condenser Pump High Water	Binary_Value	231	5106_1	RD	Active on Alarm
Ext Standby Glycol Pump On	Binary_Value	232	5107_1	RD	Active on Alarm
External Fire Detected	Binary_Value	233	5108_1	RD	Active on Alarm
Unit On	Binary_Value	234	5109_1	RD	Active on Alarm
Unit Off	Binary_Value	235	5110_1	RD	Active on Alarm
Unit Standby	Binary_Value	236	5111_1	RD	Active on Alarm
Unit Partial Shutdown	Binary_Value	237	5112_1	RD	Active on Alarm
Unit Shutdown	Binary_Value	238	5113_1	RD	Active on Alarm
Water Leakage Detector Sensor Issue	Binary_Value	239	5114_1	RD	Active on Alarm
BMS Communications Timeout	Binary_Value	240	5115_1	RD	Active on Alarm
Maintenance Due	Binary_Value	241	5116_1	RD	Active on Alarm
Maintenance Completed	Binary_Value	242	5117_1	RD	Active on Alarm
Clogged Air Filter	Binary_Value	243	5118_1	RD	Active on Alarm
RAM Battery Issue	Binary_Value	244	5119_1	RD	Active on Alarm
Master Unit Communication Lost	Binary_Value	245	5120_1	RD	Active on Alarm
High Power Shutdown	Binary_Value	246	5121_1	RD	Active on Alarm
Supply Fluid Temp Sensor Issue	Binary_Value	247	4651_1	RD	Active on Alarm
Unspecified General Event	Binary_Value	248	5588_1	RD	Active on Alarm
SEC Unspecified General Event	Binary_Value	249	6232_1	RD	Active on Alarm
SEC Communication Lost	Binary_Value	250	6233_1	RD	Active on Alarm
Static Pressure Sensor Issue	Binary_Value	251	5629_1	RD	Active on Alarm
Static Pressure Sensor Out of Range	Binary_Value	252	5910_1	RD	Active on Alarm
Power Source 'A' Issue	Binary_Value	253	6236_1	RD	Active on Alarm
Power Source B Failure	Binary_Value	254	6237_1	RD	Active on Alarm
Fluid Flow Sensor Issue	Binary_Value	255	5912_1	RD	Active on Alarm
Fluid Temperature Sensor Issue	Binary_Value	256	5911_1	RD	Active on Alarm
Unit Code Missing	Binary_Value	257	5418_1	RD	Active on Alarm

Table 4-8 Liebert CRV™—Binary Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Liebert Condenser					
Condenser Outside Air Temp Sensor Issue	Binary_Value	259	5535_1	RD	Active on Alarm
Condenser Outside Air Temp Out of Operating Range	Binary_Value	260	5536_1	RD	Active on Alarm
Condenser Control Board Issue	Binary_Value	261	5537_1	RD	Active on Alarm
Condenser Refrigerant Pressure Over Threshold	Binary_Value	262	5539_1	RD	Active on Alarm
Condenser Refrigerant Pressure Under Threshold	Binary_Value	263	5540_1	RD	Active on Alarm
Condenser Refrigerant Pressure Sensor Issue	Binary_Value	264	5541_1	RD	Active on Alarm
Condenser Supply Refrigerant Over Temp	Binary_Value	265	5542_1	RD	Active on Alarm
Condenser Supply Refrigerant Under Temp	Binary_Value	266	5543_1	RD	Active on Alarm
Condenser Supply Refrigerant Temp Sensor Issue	Binary_Value	267	5544_1	RD	Active on Alarm
Condenser Max Fan Speed Override	Binary_Value	268	5545_1	RD	Active on Alarm
Condenser Unit Unspecified General Event	Binary_Value	269	5637_1	RD	Active on Alarm
Condenser Circuit Unspecified General Event	Binary_Value	270	5638_1	RD	Active on Alarm
Condenser Communication Lost	Binary_Value	271	5531_1	RD	Active on Alarm
Condenser Remote Shutdown	Binary_Value	272	6100_1	RD	Active on Alarm
Liebert Condenser - Fan 1					
Condenser Fan Issue	Binary_Value	280	5277_1_1	RD	Active on Alarm
Liebert Condenser - Fan 2					
Condenser Fan Issue	Binary_Value	292	5277_1_2	RD	Active on Alarm
Liebert Condenser - Fan 4					
Condenser Fan Issue	Binary_Value	316	5277_1_4	RD	Active on Alarm
EEV					
EEV Superheat Below Threshold	Binary_Value	327	5621_1	RD	Active on Alarm
EEV Discharge Temp Above Threshold	Binary_Value	328	5622_1	RD	Active on Alarm
EEV Battery Issue	Binary_Value	329	5623_1	RD	Active on Alarm
EEV Power Issue	Binary_Value	330	5624_1	RD	Active on Alarm
EEV Unspecified General Event	Binary_Value	331	5625_1	RD	Active on Alarm
Power Measurement					
Input Undervoltage	Binary_Value	342	5568_1	RD	Active on Alarm
Modbus Power Meter Communication Lost	Binary_Value	343	5967_1	RD	Active on Alarm

Table 4-9 Liebert CRV™—Analog Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Air					
Supply Air Temperature	Analog_Value	1	5002_1	RD	Units: deg C
Supply Air Temperature	Analog_Value	10001	5002_1_deg_F	RD	Units: deg F
Return Air Temperature	Analog_Value	2	4291_1	RD	Units: deg C
Return Air Temperature	Analog_Value	10002	4291_1_deg_F	RD	Units: deg F
Return Dew Point	Analog_Value	3	5004_1	RD	Units: deg C
Return Dew Point	Analog_Value	10003	5004_1_deg_F	RD	Units: deg F
Remote Sensor Minimum Temperature	Analog_Value	4	5005_1	RD	Units: deg C
Remote Sensor Minimum Temperature	Analog_Value	10004	5005_1_deg_F	RD	Units: deg F
Remote Sensor Maximum Temperature	Analog_Value	5	5006_1	RD	Units: deg C
Remote Sensor Maximum Temperature	Analog_Value	10005	5006_1_deg_F	RD	Units: deg F
Remote Sensor Average Temperature	Analog_Value	6	5007_1	RD	Units: deg C
Remote Sensor Average Temperature	Analog_Value	10006	5007_1_deg_F	RD	Units: deg F
Air Temperature Set Point	Analog_Value	7	5008_1	RW	Units: deg C
Air Temperature Set Point	Analog_Value	10007	5008_1_deg_F	RW	Units: deg F
Cooling Proportional Band	Analog_Value	8	5009_1	RW	Units: deg C
Cooling Proportional Band	Analog_Value	10008	5009_1_deg_F	RW	Units: deg F
Heating Proportional Band	Analog_Value	9	5010_1	RW	Units: deg C
Heating Proportional Band	Analog_Value	10009	5010_1_deg_F	RW	Units: deg F
Air Temperature Dead Band	Analog_Value	10	5011_1	RW	Units: deg C
Air Temperature Dead Band	Analog_Value	10010	5011_1_deg_F	RW	Units: deg F
Supply Air Over Temp Threshold	Analog_Value	11	5014_1	RW	Units: deg C
Supply Air Over Temp Threshold	Analog_Value	10011	5014_1_deg_F	RW	Units: deg F
Supply Air Under Temp Threshold	Analog_Value	12	5018_1	RW	Units: deg C
Supply Air Under Temp Threshold	Analog_Value	10012	5018_1_deg_F	RW	Units: deg F
Return Air Over Temp Threshold	Analog_Value	13	5022_1	RW	Units: deg C
Return Air Over Temp Threshold	Analog_Value	10013	5022_1_deg_F	RW	Units: deg F
Air - Auxiliary Air					
Raw Auxiliary Air Temperature	Analog_Value	14	5964_1_1	RW	Units: deg C
Raw Auxiliary Air Temperature	Analog_Value	10014	5964_1_1_deg_F	RW	Units: deg F
Actual Auxiliary Air Temperature	Analog_Value	15	5965_1_1	RD	Units: deg C
Actual Auxiliary Air Temperature	Analog_Value	10015	5965_1_1_deg_F	RD	Units: deg F
Humidity					
Supply Humidity	Analog_Value	24	5027_1	RD	Units: % RH
Return Humidity	Analog_Value	25	5028_1	RD	Units: % RH
Humidity Set Point	Analog_Value	26	5029_1	RW	Units: % RH
Humidification Proportional Band	Analog_Value	27	5030_1	RW	Units: % RH
Dehumidification Proportional Band	Analog_Value	28	5031_1	RW	Units: % RH
Humidity Dead Band	Analog_Value	29	5032_1	RW	Units: % RH
High Return Humidity Threshold	Analog_Value	30	5033_1	RW	Units: % RH
Low Return Humidity Threshold	Analog_Value	31	5035_1	RW	Units: % RH

Table 4-9 Liebert CRV™—Analog Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Fans					
Fan Speed Proportional Band	Analog_Value	42	5048_1	RW	Units: deg C
Fan Speed Proportional Band	Analog_Value	10042	5048_1_deg_F	RW	Units: deg F
Fan Speed Manual Set Point	Analog_Value	43	5049_1	RW	Units: %
Fan Speed Maximum Set Point	Analog_Value	44	5050_1	RW	Units: %
Fan Speed Minimum Set Point	Analog_Value	45	5051_1	RW	Units: %
Remote Sensors					
Remote Sensor System Average Temperature	Analog_Value	48	5591_1	RD	Units: deg C
Remote Sensor System Average Temperature	Analog_Value	10048	5591_1_deg_F	RD	Units: deg F
Remote Sensor System Maximum Temperature	Analog_Value	49	5592_1	RD	Units: deg C
Remote Sensor System Maximum Temperature	Analog_Value	10049	5592_1_deg_F	RD	Units: deg F
Remote Sensor Under Temp Threshold	Analog_Value	50	5590_1	RW	Units: deg C
Remote Sensor Under Temp Threshold	Analog_Value	10051	5590_1_deg_F	RW	Units: deg F
Remote Sensor Over Temp Threshold	Analog_Value	52	5589_1	RW	Units: deg C
Remote Sensor Over Temp Threshold	Analog_Value	10052	5589_1_deg_F	RW	Units: deg F
Remote Sensors - Remote Sensor 1					
Remote Sensor Temperature	Analog_Value	56	5059_1_1	RD	Units: deg C
Remote Sensor Temperature	Analog_Value	10056	5059_1_1_deg_F	RD	Units: deg F
Remote Sensors - Remote Sensor 2					
Remote Sensor Temperature	Analog_Value	67	5059_1_2	RD	Units: deg C
Remote Sensor Temperature	Analog_Value	10067	5059_1_2_deg_F	RD	Units: deg F
Remote Sensors - Remote Sensor 10					
Remote Sensor Temperature	Analog_Value	155	5059_1_10	RD	Units: deg C
Remote Sensor Temperature	Analog_Value	10155	5059_1_10_deg_F	RD	Units: deg F
Chilled Water					
Supply Chilled Water Temperature	Analog_Value	166	4624_1	RD	Units: deg C
Supply Chilled Water Temperature	Analog_Value	10166	4624_1_deg_F	RD	Units: deg F
Supply Chilled Water Over Temp Threshold	Analog_Value	167	4625_1	RW	Units: deg C
Supply Chilled Water Over Temp Threshold	Analog_Value	10167	4625_1_deg_F	RW	Units: deg F
System Info					
BMS Timeout Period	Analog_Value	178	5075_1	RW	Units: min
Auto Restart Delay	Analog_Value	179	4710_1	RW	Units: sec
System Operations					
Operating Efficiency	Analog_Value	190	5076_1	RD	Units: %
Fan Speed	Analog_Value	191	5077_1	RD	Units: %
Cooling Capacity (Primary)	Analog_Value	192	5078_1	RD	Units: %
Dehumidifier Utilization	Analog_Value	193	5079_1	RD	Units: %
Reheat Utilization	Analog_Value	194	5080_1	RD	Units: %
Humidifier Utilization	Analog_Value	195	5081_1	RD	Units: %

Table 4-9 Liebert CRV™—Analog Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Calculated Next Maintenance Month	Analog_Value	196	4868_1	RD	
Calculated Next Maintenance Year	Analog_Value	197	4869_1	RD	
Maintenance Ramp	Analog_Value	198	4870_1	RD	Units: %
Time					
System Date and Time	Analog_Value	209	4293_1	RW	
Liebert Condenser					
Condenser Outside Air Temperature	Analog_Value	221	5534_1	RD	Units: deg C
Condenser Outside Air Temperature	Analog_Value	10221	5534_1_deg_F	RD	Units: deg F
Expected Condenser Unit Count	Analog_Value	222	6101_1	RD	
Condenser Refrigerant Pressure	Analog_Value	223	6103_1	RD	Units: bar
Condenser Supply Refrigerant Temperature	Analog_Value	224	6102_1	RD	Units: deg C
Condenser Supply Refrigerant Temperature	Analog_Value	10224	6102_1_deg_F	RD	Units: deg F
Condenser Refrigerant Pressure	Analog_Value	225	6103_1	RD	Units: bar
Liebert Condenser - Fan 1					
Condenser Fan Speed	Analog_Value	233	5276_1_1	RD	Units: %
Condenser Fan Power	Analog_Value	234	5538_1_1	RD	Units: kW
Liebert Condenser - Fan 2					
Condenser Fan Speed	Analog_Value	246	5276_1_2	RD	Units: %
Condenser Fan Power	Analog_Value	247	5538_1_2	RD	Units: kW
Liebert Condenser - Fan 4					
Condenser Fan Speed	Analog_Value	272	5276_1_4	RD	Units: %
Condenser Fan Power	Analog_Value	273	5538_1_4	RD	Units: kW
Liebert Condenser - Low Noise Mode					
Condenser Low Noise Mode Max Fan Speed	Analog_Value	285	5548_1_1	RW	Units: %
Condenser Normal Mode Max Fan Speed	Analog_Value	286	5549_1_1	RW	Units: %
Condenser Low Noise Mode - Interval Days	Analog_Value	287	5550_1_1	RW	1 = Monday 2 = Tuesday 4 = Wednesday 8 = Thursday 16 = Friday 32 = Saturday 64 = Sunday
Condenser Low Noise Mode - Full Days	Analog_Value	288	5551_1_1	RW	1 = Monday 2 = Tuesday 4 = Wednesday 8 = Thursday 16 = Friday 32 = Saturday 64 = Sunday
Condenser Low Noise Mode Start Time	Analog_Value	289	5552_1_1	RW	Units: Seconds since Midnight
Condenser Low Noise Mode Stop Time	Analog_Value	290	5553_1_1	RW	Units: Seconds since Midnight
EEV					
EEV Open Position	Analog_Value	301	5620_1	RD	Units: %

Table 4-9 Liebert CRV™—Analog Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Power Measurement					
System Input RMS A-B	Analog_Value	312	4097_1	RD	Units: VAC
System Input RMS A-N	Analog_Value	313	4096_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	314	4113_1	RD	Units: A AC
System Input RMS B-C	Analog_Value	315	4099_1	RD	Units: VAC
System Input RMS B-N	Analog_Value	316	4098_1	RD	Units: VAC
System Input RMS Current Phase B	Analog_Value	317	4114_1	RD	Units: A AC
System Input RMS C-A	Analog_Value	318	4101_1	RD	Units: VAC
System Input RMS C-N	Analog_Value	319	4100_1	RD	Units: VAC
System Input RMS Current Phase C	Analog_Value	320	4115_1	RD	Units: A AC
Energy Consumption	Analog_Value	321	5900_1	RW	Units: kWH
Instantaneous Power	Analog_Value	322	5901_1	RD	Units: W
Super Saver					
Super Saver Call For Cooling	Analog_Value	300	6234_1	RD	Units: %

Table 4-10 Liebert CRV™—Multistate Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Protocol					
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
Air					
Air Temperature Control Sensor	MultiState_Value	12	5012_1	RW	1 = Supply 2 = Remote 3 = Return
Remote Sensor Temperature Calculation	MultiState_Value	13	5013_1	RW	1 = Average 2 = Maximum
Fans					
Fan Control Mode	MultiState_Value	24	5047_1	RW	1 = Internal (Auto) 2 = External (Manual)
Fan Control Sensor	MultiState_Value	25	5052_1	RW	1 = Supply 2 = Remote 3 = Return
Remote Sensors - Remote Sensor 1					
Remote Sensor Function	MultiState_Value	36	5058_1_1	RW	1 = Disable 2 = Reference 3 = Control
Remote Sensors - Remote Sensor 2					
Remote Sensor Function	MultiState_Value	47	5058_1_2	RW	1 = Disable 2 = Reference 3 = Control
Remote Sensors - Remote Sensor 10					
Remote Sensor Function	MultiState_Value	135	5058_1_10	RW	1 = Disable 2 = Reference 3 = Control
System Info					
System Status	MultiState_Value	146	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
System Operating State	MultiState_Value	147	4706_1	RD	1 = off 2 = on 3 = standby
System Control Mode	MultiState_Value	148	4707_1	RD	1 = Internal (Auto) 2 = External (Manual)

Table 4-10 Liebert CRV™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
System Operating State Reason	MultiState_Value	149	5074_1	RD	1 = Reason Unknown 2 = Network Display 3 = Alarm 4 = Schedule 5 = Remote System 6 = External Input 7 = Local Display
System Operations					
System On/Off Control	MultiState_Value	160	5143_1	RW	1 = off 2 = on
Local Fan Override	MultiState_Value	161	6175_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection
Local Cooling Override	MultiState_Value	162	6176_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection
Local Electric Heat Override	MultiState_Value	163	6177_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection
Local Humidifier Override	MultiState_Value	164	6178_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection

Table 4-10 Liebert CRV™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Local Dehumidifier Override	MultiState_Value	165	6179_1	RD	1 = Normal operation 2 = Increased for internal protection 3 = Decreased for internal protection 4 = Disabled for internal protection 5 = Limited or disabled for low limit protection
Event Configuration					
System Event Acknowledge/Reset	MultiState_Value	171	4717_1	WO	1 = Reset 2 = Acknowledge
Smoke Detected - Event Control	MultiState_Value	172	4721_1	RW	1 = disabled 2 = enabled
Smoke Detected - Event Type	MultiState_Value	173	4722_1	RW	1 = Message 2 = Warning 3 = Alarm
Water Under Floor - Event Control	MultiState_Value	174	4724_1	RW	1 = disabled 2 = enabled
Water Under Floor - Event Type	MultiState_Value	175	4725_1	RW	1 = Message 2 = Warning 3 = Alarm
Customer Input 1 - Event Control	MultiState_Value	176	4718_1	RW	1 = disabled 2 = enabled
Customer Input 1 - Event Type	MultiState_Value	177	4719_1	RW	1 = Message 2 = Warning 3 = Alarm
Customer Input 2 - Event Control	MultiState_Value	178	5098_1	RW	1 = disabled 2 = enabled
Customer Input 2 - Event Type	MultiState_Value	179	5099_1	RW	1 = Message 2 = Warning 3 = Alarm
Customer Input 3 - Event Control	MultiState_Value	180	5100_1	RW	1 = disabled 2 = enabled
Customer Input 3 - Event Type	MultiState_Value	181	5101_1	RW	1 = Message 2 = Warning 3 = Alarm
Customer Input 4 - Event Control	MultiState_Value	182	5102_1	RW	1 = disabled 2 = enabled
Customer Input 4 - Event Type	MultiState_Value	183	5103_1	RW	1 = Message 2 = Warning 3 = Alarm
Service Required - Event Control	MultiState_Value	184	4727_1	RW	1 = disabled 2 = enabled
Service Required - Event Type	MultiState_Value	185	4728_1	RW	1 = Message 2 = Warning 3 = Alarm

Table 4-10 Liebert CRV™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Shutdown - Loss Of Power - Event Control	MultiState_Value	186	4715_1	RW	1 = disabled 2 = enabled
Shutdown - Loss Of Power - Event Type	MultiState_Value	187	4716_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Loss of Flow - Event Control	MultiState_Value	188	5082_1	RW	1 = disabled 2 = enabled
Ext Loss of Flow - Event Type	MultiState_Value	189	5083_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Reheat Lockout - Event Control	MultiState_Value	190	5084_1	RW	1 = disabled 2 = enabled
Ext Reheat Lockout - Event Type	MultiState_Value	191	5085_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Humidifier Lockout - Event Control	MultiState_Value	192	5086_1	RW	1 = disabled 2 = enabled
Ext Humidifier Lockout - Event Type	MultiState_Value	193	5087_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Compressor Lockout - Event Control	MultiState_Value	194	5088_1	RW	1 = disabled 2 = enabled
Ext Compressor Lockout - Event Type	MultiState_Value	195	5089_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Over Temperature - Event Control	MultiState_Value	196	5090_1	RW	1 = disabled 2 = enabled
Ext Over Temperature - Event Type	MultiState_Value	197	5091_1	RW	1 = Message 2 = Warning 3 = Alarm
Condenser VFD Issue - Event Control	MultiState_Value	198	5092_1	RW	1 = disabled 2 = enabled
Condenser VFD Issue - Event Type	MultiState_Value	199	5093_1	RW	1 = Message 2 = Warning 3 = Alarm
Condenser TVSS Issue - Event Control	MultiState_Value	200	5094_1	RW	1 = disabled 2 = enabled
Condenser TVSS Issue - Event Type	MultiState_Value	201	5095_1	RW	1 = Message 2 = Warning 3 = Alarm
Condenser 1 Issue - Event Control	MultiState_Value	202	5096_1	RW	1 = disabled 2 = enabled
Condenser 1 Issue - Event Type	MultiState_Value	203	5097_1	RW	1 = Message 2 = Warning 3 = Alarm

Table 4-10 Liebert CRV™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Liebert Condenser					
Condenser Refrigerant Type	MultiState_Value	215	5533_1	RD	1 = R22 2 = R407C 3 = R410A
Condenser Fan Reversal Requested	MultiState_Value	216	6104_1	RD	1 = false 2 = true
Liebert Condenser - Low Noise Mode					
Condenser Low Noise Mode State	MultiState_Value	227	5546_1_1	RD	1 = Inactive 2 = Active (Interval) 3 = Active (Full Day)
Condenser Low Noise Mode Schedule Control	MultiState_Value	228	5547_1_1	RW	1 = disabled 2 = enabled
Compressor					
Compressor High Pressure Event Reset	MultiState_Value	239	6235_1	WO	1 = Reset

Table 4-11 Liebert CRV™—Glossary

Data Label	Data Description
Actual Auxiliary Air Temperature	Actual auxiliary air temperature value being used for control. This value may differ from the raw value received from the auxiliary device if filtering is applied.
Air Temperature Control Sensor	Sensor from which air temperature measurements will be used for cooling and heating control.
Air Temperature Dead Band	Value that is divided evenly to form a temperature range above and below [Air Temperature Set Point]. If measured air temperature is within this range, no heating or cooling will occur.
Air Temperature Set Point	Desired air temperature. This set point is dependent upon which sensor is selected for control.
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
Aux Air Temp Device Communication Lost	Communication with external auxiliary device providing an air temperature value has been lost.
BMS Communications Timeout	Building Management System (or external monitoring system) has not communicated with the system within the expected timeframe.
BMS Timeout Period	Timeframe within which the Building Management System (or external monitoring system) must communicate with the system to avoid a timeout.
Bottom Fan Issue	The bottom fan is not operating within its normal parameters.
Calculated Next Maintenance Month	Calculated month of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Year].
Calculated Next Maintenance Year	Calculated year of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Month].
Chilled Water Control Valve Failure	Chilled water valve out of position. Chilled water control valve position does not match expected value.
Clogged Air Filter	Air filter is dirty and needs to be (cleaned or) replaced.
Compressor 1 High Head Pressure	Compressor 1 high head pressure.
Compressor 1 High Pressure Transducer Issue	Compressor 1 high pressure transducer is disconnected or the signal is out of range.
Compressor 1 Hours Exceeded	Operating hours for compressor 1 have exceeded the threshold.
Compressor 1 Low Pressure Transducer Issue	Compressor 1 low pressure transducer is disconnected or the signal is out of range.
Compressor 1 Low Suction Pressure	Compressor 1 low suction pressure.
Compressor 1 Pump Down Issue	Unable to pump down suction-side pressure during compressor 1 shutdown.
Compressor 1 Short Cycle	Compressor 1 short cycle. A short cycle is defined as turning on and off a number of times over a set time period.
Compressor Capacity Reduced	Compressor capacity has been reduced.
Compressor High Pressure Event Reset	Reset a Compressor High Pressure event. This will allow it to be removed from the set of active events.
Compressor Superheat Over Threshold	Compressor discharge refrigerant superheat temperature has exceeded an upper threshold.
Condenser 1 Issue - Event Control	Enable/disable the activation of the [Condenser 1 Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Condenser 1 Issue - Event Type	The event type for the [Condenser 1 Issue] event.
Condenser 1 Issue	Condenser 1 is not operating within its normal parameters.
Condenser Circuit Unspecified General Event	One or more unspecified condenser circuit events active. See local unit display for further details.
Condenser Communication Lost	Communication with condenser unit has been lost.
Condenser Control Board Issue	The condenser control board is reporting an issue.
Condenser Fan Issue	Condenser fan is not operating within its operational parameters.
Condenser Fan Power	Condenser fan's measured input power.

Table 4-11 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Condenser Fan Reversal Requested	Request the condenser fans to rotate in the reverse direction.
Condenser Fan Speed	Condenser fan speed expressed as a percentage of the maximum rated speed.
Condenser Low Noise Mode - Full Days	Days of the week selected for low noise mode full day scheduling.
Condenser Low Noise Mode - Interval Days	Days of the week selected for low noise mode interval scheduling.
Condenser Low Noise Mode Max Fan Speed	Maximum fan speed when condenser is placed in low noise mode.
Condenser Low Noise Mode Schedule Control	Enable/disable scheduled control of condenser low noise mode.
Condenser Low Noise Mode Start Time	The time of day at which the condenser will transition into low noise mode.
Condenser Low Noise Mode State	State of condenser low noise mode scheduler control.
Condenser Low Noise Mode Stop Time	The time of day at which the condenser will transition out of low noise mode.
Condenser Max Fan Speed Override	Fan speed exceeding the maximum set point in order to alleviate a high temperature or pressure condition.
Condenser Normal Mode Max Fan Speed	Maximum fan speed when condenser is not in low noise mode.
Condenser Outside Air Temp Out of Operating Range	[Condenser Outside Air Temperature] is either above an upper threshold or below a lower threshold.
Condenser Outside Air Temp Sensor Issue	Condenser outside air temperature sensor is disconnected or the signal is out of range.
Condenser Outside Air Temperature	Condenser ambient outside air temperature.
Condenser Refrigerant Pressure Over Threshold	Condenser refrigerant pressure has exceeded a threshold.
Condenser Refrigerant Pressure Sensor Issue	Condenser refrigerant pressure sensor is disconnected or the signal is out of range.
Condenser Refrigerant Pressure Under Threshold	Condenser refrigerant pressure has dropped below a threshold.
Condenser Refrigerant Pressure	Pressure of the refrigerant in a condenser circuit.
Condenser Refrigerant Type	Condenser refrigerant type.
Condenser Remote Shutdown	Condenser is shut down by a remote signal.
Condenser Supply Refrigerant Over Temp	Condenser supply refrigerant temperature has exceeded a threshold.
Condenser Supply Refrigerant Temp Sensor Issue	Condenser supply refrigerant temperature sensor is disconnected or the signal is out of range.
Condenser Supply Refrigerant Temperature	Temperature of the supply refrigerant in a condenser circuit.
Condenser Supply Refrigerant Under Temp	Condenser supply refrigerant temperature has dropped below a specified threshold.
Condenser TVSS Issue - Event Control	Enable/disable the activation of the [Condenser TVSS or SPD Issue] event (Transient Voltage Surge Suppressor or Surge Protection Device). If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Condenser TVSS Issue - Event Type	The event type for the [Condenser TVSS or SPD Issue] event (Transient Voltage Surge Suppressor or Surge Protection Device).
Condenser TVSS Issue	The condenser Transient Voltage Surge Suppressor or Surge Protection Device has failed.
Condenser Unit Unspecified General Event	One or more unspecified condenser unit events active. See local unit display for further details.
Condenser VFD Issue - Event Control	Enable/disable the activation of the [Condenser VFD Issue] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Condenser VFD Issue - Event Type	The event type for the [Condenser VFD Issue] event.
Condenser VFD Issue	The condenser fan Variable Frequency Drive is offline.

Table 4-11 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Cooling Capacity (Primary)	Compressor utilization or chilled water valve position, based on unit type.
Cooling Proportional Band	Temperature control band above [Air Temperature Set Point]. If measured air temperature is within this band, cooling operations are proportionally controlled.
Customer Input 1 - Event Control	Enable/disable the activation of the [Customer Input 1] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 1 - Event Type	The event type for the [Customer Input 1] event.
Customer Input 1	Customer Input 1.
Customer Input 2 - Event Control	Enable/disable the activation of the [Customer Input 2] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 2 - Event Type	The event type for the [Customer Input 2] event.
Customer Input 2	Customer input 2.
Customer Input 3 - Event Control	Enable/disable the activation of the [Customer Input 3] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 3 - Event Type	The event type for the [Customer Input 3] event.
Customer Input 3	Customer input 3.
Customer Input 4 - Event Control	Enable/disable the activation of the [Customer Input 4] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 4 - Event Type	The event type for the [Customer Input 4] event.
Customer Input 4	Customer input 4.
Dehumidification Proportional Band	Humidity control band above [Humidity Set Point]. If measured humidity is within this band, dehumidification operations are proportionally controlled.
Dehumidifier Hours Exceeded	Operating hours for the dehumidifier have exceeded the threshold.
Dehumidifier Utilization	Present dehumidifier utilization expressed as a percentage of the maximum rated capacity.
Dig Scroll Comp 1 Over Temp	Digital scroll compressor 1 shut off because its head temperature has exceeded the upper threshold.
Dig Scroll Comp 1 Temp Sensor Issue	Digital scroll compressor 1 temperature sensor is disconnected or the signal is out of range.
EEV Battery Issue	Electronic expansion valve battery cannot be recharged and needs to be replaced.
EEV Discharge Temp Above Threshold	Electronic expansion valve refrigerant high discharge temperature event.
EEV Open Position	Electronic expansion valve open position.
EEV Power Issue	Electronic expansion valve lost power and is running on battery backup.
EEV Superheat Below Threshold	Electronic expansion valve refrigerant low superheat event.
EEV Unspecified General Event	One or more unspecified electronic expansion valve events active. See local unit display for further details.
Electric Reheater 1 Hours Exceeded	Operating hours for electric reheater 1 have exceeded the threshold.
Electric Reheater Hours Exceeded	[Electric Reheater Hours] has exceeded [Electric Reheaters Hours Threshold].
Energy Consumption	Energy consumption since the last reset of this value.
Expected Condenser Unit Count	Number of physical condenser units that are expected to be connected to the system.
Ext Compressor Lockout - Event Control	Enable/disable the activation of the [Ext Compressor Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Compressor Lockout - Event Type	The event type for the [Ext Compressor Lockout] event.
Ext Compressor Lockout	The compressor is shut down and disabled by an external input signal.

Table 4-11 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Ext Condenser Pump High Water	High water is detected in the condenser, as indicated by an external input signal.
Ext Humidifier Lockout - Event Control	Enable/disable the activation of the [Ext Humidifier Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Humidifier Lockout - Event Type	The event type for the [Ext Humidifier Lockout] event.
Ext Humidifier Lockout	The humidifier is shut down and disabled by an external input signal.
Ext Loss of Flow - Event Control	Enable/disable the activation of the [Ext Loss of Flow] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Loss of Flow - Event Type	The event type for the [Ext Loss of Flow] event.
Ext Loss of Flow	Loss of flow is detected, as indicated by an external input signal.
Ext Over Temperature - Event Control	Enable/disable the activation of the [Ext Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Over Temperature - Event Type	The event type for the [Ext Over Temperature] event.
Ext Over Temperature	A temperature has exceeded its threshold, as indicated by an external input signal.
Ext Reheat Lockout - Event Control	Enable/disable the activation of the [Ext Reheat Lockout] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Reheat Lockout - Event Type	The event type for the [Ext Reheat Lockout] event.
Ext Reheat Lockout	The reheater is shut down and disabled by an external input signal.
Ext Standby Glycol Pump On	The standby glycol pump is on, as indicated by an external input signal.
External Condenser TVSS Issue	The condenser Transient Voltage Surge Suppressor or Surge Protection Device has failed, as indicated by an external input signal.
External Condenser VFD Issue	The condenser fan Variable Frequency Drive is offline, as indicated by an external input signal.
External Fire Detected	Fire detected, as indicated by an external input signal.
Fan Control Mode	Fan control mode. Allowable modes are: (0) Auto - Fan speed is controlled via the selected fan control sensor, and, (1) Manual - Fan will operate at a fixed speed.
Fan Control Sensor	Sensor from which air temperature measurements will be used for fan speed control.
Fan Hours Exceeded	Operating hours for the unit blower fan have exceeded the threshold.
Fan Speed Manual Set Point	Manual fan speed.
Fan Speed Maximum Set Point	Maximum fan speed.
Fan Speed Minimum Set Point	Minimum fan speed.
Fan Speed Proportional Band	Temperature control band above the temperature set point calculated for proportional fan speed control. If measured air temperature is within this band, fan speed operations are proportionally controlled.
Fan Speed	Fan speed expressed as a percentage of the maximum rated speed.
Fluid Flow Sensor Issue	The fluid flow sensor is disconnected or the signal is out of range.
Fluid Temperature Sensor Issue	The fluid temperature sensor is disconnected or the signal is out of range.
Heating Proportional Band	Temperature control band below [Air Temperature Set Point]. If measured air temperature is within this band, heating operations are proportionally controlled.
High Power Shutdown	Supply to high power components has been shutdown.
High Return Humidity Threshold	Threshold value used in the [High Return Humidity] event.
High Return Humidity	Return air high humidity event.
Humidification Proportional Band	Humidity control band below [Humidity Set Point]. If measured humidity is within this band, humidification operations are proportionally controlled.

Table 4-11 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Humidifier Control Board Not Detected	Humidifier control board is required to be connected, but no signal is detected.
Humidifier Cylinder Worn	Humidifier cylinder is not operating properly and needs to be replaced.
Humidifier Hours Exceeded	Operating hours for the humidifier have exceeded the threshold.
Humidifier Issue	Humidifier issue detected, causing it to be locked out.
Humidifier Low Water	The water level in the humidifier has dropped below its threshold.
Humidifier Over Current	The electrical current to the humidifier has exceeded its upper threshold.
Humidifier Under Current	The electrical current to the humidifier has dropped below its lower threshold.
Humidifier Utilization	Present humidifier utilization expressed as a percentage of the maximum rated capacity.
Humidity Dead Band	Value that is divided evenly to form a range above and below [Humidity Set Point]. If measured humidity is within this range, no humidification or dehumidification will occur.
Humidity Set Point	Desired relative humidity.
Input Undervoltage	One or more of the input phase voltages has dropped below the limit.
Instantaneous Power	Total electrical power currently being consumed.
Local Cooling Override	The local unit override status for cooling capacity.
Local Dehumidifier Override	The local unit override status for the dehumidifier.
Local Electric Heat Override	The local unit override status for electric heat.
Local Fan Override	The local unit override status for fan speed.
Local Humidifier Override	The local unit override status for the humidifier.
Loss of Air Flow	No air flow through the unit due to failure of all fans.
Low Return Humidity Threshold	Threshold value used in the [Low Return Humidity] event.
Low Return Humidity	Return air low humidity event.
Maintenance Completed	Maintenance has been completed on the unit.
Maintenance Due	The calculated maintenance date has been reached.
Maintenance Ramp	The ratio of operations performed to the calculated operations available between maintenance intervals.
Master Unit Communication Lost	Communication with master unit has been lost.
Modbus Power Meter Communication Lost	Communication with Modbus power meter has been lost.
Operating Efficiency	The ratio of cooling energy provided to the amount of total energy being used.
Power Source 'A' Issue	No power is detected at power source input 'A'.
Power Source B Failure	No power is detected at power source input B.
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Raw Auxiliary Air Temperature	Air temperature value sent by an external auxiliary device, with no additional filtering by the receiving system. This may be an aggregated value from multiple sensors.
Reheat Utilization	Present reheating utilization expressed as a percentage of the maximum rated capacity.
Reheater Over Temperature	The temperature of the reheater has exceeded its threshold.
Remote Sensor Average High Humidity	The average humidity of multiple remote sensors on the cooling unit has exceeded an upper threshold. The event is deactivated when the humidity drops below the threshold.
Remote Sensor Average Low Humidity	The average humidity of multiple remote sensors on the cooling unit has dropped below a lower threshold. The event is deactivated when the humidity rises above the threshold.
Remote Sensor Average Over Temperature	[Remote Sensor Average Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor Average Temperature	Average value of remote sensor temperature measurements.

Table 4-11 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Remote Sensor Average Under Temperature	[Remote Sensor Average Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Remote Sensor Function	Function assigned to remote sensor. Available values are: (0) Control - sensor will be used in calculation of remote sensor temperature that may be used for heating and cooling control, (1) Reference - sensor will not be used in calculation of remote sensor temperature, but is enabled, (2) Disable - sensor is disabled
Remote Sensor High Humidity	Remote sensor humidity has exceeded an upper threshold. The event is deactivated when the humidity drops below the threshold.
Remote Sensor Issue	Remote sensor is disconnected or the signal is out of range.
Remote Sensor Low Humidity	Remote sensor humidity has dropped below a lower threshold. The event is deactivated when the humidity rises above the threshold.
Remote Sensor Maximum Temperature	Maximum value of remote sensor temperature measurements.
Remote Sensor Minimum Temperature	Minimum value of remote sensor temperature measurements.
Remote Sensor Over Temp Threshold	Threshold value used in the remote air sensor over temperature events.
Remote Sensor Over Temperature	[Remote Sensor Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor System Average High Humidity	The average humidity of multiple remote sensors on interconnected cooling units in a single system has exceeded an upper threshold. The event is deactivated when the humidity drops below the threshold.
Remote Sensor System Average Low Humidity	The average humidity of multiple remote sensors on interconnected cooling units in a single system has dropped below a lower threshold. The event is deactivated when the humidity rises above the threshold.
Remote Sensor System Average Over Temperature	[Remote Sensor System Average Temperature] has exceeded [Remote Sensor Over Temp Threshold].
Remote Sensor System Average Temperature	Average value of remote sensor temperature measurements among a group of interconnected units in a single system.
Remote Sensor System Average Under Temperature	Remote Sensor System Average Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Remote Sensor System Maximum Temperature	Maximum value of remote sensor temperature measurements among a group of interconnected units in a single system.
Remote Sensor Temperature Calculation	Calculation method applied to temperature readings from the remote sensors to determine a single temperature measurement value for cooling and heating control.
Remote Sensor Temperature	Air temperature as measured by remote sensor.
Remote Sensor Under Temp Threshold	Threshold value used in the remote air sensor under temperature events.
Remote Sensor Under Temperature	[Remote Sensor Temperature] has dropped below [Remote Sensor Under Temp Threshold].
Return Air Over Temp Threshold	Threshold value used in the [Return Air Over Temperature] event.
Return Air Over Temperature	Return air high temperature event.
Return Air Sensor Issue	The air sensor at the inlet of the unit is disconnected or the signal is out of range.
Return Air Temperature	The temperature of the inlet air
Return Dew Point	Dew point temperature measured at the inlet of the unit.
Return Humidity Out Of Proportional Band	[Return Humidity] has exceeded the upper limit of [Dehumidification Proportional Band], or has dropped below the lower limit of [Humidification Proportional Band]], for an extended period of time.
Return Humidity	Relative humidity measured at the inlet of the unit.
SEC Communication Lost	Communication with the Superheat and Envelope Controller has been lost. The event is deactivated when communication is re-established.
SEC Unspecified General Event	One or more unspecified events active for the Superheat and Envelope Controller. See local unit display for further details.
Server Class	The general classification for this system

Table 4-11 Liebert CRV™—Glossary (continued)

Data Label	Data Description
Service Required - Event Control	Enable/disable the activation of the [Service Required] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Service Required - Event Type	The event type for the [Service Required] event.
Service Required	Unit requires servicing.
Shutdown - Loss Of Power - Event Control	Enable/disable the activation of the [Shutdown - Loss Of Power] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Shutdown - Loss Of Power - Event Type	The event type for the [Shutdown - Loss Of Power] event.
Shutdown - Loss Of Power	System lost power. This event becomes active when the unit is powered on following an unexpected loss of power. This event remains active for 90 minutes.
Smoke Detected - Event Control	Enable/disable the activation of the [Smoke Detected] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Smoke Detected - Event Type	The event type for the [Smoke Detected] event.
Smoke Detected	Smoke detected.
Static Pressure Sensor Issue	The static pressure sensor is disconnected or the signal is out of range.
Static Pressure Sensor Out of Range	Static pressure sensor signal is out of its configured range.
Super Saver Call For Cooling	Call for cooling value used for Super Saver functionality. A higher call for cooling value indicates a need for a lower coolant temperature.
Supply Air Over Temp Threshold	Threshold value used in the [Supply Air Over Temperature] event.
Supply Air Over Temperature	Supply air high temperature event.
Supply Air Sensor Issue	The air sensor at the outlet of the unit is disconnected or the signal is out of range.
Supply Air Temperature	Air temperature measured at the outlet of the unit.
Supply Air Under Temp Threshold	Threshold value used in the [Supply Air Under Temperature] event.
Supply Air Under Temperature	Supply air low temperature event.
Supply Chilled Water Loss of Flow	Supply chilled water flow is too low.
Supply Chilled Water Over Temp Threshold	Threshold value used in the [Supply Chilled Water Over Temp] event.
Supply Chilled Water Over Temp	[Supply Chilled Water Temperature] has exceeded [Supply Chilled Water Over Temp Threshold].
Supply Chilled Water Temperature	Supply chilled water temperature.
Supply Fluid Temp Sensor Issue	The supply fluid temperature sensor is disconnected or the signal is out of range.
Supply Humidity	Relative humidity at the outlet of the unit.
System Control Mode	System control mode.
System Date and Time	The system date and time
System Event Acknowledge/Reset	Reset and/or acknowledge all events.
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System On/Off Control	Turn system functionality on or off.
System Operating State Reason	The reason the system is in the current operating state.
System Operating State	Current operating state of the system.

Table 4-11 Liebert CRV™—Glossary (continued)

Data Label	Data Description
System Status	The operating status for the system
Top Fan Issue	The top fan is not operating within its normal parameters.
Unit Code Missing	Unit code has not been entered and saved.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Partial Shutdown	An event has occurred requiring some system components to be shutdown and disabled.
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
Unit Standby	Unit was placed in standby mode.
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
Water Leakage Detector Sensor Issue	The water leakage detector sensor is disconnected or the signal is out of range.
Water Under Floor - Event Control	Enable/disable the activation of the [Water Under Floor] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Water Under Floor - Event Type	The event type for the [Water Under Floor] event.
Water Under Floor	Water under the floor is detected.

Table 4-12 Liebert HPC™—Binary Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Compressors					
Compressor Not Stopping	Binary_Value	1	5263_1	RD	Active on Alarm
Compressor Superheat Over Threshold	Binary_Value	2	5604_1	RD	Active on Alarm
Compressors - Compressor 1					
Compressor Hours Exceeded	Binary_Value	12	5269_1_1	RD	Active on Alarm
Compressor High Head Pressure	Binary_Value	13	5270_1_1	RD	Active on Alarm
Compressor Low Suction Pressure	Binary_Value	14	5271_1_1	RD	Active on Alarm
Compressor Thermal Overload	Binary_Value	15	5272_1_1	RD	Active on Alarm
Compressor Low Oil Pressure	Binary_Value	16	5273_1_1	RD	Active on Alarm
Compressor Loss of Differential Pressure	Binary_Value	17	5275_1_1	RD	Active on Alarm
Compressor Capacity Reduced	Binary_Value	18	5513_1_1	RD	Active on Alarm
Compressor Capacity Normal	Binary_Value	19	5773_1_1	RD	Active on Alarm
Compressor Contactor Issue	Binary_Value	20	5774_1_1	RD	Active on Alarm
Compressors - Compressor 2					
Compressor Hours Exceeded	Binary_Value	29	5269_1_2	RD	Active on Alarm
Compressor High Head Pressure	Binary_Value	30	5270_1_2	RD	Active on Alarm
Compressor Low Suction Pressure	Binary_Value	31	5271_1_2	RD	Active on Alarm
Compressor Thermal Overload	Binary_Value	32	5272_1_2	RD	Active on Alarm
Compressor Low Oil Pressure	Binary_Value	33	5273_1_2	RD	Active on Alarm
Compressor Loss of Differential Pressure	Binary_Value	34	5275_1_2	RD	Active on Alarm
Compressor Capacity Reduced	Binary_Value	35	5513_1_2	RD	Active on Alarm
Compressor Capacity Normal	Binary_Value	36	5773_1_2	RD	Active on Alarm
Compressor Contactor Issue	Binary_Value	37	5774_1_2	RD	Active on Alarm
Compressors - Compressor 4					
Compressor Hours Exceeded	Binary_Value	263	5269_1_4	RD	Active on Alarm
Compressor High Head Pressure	Binary_Value	264	5270_1_4	RD	Active on Alarm
Compressor Low Suction Pressure	Binary_Value	265	5271_1_4	RD	Active on Alarm
Compressor Thermal Overload	Binary_Value	266	5272_1_4	RD	Active on Alarm
Compressor Low Oil Pressure	Binary_Value	267	5273_1_4	RD	Active on Alarm
Compressor Loss of Differential Pressure	Binary_Value	268	5275_1_4	RD	Active on Alarm
Compressor Capacity Reduced	Binary_Value	269	5513_1_4	RD	Active on Alarm
Compressor Capacity Normal	Binary_Value	270	5773_1_4	RD	Active on Alarm
Compressor Contactor Issue	Binary_Value	271	5774_1_4	RD	Active on Alarm
Condenser 1					
Condenser Fan Issue	Binary_Value	46	5277_1	RD	Active on Alarm
Low Condenser Refrigerant Pressure	Binary_Value	47	5278_1	RD	Active on Alarm
Condenser Max Fan Speed Override	Binary_Value	48	5545_1	RD	Active on Alarm
Condenser 2					
Condenser Fan Issue	Binary_Value	59	5277_2	RD	Active on Alarm
Low Condenser Refrigerant Pressure	Binary_Value	60	5278_2	RD	Active on Alarm
Condenser Max Fan Speed Override	Binary_Value	61	5545_2	RD	Active on Alarm

Table 4-12 Liebert HPC™—Binary Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Condenser 4					
Condenser Fan Issue	Binary_Value	67	5277_4	RD	Active on Alarm
Low Condenser Refrigerant Pressure	Binary_Value	68	5278_4	RD	Active on Alarm
Condenser Max Fan Speed Override	Binary_Value	69	5545_4	RD	Active on Alarm
Fluid					
Low Fluid Pressure	Binary_Value	72	5280_1	RD	Active on Alarm
Return Fluid Temp Sensor Issue	Binary_Value	73	5295_1	RD	Active on Alarm
Fluid - Supply (Outlet) Fluid					
Supply Fluid Over Temp	Binary_Value	84	4645_1_1	RD	Active on Alarm
Supply Fluid Under Temp	Binary_Value	85	4648_1_1	RD	Active on Alarm
Supply Fluid Temp Sensor Issue	Binary_Value	86	4651_1_1	RD	Active on Alarm
Pumps					
All Pumps Loss of Flow	Binary_Value	97	5297_1	RD	Active on Alarm
Pump 1 Loss of Flow	Binary_Value	98	4656_1	RD	Active on Alarm
Pump 2 Loss of Flow	Binary_Value	99	4659_1	RD	Active on Alarm
Pumps - Pump 1					
Pump Hours Exceeded	Binary_Value	110	5300_1_1	RD	Active on Alarm
Pumps - Pump 2					
Pump Hours Exceeded	Binary_Value	121	5300_1_2	RD	Active on Alarm
Free Cooling					
Free Cooling Valve Hours Exceeded	Binary_Value	132	5306_1	RD	Active on Alarm
Ambient Air Temperature Sensor Issue	Binary_Value	133	4618_1	RD	Active on Alarm
Evaporators					
Evaporator Inlet Temp Sensor Issue	Binary_Value	144	5308_1	RD	Active on Alarm
Evaporator Return Fluid Over Temp	Binary_Value	145	5559_1	RD	Active on Alarm
Evaporator Return Fluid Under Temp	Binary_Value	146	5560_1	RD	Active on Alarm
Evaporators - Evaporator 1					
Evaporator Fluid Freeze - Auto Reset	Binary_Value	157	5310_1_1	RD	Active on Alarm
Evaporator Fluid Freeze - Manual Reset Required	Binary_Value	158	5311_1_1	RD	Active on Alarm
Supply Refrigerant Temp Sensor Issue	Binary_Value	159	4640_1_1	RD	Active on Alarm
Evaporators - Evaporator 2					
Evaporator Fluid Freeze - Auto Reset	Binary_Value	170	5310_1_2	RD	Active on Alarm
Evaporator Fluid Freeze - Manual Reset Required	Binary_Value	171	5311_1_2	RD	Active on Alarm
Supply Refrigerant Temp Sensor Issue	Binary_Value	172	4640_1_2	RD	Active on Alarm

Table 4-12 Liebert HPC™—Binary Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
System Events					
Customer Input 1	Binary_Value	183	4270_1	RD	Active on Alarm
Customer Input 2	Binary_Value	184	4271_1	RD	Active on Alarm
Customer Input 3	Binary_Value	194	4272_1	RD	Active on Alarm
Customer Input 4	Binary_Value	195	4273_1	RD	Active on Alarm
Unit On	Binary_Value	185	5109_1	RD	Active on Alarm
Unit Off	Binary_Value	186	5110_1	RD	Active on Alarm
Master Unit Communication Lost	Binary_Value	187	5120_1	RD	Active on Alarm
Subgroup Event Occurred During Communication Loss	Binary_Value	188	5315_1	RD	Active on Alarm
Humidifier Control Board Not Detected	Binary_Value	189	5045_1	RD	Active on Alarm
RAM Battery Issue	Binary_Value	190	5119_1	RD	Active on Alarm
Unit Code Missing	Binary_Value	191	5418_1	RD	Active on Alarm
Unspecified General Event	Binary_Value	192	5588_1	RD	Active on Alarm
Unit Shutdown Unspecified General Event	Binary_Value	193	5775_1	RD	Active on Alarm
EEV 1					
EEV Unspecified General Event	Binary_Value	200	5625_1	RD	Active on Alarm
EEV 2					
EEV Unspecified General Event	Binary_Value	210	5625_2	RD	Active on Alarm
EEV 4					
EEV Unspecified General Event	Binary_Value	230	5625_4	RD	Active on Alarm
Power Measurement 1					
Modbus Power Meter Communication Lost	Binary_Value	282	5967_1	RD	Active on Alarm
Power Measurement 2					
Modbus Power Meter Communication Lost	Binary_Value	293	5967_2	RD	Active on Alarm

Table 4-13 Liebert HPC™—Analog Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Compressors					
Compressor Shut Down - Ambient Air Low Temp Limit	Analog_Value	1	5262_1	RW	Units: deg C
Compressor Shut Down - Ambient Air Low Temp Limit	Analog_Value	10001	5262_1_deg_F	RW	Units: deg F
Compressors - Compressor 1					
Compressor Head Pressure	Analog_Value	12	5266_1_1	RD	Units: bar
Compressor Hours	Analog_Value	13	5267_1_1	RW	Units: hr
Compressor Hours Threshold	Analog_Value	14	5268_1_1	RW	Units: hr
Compressors - Compressor 2					
Compressor Head Pressure	Analog_Value	25	5266_1_2	RD	Units: bar
Compressor Hours	Analog_Value	26	5267_1_2	RW	Units: hr
Compressor Hours Threshold	Analog_Value	27	5268_1_2	RW	Units: hr
Compressors - Compressor 4					
Compressor Head Pressure	Analog_Value	215	5266_1_4	RD	Units: bar
Compressor Hours	Analog_Value	216	5267_1_4	RW	Units: hr
Compressor Hours Threshold	Analog_Value	217	5268_1_4	RW	Units: hr
Condenser 1					
Condenser Fan Speed	Analog_Value	38	5276_1	RD	Units: %
Condenser 2					
Condenser Fan Speed	Analog_Value	49	5276_2	RD	Units: %
Condenser 4					
Condenser Fan Speed	Analog_Value	55	5276_4	RD	Units: %
Fluid					
Fluid Pressure	Analog_Value	60	5279_1	RD	Units: bar
Fluid Cooling Proportional Band	Analog_Value	61	5281_1	RW	Units: deg C
Fluid Cooling Proportional Band	Analog_Value	10061	5281_1_deg_F	RW	Units: deg F
Fluid - Supply (Outlet) Fluid					
Supply Fluid Temp Set Point 1	Analog_Value	72	5283_1_1	RW	Units: deg C
Supply Fluid Temp Set Point 1	Analog_Value	10072	5283_1_1_deg_F	RW	Units: deg F
Supply Fluid Temp Set Point 2	Analog_Value	73	5284_1_1	RW	Units: deg C
Supply Fluid Temp Set Point 2	Analog_Value	10073	5284_1_1_deg_F	RW	Units: deg F
Supply Fluid Over Temp Alarm Threshold	Analog_Value	74	5285_1_1	RW	Units: deg C
Supply Fluid Over Temp Alarm Threshold	Analog_Value	10074	5285_1_1_deg_F	RW	Units: deg F
Supply Fluid Over Temp Warning Threshold	Analog_Value	75	4644_1_1	RW	Units: deg C
Supply Fluid Over Temp Warning Threshold	Analog_Value	10075	4644_1_1_deg_F	RW	Units: deg F
Supply Fluid Under Temp Warning Threshold	Analog_Value	76	5286_1_1	RW	Units: deg C
Supply Fluid Under Temp Warning Threshold	Analog_Value	10076	5286_1_1_deg_F	RW	Units: deg F
Supply Fluid Under Temp Alarm Threshold	Analog_Value	77	5287_1_1	RW	Units: deg C
Supply Fluid Under Temp Alarm Threshold	Analog_Value	10077	5287_1_1_deg_F	RW	Units: deg F
Pumps - Pump 1					
Pump Hours	Analog_Value	88	5298_1_1	RW	Units: hr
Pump Hours Threshold	Analog_Value	89	5299_1_1	RW	Units: hr
Pumps - Pump 2					
Pump Hours	Analog_Value	100	5298_1_2	RW	Units: hr
Pump Hours Threshold	Analog_Value	101	5299_1_2	RW	Units: hr

Table 4-13 Liebert HPC™—Analog Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Free Cooling					
Free Cooling External Temperature Delta	Analog_Value	112	5301_1	RW	Units: deg C
Free Cooling External Temperature Delta	Analog_Value	10112	5301_1_deg_F	RW	Units: deg F
Free Cooling Valve Open Position	Analog_Value	113	5303_1	RD	Units: %
Free Cooling Valve Hours	Analog_Value	114	5304_1	RW	Units: hr
Free Cooling Valve Hours Threshold	Analog_Value	115	5305_1	RW	Units: hr
Evaporators					
Evaporator Return Fluid Temperature	Analog_Value	126	5307_1	RD	Units: deg C
Evaporator Return Fluid Temperature	Analog_Value	10126	5307_1_deg_F	RD	Units: deg F
Evaporator Return Fluid Over Temp Alarm Threshold	Analog_Value	127	5555_1	RW	Units: deg C
Evaporator Return Fluid Over Temp Alarm Threshold	Analog_Value	10127	5555_1_deg_F	RW	Units: deg F
Evaporator Return Fluid Over Temp Warning Threshold	Analog_Value	128	5556_1	RW	Units: deg C
Evaporator Return Fluid Over Temp Warning Threshold	Analog_Value	10128	5556_1_deg_F	RW	Units: deg F
Evaporator Return Fluid Under Temp Warning Threshold	Analog_Value	129	5557_1	RW	Units: deg C
Evaporator Return Fluid Under Temp Warning Threshold	Analog_Value	10129	5557_1_deg_F	RW	Units: deg F
Evaporator Return Fluid Under Temp Alarm Threshold	Analog_Value	130	5558_1	RW	Units: deg C
Evaporator Return Fluid Under Temp Alarm Threshold	Analog_Value	10130	5558_1_deg_F	RW	Units: deg F
Brine					
Supply Brine Temp Set Point	Analog_Value	141	5312_1	RW	Units: deg C
Supply Brine Temp Set Point	Analog_Value	10141	5312_1_deg_F	RW	Units: deg F
Standby Units					
Standby Units	Analog_Value	152	5314_1	RW	
System Operations					
Return Fluid Temperature	Analog_Value	163	5288_1	RD	Units: deg C
Return Fluid Temperature	Analog_Value	10163	5288_1_deg_F	RD	Units: deg F
Supply Fluid Temperature	Analog_Value	164	4643_1	RD	Units: deg C
Supply Fluid Temperature	Analog_Value	10164	4643_1_deg_F	RD	Units: deg F
Actual Supply Fluid Temp Set Point	Analog_Value	165	5282_1	RD	Units: deg C
Actual Supply Fluid Temp Set Point	Analog_Value	10165	5282_1_deg_F	RD	Units: deg F
Condenser Inlet Water Temperature	Analog_Value	166	5517_1	RD	Units: deg C
Condenser Inlet Water Temperature	Analog_Value	10166	5517_1_deg_F	RD	Units: deg F
Condenser Outlet Water Temperature	Analog_Value	167	5518_1	RD	Units: deg C
Condenser Outlet Water Temperature	Analog_Value	10167	5518_1_deg_F	RD	Units: deg F
Supply Heated Water Temp Set Point	Analog_Value	168	5313_1	RW	Units: deg C
Supply Heated Water Temp Set Point	Analog_Value	10168	5313_1_deg_F	RW	Units: deg F
Free Cooling Utilization	Analog_Value	169	5519_1	RD	Units: %
Reheat Utilization	Analog_Value	170	5080_1	RD	Units: %
Compressor Utilization	Analog_Value	171	5078_1	RD	Units: %
Ambient Air Temperature	Analog_Value	172	4594_1	RD	Units: deg C
Ambient Air Temperature	Analog_Value	10172	4594_1_deg_F	RD	Units: deg F

Table 4-13 Liebert HPC™—Analog Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Compressor Economizer Utilization	Analog_Value	173	5520_1	RD	Units: %
Condenser Adiabatic Cooling Utilization	Analog_Value	174	5521_1	RD	Units: %
Time					
System Date and Time	Analog_Value	185	4293_1	RW	
Power Measurement 1					
System Input RMS A-B	Analog_Value	263	4097_1	RD	Units: VAC
System Input RMS A-N	Analog_Value	264	4096_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	265	4113_1	RD	Units: A AC
System Input RMS B-C	Analog_Value	266	4099_1	RD	Units: VAC
System Input RMS B-N	Analog_Value	267	4098_1	RD	Units: VAC
System Input RMS Current Phase B	Analog_Value	268	4114_1	RD	Units: A AC
System Input RMS C-A	Analog_Value	269	4101_1	RD	Units: VAC
System Input RMS C-N	Analog_Value	270	4100_1	RD	Units: VAC
System Input RMS Current Phase C	Analog_Value	271	4115_1	RD	Units: A AC
Energy Consumption	Analog_Value	272	5900_1	RD	Units: kWH
Instantaneous Power	Analog_Value	273	5901_1	RD	Units: W
Output Power Factor	Analog_Value	274	5167_1	RD	
Power Measurement 2					
System Input RMS A-B	Analog_Value	285	4097_2	RD	Units: VAC
System Input RMS A-N	Analog_Value	286	4096_2	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	287	4113_2	RD	Units: A AC
System Input RMS B-C	Analog_Value	288	4099_2	RD	Units: VAC
System Input RMS B-N	Analog_Value	289	4098_2	RD	Units: VAC
System Input RMS Current Phase B	Analog_Value	290	4114_2	RD	Units: A AC
System Input RMS C-A	Analog_Value	291	4101_2	RD	Units: VAC
System Input RMS C-N	Analog_Value	292	4100_2	RD	Units: VAC
System Input RMS Current Phase C	Analog_Value	293	4115_2	RD	Units: A AC
Energy Consumption	Analog_Value	294	5900_2	RD	Units: kWH
Instantaneous Power	Analog_Value	295	5901_2	RD	Units: W
Output Power Factor	Analog_Value	296	5167_2	RD	—

Table 4-14 Liebert HPC™—Multistate Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Protocol					
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU
Compressors - Compressor 1					
Compressor State	MultiState_Value	12	5264_1_1	RD	1 = off 2 = on
Compressor Capacity Control State	MultiState_Value	13	5265_1_1	RD	1 = off 2 = on
Compressors - Compressor 2					
Compressor State	MultiState_Value	24	5264_1_2	RD	1 = off 2 = on
Compressor Capacity Control State	MultiState_Value	25	5265_1_2	RD	1 = off 2 = on
Compressors - Compressor 4					
Compressor State	MultiState_Value	246	5264_1_4	RD	1 = off 2 = on
Compressor Capacity Control State	MultiState_Value	247	5265_1_4	RD	1 = off 2 = on
Free Cooling					
Free Cooling Status	MultiState_Value	36	5302_1	RD	1 = off 2 = on 3 = No Support
System Events					
System Event Acknowledge/Reset	MultiState_Value	47	4717_1	WO	1 = Reset 2 = Acknowledge
System Info					
System Status	MultiState_Value	58	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
System Operating State	MultiState_Value	59	4706_1	RD	1 = off 2 = on 3 = standby
System Control Mode	MultiState_Value	60	4707_1	RD	1 = Internal (Auto) 2 = External (Manual)
System Operating State Reason	MultiState_Value	61	5074_1	RD	1 = Reason Unknown 2 = Network Display 3 = Alarm 4 = Schedule 5 = Remote System 6 = External Input 7 = Local Display
System On/Off Control	MultiState_Value	62	5143_1	RW	1 = off 2 = on

Table 4-14 Liebert HPC™—Multistate Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
System Operations					
Pump 1 State	MultiState_Value	73	4654_1	RD	1 = off 2 = on
Pump 2 State	MultiState_Value	74	4655_1	RD	1 = off 2 = on

Table 4-15 Liebert HPC™—Glossary

Data Label	Data Description
Actual Supply Fluid Temp Set Point	The actual set point value being used for the desired fluid temperature at the outlet of the unit.
All Pumps Loss of Flow	System is shut down due to loss of flow in all available pumps.
Ambient Air Temperature Sensor Issue	The ambient air temperature sensor is disconnected or the signal is out of range.
Ambient Air Temperature	Ambient air temperature.
Compressor Capacity Control State	Compressor capacity control state. When 'ON', the cooling capacity of the compressor has been reduced.
Compressor Capacity Normal	Compressor has returned to normal load capacity.
Compressor Capacity Reduced	Compressor capacity has been reduced.
Compressor Contactor Issue	Compressor contactor is not closing during compressor startup or is not opening during compressor shutdown.
Compressor Economizer Utilization	Present compressor economizer utilization expressed as a percentage of the maximum.
Compressor Head Pressure	Compressor head pressure.
Compressor High Head Pressure	Compressor is shut down due to high head pressure.
Compressor Hours Exceeded	[Compressor Hours] has exceeded [Compressor Hours Threshold].
Compressor Hours Threshold	Threshold value used in the [Compressor Hours Exceeded] event.
Compressor Hours	Operating hours for compressor since last reset of this value.
Compressor Loss of Differential Pressure	Compressor is shut down due to low differential pressure.
Compressor Low Oil Pressure	Compressor low oil pressure.
Compressor Low Suction Pressure	Compressor is shut down due to low suction pressure.
Compressor Not Stopping	Compressor commanded to stop, but continues to run.
Compressor Shut Down - Ambient Air Low Temp Limit	When the temperature of ambient air falls below this lower threshold, the compressor will be shut off. Correct condensing pressure cannot be achieved when temperature is too low.
Compressor State	Compressor operational state.
Compressor Superheat Over Threshold	Compressor discharge refrigerant superheat temperature has exceeded an upper threshold.
Compressor Thermal Overload	Compressor is shut down due to thermal overload.
Compressor Utilization	Present compressor utilization expressed as a percentage of the maximum rated capacity.
Condenser Adiabatic Cooling Utilization	Present adiabatic cooling utilization expressed as a percentage of the maximum.
Condenser Fan Issue	Condenser fan is not operating within its operational parameters.
Condenser Fan Speed	Condenser fan speed expressed as a percentage of the maximum rated speed.
Condenser Inlet Water Temperature	For water cooled condensers, the temperature of the water entering the heat exchanger, before cooling the refrigerant.
Condenser Max Fan Speed Override	Fan speed exceeding the maximum set point in order to alleviate a high temperature or pressure condition.
Condenser Outlet Water Temperature	For water cooled condensers, the temperature of the water exiting the heat exchanger, after cooling the refrigerant.
Cooling Gross Capacity	Cooling Gross Capacity
Customer Input 1	Customer input 1.
Customer Input 2	Customer input 2.
Customer Input 3	Customer input 3.
Customer Input 4	Customer input 4.

Table 4-15 Liebert HPC™—Glossary (continued)

Data Label	Data Description
EEV Unspecified General Event	One or more unspecified electronic expansion valve events active. See local unit display for further details.
Energy Consumption	Energy consumption since the last reset of this value.
Evaporator Fluid Freeze - Auto Reset	Evaporator outlet fluid temperature has dropped below the freeze threshold. Evaporator has been shut down, but will restart when the temperature rises above the threshold.
Evaporator Fluid Freeze - Manual Reset Required	Evaporator outlet fluid temperature has dropped below the freeze threshold. Evaporator has been shut down and requires a manual reset.
Evaporator Inlet Temp Sensor Issue	The evaporator inlet temperature sensor is disconnected or the signal is out of range.
Evaporator Return Fluid Over Temp Alarm Threshold	Alarm threshold value used in the [Evaporator Return Fluid Over Temp] event.
Evaporator Return Fluid Over Temp Warning Threshold	Warning threshold value used in the [Evaporator Return Fluid Over Temp] event.
Evaporator Return Fluid Over Temp	[Evaporator Return Fluid Temperature] has exceeded a threshold. The event is deactivated when the temperature drops below the threshold.
Evaporator Return Fluid Temperature	Fluid temperature measured at the inlet of the evaporator.
Evaporator Return Fluid Under Temp Alarm Threshold	Alarm threshold value used in the [Evaporator Return Fluid Under Temp] event.
Evaporator Return Fluid Under Temp Warning Threshold	Warning threshold value used in the [Evaporator Return Fluid Under Temp] event.
Evaporator Return Fluid Under Temp	[Evaporator Return Fluid Temperature] has dropped below a threshold. The event is deactivated when the temperature rises above the threshold.
Fluid Cooling Proportional Band	Temperature control band above [Actual Supply Fluid Temp Set Point]. If [Return Fluid Temperature] is within this band, fluid cooling operations are proportionally controlled.
Fluid Pressure	Fluid pressure. This is the pressure within a closed water/glycol circuit.
Free Cooling External Temperature Delta	Minimum temperature delta required between return fluid and external ambient air temperatures in order to enable free cooling.
Free Cooling Status	Free cooling status.
Free Cooling Utilization	Present free cooling utilization expressed as a percentage of the maximum.
Free Cooling Valve Hours Exceeded	[Free Cooling Valve Hours] has exceeded [Free Cooling Valve Hours Threshold].
Free Cooling Valve Hours Threshold	Threshold value used in the [Free Cooling Valve Hours Exceeded] event.
Free Cooling Valve Hours	Operating hours for free cooling valve since last reset of this value.
Free Cooling Valve Open Position	Free cooling valve open position.
Humidifier Control Board Not Detected	Humidifier control board is required to be connected, but no signal is detected.
Instantaneous Power	Total electrical power currently being consumed.
Low Condenser Refrigerant Pressure	Refrigerant pressure in condenser coil is too low.
Low Fluid Pressure	[Fluid Pressure] has dropped below a specified threshold.
Master Unit Communication Lost	Communication with master unit has been lost.
Modbus Power Meter Communication Lost	Communication with Modbus power meter has been lost.
Output Power Factor	Total power factor, real power/apparent power for all phases combined

Table 4-15 Liebert HPC™—Glossary (continued)

Data Label	Data Description
Pump 1 Loss of Flow	Loss of flow is detected in pump 1. This condition occurs when no flow is detected through the flow switch.
Pump 1 State	Pump 1 operational state.
Pump 2 Loss of Flow	Loss of flow is detected in pump 2. This condition occurs when no flow is detected through the flow switch.
Pump 2 State	Pump 2 operational state.
Pump Hours Exceeded	[Pump Hours] has exceeded [Pump Hours Threshold].
Pump Hours Threshold	Threshold value used in the [Pump Hours Exceeded] event.
Pump Hours	Operating hours for pump since last reset of this value.
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Reheat Utilization	Present reheating utilization expressed as a percentage of the maximum rated capacity.
Return Fluid Temp Sensor Issue	The return fluid temperature sensor is disconnected or the signal is out of range.
Return Fluid Temperature	Fluid temperature measured at the inlet of the unit.
Server Class	The general classification for this system
Standby Units	The number of standby units.
Subgroup Event Occurred During Communication Loss	While subgroup unit communication was lost, an event occurred on the subgroup unit. Please check subgroup unit event log.
Supply Brine Temp Set Point	Desired brine fluid temperature at the outlet of the unit.
Supply Fluid Over Temp Alarm Threshold	Threshold value used to generate a [Supply Fluid Over Temp] alarm.
Supply Fluid Over Temp Warning Threshold	Threshold value used to generate a [Supply Fluid Over Temp] warning.
Supply Fluid Over Temp	[Supply Fluid Temperature] has exceeded a specified threshold.
Supply Fluid Temp Sensor Issue	The supply fluid temperature sensor is disconnected or the signal is out of range.
Supply Fluid Temp Set Point 1	Set point 1 of desired fluid temperature at the outlet of the unit.
Supply Fluid Temp Set Point 2	Set point 2 of desired fluid temperature at the outlet of the unit.
Supply Fluid Temperature	Fluid temperature measured at the outlet of the unit.
Supply Fluid Under Temp Alarm Threshold	Threshold value used to generate a [Supply Fluid Under Temp] alarm.
Supply Fluid Under Temp Warning Threshold	Threshold value used to generate a [Supply Fluid Under Temp] warning.
Supply Fluid Under Temp	[Supply Fluid Temperature] has dropped below a specified threshold.
Supply Heated Water Temp Set Point	Desired heated water temperature at the outlet of the unit.
Supply Refrigerant Temp Sensor Issue	The supply refrigeramt temperature sensor is disconnected or the signal is out of range.
System Control Mode	System control mode.
System Date and Time	The system date and time
System Event Acknowledge/Reset	Reset and/or acknowledge all events.
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A

Table 4-15 Liebert HPC™—Glossary (continued)

Data Label	Data Description
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System On/Off Control	Turn system functionality on or off.
System Operating State Reason	The reason the system is in the current operating state.
System Operating State	Current operating state of the system.
System Status	The operating status for the system
Unit Code Missing	Unit code has not been entered and saved.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Shutdown Unspecified General Event	One or more unspecified unit shutdown events active. See local unit display for further details.
Unspecified General Event	One or more unspecified events active. See local unit display for further details.

Table 4-16 Liebert XDP™, Liebert XDC™—Binary Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
External Air					
Ext Air Sensor A Over Temperature	Binary_Value	1	4601_1	RD	—
Ext Air Sensor B Over Temperature	Binary_Value	2	4604_1	RD	—
Ext Air Sensor A Under Temperature	Binary_Value	3	4608_1	RD	—
Ext Air Sensor B Under Temperature	Binary_Value	4	4611_1	RD	—
Ext Dew Point Over Temperature	Binary_Value	5	4615_1	RD	—
Ext Air Sensor A Issue	Binary_Value	6	4618_1	RD	—
Ext Air Sensor B Issue	Binary_Value	7	4621_1	RD	—
Chilled Water					
Supply Chilled Water Over Temp	Binary_Value	18	4626_1	RD	—
Supply Chilled Water Temp Sensor Issue	Binary_Value	19	4629_1	RD	—
Chilled Water Control Valve Position	Binary_Value	20	4703_1	RD	—
Refrigerant					
Supply Refrigerant Over Temp	Binary_Value	31	4634_1	RD	—
Supply Refrigerant Under Temp	Binary_Value	32	4637_1	RD	—
Supply Refrigerant Temp Sensor Issue	Binary_Value	33	4640_1	RD	—
Fluid					
Supply Fluid Over Temp	Binary_Value	44	4645_1	RD	—
Supply Fluid Under Temp	Binary_Value	45	4648_1	RD	—
Supply Fluid Temp Sensor Issue	Binary_Value	46	4651_1	RD	—
Pumps					
Pump 1 Loss of Flow	Binary_Value	57	4656_1	RD	—
Pump 2 Loss of Flow	Binary_Value	58	4659_1	RD	—
Pump Short Cycle	Binary_Value	59	4662_1	RD	—
Pumps - Pump Hours 1					
Pump Hours Exceeded	Binary_Value	70	5300_1_1	RD	—
Pumps - Pump Hours 2					
Pump Hours Exceeded	Binary_Value	81	5300_1_2	RD	—
Compressors					
Compressor 1A High Head Pressure	Binary_Value	92	4669_1	RD	—
Compressor 1B High Head Pressure	Binary_Value	93	4672_1	RD	—
Compressor 2A High Head Pressure	Binary_Value	94	4675_1	RD	—
Compressor 2B High Head Pressure	Binary_Value	95	4678_1	RD	—
Compressor 1A Short Cycle	Binary_Value	96	4681_1	RD	—
Compressor 1B Short Cycle	Binary_Value	97	4684_1	RD	—
Compressor 2A Short Cycle	Binary_Value	98	4687_1	RD	—
Compressor 2B Short Cycle	Binary_Value	99	4690_1	RD	—
Circuit 1 Low Suction Pressure	Binary_Value	100	4693_1	RD	—
Circuit 2 Low Suction Pressure	Binary_Value	101	4696_1	RD	—

Table 4-16 Liebert XDP™, Liebert XDC™—Binary Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
XD System 1					
Ext System Condensation Detected	Binary_Value	112	5492_1	RD	—
Ext Fan Issue	Binary_Value	113	5495_1	RD	—
Sensor Issue	Binary_Value	114	5060_1	RD	—
Ext Remote Shutdown	Binary_Value	115	5500_1	RD	—
Hot Aisle Temp Out of Range	Binary_Value	116	5505_1	RD	—
Cold Aisle Temp Out of Range	Binary_Value	117	5508_1	RD	—
XD System 2					
Ext System Condensation Detected	Binary_Value	128	5492_2	RD	—
Ext Fan Issue	Binary_Value	129	5495_2	RD	—
Sensor Issue	Binary_Value	130	5060_2	RD	—
Ext Remote Shutdown	Binary_Value	131	5500_2	RD	—
Hot Aisle Temp Out of Range	Binary_Value	132	5505_2	RD	—
Cold Aisle Temp Out of Range	Binary_Value	133	5508_2	RD	—
XD System 20					
Ext System Condensation Detected	Binary_Value	416	5492_20	RD	—
Ext Fan Issue	Binary_Value	417	5495_20	RD	—
Sensor Issue	Binary_Value	418	5060_20	RD	—
Ext Remote Shutdown	Binary_Value	419	5500_20	RD	—
Hot Aisle Temp Out of Range	Binary_Value	420	5505_20	RD	—
Cold Aisle Temp Out of Range	Binary_Value	421	5508_20	RD	—
System Events					
Customer Input 1	Binary_Value	432	4270_1	RD	—
System Condensation Detected	Binary_Value	433	4711_1	RD	—
Shutdown - Loss Of Power	Binary_Value	434	4714_1	RD	—
Smoke Detected	Binary_Value	435	4720_1	RD	—
Water Under Floor	Binary_Value	436	4723_1	RD	—
Service Required	Binary_Value	437	4726_1	RD	—
Fan Issue	Binary_Value	438	4729_1	RD	—
Unit Communication Lost	Binary_Value	439	5419_1	RD	—
RAM Battery Issue	Binary_Value	440	5119_1	RD	—
Master Unit Communication Lost	Binary_Value	441	5120_1	RD	—
Remote Shutdown	Binary_Value	442	5512_1	RD	—
Unit Code Missing	Binary_Value	443	5418_1	RD	—
System Events - Messages					
Unit On	Binary_Value	454	5109_1_1	RD	—
Unit Off	Binary_Value	455	5110_1_1	RD	—
Unit Standby	Binary_Value	456	5111_1_1	RD	—
Unit Partial Shutdown	Binary_Value	457	5112_1_1	RD	—
Unit Shutdown	Binary_Value	458	5113_1_1	RD	—
Maintenance Due	Binary_Value	459	5116_1_1	RD	—
Maintenance Completed	Binary_Value	460	5117_1_1	RD	—

Table 4-17 Liebert XDP™, Liebert XDC™—Analog Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
External Air					
Dew Point Temperature	Analog_Value	1	4867_1	RD	—
Minimum Room Temperature Set Point	Analog_Value	2	4709_1	RW	—
Ext Air Sensor A Temperature	Analog_Value	3	4594_1	RD	—
Ext Air Sensor A Humidity	Analog_Value	4	4595_1	RD	—
Ext Air Sensor A Dew Point Temp	Analog_Value	5	4596_1	RD	—
Ext Air Sensor B Temperature	Analog_Value	6	4597_1	RD	—
Ext Air Sensor B Humidity	Analog_Value	7	4598_1	RD	—
Ext Air Sensor B Dew Point Temp	Analog_Value	8	4599_1	RD	—
Ext Air Over Temp Threshold	Analog_Value	9	4600_1	RW	—
Ext Air Under Temp Threshold	Analog_Value	10	4607_1	RW	—
Ext Dew Point Over Temp Threshold	Analog_Value	11	4614_1	RW	—
Chilled Water					
Supply Chilled Water Temperature	Analog_Value	22	4624_1	RD	—
Supply Chilled Water Over Temp Threshold	Analog_Value	23	4625_1	RW	—
Refrigerant					
Supply Refrigerant Temperature	Analog_Value	34	4632_1	RD	—
Supply Refrig Over Temp Threshold	Analog_Value	35	4633_1	RW	—
Fluid					
Supply Fluid Temperature	Analog_Value	46	4643_1	RD	—
Supply Fluid Over Temp Threshold	Analog_Value	47	4644_1	RW	—
Pumps - Pump Hours 1					—
Pump Hours	Analog_Value	58	5298_1_1	RW	—
Pump Hours Threshold	Analog_Value	59	5299_1_1	RW	—
Pumps - Pump Hours 2					
Pump Hours	Analog_Value	70	5298_1_2	RW	—
Pump Hours Threshold	Analog_Value	71	5299_1_2	RW	—
Hot Gas					
Hot Gas Valve 1 Open Position	Analog_Value	82	4699_1	RD	—
Hot Gas Valve 2 Open Position	Analog_Value	83	4700_1	RD	—
XD System 1					
Cooling Capacity	Analog_Value	94	5490_1	RD	—
Cooling Capacity	Analog_Value	95	5491_1	RD	—
Hot Aisle Over Temp Threshold	Analog_Value	96	5503_1	RW	—
Hot Aisle Under Temp Threshold	Analog_Value	97	5504_1	RW	—
Cold Aisle Over Temp Threshold	Analog_Value	98	5506_1	RW	—
Cold Aisle Under Temp Threshold	Analog_Value	99	5507_1	RW	—
XD System 1 Temperature Sensor 1					
Remote Sensor Temperature	Analog_Value	110	5059_1_1	RD	—
XD System 1 Temperature Sensor 2					
Remote Sensor Temperature	Analog_Value	121	5059_1_2	RD	—
XD System 1 Temperature Sensor 4					
Remote Sensor Temperature	Analog_Value	143	5059_1_4	RD	—

Table 4-17 Liebert XDP™, Liebert XDC™—Analog Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
XD System 2					
Cooling Capacity	Analog_Value	154	5490_2	RD	—
Cooling Capacity	Analog_Value	155	5491_2	RD	—
Hot Aisle Over Temp Threshold	Analog_Value	156	5503_2	RW	—
Hot Aisle Under Temp Threshold	Analog_Value	157	5504_2	RW	—
Cold Aisle Over Temp Threshold	Analog_Value	158	5506_2	RW	—
Cold Aisle Under Temp Threshold	Analog_Value	159	5507_2	RW	—
XD System 2 Temperature Sensor 1					
Remote Sensor Temperature	Analog_Value	170	5059_2_1	RD	—
XD System 2 Temperature Sensor 2					
Remote Sensor Temperature	Analog_Value	181	5059_2_2	RD	—
XD System 2 Temperature Sensor 3					
Remote Sensor Temperature	Analog_Value	192	5059_2_3	RD	—
XD System 2 Temperature Sensor 4					—
Remote Sensor Temperature	Analog_Value	203	5059_2_4	RD	—
XD System 20					
Cooling Capacity	Analog_Value	1234	5490_20	RD	—
Cooling Capacity	Analog_Value	1235	5491_20	RD	—
Hot Aisle Over Temp Threshold	Analog_Value	1236	5503_20	RW	—
Hot Aisle Under Temp Threshold	Analog_Value	1237	5504_20	RW	—
Cold Aisle Over Temp Threshold	Analog_Value	1238	5506_20	RW	—
Cold Aisle Under Temp Threshold	Analog_Value	1239	5507_20	RW	—
XD System 20 Temperature Sensor 1					
Remote Sensor Temperature	Analog_Value	1250	5059_20_1	RD	—
XD System 20 Temperature Sensor 2					
Remote Sensor Temperature	Analog_Value	1261	5059_20_2	RD	—
XD System 20 Temperature Sensor 3					
Remote Sensor Temperature	Analog_Value	1272	5059_20_3	RD	—
XD System 20 Temperature Sensor 4					
Remote Sensor Temperature	Analog_Value	1283	5059_20_4	RD	—
System Information					
Auto Restart Delay	Analog_Value	1294	4710_1	RW	—
Maintenance Ramp	Analog_Value	1295	4870_1	RD	—
Calculated Next Maintenance Month	Analog_Value	1296	4868_1	RD	—
Calculated Next Maintenance Year	Analog_Value	1297	4869_1	RD	—
Time					
System Date and Time	Analog_Value	1308	4293_1	RW	—

Table 4-18 Liebert XDP™, Liebert XDC™—Multistate Data

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
External Air					
Ext Air Sensor A Over Temp - Event Control	Multistate_Value	1	4602_1	RW	1 = Disabled 2 = Enabled
Ext Air Sensor A Over Temp - Event Type	Multistate_Value	2	4603_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Air Sensor B Over Temp - Event Control	Multistate_Value	3	4605_1	RW	1 = Disabled 2 = Enabled
Ext Air Sensor B Over Temp - Event Type	Multistate_Value	4	4606_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Air Sensor A Under Temp - Event Control	Multistate_Value	5	4609_1	RW	1 = Disabled 2 = Enabled
Ext Air Sensor A Under Temp - Event Type	Multistate_Value	6	4610_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Air Sensor B Under Temp - Event Control	Multistate_Value	7	4612_1	RW	1 = Disabled 2 = Enabled
Ext Air Sensor B Under Temp - Event Type	Multistate_Value	8	4613_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Dew Point Over Temp - Event Control	Multistate_Value	9	4616_1	RW	1 = Disabled 2 = Enabled
Ext Dew Point Over Temp - Event Type	Multistate_Value	10	4617_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Air Sensor A Issue - Event Control	Multistate_Value	11	4619_1	RD	1 = Disabled 2 = Enabled
Ext Air Sensor A Issue - Event Type	Multistate_Value	12	4620_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Air Sensor B Issue - Event Control	Multistate_Value	13	4622_1	RD	1 = Disabled 2 = Enabled
Ext Air Sensor B Issue - Event Type	Multistate_Value	14	4623_1	RW	1 = Message 2 = Warning 3 = Alarm
Chilled Water					
Supply CW Over Temp - Event Control	Multistate_Value	25	4627_1	RD	1 = Disabled 2 = Enabled
Supply CW Over Temp - Event Type	Multistate_Value	26	4628_1	RW	1 = Message 2 = Warning 3 = Alarm
Supply CW Temp Sensor Issue - Event Control	Multistate_Value	27	4630_1	RD	1 = Disabled 2 = Enabled
Supply CW Temp Sensor Issue - Event Type	Multistate_Value	28	4631_1	RW	1 = Message 2 = Warning 3 = Alarm
Chilled Water Cntrl Valve Pos - Event Control	Multistate_Value	29	4704_1	RW	1 = Disabled 2 = Enabled

Table 4-18 Liebert XDP™, Liebert XDC™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Chilled Water Cntrl Valve Pos - Event Type	Multistate_Value	30	4705_1	RW	1 = Message 2 = Warning 3 = Alarm
Refrigerant					
Supply Refrig Over Temp - Event Control	Multistate_Value	41	4635_1	RD	1 = Disabled 2 = Enabled
Supply Refrig Over Temp - Event Type	Multistate_Value	42	4636_1	RW	1 = Message 2 = Warning 3 = Alarm
Supply Refrig Under Temp - Event Control	Multistate_Value	43	4638_1	RD	1 = Disabled 2 = Enabled
Supply Refrig Under Temp - Event Type	Multistate_Value	44	4639_1	RW	1 = Message 2 = Warning 3 = Alarm
Supply Refrig Temp Sensor Issue - Event Control	Multistate_Value	45	4641_1	RD	1 = Disabled 2 = Enabled
Supply Refrig Temp Sensor Issue - Event Type	Multistate_Value	46	4642_1	RW	1 = Message 2 = Warning 3 = Alarm
Fluid					
Supply Fluid Over Temp - Event Control	Multistate_Value	57	4646_1	RD	1 = Disabled 2 = Enabled
Supply Fluid Over Temp - Event Type	Multistate_Value	58	4647_1	RW	1 = Message 2 = Warning 3 = Alarm
Supply Fluid Under Temp - Event Control	Multistate_Value	59	4649_1	RD	1 = Disabled 2 = Enabled
Supply Fluid Under Temp - Event Type	Multistate_Value	60	4650_1	RW	1 = Message 2 = Warning 3 = Alarm
Supply Fluid Temp Sensor Issue - Event Control	Multistate_Value	61	4652_1	RD	1 = Disabled 2 = Enabled
Supply Fluid Temp Sensor Issue - Event Type	Multistate_Value	62	4653_1	RW	1 = Message 2 = Warning 3 = Alarm
Pumps					
Pump 1 State	Multistate_Value	73	4654_1	RD	1 = Off / 2 = On
Pump 2 State	Multistate_Value	74	4655_1	RD	1 = Off / 2 = On
Pump 1 Loss of Flow - Event Control	Multistate_Value	75	4657_1	RW	1 = Disabled 2 = Enabled
Pump 1 Loss of Flow - Event Type	Multistate_Value	76	4658_1	RW	1 = Message 2 = Warning 3 = Alarm
Pump 2 Loss of Flow - Event Control	Multistate_Value	77	4660_1	RW	1 = Disabled 2 = Enabled
Pump 2 Loss of Flow - Event Type	Multistate_Value	78	4661_1	RW	1 = Message 2 = Warning 3 = Alarm
Pump Short Cycle - Event Control	Multistate_Value	79	4663_1	RD	1 = Disabled 2 = Enabled

Table 4-18 Liebert XDP™, Liebert XDC™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Pump Short Cycle - Event Type	Multistate_Value	80	4664_1	RW	1 = Message 2 = Warning 3 = Alarm
Compressors					
Compressor 1A State	Multistate_Value	91	4665_1	RD	1 = Off / 2 = On
Compressor 1B State	Multistate_Value	92	4666_1	RD	1 = Off / 2 = On
Compressor 2A State	Multistate_Value	93	4667_1	RD	1 = Off / 2 = On
Compressor 2B State	Multistate_Value	94	4668_1	RD	1 = Off / 2 = On
Compressor 1A High Head Pressure - Event Control	Multistate_Value	95	4670_1	RW	1 = Disabled 2 = Enabled
Compressor 1A High Head Pressure - Event Type	Multistate_Value	96	4671_1	RW	1 = Message 2 = Warning 3 = Alarm
Compressor 1B High Head Pressure - Event Control	Multistate_Value	97	4673_1	RW	1 = Disabled 2 = Enabled
Compressor 1B High Head Pressure - Event Type	Multistate_Value	98	4674_1	RW	1 = Message 2 = Warning 3 = Alarm
Compressor 2A High Head Pressure - Event Control	Multistate_Value	99	4676_1	RW	1 = Disabled 2 = Enabled
Compressor 2A High Head Pressure - Event Type	Multistate_Value	100	4677_1	RW	1 = Message 2 = Warning 3 = Alarm
Compressor 2B High Head Pressure - Event Control	Multistate_Value	101	4679_1	RW	1 = Disabled 2 = Enabled
Compressor 2B High Head Pressure - Event Type	Multistate_Value	102	4680_1	RW	1 = Message 2 = Warning 3 = Alarm
Compressor 1A Short Cycle - Event Control	Multistate_Value	103	4682_1	RW	1 = Disabled 2 = Enabled
Compressor 1A Short Cycle - Event Type	Multistate_Value	104	4683_1	RW	1 = Message 2 = Warning 3 = Alarm
Compressor 1B Short Cycle - Event Control	Multistate_Value	105	4685_1	RW	1 = Disabled 2 = Enabled
Compressor 1B Short Cycle - Event Type	Multistate_Value	106	4686_1	RW	1 = Message 2 = Warning 3 = Alarm
Compressor 2A Short Cycle - Event Control	Multistate_Value	107	4688_1	RW	1 = Disabled 2 = Enabled
Compressor 2A Short Cycle - Event Type	Multistate_Value	108	4689_1	RW	1 = Message 2 = Warning 3 = Alarm
Compressor 2B Short Cycle - Event Control	Multistate_Value	109	4691_1	RW	1 = Disabled 2 = Enabled
Compressor 2B Short Cycle - Event Type	Multistate_Value	110	4692_1	RW	1 = Message 2 = Warning 3 = Alarm
Circuit 1 Low Suction Pressure - Event Control	Multistate_Value	111	4694_1	RW	1 = Disabled 2 = Enabled

Table 4-18 Liebert XDP™, Liebert XDC™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Circuit 1 Low Suction Pressure - Event Type	Multistate_Value	112	4695_1	RW	1 = Message 2 = Warning 3 = Alarm
Circuit 2 Low Suction Pressure - Event Control	Multistate_Value	113	4697_1	RW	1 = Disabled 2 = Enabled
Circuit 2 Low Suction Pressure - Event Type	Multistate_Value	114	4698_1	RW	1 = Message 2 = Warning 3 = Alarm
Hot Gas					
Hot Gas Solenoid Valve 1 Position	Multistate_Value	125	4701_1	RD	1 = Closed 2 = Open
Hot Gas Solenoid Valve 2 Position	Multistate_Value	126	4702_1	RD	1 = Closed 2 = Open
XD System 1					
Communication Status	Multistate_Value	137	5486_1	RD	1 = Connected 2 = Not Connected
Fan On/Off Control	Multistate_Value	138	5487_1	RW	1 = Off / 2 = On
Primary Fan Group State	Multistate_Value	139	5509_1	RD	1 = Off / 2 = On 3 = Economy
Fan Button Control	Multistate_Value	140	5488_1	RW	1 = Enabled 2 = Disabled
Visual ID Control	Multistate_Value	141	5489_1	RW	1 = Disabled 2 = Enabled
Ext System Condensation Detected - Event Control	Multistate_Value	142	5493_1	RW	1 = Disabled 2 = Enabled
Ext System Condensation Detected - Event Type	Multistate_Value	143	5494_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Fan Issue - Event Control	Multistate_Value	144	5496_1	RW	1 = Disabled 2 = Enabled
Ext Fan Issue - Event Type	Multistate_Value	145	5497_1	RW	1 = Message 2 = Warning 3 = Alarm
Sensor Issue - Event Control	Multistate_Value	146	5498_1	RW	1 = Disabled 2 = Enabled
Sensor Issue - Event Type	Multistate_Value	147	5499_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Remote Shutdown - Event Control	Multistate_Value	148	5501_1	RW	1 = Disabled 2 = Enabled
Ext Remote Shutdown - Event Type	Multistate_Value	149	5502_1	RW	1 = Message 2 = Warning 3 = Alarm
XD System 1 Secondary Fans 1					
Fan State	Multistate_Value	160	5510_1_1	RD	1 = Off / 2 = On 3 = Economy
Fan Economy Mode	Multistate_Value	161	5511_1_1	RW	1 = Disabled 2 = Automatic 3 = Manual

Table 4-18 Liebert XDP™, Liebert XDC™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
XD System 2					
Communication Status	Multistate_Value	172	5486_2	RD	1 = Connected 2 = Not Connected
Fan On/Off Control	Multistate_Value	173	5487_2	RW	1 = Off / 2 = On
Primary Fan Group State	Multistate_Value	174	5509_2	RD	1 = Off / 2 = On 3 = Economy
Fan Button Control	Multistate_Value	175	5488_2	RW	1 = Enabled 2 = Disabled
Visual ID Control	Multistate_Value	176	5489_2	RW	1 = Disabled 2 = Enabled
Ext System Condensation Detected - Event Control	Multistate_Value	177	5493_2	RW	1 = Disabled 2 = Enabled
Ext System Condensation Detected - Event Type	Multistate_Value	178	5494_2	RW	1 = Message 2 = Warning 3 = Alarm
Ext Fan Issue - Event Control	Multistate_Value	179	5496_2	RW	1 = Disabled 2 = Enabled
Ext Fan Issue - Event Type	Multistate_Value	180	5497_2	RW	1 = Message 2 = Warning 3 = Alarm
Sensor Issue - Event Control	Multistate_Value	181	5498_2	RW	1 = Disabled 2 = Enabled
Sensor Issue - Event Type	Multistate_Value	182	5499_2	RW	1 = Message 2 = Warning 3 = Alarm
Ext Remote Shutdown - Event Control	Multistate_Value	183	5501_2	RW	1 = Disabled 2 = Enabled
Ext Remote Shutdown - Event Type	Multistate_Value	184	5502_2	RW	1 = Message 2 = Warning 3 = Alarm
XD System 2 Secondary Fans 1					
Fan State	Multistate_Value	195	5510_2_1	RD	1 = Off / 2 = On 3 = Economy
Fan Economy Mode	Multistate_Value	196	5511_2_1	RW	1 = Disabled 2 = Automatic 3 = Manual
XD System 20					
Communication Status	Multistate_Value	802	5486_20	RD	1 = Connected 2 = Not Connected
Fan On/Off Control	Multistate_Value	803	5487_20	RW	1 = Off / 2 = On
Primary Fan Group State	Multistate_Value	804	5509_20	RD	1 = Off / 2 = On 3 = Economy
Fan Button Control	Multistate_Value	805	5488_20	RW	1 = Enabled 2 = Disabled
Visual ID Control	Multistate_Value	806	5489_20	RW	1 = Disabled 2 = Enabled
Ext System Condensation Detected - Event Control	Multistate_Value	807	5493_20	RW	1 = Disabled 2 = Enabled

Table 4-18 Liebert XDP™, Liebert XDC™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Ext System Condensation Detected - Event Type	Multistate_Value	808	5494_20	RW	1 = Message 2 = Warning 3 = Alarm
Ext Fan Issue - Event Control	Multistate_Value	809	5496_20	RW	1 = Disabled 2 = Enabled
Ext Fan Issue - Event Type	Multistate_Value	810	5497_20	RW	1 = Message 2 = Warning 3 = Alarm
Sensor Issue - Event Control	Multistate_Value	811	5498_20	RW	1 = Disabled 2 = Enabled
Sensor Issue - Event Type	Multistate_Value	812	5499_20	RW	1 = Message 2 = Warning 3 = Alarm
Ext Remote Shutdown - Event Control	Multistate_Value	813	5501_20	RW	1 = Disabled 2 = Enabled
Ext Remote Shutdown - Event Type	Multistate_Value	814	5502_20	RW	1 = Message 2 = Warning 3 = Alarm
XD System 20 Secondary Fans 1					
Fan State	Multistate_Value	825	5510_20_1	RD	1 = Off / 2 = On 3 = Economy
Fan Economy Mode	Multistate_Value	826	5511_20_1	RW	1 = Disabled 2 = Automatic 3 = Manual
System Information					
System Status	Multistate_Value	837	4123_1	RD	1 = Normal Operation 2 = Startup 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
System Operating State	Multistate_Value	838	4706_1	RD	1 = Off / 2 = On 3 = Standby
System Control Mode	Multistate_Value	839	4707_1	RD	1 = Internal (Auto) 2 = External (Manual)
System Operating State Reason	Multistate_Value	840	5074_1	RD	1 = Reason Unknown 2 = Network Display 3 = Alarm 4 = Schedule 5 = Remote System 6 = External Input 7 = Local Display
System On/Off Control	Multistate_Value	841	5143_1	RW	1 = Off / 2 = On
System Event Configuration					
Customer Input 1 - Event Control	Multistate_Value	852	4718_1	RW	1 = Disabled 2 = Enabled
Customer Input 1 - Event Type	Multistate_Value	853	4719_1	RW	1 = Message 2 = Warning 3 = Alarm

Table 4-18 Liebert XDP™, Liebert XDC™—Multistate Data (continued)

Controller	Liebert iCOM® v4				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
System Condensation Detected - Event Control	Multistate_Value	854	4712_1	RD	1 = Disabled 2 = Enabled
System Condensation Detected - Event Type	Multistate_Value	855	4713_1	RW	1 = Message 2 = Warning 3 = Alarm
Shutdown - Loss Of Power - Event Control	Multistate_Value	856	4715_1	RD	1 = Disabled 2 = Enabled
Shutdown - Loss Of Power - Event Type	Multistate_Value	857	4716_1	RW	1 = Message 2 = Warning 3 = Alarm
Smoke Detected - Event Control	Multistate_Value	858	4721_1	RW	1 = Disabled 2 = Enabled
Smoke Detected - Event Type	Multistate_Value	859	4722_1	RW	1 = Message 2 = Warning 3 = Alarm
Water Under Floor - Event Control	Multistate_Value	860	4724_1	RW	1 = Disabled 2 = Enabled
Water Under Floor - Event Type	Multistate_Value	861	4725_1	RW	1 = Message 2 = Warning 3 = Alarm
Service Required - Event Control	Multistate_Value	862	4727_1	RW	1 = Disabled 2 = Enabled
Service Required - Event Type	Multistate_Value	863	4728_1	RW	1 = Message 2 = Warning 3 = Alarm
Fan Issue - Event Control	Multistate_Value	864	4730_1	RW	1 = Disabled 2 = Enabled
Fan Issue - Event Type	Multistate_Value	865	4731_1	RW	1 = Message 2 = Warning 3 = Alarm
System Events					
System Event Acknowledge/Reset	Multistate_Value	876	4717_1	WO	1 = Reset 2 = Acknowledge

Table 4-19 Liebert XDP™, Liebert XDC™—Glossary

Data Label	Data Description
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
Calculated Next Maintenance Month	Calculated month of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Year].
Calculated Next Maintenance Year	Calculated year of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Month].
Chilled Water Cntrl Valve Pos - Event Control	Enable/disable the activation of the [Chilled Water Control Valve Position] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Chilled Water Cntrl Valve Pos - Event Type	The event type for the [Chilled Water Control Valve Position] event.
Chilled Water Control Valve Position	Chilled water valve out of position. Chilled water control valve position does not match expected value.
Circuit 1 Low Suction Pressure - Event Control	Enable/disable the activation of the [Circuit 1 Low Suction Pressure] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Circuit 1 Low Suction Pressure - Event Type	The event type for the [Circuit 1 Low Suction Pressure] event.
Circuit 1 Low Suction Pressure	Compressor circuit 1 low suction pressure.
Circuit 2 Low Suction Pressure - Event Control	Enable/disable the activation of the [Circuit 2 Low Suction Pressure] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Circuit 2 Low Suction Pressure - Event Type	The event type for the [Circuit 2 Low Suction Pressure] event.
Circuit 2 Low Suction Pressure	Compressor circuit 2 low suction pressure.
Cold Aisle Over Temp Threshold	Upper threshold value used in the [Cold Aisle Temp Out of Range] event.
Cold Aisle Temp Out of Range	The air temperature in the cold aisle is either above [Cold Aisle Over Temp Threshold] or below [Cold Aisle Under Temp Threshold].
Cold Aisle Under Temp Threshold	Lower threshold value used in the [Cold Aisle Temp Out of Range] event.
Communication Status	Communication status of remote device.
Compressor 1A High Head Pressure - Event Control	Enable/disable the activation of the [Compressor 1A High Head Pressure] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor 1A High Head Pressure - Event Type	The event type for the [Compressor 1A High Head Pressure] event.
Compressor 1A High Head Pressure	Compressor 1A high head pressure.
Compressor 1A Short Cycle - Event Control	Enable/disable the activation of the [Compressor 1A Short Cycle] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor 1A Short Cycle - Event Type	The event type for the [Compressor 1A Short Cycle] event.
Compressor 1A Short Cycle	Compressor 1A short cycle. A short cycle is defined as turning on and off a number of times over a set time period.
Compressor 1A State	Compressor 1A operational state.
Compressor 1B High Head Pressure - Event Control	Enable/disable the activation of the [Compressor 1B High Head Pressure] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor 1B High Head Pressure - Event Type	The event type for the [Compressor 1B High Head Pressure] event.
Compressor 1B High Head Pressure	Compressor 1B high head pressure.
Compressor 1B Short Cycle - Event Control	Enable/disable the activation of the [Compressor 1B Short Cycle] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor 1B Short Cycle - Event Type	The event type for the [Compressor 1B Short Cycle] event.

Table 4-19 Liebert XDP™, Liebert XDC™—Glossary (continued)

Data Label	Data Description
Compressor 1B Short Cycle	Compressor 1B short cycle. A short cycle is defined as turning on and off a number of times over a set time period.
Compressor 1B State	Compressor 1B operational state.
Compressor 2A High Head Pressure - Event Control	Enable/disable the activation of the [Compressor 2A High Head Pressure] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor 2A High Head Pressure - Event Type	The event type for the [Compressor 2A High Head Pressure] event.
Compressor 2A High Head Pressure	Compressor 2A high head pressure.
Compressor 2A Short Cycle - Event Control	Enable/disable the activation of the [Compressor 2A Short Cycle] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor 2A Short Cycle - Event Type	The event type for the [Compressor 2A Short Cycle] event.
Compressor 2A Short Cycle	Compressor 2A short cycle. A short cycle is defined as turning on and off a number of times over a set time period.
Compressor 2A State	Compressor 2A operational state.
Compressor 2B High Head Pressure - Event Control	Enable/disable the activation of the [Compressor 2B High Head Pressure] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor 2B High Head Pressure - Event Type	The event type for the [Compressor 2B High Head Pressure] event.
Compressor 2B High Head Pressure	Compressor 2B high head pressure.
Compressor 2B Short Cycle - Event Control	Enable/disable the activation of the [Compressor 2B Short Cycle] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Compressor 2B Short Cycle - Event Type	The event type for the [Compressor 2B Short Cycle] event.
Compressor 2B Short Cycle	Compressor 2B short cycle. A short cycle is defined as turning on and off a number of times over a set time period.
Compressor 2B State	Compressor 2B operational state.
Cooling Capacity	Cooling capacity in use, expressed as a percentage of the maximum rated capacity.
Cooling Capacity	Cooling capacity in use, expressed in kilowatts.
Customer Input 1 - Event Control	Enable/disable the activation of the [Customer Input 1] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 1 - Event Type	The event type for the [Customer Input 1] event.
Customer Input 1	Customer input 1.
Dew Point Temperature	Dew point temperature, using the highest reading from all sensors.
Ext Air Over Temp Threshold	Threshold value used in the ([Ext Air Sensor A Over Temperature], [Ext Air Sensor B Over Temperature]...) events.
Ext Air Sensor A Dew Point Temp	Dew point temperature as measured by External Air Sensor A.
Ext Air Sensor A Humidity	Relative humidity as measured by External Air Sensor A.
Ext Air Sensor A Issue - Event Control	Enable/disable the activation of the [Ext Air Sensor A Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Issue - Event Type	The event type for the [Ext Air Sensor A Issue] event.
Ext Air Sensor A Issue	The External Air Sensor A is disconnected or the signal is out of range.
Ext Air Sensor A Over Temp - Event Control	Enable/disable the activation of the [Ext Air Sensor A Over Temperature] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Over Temp - Event Type	The event type for the [Ext Air Sensor A Over Temperature] event.

Table 4-19 Liebert XDP™, Liebert XDC™—Glossary (continued)

Data Label	Data Description
Ext Air Sensor A Over Temperature	[Ext Air Sensor A Temperature] has exceeded [Ext Air Over Temp Threshold].
Ext Air Sensor A Temperature	Air temperature as measured by External Air Sensor A.
Ext Air Sensor A Under Temp - Event Control	Enable/disable the activation of the [Ext Air Sensor A Under Temperature] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor A Under Temp - Event Type	The event type for the [Ext Air Sensor A Under Temperature] event.
Ext Air Sensor A Under Temperature	[Ext Air Sensor A Temperature] has dropped below [Ext Air Under Temp Threshold].
Ext Air Sensor B Dew Point Temp	Dew point temperature as measured by External Air Sensor B.
Ext Air Sensor B Humidity	Relative humidity as measured by External Air Sensor B.
Ext Air Sensor B Issue - Event Control	Enable/disable the activation of the [Ext Air Sensor B Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor B Issue - Event Type	The event type for the [Ext Air Sensor B Issue] event.
Ext Air Sensor B Issue	The External Air Sensor B is disconnected or the signal is out of range.
Ext Air Sensor B Over Temp - Event Control	Enable/disable the activation of the [Ext Air Sensor B Over Temperature] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor B Over Temp - Event Type	The event type for the [Ext Air Sensor B Over Temperature] event.
Ext Air Sensor B Over Temperature	[Ext Air Sensor B Temperature] has exceeded [Ext Air Over Temp Threshold].
Ext Air Sensor B Temperature	Air temperature as measured by External Air Sensor B.
Ext Air Sensor B Under Temp - Event Control	Enable/disable the activation of the [Ext Air Sensor B Under Temperature] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Air Sensor B Under Temp - Event Type	The event type for the [Ext Air Sensor B Under Temperature] event.
Ext Air Sensor B Under Temperature	[Ext Air Sensor B Temperature] has dropped below [Ext Air Under Temp Threshold].
Ext Air Under Temp Threshold	Threshold value used in the ([Ext Air Sensor A Under Temperature], [Ext Air Sensor B Under Temperature]...) events.
Ext Dew Point Over Temp - Event Control	Enable/disable the activation of the [Ext Dew Point Over Temperature] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Dew Point Over Temp - Event Type	The event type for the [Ext Dew Point Over Temperature] event.
Ext Dew Point Over Temp Threshold	Threshold value used in the [Ext Dew Point Over Temperature] event.
Ext Dew Point Over Temperature	At least one dew point temperature reading ([Ext Air Sensor A Dew Point Temp], [Ext Air Sensor B Dew Point Temp]...) has exceeded [Ext Dew Point Over Temp Threshold].
Ext Fan Issue - Event Control	Enable/disable the activation of the [Ext Fan Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Fan Issue - Event Type	The event type for the [Ext Fan Issue] event.
Ext Fan Issue	One or more fans are not operating within their operational parameters.
Ext Remote Shutdown - Event Control	Enable/disable the activation of the [Remote Shutdown] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Remote Shutdown - Event Type	The event type for the [Remote Shutdown] event.
Ext Remote Shutdown	Unit is shut down by a remote signal.
Ext System Condensation Detected - Event Control	Enable/disable the activation of the [Ext System Condensation Detected] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.

Table 4-19 Liebert XDP™, Liebert XDC™—Glossary (continued)

Data Label	Data Description
Ext System Condensation Detected - Event Type	The event type for the [Ext System Condensation Detected] event.
Ext System Condensation Detected	External system condensation detected.
Fan Button Control	Enable or disable the buttons from controlling the state of the fans.
Fan Economy Mode	Mode in which system secondary fans are to be controlled.
Fan Issue - Event Control	Enable/disable the activation of the [Fan Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Fan Issue - Event Type	The event type for the [Fan Issue] event.
Fan Issue	One or more fans are not operating within their operational parameters.
Fan On/Off Control	Turn system fans on or off.
Fan State	Current operational state of a group of fans.
Hot Aisle Over Temp Threshold	Upper threshold value used in the [Hot Aisle Temp Out of Range] event.
Hot Aisle Temp Out of Range	The air temperature in the Hot aisle is either above [Hot Aisle Over Temp Threshold] or below [Hot Aisle Under Temp Threshold].
Hot Aisle Under Temp Threshold	Lower threshold value used in the [Hot Aisle Temp Out of Range] event.
Hot Gas Solenoid Valve 1 Position	Hot gas solenoid valve 1 position.
Hot Gas Solenoid Valve 2 Position	Hot gas solenoid valve 2 position.
Hot Gas Valve 1 Open Position	Hot gas valve 1 open position.
Hot Gas Valve 2 Open Position	Hot gas valve 2 open position.
Maintenance Completed	Maintenance has been completed on the unit.
Maintenance Due	The calculated maintenance date has been reached.
Maintenance Ramp	The ratio of operations performed to the calculated operations available between maintenance intervals.
Master Unit Communication Lost	Communication with master unit has been lost.
Minimum Room Temperature Set Point	Minimum desired room air temperature. If the room air temperature falls below this set point, the unit will reduce the cooling.
Primary Fan Group State	Current operational state of the primary fan group.
Pump 1 Loss of Flow - Event Control	Enable/disable the activation of the [Pump 1 Loss of Flow] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Pump 1 Loss of Flow - Event Type	The event type for the [Pump 1 Loss of Flow] event.
Pump 1 Loss of Flow	Loss of flow is detected in pump 1. The loss of flow condition occurs when no differential pressure is detected across the pump.
Pump 1 State	Pump 1 operational state.
Pump 2 Loss of Flow - Event Control	Enable/disable the activation of the [Pump 2 Loss of Flow] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Pump 2 Loss of Flow - Event Type	The event type for the [Pump 2 Loss of Flow] event.
Pump 2 Loss of Flow	Loss of flow is detected in pump 2. The loss of flow condition occurs when no differential pressure is detected across the pump.
Pump 2 State	Pump 2 operational state.
Pump Hours Exceeded	[Pump Hours] has exceeded [Pump Hours Threshold].
Pump Hours Threshold	Threshold value used in the [Pump Hours Exceeded] event.
Pump Hours	Operating hours for pump since last reset of this value.
Pump Short Cycle - Event Control	Enable/disable the activation of the [Pump Short Cycle] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Pump Short Cycle - Event Type	The event type for the [Pump Short Cycle] event.

Table 4-19 Liebert XDP™, Liebert XDC™—Glossary (continued)

Data Label	Data Description
Pump Short Cycle	Pumps have short cycled. A short cycle is defined as turning on and off a number of times over a set time period.
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Remote Sensor Temperature	Air temperature as measured by remote sensor.
Remote Shutdown	Unit is shut down by a remote signal.
Sensor Issue - Event Control	Enable/disable the activation of the [Sensor Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Sensor Issue - Event Type	The event type for the [Sensor Issue] event.
Sensor Issue	One or more sensors are disconnected or the signals are out of range.
Service Required - Event Control	Enable/disable the activation of the [Service Required] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Service Required - Event Type	The event type for the [Service Required] event.
Service Required	Unit requires servicing.
Shutdown - Loss Of Power - Event Control	Enable/disable the activation of the [Shutdown - Loss Of Power] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Shutdown - Loss Of Power - Event Type	The event type for the [Shutdown - Loss Of Power] event.
Shutdown - Loss Of Power	System lost power. This event becomes active when the unit is powered on following an unexpected loss of power.
Smoke Detected - Event Control	Enable/disable the activation of the [Smoke Detected] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Smoke Detected - Event Type	The event type for the [Smoke Detected] event.
Smoke Detected	Smoke detected.
Supply Chilled Water Over Temp Threshold	Threshold value used in the [Supply Chilled Water Over Temp] event.
Supply Chilled Water Over Temp	[Supply Chilled Water Temperature] has exceeded [Supply Chilled Water Over Temp Threshold].
Supply Chilled Water Temp Sensor Issue	The supply chilled water temperature sensor is disconnected or the signal is out of range.
Supply Chilled Water Temperature	Supply chilled water temperature.
Supply CW Over Temp - Event Control	Enable/disable the activation of the [Supply Chilled Water Over Temp] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Supply CW Over Temp - Event Type	The event type for the [Supply Chilled Water Over Temp] event.
Supply CW Temp Sensor Issue - Event Control	Enable/disable the activation of the [Supply Chilled Water Temp Sensor Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Supply CW Temp Sensor Issue - Event Type	The event type for the [Supply Chilled Water Temp Sensor Issue] event.
Supply Fluid Over Temp - Event Control	Enable/disable the activation of the [Supply Fluid Over Temp] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Supply Fluid Over Temp - Event Type	The event type for the [Supply Fluid Over Temp] event.
Supply Fluid Over Temp Threshold	Threshold value used in the [Supply Fluid Over Temp] event.
Supply Fluid Over Temp	[Supply Fluid Temperature] has exceeded [Supply Fluid Over Temp Threshold].
Supply Fluid Temp Sensor Issue - Event Control	Enable/disable the activation of the [Supply Fluid Temp Sensor Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.

Table 4-19 Liebert XDP™, Liebert XDC™—Glossary (continued)

Data Label	Data Description
Supply Fluid Temp Sensor Issue - Event Type	The event type for the [Supply Fluid Temp Sensor Issue] event.
Supply Fluid Temp Sensor Issue	The supply fluid temperature sensor is disconnected or the signal is out of range.
Supply Fluid Temperature	Supply fluid temperature.
Supply Fluid Under Temp - Event Control	Enable/disable the activation of the [Supply Fluid Under Temp] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Supply Fluid Under Temp - Event Type	The event type for the [Supply Fluid Under Temp] event.
Supply Fluid Under Temp	[Supply Fluid Temperature] has dropped below a specified threshold.
Supply Refrig Over Temp - Event Control	Enable/disable the activation of the [Supply Refrigerant Over Temp] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Supply Refrig Over Temp - Event Type	The event type for the [Supply Refrigerant Over Temp] event.
Supply Refrig Over Temp Threshold	Threshold value used in the [Supply Refrigerant Over Temp] event.
Supply Refrig Temp Sensor Issue - Event Control	Enable/disable the activation of the [Supply Refrigerant Temp Sensor Issue] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Supply Refrig Temp Sensor Issue - Event Type	The event type for the [Supply Refrigerant Temp Sensor Issue] event.
Supply Refrig Under Temp Control - Event	Enable/disable the activation of the [Supply Refrigerant Under Temp] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Supply Refrig Under Temp - Event Type	The event type for the [Supply Refrigerant Under Temp] event.
Supply Refrigerant Over Temp	Event that is activated when [Supply Refrigerant Temperature] exceeds [Supply Refrig Over Temp Threshold]. The event is deactivated when the temperature drops below the threshold.
Supply Refrigerant Temp Sensor Issue	The supply refrigeramt temperature sensor is disconnected or the signal is out of range.
Supply Refrigerant Temperature	Supply refrigerant temperature.
Supply Refrigerant Under Temp	[Supply Refrigerant Temperature] has dropped below a specified threshold.
System Condensation Detected - Event Control	Enable/disable the activation of the [System Condensation Detected] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
System Condensation Detected - Event Type	The event type for the [System Condensation Detected] event.
System Condensation Detected	System condensation detected.
System Control Mode	System control mode.
System Date and Time	The system date and time
System Event Acknowledge/Reset	Reset and/or acknowledge all events.
System On/Off Control	Turn system functionality on or off.
System Operating State Reason	The reason the system is in the current operating state.
System Operating State	Current operating state of the system.
System Status	The operating status for the system.
Unit Code Missing	Unit code has not been entered and saved.
Unit Communication Lost	Master has lost communication with one or more networked units.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Partial Shutdown	An event has occurred requiring some system components to be shutdown and disabled.

Table 4-19 Liebert XDP™, Liebert XDC™—Glossary (continued)

Data Label	Data Description
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
Unit Standby	Unit was placed in standby mode.
Visual ID Control	Visual identification control to display an LED flashing sequence, allowing it to be visually located.
Water Under Floor - Event Control	Enable/disable the activation of the [Water Under Floor] event. If set to “disabled,” the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Water Under Floor - Event Type	The event type for the [Water Under Floor] event.
Water Under Floor	Water under the floor is detected.

Table 4-20 Liebert iCOM® DCL™—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Air Temperature					
Supply Air Over Temperature	Binary_Value	1	5015_1	RD	Active on Alarm
Supply Air Under Temperature	Binary_Value	2	5019_1	RD	Active on Alarm
Return Air Over Temperature	Binary_Value	3	5023_1	RD	Active on Alarm
Supply Air Sensor Issue	Binary_Value	4	5026_1	RD	Active on Alarm
Return Air Sensor Issue	Binary_Value	5	5147_1	RD	Active on Alarm
Unit Top Return Air Sensor Failure	Binary_Value	6	6274_1	RD	Active on Alarm
Unit Middle Return Air Sensor Failure	Binary_Value	7	6275_1	RD	Active on Alarm
Unit Bottom Return Air Sensor Failure	Binary_Value	8	6276_1	RD	Active on Alarm
Unit Top Supply Air Sensor Failure	Binary_Value	9	6277_1	RD	Active on Alarm
Unit Middle First Supply Air Sensor Failure	Binary_Value	10	6278_1	RD	Active on Alarm
Unit Middle Second Supply Air Sensor Failure	Binary_Value	11	6284_1	RD	Active on Alarm
Unit Bottom Supply Air Sensor Failure	Binary_Value	12	6279_1	RD	Active on Alarm
Pipe Temperature Sensor Failure	Binary_Value	13	6358_1	RD	Active on Alarm
Humidity					
High Return Humidity	Binary_Value	24	5034_1	RD	Active on Alarm
Low Return Humidity	Binary_Value	25	5036_1	RD	Active on Alarm
Dehumidifier Hours Exceeded	Binary_Value	26	5038_1	RD	Active on Alarm
Fans					
Loss of Air Flow	Binary_Value	37	5053_1	RD	Active on Alarm
Fan Hours Exceeded	Binary_Value	38	5054_1	RD	Active on Alarm
Top Fan Issue	Binary_Value	39	5055_1	RD	Active on Alarm
Bottom Fan Issue	Binary_Value	40	5056_1	RD	Active on Alarm
Remote Sensors 1					
Remote Sensor Issue	Binary_Value	51	5060_1	RD	Active on Alarm
Remote Sensors 2					
Remote Sensor Issue	Binary_Value	62	5060_2	RD	Active on Alarm
Remote Sensors 4					
Remote Sensor Issue	Binary_Value	84	5060_4	RD	Active on Alarm
Chilled Water					
Chilled Water Control Valve Failure	Binary_Value	95	4703_1	RD	Active on Alarm
Supply Chilled Water Loss of Flow	Binary_Value	96	4980_1	RD	Active on Alarm
Chilled Water Control Active	Binary_Value	97	6293_1	RD	Active on Alarm
Modbus 0-10V Module Communication Failure	Binary_Value	98	6297_1	RD	Active on Alarm
Chilled Water Circuit 1					
Chilled Water Flow Transducer Failure	Binary_Value	109	6294_1_1	RD	Active on Alarm
Chilled Water Inlet Temperature Sensor Failure	Binary_Value	110	6295_1_1	RD	Active on Alarm
Chilled Water High Inlet Temperature	Binary_Value	111	6296_1_1	RD	Active on Alarm
Chilled Water Circuit 2					
Chilled Water Flow Transducer Failure	Binary_Value	122	6294_1_2	RD	Active on Alarm
Chilled Water Inlet Temperature Sensor Failure	Binary_Value	123	6295_1_2	RD	Active on Alarm
Chilled Water High Inlet Temperature	Binary_Value	124	6296_1_2	RD	Active on Alarm

Table 4-20 Liebert iCOM® DCL™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Customer Input 1	Binary_Value	135	4270_1	RD	Active on Alarm
Customer Input 2	Binary_Value	136	4271_1	RD	Active on Alarm
Customer Input 3	Binary_Value	137	4272_1	RD	Active on Alarm
Customer Input 4	Binary_Value	138	4273_1	RD	Active on Alarm
Smoke Detected	Binary_Value	139	4720_1	RD	Active on Alarm
Water Under Floor	Binary_Value	140	4723_1	RD	Active on Alarm
Service Required	Binary_Value	141	4726_1	RD	Active on Alarm
Ext Over Temperature	Binary_Value	142	5104_1	RD	Active on Alarm
Ext Loss of Flow	Binary_Value	143	5105_1	RD	Active on Alarm
Ext Condenser Pump High Water	Binary_Value	144	5106_1	RD	Active on Alarm
Ext Standby Glycol Pump On	Binary_Value	145	5107_1	RD	Active on Alarm
External Fire Detected	Binary_Value	146	5108_1	RD	Active on Alarm
Unit On	Binary_Value	147	5109_1	RD	Active on Alarm
Unit Off	Binary_Value	148	5110_1	RD	Active on Alarm
Unit Partial Shutdown	Binary_Value	149	5112_1	RD	Active on Alarm
Unit Shutdown	Binary_Value	150	5113_1	RD	Active on Alarm
Water Leakage Detector Sensor Issue	Binary_Value	151	5114_1	RD	Active on Alarm
BMS Communications Timeout	Binary_Value	152	5115_1	RD	Active on Alarm
Maintenance Due	Binary_Value	153	5116_1	RD	Active on Alarm
Maintenance Completed	Binary_Value	154	5117_1	RD	Active on Alarm
RAM Battery Issue	Binary_Value	155	5119_1	RD	Active on Alarm
High Power Shutdown	Binary_Value	156	5121_1	RD	Active on Alarm
Unspecified General Event	Binary_Value	157	5588_1	RD	Active on Alarm
Rack Doors Open	Binary_Value	158	6299_1	RD	Active on Alarm

Table 4-21 Liebert iCOM® DCL™—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Air Temperature					
Supply Air Temperature	Analog_Value	1	5002_1	RD	Units: deg C
Supply Air Temperature	Analog_Value	10001	5002_1_deg_F	RD	Units: deg F
Return Air Temperature	Analog_Value	2	4291_1	RD	Units: deg C
Return Air Temperature	Analog_Value	10002	4291_1_deg_F	RD	Units: deg F
Return Dew Point	Analog_Value	3	5004_1	RD	Units: deg C
Return Dew Point	Analog_Value	10003	5004_1_deg_F	RD	Units: deg F
Remote Sensor Minimum Temperature	Analog_Value	4	5005_1	RD	Units: deg C
Remote Sensor Minimum Temperature	Analog_Value	10004	5005_1_deg_F	RD	Units: deg F
Remote Sensor Maximum Temperature	Analog_Value	5	5006_1	RD	Units: deg C
Remote Sensor Maximum Temperature	Analog_Value	10005	5006_1_deg_F	RD	Units: deg F
Remote Sensor Average Temperature	Analog_Value	6	5007_1	RD	Units: deg C
Remote Sensor Average Temperature	Analog_Value	10006	5007_1_deg_F	RD	Units: deg F
Air Temperature Set Point	Analog_Value	7	5008_1	RW	Units: deg C
Air Temperature Set Point	Analog_Value	10007	5008_1_deg_F	RW	Units: deg F
Cooling Proportional Band	Analog_Value	8	5009_1	RW	Units: deg C
Cooling Proportional Band	Analog_Value	10008	5009_1_deg_F	RW	Units: deg F
Air Temperature Dead Band	Analog_Value	9	5011_1	RW	Units: deg C
Air Temperature Dead Band	Analog_Value	10009	5011_1_deg_F	RW	Units: deg F
High Supply Air Temperature Threshold	Analog_Value	10	5014_1	RW	Units: deg C
High Supply Air Temperature Threshold	Analog_Value	10010	5014_1_deg_F	RW	Units: deg F
Unit Top Return Sensor Temperature	Analog_Value	11	6268_1	RD	Units: deg C
Unit Top Return Sensor Temperature	Analog_Value	10011	6268_1_deg_F	RD	Units: deg F
Unit Middle Return Sensor Temperature	Analog_Value	12	6269_1	RD	Units: deg C
Unit Middle Return Sensor Temperature	Analog_Value	10012	6269_1_deg_F	RD	Units: deg F
Unit Bottom Return Sensor Temperature	Analog_Value	13	6270_1	RD	Units: deg C
Unit Bottom Return Sensor Temperature	Analog_Value	10013	6270_1_deg_F	RD	Units: deg F
Unit Top Supply Sensor Temperature	Analog_Value	14	6271_1	RD	Units: deg C
Unit Top Supply Sensor Temperature	Analog_Value	10014	6271_1_deg_F	RD	Units: deg F
Unit Middle First Supply Sensor Temperature	Analog_Value	15	6272_1	RD	Units: deg C
Unit Middle First Supply Sensor Temperature	Analog_Value	10015	6272_1_deg_F	RD	Units: deg F
Unit Middle Second Supply Sensor Temperature	Analog_Value	16	6283_1	RD	Units: deg C
Unit Middle Second Supply Sensor Temperature	Analog_Value	10016	6283_1_deg_F	RD	Units: deg F
Unit Bottom Supply Sensor Temperature	Analog_Value	17	6273_1	RD	Units: deg C
Unit Bottom Supply Sensor Temperature	Analog_Value	10017	6273_1_deg_F	RD	Units: deg F
Low Supply Air Temperature Threshold	Analog_Value	18	5018_1	RW	Units: deg C
Low Supply Air Temperature Threshold	Analog_Value	10018	5018_1_deg_F	RW	Units: deg F
High Return Air Temperature Threshold	Analog_Value	19	5022_1	RW	Units: deg C
High Return Air Temperature Threshold	Analog_Value	10019	5022_1_deg_F	RW	Units: deg F
Humidity					
Supply Humidity	Analog_Value	30	5027_1	RD	Units: % RH
Return Humidity	Analog_Value	31	5028_1	RD	Units: % RH
Humidity Set Point	Analog_Value	32	5029_1	RW	Units: % RH
High Return Humidity Threshold	Analog_Value	33	5033_1	RW	Units: % RH
Low Return Humidity Threshold	Analog_Value	34	5035_1	RW	Units: % RH

Table 4-21 Liebert iCOM® DCL™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Unit Top Return Sensor Humidity	Analog_Value	35	6280_1	RD	Units: % RH
Unit Middle Return Sensor Humidity	Analog_Value	36	6281_1	RD	Units: % RH
Unit Bottom Return Sensor Humidity	Analog_Value	37	6282_1	RD	Units: % RH
Fans					
Fan Speed Proportional Band	Analog_Value	48	5048_1	RW	Units: deg C
Fan Speed Proportional Band	Analog_Value	10048	5048_1_deg_F	RW	Units: deg F
Fan Speed Manual Set Point	Analog_Value	49	5049_1	RW	Units: %
Fan Speed Maximum Set Point	Analog_Value	50	5050_1	RW	Units: %
Fan Speed Minimum Set Point	Analog_Value	51	5051_1	RW	Units: %
Pipe Temperature Set Point	Analog_Value	52	6359_1	RW	Units: deg C
Pipe Temperature Set Point	Analog_Value	10052	6359_1_deg_F	RW	Units: deg F
Pipe Temperature Dead Band	Analog_Value	53	6360_1	RW	Units: deg C
Pipe Temperature Dead Band	Analog_Value	10053	6360_1_deg_F	RW	Units: deg F
Remote Sensors 1					
Remote Sensor Temperature	Analog_Value	64	5059_1	RD	Units: deg C
Remote Sensor Temperature	Analog_Value	10064	5059_1_deg_F	RD	Units: deg F
Remote Sensors 2					
Remote Sensor Temperature	Analog_Value	75	5059_2	RD	Units: deg C
Remote Sensor Temperature	Analog_Value	10075	5059_2_deg_F	RD	Units: deg F
Remote Sensors 4					
Remote Sensor Temperature	Analog_Value	97	5059_4	RD	Units: deg C
Remote Sensor Temperature	Analog_Value	10097	5059_4_deg_F	RD	Units: deg F
Chilled Water					
High Supply Fluid Temperature Threshold	Analog_Value	108	4625_1	RW	Units: deg C
High Supply Fluid Temperature Threshold	Analog_Value	10108	4625_1_deg_F	RW	Units: deg F
Chilled Water Valve Rotation Hour	Analog_Value	109	6289_1	RW	Units: hr
Chilled Water Inlet High Temperature Threshold	Analog_Value	110	6291_1	RW	Units: deg C
Chilled Water Inlet High Temperature Threshold	Analog_Value	10110	6291_1_deg_F	RW	Units: deg F
Chilled Water Valve Open Position	Analog_Value	111	5640_1	RW	Units: %
Chilled Water Inlet Temperature Hysteresis	Analog_Value	112	6292_1	RW	Units: deg C
Chilled Water Inlet Temperature Hysteresis	Analog_Value	10112	6292_1_deg_F	RW	Units: deg F
Chilled Water Circuit 1					
Chilled Water Outlet Temperature	Analog_Value	123	6312_1_1	RD	Units: deg C
Chilled Water Outlet Temperature	Analog_Value	10123	6312_1_1_deg_F	RD	Units: deg F
Chilled Water Inlet Temperature	Analog_Value	124	6311_1_1	RD	Units: deg C
Chilled Water Inlet Temperature	Analog_Value	10124	6311_1_1_deg_F	RD	Units: deg F
Chiled Water Circuit 2					
Chilled Water Outlet Temperature	Analog_Value	135	6312_1_2	RD	Units: deg C
Chilled Water Outlet Temperature	Analog_Value	10135	6312_1_2_deg_F	RD	Units: deg F
Chilled Water Inlet Temperature	Analog_Value	136	6311_1_2	RD	Units: deg C
Chilled Water Inlet Temperature	Analog_Value	10136	6311_1_2_deg_F	RD	Units: deg F
System Info					
BMS Timeout Period	Analog_Value	147	5075_1	RW	Units: min
Auto Restart Delay	Analog_Value	148	4710_1	RW	Units: sec

Table 4-21 Liebert iCOM® DCL™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Operations					
Cooling Capacity	Analog_Value	159	5490_1	RD	Units: %
Fan Speed	Analog_Value	160	5077_1	RD	Units: %
Dehumidifier Utilization	Analog_Value	161	5079_1	RD	Units: %
Calculated Next Maintenance Month	Analog_Value	162	4868_1	RD	
Calculated Next Maintenance Year	Analog_Value	163	4869_1	RD	
Maintenance Ramp	Analog_Value	164	4870_1	RD	Units: %
Rack Door Open High Supply Air Temperature Threshold	Analog_Value	165	6298_1	RW	Units: deg C
Rack Door Open High Supply Air Temperature Threshold	Analog_Value	10165	6298_1_deg_F	RW	Units: deg F
Time					
System Date and Time	Analog_Value	176	4293_1	RW	
Power Measurement					
Power Meter Status	Analog_Value	187	5675_1	RD	
System Input RMS A-B	Analog_Value	188	4097_1	RD	Units: VAC
System Input RMS A-N	Analog_Value	189	4096_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	190	4113_1	RD	Units: A AC
System Input RMS B-C	Analog_Value	191	4099_1	RD	Units: VAC
System Input RMS B-N	Analog_Value	192	4098_1	RD	Units: VAC
System Input RMS Current Phase B	Analog_Value	193	4114_1	RD	Units: A AC
System Input RMS C-A	Analog_Value	194	4101_1	RD	Units: VAC
System Input RMS C-N	Analog_Value	195	4100_1	RD	Units: VAC
System Input RMS Current Phase C	Analog_Value	196	4115_1	RD	Units: A AC
Energy Consumption	Analog_Value	197	5900_1	RD	Units: kWH
Instantaneous Power	Analog_Value	198	5901_1	RD	Units: W

Table 4-22 Liebert iCOM® DCL™—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Protocol					
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
Air Temperature					
Air Temperature Control Sensor	MultiState_Value	12	5012_1	RW	1 = Supply 2 = Remote 3 = Return
Remote Sensor Temperature Calculation	MultiState_Value	13	5013_1	RW	1 = Average 2 = Maximum
Return Temperature/Humidity Sensor Control Type	MultiState_Value	14	6266_1	RW	1 = Average 2 = Maximum 3 = Top Sensor 4 = Middle Sensor 5 = Bottom Sensor
Supply Temperature Sensor Control Type	MultiState_Value	15	6267_1	RW	1 = Average 2 = Maximum 3 = Top Sensor 4 = Middle Sensor 1 5 = Middle Sensor 2 6 = Bottom Sensor
Humidity					
Dehumidifier State	MultiState_Value	26	5387_1	RW	1 = off 2 = on
Fans					
Fan Control Mode	MultiState_Value	37	5047_1	RW	1 = Internal (Auto) 2 = External (Manual)
Fan Control Sensor	MultiState_Value	38	6449_1	RW	1 = Supply Sensor 2 = Remote Sensor 3 = Return Sensor 4 = Delta Ret-Sup 5 = Delta Remote 6 = Pipe Sensor
Remote Sensors 1					
Remote Sensor Function	MultiState_Value	49	5058_1	RW	1 = Disable 2 = Reference 3 = Control
Remote Sensors 2					
Remote Sensor Function	MultiState_Value	60	5058_2	RW	1 = Disable 2 = Reference 3 = Control
Remote Sensors 4					
Remote Sensor Function	MultiState_Value	82	5058_4	RW	1 = Disable 2 = Reference 3 = Control

Table 4-22 Liebert iCOM® DCL™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Chilled Water					
Chilled Water Valve Control	MultiState_Value	93	6286_1	RW	1 = Single 2 = 2 Parallel 3 = 2 Alternate 4 = 2 Cascade
Chilled Water Main Valve	MultiState_Value	94	6287_1	RW	
Chilled Water Auto Valve Rotation	MultiState_Value	95	6288_1	RW	1 = disabled 2 = enabled
Chilled Water Inlet Temperature Control	MultiState_Value	96	6290_1	RW	1 = disabled 2 = enabled
System Info					
System Status	MultiState_Value	107	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
Unit Operating State	MultiState_Value	108	4706_1	RD	1 = off 2 = on 3 = standby
Unit Control Mode	MultiState_Value	109	4707_1	RD	1 = Internal (Auto) 2 = External (Manual)
Unit Operating State Reason	MultiState_Value	110	5074_1	RD	1 = Reason Unknown 2 = Network Display 3 = Alarm 4 = Schedule 5 = Remote System 6 = External Input 7 = Local Display
System Operations					
System On/Off Control	MultiState_Value	121	5143_1	RW	1 = off 2 = on
Rack Door Open Sensor Selection	MultiState_Value	122	6361_1	RD	1 = Supply Sensor 2 = Rack Sensor 1 3 = Rack Sensor 2 4 = Rack Sensor 3 5 = Rack Sensor 4
Event Configuration					
System Event Acknowledge/Reset	MultiState_Value	133	4717_1	WO	1 = Reset 2 = Acknowledge
Smoke Detected - Event Control	MultiState_Value	134	4721_1	RW	1 = disabled 2 = enabled
Smoke Detected - Event Type	MultiState_Value	135	4722_1	RW	1 = Message 2 = Warning 3 = Alarm
Water Under Floor - Event Control	MultiState_Value	136	4724_1	RW	1 = disabled 2 = enabled

Table 4-22 Liebert iCOM® DCL™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Water Under Floor - Event Type	MultiState_Value	137	4725_1	RW	1 = Message 2 = Warning 3 = Alarm
Customer Input 1 - Event Control	MultiState_Value	138	4718_1	RW	1 = disabled 2 = enabled
Customer Input 1 - Event Type	MultiState_Value	139	4719_1	RW	1 = Message 2 = Warning 3 = Alarm
Customer Input 2 - Event Control	MultiState_Value	140	5098_1	RW	1 = disabled 2 = enabled
Customer Input 2 - Event Type	MultiState_Value	141	5099_1	RW	1 = Message 2 = Warning 3 = Alarm
Customer Input 3 - Event Control	MultiState_Value	142	5100_1	RW	1 = disabled 2 = enabled
Customer Input 3 - Event Type	MultiState_Value	143	5101_1	RW	1 = Message 2 = Warning 3 = Alarm
Customer Input 4 - Event Control	MultiState_Value	144	5102_1	RW	1 = disabled 2 = enabled
Customer Input 4 - Event Type	MultiState_Value	145	5103_1	RW	1 = Message 2 = Warning 3 = Alarm
Service Required - Event Control	MultiState_Value	146	4727_1	RW	1 = disabled 2 = enabled
Service Required - Event Type	MultiState_Value	147	4728_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Loss of Flow - Event Control	MultiState_Value	148	5082_1	RW	1 = disabled 2 = enabled
Ext Loss of Flow - Event Type	MultiState_Value	149	5083_1	RW	1 = Message 2 = Warning 3 = Alarm
Ext Over Temperature - Event Control	MultiState_Value	150	5090_1	RW	1 = disabled 2 = enabled
Ext Over Temperature - Event Type	MultiState_Value	151	5091_1	RW	1 = Message 2 = Warning 3 = Alarm

Table 4-23 Liebert iCOM® DCL™—Glossary

Data Label	Data Description
Air Temperature Control Sensor	Sensor from which air temperature measurements will be used for cooling and heating control.
Air Temperature Dead Band	Value that is divided evenly to form a temperature range above and below [Air Temperature Set Point]. If measured air temperature is within this range, no heating or cooling will occur.
Air Temperature Set Point	Desired air temperature. This set point is dependent upon which sensor is selected for control.
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
BMS Communications Timeout	Building Management System (or external monitoring system) has not communicated with the system within the expected timeframe.
BMS Timeout Period	Timeframe within which the Building Management System (or external monitoring system) must communicate with the system to avoid a timeout.
Bottom Fan Issue	The bottom fan is not operating within its normal parameters.
Calculated Next Maintenance Month	Calculated month of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Year].
Calculated Next Maintenance Year	Calculated year of the next scheduled maintenance. Used in conjunction with [Calculated Next Maintenance Month].
Chilled Water Auto Valve Rotation	If enabled, the priority of the chilled water valves will change daily.
Chilled Water Control Active	Chilled water inlet temperature control function is enabled due to 'bad' water.
Chilled Water Control Valve Failure	Chilled water valve out of position. Chilled water control valve position does not match expected value.
Chilled Water Flow Transducer Failure	Chilled water flow transducer is disconnected or the signal is out of range.
Chilled Water High Inlet Temperature	Chilled water inlet temperature has exceeded an upper threshold.
Chilled Water Inlet High Temperature Threshold	Defines the threshold for considering the inlet water temperature too high.
Chilled Water Inlet Temperature Control	Enable/disable the function to switch off the fan and open the chilled water valve in case of 'bad' inlet water.
Chilled Water Inlet Temperature Hysteresis	Hysteresis used before returning to standard control mode when [Chilled Water Inlet Temperature Control] is enabled.
Chilled Water Inlet Temperature Sensor Failure	Chilled water inlet temperature sensor is disconnected or the signal is out of range. The sensor is mandatory for the chilled water flow function.
Chilled Water Inlet Temperature	Temperature of the water entering the hydraulic circuit of the chilled water unit.
Chilled Water Main Valve	Specifies which of the two chilled water valves is the main valve.
Chilled Water Outlet Temperature	Temperature of the water exiting the hydraulic circuit of the chilled water unit.
Chilled Water Valve Control	Method for controlling the chilled water cooling capacity. The options available are: single, parallel, alternate and cascade.
Chilled Water Valve Open Position	Chilled water valve open position.
Chilled Water Valve Rotation Hour	Hour of the day for switching the priority of the valves.
Cooling Capacity	Cooling capacity in use, expressed as a percentage of the maximum rated capacity.
Cooling Proportional Band	Temperature control band above [Air Temperature Set Point]. If measured air temperature is within this band, cooling operations are proportionally controlled.
Customer Input 1 - Event Control	Enable/disable the activation of the [Customer Input 1] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 1 - Event Type	The event type for the [Customer Input 1] event.
Customer Input 1	Customer Input 1.
Customer Input 2 - Event Control	Enable/disable the activation of the [Customer Input 2] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.

Table 4-23 Liebert iCOM® DCL™—Glossary (continued)

Data Label	Data Description
Customer Input 2 - Event Type	The event type for the [Customer Input 2] event.
Customer Input 2	Customer input 2.
Customer Input 3 - Event Control	Enable/disable the activation of the [Customer Input 3] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 3 - Event Type	The event type for the [Customer Input 3] event.
Customer Input 3	Customer input 3.
Customer Input 4 - Event Control	Enable/disable the activation of the [Customer Input 4] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Customer Input 4 - Event Type	The event type for the [Customer Input 4] event.
Customer Input 4	Customer input 4.
Dehumidifier Hours Exceeded	Operating hours for the dehumidifier have exceeded the threshold.
Dehumidifier State	Dehumidifier operational state.
Dehumidifier Utilization	Present dehumidifier utilization expressed as a percentage of the maximum rated capacity.
Energy Consumption	Energy consumption since the last reset of this value.
Ext Condenser Pump High Water	High water is detected in the condensate pump by the auxiliary float, as indicated by an external input signal.
Ext Loss of Flow - Event Control	Enable/disable the activation of the [Ext Loss of Flow] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Loss of Flow - Event Type	The event type for the [Ext Loss of Flow] event.
Ext Loss of Flow	Loss of flow is detected, as indicated by an external input signal.
Ext Over Temperature - Event Control	Enable/disable the activation of the [Ext Over Temperature] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Ext Over Temperature - Event Type	The event type for the [Ext Over Temperature] event.
Ext Over Temperature	A temperature has exceeded its threshold, as indicated by an external input signal.
Ext Standby Glycol Pump On	The standby glycol pump is on, as indicated by an external input signal.
External Fire Detected	Fire detected, as indicated by an external input signal.
Fan Control Mode	Fan control mode. Allowable modes are: (0) Auto - Fan speed is controlled via the selected fan control sensor, and, (1) Manual - Fan will operate at a fixed speed.
Fan Control Sensor	Sensor from which air temperature measurements will be used for fan speed control.
Fan Hours Exceeded	Operating hours for the unit blower fan have exceeded the threshold.
Fan Speed Manual Set Point	Manual fan speed.
Fan Speed Maximum Set Point	Maximum fan speed.
Fan Speed Minimum Set Point	Minimum fan speed.
Fan Speed Proportional Band	Temperature control band above the temperature set point calculated for proportional fan speed control. If measured air temperature is within this band, fan speed operations are proportionally controlled.
Fan Speed	Fan speed expressed as a percentage of the maximum rated speed.
High Power Shutdown	Supply to high power components has been shutdown.
High Return Air Temperature Threshold	Threshold value used in the [Return Air Over Temperature] event.
High Return Humidity Threshold	Threshold value used in the [High Return Humidity] event.
High Return Humidity	Return air high humidity event.
High Supply Air Temperature Threshold	Threshold value used in the [Supply Air Over Temperature] event.

Table 4-23 Liebert iCOM® DCL™—Glossary (continued)

Data Label	Data Description
High Supply Fluid Temperature Threshold	Threshold value used in the [Supply Chilled Water Over Temp] event.
Humidity Set Point	Desired relative humidity.
Instantaneous Power	Total electrical power currently being consumed.
Loss of Air Flow	No air flow through the unit due to failure of all fans.
Low Return Humidity Threshold	Threshold value used in the [Low Return Humidity] event.
Low Return Humidity	Return air low humidity event.
Low Supply Air Temperature Threshold	Threshold value used in the [Supply Air Under Temperature] event.
Maintenance Completed	Maintenance has been completed on the unit.
Maintenance Due	The calculated maintenance date has been reached.
Maintenance Ramp	The ratio of operations performed to the calculated operations available between maintenance intervals.
Modbus 0-10V Module Communication Failure	Modbus 0-10V module for managing the second Chilled Water circuit valve is disconnected or the signal is out of range.
Pipe Temperature Dead Band	Value that is divided evenly to form a temperature range above and below [Pipe Temperature Set Point]. If measured air temperature is within this range, the fan speed will not change.
Pipe Temperature Sensor Failure	Air temperature sensor located in the pipe is not sending a valid value.
Pipe Temperature Set Point	This value will be used as a comparison against pipe air temperature measurements in order to manage the speed of the fans.
Power Meter Status	Power Meter Status
Rack Door Open High Supply Air Temperature Threshold	If the rack supply air temperature exceeds this threshold, the rack doors are opened.
Rack Door Open Sensor Selection	Specifies the temperature sensor to be used by the control to manage the automatic rack door opening function.
Rack Doors Open	Rack doors opened due to supply air temperature exceeding the [Rack Door Open High Supply Air Temperature Threshold].
RAM Battery Issue	RAM or RAM backup battery is not operating correctly.
Remote Sensor Average Temperature	Average value of remote sensor temperature measurements.
Remote Sensor Function	Function assigned to remote sensor. Available values are: (0) Control - sensor will be used in calculation of remote sensor temperature that may be used for heating and cooling control, (1) Reference - sensor will not be used in calculation of remote sensor temperature, but is enabled, (2) Disable - sensor is disabled
Remote Sensor Issue	Remote sensor is disconnected or the signal is out of range.
Remote Sensor Maximum Temperature	Maximum value of remote sensor temperature measurements.
Remote Sensor Minimum Temperature	Minimum value of remote sensor temperature measurements.
Remote Sensor Temperature Calculation	Calculation method applied to temperature readings from the remote sensors to determine a single temperature measurement value for cooling and heating control.
Remote Sensor Temperature	Air temperature as measured by remote sensor.
Return Air Over Temperature	Return air high temperature event.
Return Air Sensor Issue	The air sensor at the inlet of the unit is disconnected or the signal is out of range.
Return Air Temperature	The temperature of the inlet air
Return Dew Point	Dew point temperature measured at the inlet of the unit.
Return Humidity	Relative humidity measured at the inlet of the unit.
Return Temperature/Humidity Sensor Control Type	Specifies whether the average, maximum, or only one of the return sensor values is to be used for return humidity and temperature control.
Server Class	The general classification for this system

Table 4-23 Liebert iCOM® DCL™—Glossary (continued)

Data Label	Data Description
Service Required - Event Control	Enable/disable the activation of the [Service Required] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Service Required - Event Type	The event type for the [Service Required] event.
Service Required	Unit requires servicing.
Smoke Detected - Event Control	Enable/disable the activation of the [Smoke Detected] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Smoke Detected - Event Type	The event type for the [Smoke Detected] event.
Smoke Detected	Smoke detected.
Supply Air Over Temperature	Supply air high temperature event.
Supply Air Sensor Issue	The air sensor at the outlet of the unit is disconnected or the signal is out of range.
Supply Air Temperature	Air temperature measured at the outlet of the unit.
Supply Air Under Temperature	Supply air low temperature event.
Supply Chilled Water Loss of Flow	Supply chilled water or glycol flow is too low.
Supply Humidity	Relative humidity at the outlet of the unit.
Supply Temperature Sensor Control Type	Specifies whether the average, maximum, or only one of the supply sensor values is to be used for supply temperature control.
System Date and Time	The system date and time
System Event Acknowledge/Reset	Reset and/or acknowledge all events.
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System On/Off Control	Turn system functionality on or off.
System Status	The operating status for the system
Top Fan Issue	The top fan is not operating within its normal parameters.
Unit Bottom Return Air Sensor Failure	Return air sensor at the bottom of the unit is disconnected or the signal is out of range.
Unit Bottom Return Sensor Humidity	Return humidity as measured by the sensor located at the bottom of the unit.
Unit Bottom Return Sensor Temperature	Return air temperature as measured by the sensor located at the bottom of the unit.
Unit Bottom Supply Air Sensor Failure	Supply air sensor at the bottom of the unit is disconnected or the signal is out of range.
Unit Bottom Supply Sensor Temperature	Supply air temperature as measured by the sensor located at the bottom of the unit.
Unit Control Mode	Unit control mode.
Unit Middle First Supply Air Sensor Failure	First supply air sensor in the middle of the unit is disconnected or the signal is out of range.
Unit Middle First Supply Sensor Temperature	Supply air temperature as measured by the first sensor located in the middle of the unit.
Unit Middle Return Air Sensor Failure	Return air sensor in the middle of the unit is disconnected or the signal is out of range.

Table 4-23 Liebert iCOM® DCL™—Glossary (continued)

Data Label	Data Description
Unit Middle Return Sensor Humidity	Return humidity as measured by the sensor located in the middle of the unit.
Unit Middle Return Sensor Temperature	Return air temperature as measured by the sensor located in the middle of the unit.
Unit Middle Second Supply Air Sensor Failure	Second supply air sensor in the middle of the unit is disconnected or the signal is out of range.
Unit Middle Second Supply Sensor Temperature	Supply air temperature as measured by the second sensor located in the middle of the unit.
Unit Off	Unit was turned off.
Unit On	Unit was turned on.
Unit Operating State Reason	The reason the unit is in the current operating state.
Unit Operating State	Current operating state of the unit.
Unit Partial Shutdown	An event has occurred requiring some system components to be shutdown and disabled.
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
Unit Top Return Air Sensor Failure	Return air sensor at the top of the unit is disconnected or the signal is out of range.
Unit Top Return Sensor Humidity	Return humidity as measured by the sensor located at the top of the unit.
Unit Top Return Sensor Temperature	Return air temperature as measured by the sensor located at the top of the unit.
Unit Top Supply Air Sensor Failure	Supply air sensor at the top of the unit is disconnected or the signal is out of range.
Unit Top Supply Sensor Temperature	Supply air temperature as measured by the sensor located at the top of the unit.
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
Water Leakage Detector Sensor Issue	The water leakage detector sensor is disconnected or the signal is out of range.
Water Under Floor - Event Control	Enable/disable the activation of the [Water Under Floor] event. If set to 'disabled', the event will not be annunciated. This implies that the event will not be placed in any active event list or in any event history list.
Water Under Floor - Event Type	The event type for the [Water Under Floor] event.
Water Under Floor	Water under the floor is detected.

Table 4-24 Liebert DataMate™, Liebert Mini-Mate2™—MM2

Controller	MM2	
Liebert Products	Liebert DataMate Liebert Mini-Mate2	
Data Description	**BACnet Instance**	**Notes**
Status Points (View)		
Temperature	BS01_x	—
Humidity	BS02_x	—
Cooling	BS03_x	1=On / 0=Off
Heating	BS04_x	1=On / 0=Off
Humidification	BS05_x	1=On / 0=Off
Dehumidification	BS06_x	1=On / 0=Off
Econ-o-Cycle	BS07_x	1=On / 0=Off
Stages	BS08_x	—
% Capacity	BS09_x	—
Unit On/Off	BS18_x	1=On / 0=Off
Alarm Points		
Communications	BA01_x:00	—
Local Off	BA01_x:01	—
Remote Off	BA01_x:02	—
High Head Pressure 1	BA01_x:03	—
Loss of Airflow	BA01_x:05	—
Standby Glycol Unit On	BA01_x:06	—
Change Filters	BA01_x:07	—
High Temperature	BA01_x:08	—
Low Temperature	BA01_x:09	—
High Humidity	BA02_x:00	—
Low Humidity	BA02_x:01	—
Humidifier Problem	BA02_x:02	—
Smoke Detected	BA02_x:08	—
Loss of Water Flow	BA02_x:09	—
Standby Unit On	BA02_x:10	—
Short Cycle	BA03:01	—
Loss of Power	BA03:02	—
Local Alarm 1	BA03:06	—
Local Alarm 2	BA03:07	—
High Water	BA03:08	—
Local Alarm 4	BA03:09	—
Setpoints (View)		
Temperature	BS10_x	—
Humidity	BS12_x	—
Control Points (Set)		
Remote On/Off	BC01_x	Bit 0 On=unit Off; Bit 1 On=unit On
Temperature Setpoint	BC02_x	—
Humidity Setpoint	BC03_x	—

Table 4-25 Liebert Mini-Mate2™ 8 Ton—L8T

Controller	L8T	
Liebert Products	Liebert Mini-Mate2 8 Ton	
Data Description	**BACnet Instance**	**Notes**
Status Points (View)		
Temperature	BS01_x	—
Humidity	BS02_x	—
Cooling	BS03_x	1=On / 0=Off
Heating	BS04_x	1=On / 0=Off
Humidification	BS05_x	1=On / 0=Off
De-humidification	BS06_x	1=On / 0=Off
Econ-O-Cycle	BS07_x	1=On / 0=Off
Stages	BS08_x	—
% Capacity	BS09_x	—
Unit Status (On / Off)	BS18_x	1=On / 0=Off
Alarm Points		
Communications	BA01_x:00	—
Local Off	BA01_x:01	—
Remote Off	BA01_x:02	—
High Head Pressure 1	BA01_x:03	—
High Head Pressure 2	BA01_x:04	—
Loss of Airflow	BA01_x:05	—
Standby Glycol Unit On	BA01_x:06	—
Change Filters	BA01_x:08	—
High Temperature	BA01_x:09	—
Low Temperature	BA01_x:10	—
High Humidity	BA02_x00	—
Low Humidity	BA02_x01	—
Humidifier Problem	BA02_x02	—
Smoke Detected	BA02_x:08	—
Loss of Water	BA02_x:09	—
Standby Unit On	BA02_x:10	—
Short Cycle	BA03_x:01	—
Loss of Power	BA03_x:02	—
Local Alarm 1	BA03_x:06	—
Local Alarm 2	BA03_x:07	—
High Water Humidifier Pan	BA03_x:08	—
Setpoints (View)		
Temperature Setpoint	BS10_x	—
Humidity Setpoint	BS12_x	—
Control Points (Set)		
Unit On / Off	BC01_x	Bit 0 On=unit Off; Bit 1 On=unit On
Temperature Setpoint	BC02_x	-
Temperature Tolerance	BC02_x	Multiply desired value by 1000
Humidity Setpoint	BC03_x	-
Humidity Tolerance	BC03_x	Multiply desired value by 1000
Reheat Lockout	BC01_x	Bit 2 on=RH off Bit 3 on=RH on
Humidifier Lockout	BC01_x	Bit 4 on=HL off Bit 5 on=HL on

4.3 UPS Systems

Table 4-26 Liebert APM™, Liebert NXC™, Liebert NXR™—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
System Status					
Battery Auto Test In Progress	Binary_Value	1	4172_1	RD	Active on Alarm
Battery Equalize	Binary_Value	2	4170_1	RD	Active on Alarm
Battery Charging Inhibited	Binary_Value	3	4200_1	RD	Active on Alarm
On Generator	Binary_Value	4	4315_1	RD	Active on Alarm
System Events					
System Input Power Problem	Binary_Value	15	4122_1	RD	Active on Alarm
Rectifier Failure	Binary_Value	16	4295_1	RD	Active on Alarm
Inverter Failure	Binary_Value	17	4233_1	RD	Active on Alarm
Bypass Not Available	Binary_Value	18	4135_1	RD	Active on Alarm
Battery Low	Binary_Value	19	4162_1	RD	Active on Alarm
LBS Inhibited	Binary_Value	20	4758_1	RD	Active on Alarm
System Fan Failure	Binary_Value	21	4311_1	RD	Active on Alarm
Equipment Over Temperature	Binary_Value	22	4310_1	RD	Active on Alarm
System Shutdown - EPO	Binary_Value	23	4213_1	RD	Active on Alarm
Bypass Static Switch Unavailable	Binary_Value	24	4143_1	RD	Active on Alarm
Bypass - Excess Auto Retransfers	Binary_Value	25	4139_1	RD	Active on Alarm
Parallel Comm Warning	Binary_Value	26	4823_1	RD	Active on Alarm
Power Supply Failure	Binary_Value	27	4314_1	RD	Active on Alarm
Battery Over Temperature	Binary_Value	28	4219_1	RD	Active on Alarm
System Input Phs Rotation Error	Binary_Value	29	4146_1	RD	Active on Alarm
Fuse Failure	Binary_Value	30	4440_1	RD	Active on Alarm
Inverter Overload Phase A	Binary_Value	31	4234_1	RD	Active on Alarm
Inverter Overload Phase B	Binary_Value	32	4235_1	RD	Active on Alarm
Inverter Overload Phase C	Binary_Value	33	4236_1	RD	Active on Alarm
MMS Overload	Binary_Value	34	4831_1	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	35	4290_1	RD	Active on Alarm
System Output Fault	Binary_Value	36	4389_1	RD	Active on Alarm
Internal Communications Failure	Binary_Value	37	4300_1	RD	Active on Alarm
Battery Charging Error	Binary_Value	38	4164_1	RD	Active on Alarm
System Input Current Imbalance	Binary_Value	39	4382_1	RD	Active on Alarm
Main Battery Disconnect Open	Binary_Value	40	4173_1	RD	Active on Alarm
Inverter Static Switch SCR Short	Binary_Value	41	4391_1	RD	Active on Alarm
Battery Not Qualified	Binary_Value	42	5149_1	RD	Active on Alarm
Battery Terminals Reversed	Binary_Value	43	5150_1	RD	Active on Alarm
Battery Converter Failure	Binary_Value	44	5151_1	RD	Active on Alarm
Inverter SCR Open	Binary_Value	45	5152_1	RD	Active on Alarm
Load Sharing Fault	Binary_Value	46	5153_1	RD	Active on Alarm
DC Bus Abnormal	Binary_Value	47	5154_1	RD	Active on Alarm
Mains Input Neutral Lost	Binary_Value	48	5155_1	RD	Active on Alarm
Load Impact Transfer	Binary_Value	49	5156_1	RD	Active on Alarm
User Operation Invalid	Binary_Value	50	5157_1	RD	Active on Alarm
Power Sub Module Fault	Binary_Value	51	5158_1	RD	Active on Alarm
Battery Discharging	Binary_Value	52	4168_1	RD	Active on Alarm

Table 4-26 Liebert APM™, Liebert NXC™, Liebert NXR™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
UPS Output on Bypass	Binary_Value	53	4298_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	54	4299_1	RD	Active on Alarm
Battery Capacity Low	Binary_Value	55	4166_1	RD	Active on Alarm
MMS On Battery	Binary_Value	56	4834_1	RD	Active on Alarm
Redundancy	Binary_Value	57	4825_1	RD	Active on Alarm
Top Outlet Fan Fault	Binary_Value	58	5770_1	RD	Active on Alarm
MMS Over Capacity	Binary_Value	59	5771_1	RD	Active on Alarm
Battery Charge Equalization Timeout	Binary_Value	60	6065_1	RD	Active on Alarm

Table 4-27 Liebert APM™, Liebert NXC™, Liebert NXR™—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
System Input RMS A-B	Analog_Value	1	4097_1	RD	Units: VAC
System Input RMS B-C	Analog_Value	2	4099_1	RD	Units: VAC
System Input RMS C-A	Analog_Value	3	4101_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	4	4113_1	RD	Units: A AC
System Input RMS Current Phase B	Analog_Value	5	4114_1	RD	Units: A AC
System Input RMS Current Phase C	Analog_Value	6	4115_1	RD	Units: A AC
System Input Frequency	Analog_Value	7	4105_1	RD	Units: Hz
System Input RMS A-N	Analog_Value	8	4096_1	RD	Units: VAC
System Input RMS B-N	Analog_Value	9	4098_1	RD	Units: VAC
System Input RMS C-N	Analog_Value	10	4100_1	RD	Units: VAC
System Input Power Factor Phs A	Analog_Value	11	4116_1	RD	—
System Input Power Factor Phs B	Analog_Value	12	4117_1	RD	—
System Input Power Factor Phs C	Analog_Value	13	4118_1	RD	—
Bypass					
Bypass Input Voltage RMS A-N	Analog_Value	24	4128_1	RD	Units: VAC
Bypass Input Voltage RMS B-N	Analog_Value	25	4129_1	RD	Units: VAC
Bypass Input Voltage RMS C-N	Analog_Value	26	4130_1	RD	Units: VAC
Bypass Input Frequency	Analog_Value	27	4131_1	RD	Units: Hz
Battery					
Battery Time Remaining	Analog_Value	38	4150_1	RD	Units: min
Battery Volts for Cabinet	Analog_Value	39	4155_1	RD	Units: VDC
Battery Temperature for Cabinet	Analog_Value	40	4156_1	RD	Units: deg C
Battery Temperature for Cabinet	Analog_Value	10040	4156_1_deg_F	RD	Units: deg F
Inlet Air Temperature	Analog_Value	41	4291_1	RD	Units: deg C
Inlet Air Temperature	Analog_Value	10041	4291_1_deg_F	RD	Units: deg F
DC Bus Current	Analog_Value	42	4149_1	RD	Units: A DC
Output					
System Output Voltage RMS A-N	Analog_Value	53	4385_1	RD	Units: VAC
System Output Voltage RMS B-N	Analog_Value	54	4386_1	RD	Units: VAC
System Output Voltage RMS C-N	Analog_Value	55	4387_1	RD	Units: VAC
System Output RMS Current Phs A	Analog_Value	56	4204_1	RD	Units: A AC
System Output RMS Current Phs B	Analog_Value	57	4205_1	RD	Units: A AC
System Output RMS Current Phs C	Analog_Value	58	4206_1	RD	Units: A AC
System Output Frequency	Analog_Value	59	4207_1	RD	Units: Hz
System Output Voltage RMS A-B	Analog_Value	60	4201_1	RD	Units: VAC
System Output Voltage RMS B-C	Analog_Value	61	4202_1	RD	Units: VAC
System Output Voltage RMS C-A	Analog_Value	62	4203_1	RD	Units: VAC
System Output Power Factor Phs A	Analog_Value	63	4210_1	RD	—
System Output Power Factor Phs B	Analog_Value	64	4211_1	RD	—
System Output Power Factor Phs C	Analog_Value	65	4212_1	RD	—
System Output Pct Power Phase A	Analog_Value	66	4223_1	RD	Units: %
System Output Pct Power Phase B	Analog_Value	67	4224_1	RD	Units: %
System Output Pct Power Phase C	Analog_Value	68	4225_1	RD	Units: %
MMS Output Apparent Power	Analog_Value	69	4812_1	RD	Units: kVA
MMS Output Power	Analog_Value	70	4811_1	RD	Units: kW
System Output Apparent Power	Analog_Value	71	4209_1	RD	Units: kVA

Table 4-27 Liebert APM™, Liebert NXC™, Liebert NXR™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Output Power	Analog_Value	72	4208_1	RD	Units: kW
Output Current Crest Factor Phs A	Analog_Value	73	5159_1	RD	—
Output Current Crest Factor Phs B	Analog_Value	74	5160_1	RD	—
Output Current Crest Factor Phs C	Analog_Value	75	5161_1	RD	—
System Configuration					
System Date and Time	Analog_Value	86	4293_1	RW	—

Table 4-28 Liebert APM™, Liebert NXC™, Liebert NXR™—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery					
UPS battery1 status	MultiState_Value	1	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
System Status					
Inverter On/Off State	MultiState_Value	12	4746_1	RD	1 = off 2 = on
Maintenance Bypass Breaker (MBB)	MultiState_Value	13	4772_1	RD	1 = Open 2 = Close 3 = Not Installed
UPS Output Source	MultiState_Value	14	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reduced
System Status	MultiState_Value	15	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
ECO Mode Operation State	MultiState_Value	16	5454_1	RD	1 = disabled 2 = enabled

Table 4-29 Liebert APM™, Liebert NXC™, Liebert NXR™—Glossary

Data Label	Data Description
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Capacity Low	Battery capacity is low
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Converter Failure	Battery converter failure. This is a summary event caused by one or more power sub-modules in a UPS module.
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Charge Equalization Timeout	The battery equalizing is time out
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Not Qualified	The UPS battery voltage is not qualified. This event will be detected even in the absence of battery disconnect or when it is open.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral
Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral
Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Static Switch Unavailable	The static bypass switch is off, and unable to operate
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Temperature	The temperature of the inlet air
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Overload Phase A	Inverter is operating with an overload on phase A
Inverter Overload Phase B	Inverter is operating with an overload on phase B
Inverter Overload Phase C	Inverter is operating with an overload on phase C
Inverter SCR Open	The system has detected an open across one or more inverter static switch Silicon Controlled Rectifiers.
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Static Switch SCR Short	The system has detected a short across one or more inverter static switch Silicon Controlled Rectifiers (SCR)
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Load Impact Transfer	On bypass as result of load impact.

Table 4-29 Liebert APM™, Liebert NXC™, Liebert NXR™—Glossary (continued)

Data Label	Data Description
Load Sharing Fault	Difference between any phase inverter current of unit and the relevant average output current of parallel system is more than a specific percent of nominal current.
Loss of Redundancy	The multi-module collection doesn't have enough modules to redundantly support the load
Main Battery Disconnect Open	Main battery disconnect is open
Mains Input Neutral Lost	Loss of neutral in the input source is detected.
Maintenance Bypass Breaker (MBB)	Maintenance bypass breaker (MBB)
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Power	The sum total power of all system output modules
MMS Over Capacity	The multi-module system load is larger than the apparent power limit setting.
MMS Overload	Multi-module system overload
On Generator	A generator is supplying the power to the system
Output Current Crest Factor Phs A	Output current crest factor of Phase A.
Output Current Crest Factor Phs B	Output current crest factor of Phase B.
Output Current Crest Factor Phs C	Output current crest factor of Phase C.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Parallel Comm Warning	Parallel communication bus warning
Power Sub Module Fault	One or more failures detected in power module, inverter or rectifier.
Power Supply Failure	Power supply failure
Rectifier Failure	Rectifier failure - rectifier is off
System Date and Time	The system date and time
System Fan Failure	System fan failure - one or more fans have failed
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Frequency	The system input frequency
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Factor Phs A	The system input power factor for Phase A
System Input Power Factor Phs B	The system input power factor for Phase B
System Input Power Factor Phs C	The system input power factor for Phase C
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A

Table 4-29 Liebert APM™, Liebert NXC™, Liebert NXR™—Glossary (continued)

Data Label	Data Description
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
Top Outlet Fan Fault	Top outlet fan fault - one or more top outlet fans have failed.
UPS battery1 status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
User Operation Invalid	User attempted an invalid operation.

Table 4-30 Liebert APS™—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
Rectifier Failure	Binary_Value	1	4295_1	RD	Active on Alarm
System Input Power Problem	Binary_Value	2	4122_1	RD	Active on Alarm
System Input Current Imbalance	Binary_Value	3	4382_1	RD	Active on Alarm
Bypass					
UPS Output on Bypass	Binary_Value	14	4298_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	15	4299_1	RD	Active on Alarm
Bypass Not Available	Binary_Value	16	4135_1	RD	Active on Alarm
Bypass Overload	Binary_Value	17	5798_1	RD	Active on Alarm
Bypass Frequency Error	Binary_Value	18	4175_1	RD	Active on Alarm
Bypass Auto Retransfer Failed	Binary_Value	19	4138_1	RD	Active on Alarm
Battery					
Battery Discharging	Binary_Value	30	4168_1	RD	Active on Alarm
Battery Manual Test In Progress	Binary_Value	31	4171_1	RD	Active on Alarm
Battery Auto Test In Progress	Binary_Value	32	4172_1	RD	Active on Alarm
Battery Test Passed	Binary_Value	33	4322_1	RD	Active on Alarm
Battery Test Failed	Binary_Value	34	4323_1	RD	Active on Alarm
Low Battery - Shutdown Imminent	Binary_Value	35	5801_1	RD	Active on Alarm
Battery Module Fault	Binary_Value	36	5856_1	RD	Active on Alarm
Battery Module Warning	Binary_Value	37	5857_1	RD	Active on Alarm
Battery Over Temperature	Binary_Value	38	4219_1	RD	Active on Alarm
Battery Temperature Imbalance	Binary_Value	39	4169_1	RD	Active on Alarm
Output					
Output Overload	Binary_Value	50	5806_1	RD	Active on Alarm
Output Off Pending	Binary_Value	51	5807_1	RD	Active on Alarm
System Output Off	Binary_Value	52	4215_1	RD	Active on Alarm
System Shutdown - Transformer Over Temperature	Binary_Value	53	5850_1	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	54	4290_1	RD	Active on Alarm
System Shutdown - Output Short	Binary_Value	55	5808_1	RD	Active on Alarm
System Shutdown - Low Battery	Binary_Value	56	5809_1	RD	Active on Alarm
System Shutdown - Remote Shutdown	Binary_Value	57	5810_1	RD	Active on Alarm
System Shutdown - Hardware Fault	Binary_Value	58	5811_1	RD	Active on Alarm
Maximum Load Alarm	Binary_Value	59	5851_1	RD	Active on Alarm
Inverter					
Loss of Redundancy	Binary_Value	70	5817_1	RD	Active on Alarm
Power Module Failure	Binary_Value	71	5818_1	RD	Active on Alarm
Power Module Warning	Binary_Value	72	5819_1	RD	Active on
System Status					
Unspecified General Event	Binary_Value	83	5588_1	RD	Active on Alarm
Check Air Filter	Binary_Value	84	5862_1	RD	Active on Alarm
Frame Fan Fault	Binary_Value	85	5770_1	RD	Active on Alarm
Transformer Fan Fault	Binary_Value	86	5863_1	RD	Active on Alarm
Transformer Overtemperature	Binary_Value	87	5433_1	RD	Active on Alarm
No Load Warning	Binary_Value	88	5865_1	RD	Active on Alarm

Table 4-30 Liebert APS™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
PowerModule 1					
Power Module Fan Fault	Binary_Value	99	5838_1	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	100	5839_1	RD	Active on Alarm
Power Module Shutdown - Over Temperature	Binary_Value	101	5840_1	RD	Active on Alarm
PowerModule 2					
Power Module Fan Fault	Binary_Value	112	5838_2	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	113	5839_2	RD	Active on Alarm
Power Module Shutdown - Over Temperature	Binary_Value	114	5840_2	RD	Active on Alarm
PowerModule 10					
Power Module Fan Fault	Binary_Value	216	5838_10	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	217	5839_10	RD	Active on Alarm
Power Module Shutdown - Over Temperature	Binary_Value	218	5840_10	RD	Active on Alarm
BatteryModule 1					
Battery Module Temperature Sensor Fault	Binary_Value	229	5847_1	RD	Active on Alarm
Battery Module Over Temperature	Binary_Value	230	5848_1	RD	Active on Alarm
Replace Battery Module	Binary_Value	231	5849_1	RD	Active on Alarm
BatteryModule 2					
Battery Module Temperature Sensor Fault	Binary_Value	242	5847_2	RD	Active on Alarm
Battery Module Over Temperature	Binary_Value	243	5848_2	RD	Active on Alarm
Replace Battery Module	Binary_Value	244	5849_2	RD	Active on Alarm
BatteryModule 80					
Battery Module Temperature Sensor Fault	Binary_Value	1256	5847_80	RD	Active on Alarm
Battery Module Over Temperature	Binary_Value	1257	5848_80	RD	Active on Alarm
Replace Battery Module	Binary_Value	1258	5849_80	RD	Active on Alarm
ChargerModule					
Charger Module Fan Fault	Binary_Value	1269	5842_1	RD	Active on Alarm

Table 4-31 Liebert APS™—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input RMS L1-N	Analog_Value	1	4096_1	RD	Units: VAC
System Input RMS L2-N	Analog_Value	2	4098_1	RD	Units: VAC
System Input RMS L3-N	Analog_Value	3	4100_1	RD	Units: VAC
System Input RMS L1-L2	Analog_Value	4	4097_1	RD	Units: VAC
System Input RMS L2-L3	Analog_Value	5	4099_1	RD	Units: VAC
System Input RMS L3-L1	Analog_Value	6	4101_1	RD	Units: VAC
System Input RMS Current L1	Analog_Value	7	4113_1	RD	Units: A AC
System Input RMS Current L2	Analog_Value	8	4114_1	RD	Units: A AC
System Input RMS Current L3	Analog_Value	9	4115_1	RD	Units: A AC
System Input Frequency	Analog_Value	10	4105_1	RD	Units: Hz
System Input Power Factor L1	Analog_Value	11	4116_1	RD	—
System Input Power Factor L2	Analog_Value	12	4117_1	RD	—
System Input Power Factor L3	Analog_Value	13	4118_1	RD	—
System Input Brown Out Count	Analog_Value	14	4119_1	RD	—
System Input Black Out Count	Analog_Value	15	4120_1	RD	—
Bypass					
Bypass Input Voltage RMS L1-N	Analog_Value	26	4128_1	RD	Units: VAC
Bypass Input Voltage RMS L2-N	Analog_Value	27	4129_1	RD	Units: VAC
Bypass Input Voltage RMS L1-L2	Analog_Value	28	4125_1	RD	Units: VAC
Bypass Input Frequency	Analog_Value	29	4131_1	RD	Units: Hz
Number Of Transfers To Bypass	Analog_Value	30	5837_1	RD	—
Battery					
Battery Time Remaining	Analog_Value	41	4150_1	RD	Units: min
Battery Volts for Cabinet	Analog_Value	42	4155_1	RD	Units: VDC
DC Bus Current	Analog_Value	43	4149_1	RD	Units: A DC
Battery Percentage Charge	Analog_Value	44	4153_1	RD	Units: %
Battery Temperature	Analog_Value	45	5853_1	RD	Units: deg C
Battery Temperature	Analog_Value	10045	5853_1_deg_F	RD	Units: deg F
Number of Discharge Cycles	Analog_Value	46	5854_1	RD	—
Accumulated Discharge Time	Analog_Value	47	5855_1	RD	Units: hr
Time Until Next Auto Battery Test	Analog_Value	48	5804_1	RD	Units: min
Number of EBC Installed	Analog_Value	49	5800_1	RD	—
Low Battery Warning Time	Analog_Value	50	5802_1	RW	Units: min
Output					
System Output Voltage RMS L1-N	Analog_Value	61	4385_1	RD	Units: VAC
System Output Voltage RMS L2-N	Analog_Value	62	4386_1	RD	Units: VAC
System Output Voltage RMS L1-L2	Analog_Value	63	4201_1	RD	Units: VAC
System Output RMS Current L1	Analog_Value	64	4204_1	RD	Units: A AC
System Output RMS Current L2	Analog_Value	65	4205_1	RD	Units: A AC
System Output Frequency	Analog_Value	66	4207_1	RD	Units: Hz
System Output Power Factor L1	Analog_Value	67	4210_1	RD	—
System Output Power Factor L2	Analog_Value	68	4211_1	RD	—
System Output Apparent Power	Analog_Value	69	4209_1	RD	Units: kVA
System Output Apparent Power L1	Analog_Value	70	5868_1	RD	Units: kVA
System Output Apparent Power L2	Analog_Value	71	5869_1	RD	Units: kVA

Table 4-31 Liebert APS™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Output Power	Analog_Value	72	4208_1	RD	Units: kW
System Output Power L1	Analog_Value	73	5859_1	RD	Units: kW
System Output Power L2	Analog_Value	74	5860_1	RD	Units: kW
System Output Pct Power L1	Analog_Value	75	4223_1	RD	Units: %
System Output Pct Power L2	Analog_Value	76	4224_1	RD	Units: %
Maximum Load Alarm Limit	Analog_Value	77	5813_1	RW	Units: kVA
Shutdown After Delay	Analog_Value	78	5814_1	RW	Units: sec
Reboot After Delay	Analog_Value	79	5815_1	RW	Units: sec
Output On Delay	Analog_Value	80	5816_1	RW	Units: sec
System Status					
System Capacity	Analog_Value	91	5821_1	RD	Units: VA
Frame Capacity	Analog_Value	92	5822_1	RD	Units: VA
Number of Installed Power Modules	Analog_Value	93	5823_1	RD	—
Number Of Active Power Modules	Analog_Value	94	5824_1	RD	—
Number Of Power Modules With Warnings	Analog_Value	95	5825_1	RD	—
Number Of Failed Power Modules	Analog_Value	96	5826_1	RD	—
Number of Installed Battery Strings	Analog_Value	97	5827_1	RD	—
Number of Active Battery Strings	Analog_Value	98	5828_1	RD	—
Number of Battery Strings With Warnings	Analog_Value	99	5829_1	RD	—
Number of Failed Battery Strings	Analog_Value	100	5830_1	RD	—
Auto Restart Delay	Analog_Value	101	5852_1	RW	Units: sec
No Load Warning Current Threshold	Analog_Value	102	5866_1	RW	Units: A AC
No Load Warning Delay	Analog_Value	103	5867_1	RW	Units: min
Inlet air temperature	Analog_Value	104	4291_1	RD	Units: deg C
Inlet air temperature	Analog_Value	10104	4291_1_deg_F	RD	Units: deg F
BatteryModule 1					
Battery String Voltage	Analog_Value	114	5843_1	RD	Units: VDC
Battery Module Temperature	Analog_Value	115	5844_1	RD	Units: deg C
Battery Module Temperature	Analog_Value	10115	5844_1_deg_F	RD	Units: deg F
Number of Discharge Cycles	Analog_Value	116	5845_1	RD	—
Accumulated Discharge Time	Analog_Value	117	5846_1	RD	Units: hr
BatteryModule 2					
Battery String Voltage	Analog_Value	128	5843_2	RD	Units: VDC
Battery Module Temperature	Analog_Value	129	5844_2	RD	Units: deg C
Battery Module Temperature	Analog_Value	10129	5844_2_deg_F	RD	Units: deg F
Number of Discharge Cycles	Analog_Value	130	5845_2	RD	—
Accumulated Discharge Time	Analog_Value	131	5846_2	RD	Units: hr
BatteryModule 80					
Battery String Voltage	Analog_Value	1220	5843_80	RD	Units: VDC
Battery Module Temperature	Analog_Value	1221	5844_80	RD	Units: deg C
Battery Module Temperature	Analog_Value	11221	5844_80_deg_F	RD	Units: deg F
Number of Discharge Cycles	Analog_Value	1222	5845_80	RD	—
Accumulated Discharge Time	Analog_Value	1223	5846_80	RD	Units: hr
System Configuration					
System Date and Time	Analog_Value	1234	4293_1	RW	—

Table 4-32 Liebert APS™—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Protocol					
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU
Bypass					
Bypass Qualification Status	MultiState_Value	12	4737_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Battery					
UPS Battery Status	MultiState_Value	23	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Battery is	MultiState_Value	24	5799_1	RD	1 = fully charged 2 = charging 3 = discharging 4 = not charging (charger off)
Automatic Battery Test	MultiState_Value	25	5803_1	RW	1 = disabled 2 = enabled
Auto Battery Test Interval	MultiState_Value	26	5805_1	RW	1 = 8 weeks 2 = 12 weeks 3 = 16 weeks 4 = 20 weeks 5 = 26 weeks
Manual Battery Test	MultiState_Value	27	5858_1	WO	1 = Start Test
Output					
Output Qualification Status	MultiState_Value	38	4744_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Inverter					
Inverter On/Off State	MultiState_Value	49	4746_1	RD	1 = off 2 = on
System Set To Operate With	MultiState_Value	50	5820_1	RW	1 = No Redundancy 2 = Redundancy
System Status					
UPS Output Source	MultiState_Value	61	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer

Table 4-32 Liebert APS™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Status	MultiState_Value	62	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
Auto Restart	MultiState_Value	63	5831_1	RW	1 = disabled 2 = enabled
Auto Restart Minimum Battery Setting	MultiState_Value	64	5832_1	RW	1 = 0% 2 = 10% 3 = 20% 4 = 30% 5 = 40% 6 = 50% 7 = 60% 8 = 70% 9 = 80% 10 = 90%
PowerModule 1					
Module Operating Status	MultiState_Value	75	5833_1	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault
Inverter Status	MultiState_Value	76	5864_1	RD	1 = Inverter Inactive 2 = Inverter Active
PowerModule 2					
Module Operating Status	MultiState_Value	87	5833_2	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault
Inverter Status	MultiState_Value	88	5864_2	RD	1 = Inverter Inactive 2 = Inverter Active
PowerModule 10					
Module Operating Status	MultiState_Value	183	5833_10	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault
Inverter Status	MultiState_Value	184	5864_10	RD	1 = Inverter Inactive 2 = Inverter Active
BatteryModule 1					
Module Operating Status	MultiState_Value	195	5834_1	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fau
BatteryModule 2					
Module Operating Status	MultiState_Value	206	5834_2	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault

Table 4-32 Liebert APS™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
BatteryModule 80					
Module Operating Status	MultiState_Value	1064	5834_80	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault
ChargerModule					
Module Operating Status	MultiState_Value	1075	5835_1	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault
Charger Mode	MultiState_Value	1076	5841_1	RD	1 = Not Charging 2 = Float Charging 3 = Current Limit Charging 4 = Equalize Charging
BypassControlModule					
Module Operating Status	MultiState_Value	1087	5836_1	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault

Table 4-33 Liebert APS™—Glossary

Data Label	Data Description
Accumulated Discharge Time	The highest accumulated battery discharge time among installed battery modules.
Accumulated Discharge Time	Total accumulated discharge time for the Battery Module since it was made.
Auto Battery Test Interval	The time between automatic battery tests.
Auto Restart Delay	If 'Auto Restart' is set to 'enabled' the UPS will not restart the load after a battery discharge until this amount of time has elapsed since the restoration of utility power.
Auto Restart Minimum Battery Setting	The percent state of charge that the batteries must have before the unit is allowed to auto restart.
Auto Restart	When “enabled,” the UPS will automatically restart the load when utility power is restored after a battery discharge.
Automatic Battery Test	Enable/disable the automatic battery test schedule.
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Discharging	The battery is discharging
Battery is	Battery charge status.
Battery Manual Test In Progress	Manual battery test is in progress
Battery Module Fault	One or more battery modules are reporting a fault condition.
Battery Module Over Temperature	The Battery Module has detected an over temperature condition.
Battery Module Temperature Sensor Fault	A Battery Module temperature sensor fault has been detected.
Battery Module Temperature	The battery temperature measured by the Battery Module.
Battery Module Warning	One or more battery modules are reporting a warning condition.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Percentage Charge	The percentage of battery charge
Battery String Voltage	The voltage between the positive and negative battery terminals of a battery string.
Battery Temperature Imbalance	Excessive temperature differences between battery sensors detected
Battery Temperature	The highest battery temperature among all installed Battery Modules.
Battery Test Failed	Battery test failed
Battery Test Passed	Battery test passed
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass Auto Retransfer Failed	After performing a recoverable transfer to bypass, an attempt to auto retransfer from bypass to inverter failed
Bypass Frequency Error	The bypass frequency is outside the inverter synchronization limits
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS L1-L2	The bypass input RMS voltage between Lines 1 and 2
Bypass Input Voltage RMS L1-N	The bypass input RMS voltage between Line 1 and Neutral
Bypass Input Voltage RMS L2-N	The bypass input RMS voltage between Line 2 and Neutral
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload	Bypass overloaded, reduce load immediately.
Bypass Qualification Status	bypass qualification status
Charger Mode	The Charger Module is operating in the stated charging mode.
Charger Module Fan Fault	The Charger Module has detected a fan fault.
Check Air Filter	Please check air filter, it may need to be cleaned or replaced.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value

Table 4-33 Liebert APS™—Glossary (continued)

Data Label	Data Description
Frame Capacity	Total system capacity supported when the maximum number of power modules are installed.
Frame Fan Fault	The frame top outlet fan has failed.
Inlet Air Temperature	The temperature of the inlet air.
Inverter On/Off State	inverter on/off state
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Status	Status of the inverter output. Active means the inverter is online with regulated output voltage and ready to power the load. Inactive means the inverter is offline and not ready to power the load.
Loss of Redundancy	The system has an insufficient number of power modules to provide redundancy.
Low Battery - Shutdown Imminent	If active and guaranteed shutdown is enabled, a low battery reserve condition exists that will shutdown the UPS.
Low Battery Warning Time	When battery time remaining falls to, or below, this value the low battery alarm is activated.
Manual Battery Test	Command to initiate a manual battery test.
Maximum Load Alarm Limit	Maximum load [VA] supportable without a 'Maximum Load Alarm' condition.
Maximum Load Alarm	Maximum load alarm indicating load setting has been exceeded.
Module Operating Status	The operating status for this Battery Module.
Module Operating Status	The operating status for this Bypass Control Module.
Module Operating Status	The operating status for this Charger Module.
Module Operating Status	The operating status for this Power Module.
No Load Warning Current Threshold	If the output current is below this number of amps for a period of [No Load Warning Delay] time, the [No Load Warning] will become active.
No Load Warning Delay	If the output current is below the [No Load Warning Current Threshold] number of amps for this period of time, the [No Load Warning] will become active.
No Load Warning	Indicates the UPS has output voltage but the output current is below a set threshold [No Load Warning Current Threshold] for a set period of time [No Load Warning Delay].
Number of Active Battery Strings	The total number of active battery strings.
Number Of Active Power Modules	The total number of active power modules.
Number of Battery Strings With Warnings	The total number of battery strings with warnings.
Number of Discharge Cycles	The highest number of battery discharge cycles among all installed Battery Modules.
Number of Discharge Cycles	The total number of battery discharge cycles for the Battery Module since it was made.
Number of EBC Installed	The total number of Extended Battery Cabinets installed.
Number of Failed Battery Strings	The total number of failed battery strings.
Number Of Failed Power Modules	The total number of failed power modules.
Number of Installed Battery Strings	The total number of battery strings installed.
Number of Installed Power Modules	The total number of Power Modules installed.
Number Of Power Modules With Warnings	The total number of power modules with warnings.
Number Of Transfers To Bypass	The total number of transfers to bypass from inverter since system startup.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Off Pending	Output off pending - shutdown imminent.
Output On Delay	When a value is written to this point the output will be turned on after the specified time has elapsed.

Table 4-33 Liebert APS™—Glossary (continued)

Data Label	Data Description
Output Overload	An overload exists on the output.
Output Qualification Status	output qualification status
Power Module Failure	One or more conditions indicate a power module failure, service is required.
Power Module Fan Fault	The Power Module has detected a fan fault.
Power Module Over Temperature	The Power Module has detected an over temperature condition.
Power Module Shutdown - Over Temperature	Power Module has shutdown due to over temperature.
Power Module Warning	One or more power modules is reporting a warning condition.
Reboot After Delay	When a value is written to this point the output will be turned off after the specified time has elapsed and then turned back on 10-30 seconds later.
Rectifier Failure	Rectifier failure - rectifier is off
Replace Battery Module	The Battery Module needs to be replaced.
Server Class	The general classification for this system
Shutdown After Delay	When a value is written to this point the system will shutdown after the specified time has elapsed and output will remain off.
System Capacity	System capacity supported by the installed power modules.
System Date and Time	The system date and time
System Input Black Out Count	The number of occurrences, since the last reset, where the input was not qualified to provide power to the system
System Input Brown Out Count	The number of occurrences, since the last reset, where the system input voltage has fallen below a pre-determined threshold for a specified amount of time
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Frequency	The system input frequency
System Input Power Factor L1	The system input power factor for Line 1
System Input Power Factor L2	The system input power factor for Line 2
System Input Power Factor L3	The system input power factor for Line 3
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS Current L1	The system input RMS current for Line 1
System Input RMS Current L2	The system input RMS current for Line 2
System Input RMS Current L3	The system input RMS current for Line 3
System Input RMS L1-L2	The System Input RMS Voltage between Line 1 and Line 2
System Input RMS L1-N	The System Input RMS Voltage between Line 1 and Neutral
System Input RMS L2-L3	The System Input RMS Voltage between Line 2 and Line 3
System Input RMS L2-N	The System Input RMS Voltage between Line 2 and Neutral
System Input RMS L3-L1	The System Input RMS Voltage between Line 3 and Line 1
System Input RMS L3-N	The System Input RMS Voltage between Line 3 and Neutral
System Output Apparent Power L1	System output apparent power on Line 1
System Output Apparent Power L2	System output apparent power on Line 2
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Frequency	The system output frequency
System Output Off	The system output is off
System Output Pct Power L1	The system output power on Line 1 as a percentage of the rated capacity
System Output Pct Power L2	The system output power on Line 2 as a percentage of the rated capacity
System Output Power Factor L1	The system output power factor of Line 1

Table 4-33 Liebert APS™—Glossary (continued)

Data Label	Data Description
System Output Power Factor L2	The system output power factor of Line 2
System Output Power L1	The system output power on Line 1.
System Output Power L2	The system output power on Line 2.
System Output Power	The sum total power of all system output phases
System Output RMS Current L1	The system output RMS current for Line 1
System Output RMS Current L2	The system output RMS current for Line 2
System Output Voltage RMS L1-L2	The system output RMS voltage between Lines 1 and 2
System Output Voltage RMS L1-N	The system output RMS voltage between Line 1 and Neutral
System Output Voltage RMS L2-N	The system output RMS voltage between Line 2 and Neutral
System Set To Operate With	If this point reports 'Redundancy' then the system is configured for redundancy and the 'Loss of Redundancy' alarm is enabled.
System Shutdown - Hardware Fault	Shutdown was due to an externally applied hardware control signal.
System Shutdown - Low Battery	Shutdown was due to a low battery condition.
System Shutdown - Output Short	Shutdown was due to a short on the output.
System Shutdown - Remote Shutdown	Shutdown was due to a remote communications shutdown command.
System Shutdown - Transformer Over Temperature	System shutdown due to transformer over temperature.
System Status	The operating status for the system
Time Until Next Auto Battery Test	The time until the next automatic battery test is started.
Transformer Fan Fault	The transformer fan has failed.
Transformer Overtemperature	Transformer temperature has exceeded the limit
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
UPS Battery Status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source

Table 4-34 Liebert EPM™—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
System Status					
Battery Equalize	Binary_Value	1	4170_1	RD	Active on Alarm
Battery Charging Inhibited	Binary_Value	2	4200_1	RD	Active on Alarm
On Generator	Binary_Value	3	4315_1	RD	Active on Alarm
Battery Self Test	Binary_Value	4	4741_1	RD	Active on Alarm
Battery Circuit Breaker 1 Open	Binary_Value	5	4176_1	RD	Active on Alarm
Battery Circuit Breaker 2 Open	Binary_Value	6	4179_1	RD	Active on Alarm
Battery Circuit Breaker 3 Open	Binary_Value	7	4182_1	RD	Active on Alarm
Battery Circuit Breaker 4 Open	Binary_Value	8	4185_1	RD	Active on Alarm
Main Battery Disconnect Open	Binary_Value	9	4173_1	RD	Active on Alarm
System Events					
System Input Power Problem	Binary_Value	20	4122_1	RD	Active on Alarm
Rectifier Failure	Binary_Value	21	4295_1	RD	Active on Alarm
Inverter Failure	Binary_Value	22	4233_1	RD	Active on Alarm
Bypass Not Available	Binary_Value	23	4135_1	RD	Active on Alarm
Battery Low	Binary_Value	24	4162_1	RD	Active on Alarm
LBS Inhibited	Binary_Value	25	4758_1	RD	Active on Alarm
System Fan Failure	Binary_Value	26	4311_1	RD	Active on Alarm
Equipment Over Temperature	Binary_Value	27	4310_1	RD	Active on Alarm
System Shutdown - EPO	Binary_Value	28	4213_1	RD	Active on Alarm
Bypass Static Switch Unavailable	Binary_Value	29	4143_1	RD	Active on Alarm
Bypass - Excess Auto Retransfers	Binary_Value	30	4139_1	RD	Active on Alarm
Parallel Comm Warning	Binary_Value	31	4823_1	RD	Active on Alarm
Power Supply Failure	Binary_Value	32	4314_1	RD	Active on Alarm
Battery Over Temperature	Binary_Value	33	4219_1	RD	Active on Alarm
System Input Phs Rotation Error	Binary_Value	34	4146_1	RD	Active on Alarm
Fuse Failure	Binary_Value	35	4440_1	RD	Active on Alarm
Inverter Overload	Binary_Value	36	5960_1	RD	Active on Alarm
MMS Overload	Binary_Value	37	4831_1	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	38	4290_1	RD	Active on Alarm
System Output Fault	Binary_Value	39	4389_1	RD	Active on Alarm
Internal Communications Failure	Binary_Value	40	4300_1	RD	Active on Alarm
Battery Charging Error	Binary_Value	41	4164_1	RD	Active on Alarm
System Input Current Imbalance	Binary_Value	42	4382_1	RD	Active on Alarm
Battery Not Qualified	Binary_Value	43	5149_1	RD	Active on Alarm
Battery Terminals Reversed	Binary_Value	44	5150_1	RD	Active on Alarm
Battery Converter Failure	Binary_Value	45	5151_1	RD	Active on Alarm
Load Sharing Fault	Binary_Value	46	5153_1	RD	Active on Alarm
DC Bus Abnormal	Binary_Value	47	5154_1	RD	Active on Alarm
Mains Input Neutral Lost	Binary_Value	48	5155_1	RD	Active on Alarm
Load Impact Transfer	Binary_Value	49	5156_1	RD	Active on Alarm
User Operation Invalid	Binary_Value	50	5157_1	RD	Active on Alarm
Battery Discharging	Binary_Value	51	4168_1	RD	Active on Alarm
UPS Output on Bypass	Binary_Value	52	4298_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	53	4299_1	RD	Active on Alarm
Battery Capacity Low	Binary_Value	54	4166_1	RD	Active on Alarm

Table 4-34 Liebert EPM™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MMS On Battery	Binary_Value	55	4834_1	RD	Active on Alarm
Loss of Redundancy	Binary_Value	56	4825_1	RD	Active on Alarm
Top Outlet Fan Fault	Binary_Value	57	5770_1	RD	Active on Alarm
MMS Over Capacity	Binary_Value	58	5771_1	RD	Active on Alarm
Bypass Input Voltage Fault	Binary_Value	59	5957_1	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	60	5839_1	RD	Active on Alarm
Excess ECO Suspends	Binary_Value	61	5458_1	RD	Active on Alarm
Battery Ground Fault	Binary_Value	62	4222_1	RD	Active on Alarm
System Input Current Limit	Binary_Value	63	4147_1	RD	Active on Alarm
Inverter Relay Fault	Binary_Value	64	6059_1	RD	Active on Alarm
Transfer to Bypass - System Overload	Binary_Value	65	6060_1	RD	Active on Alarm
Input Source Backfeed	Binary_Value	66	6061_1	RD	Active on Alarm
Loss of Synchronization	Binary_Value	67	6062_1	RD	Active on Alarm
Battery Converter Current Limit	Binary_Value	68	6063_1	RD	Active on Alarm
LBS Cable Failure	Binary_Value	69	6064_1	RD	Active on Alarm
Battery Charge Equalization Timeout	Binary_Value	70	6065_1	RD	Active on Alarm
Parallel Cable Failure	Binary_Value	71	6066_1	RD	Active on Alarm
Battery Fault	Binary_Value	72	6067_1	RD	Active on Alarm
Battery Room Alarm	Binary_Value	73	6068_1	RD	Active on Alarm
Battery Breaker 1 Open Failure	Binary_Value	74	4177_1	RD	Active on Alarm
Battery Breaker 2 Open Failure	Binary_Value	75	4180_1	RD	Active on Alarm
Battery Breaker 3 Open Failure	Binary_Value	76	4183_1	RD	Active on Alarm
Battery Breaker 4 Open Failure	Binary_Value	77	4186_1	RD	Active on Alarm
Bypass Backfeed Detected	Binary_Value	78	4216_1	RD	Active on Alarm

Table 4-35 Liebert EPM™—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input RMS A-B	Analog_Value	1	4097_1	RD	Units: VAC
System Input RMS B-C	Analog_Value	2	4099_1	RD	Units: VAC
System Input RMS C-A	Analog_Value	3	4101_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	4	4113_1	RD	Units: A AC
System Input RMS Current Phase B	Analog_Value	5	4114_1	RD	Units: A AC
System Input RMS Current Phase C	Analog_Value	6	4115_1	RD	Units: A AC
System Input Frequency	Analog_Value	7	4105_1	RD	Units: Hz
System Input RMS A-N	Analog_Value	8	4096_1	RD	Units: VAC
System Input RMS B-N	Analog_Value	9	4098_1	RD	Units: VAC
System Input RMS C-N	Analog_Value	10	4100_1	RD	Units: VAC
System Input Power Factor Phs A	Analog_Value	11	4116_1	RD	
System Input Power Factor Phs B	Analog_Value	12	4117_1	RD	
System Input Power Factor Phs C	Analog_Value	13	4118_1	RD	
Bypass					
Bypass Input Voltage RMS A-N	Analog_Value	24	4128_1	RD	Units: VAC
Bypass Input Voltage RMS B-N	Analog_Value	25	4129_1	RD	Units: VAC
Bypass Input Voltage RMS C-N	Analog_Value	26	4130_1	RD	Units: VAC
Bypass Input Frequency	Analog_Value	27	4131_1	RD	Units: Hz
Bypass Input Voltage RMS A-B	Analog_Value	28	4125_1	RD	Units: VAC
Bypass Input Voltage RMS B-C	Analog_Value	29	4126_1	RD	Units: VAC
Bypass Input Voltage RMS C-A	Analog_Value	30	4127_1	RD	Units: VAC
Battery					
Battery Time Remaining	Analog_Value	41	4150_1	RD	Units: min
Battery Volts for Cabinet	Analog_Value	42	4155_1	RD	Units: VDC
Battery Temperature for Cabinet	Analog_Value	43	4156_1	RD	Units: deg C
Battery Temperature for Cabinet	Analog_Value	10043	4156_1_deg_F	RD	Units: deg F
DC Bus Current	Analog_Value	44	4149_1	RD	Units: A DC
Output					
System Output Voltage RMS A-N	Analog_Value	55	4385_1	RD	Units: VAC
System Output Voltage RMS B-N	Analog_Value	56	4386_1	RD	Units: VAC
System Output Voltage RMS C-N	Analog_Value	57	4387_1	RD	Units: VAC
System Output RMS Current Phs A	Analog_Value	58	4204_1	RD	Units: A AC
System Output RMS Current Phs B	Analog_Value	59	4205_1	RD	Units: A AC
System Output RMS Current Phs C	Analog_Value	60	4206_1	RD	Units: A AC
System Output Frequency	Analog_Value	61	4207_1	RD	Units: Hz
System Output Voltage RMS A-B	Analog_Value	62	4201_1	RD	Units: VAC
System Output Voltage RMS B-C	Analog_Value	63	4202_1	RD	Units: VAC
System Output Voltage RMS C-A	Analog_Value	64	4203_1	RD	Units: VAC
System Output Power Factor Phs A	Analog_Value	65	4210_1	RD	
System Output Power Factor Phs B	Analog_Value	66	4211_1	RD	
System Output Power Factor Phs C	Analog_Value	67	4212_1	RD	
System Output Pct Power Phase A	Analog_Value	68	4223_1	RD	Units: %
System Output Pct Power Phase B	Analog_Value	69	4224_1	RD	Units: %
System Output Pct Power Phase C	Analog_Value	70	4225_1	RD	Units: %

Table 4-35 Liebert EPM™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MMS Output Apparent Power	Analog_Value	71	4812_1	RD	Units: kVA
MMS Output Power	Analog_Value	72	4811_1	RD	Units: kW
Output Current Crest Factor Phs A	Analog_Value	73	5159_1	RD	
Output Current Crest Factor Phs B	Analog_Value	74	5160_1	RD	
Output Current Crest Factor Phs C	Analog_Value	75	5161_1	RD	
System Output Power Phase A	Analog_Value	76	5859_1	RD	Units: kW
System Output Power Phase B	Analog_Value	77	5860_1	RD	Units: kW
System Output Power Phase C	Analog_Value	78	5959_1	RD	Units: kW
System Output Apparent Power Phs A	Analog_Value	79	5868_1	RD	Units: kVA
System Output Apparent Power Phs B	Analog_Value	80	5869_1	RD	Units: kVA
System Output Apparent Power Phs C	Analog_Value	81	5870_1	RD	Units: kVA
System Output Power	Analog_Value	82	4208_1	RD	Units: kW
System Output Apparent Power	Analog_Value	83	4209_1	RD	Units: kVA
System Configuration					
System Input Nominal Voltage	Analog_Value	94	4102_1	RD	Units: VAC
System Input Nominal Frequency	Analog_Value	95	4103_1	RD	Units: Hz
System Input Nominal Current	Analog_Value	96	4104_1	RD	Units: A AC
Bypass Nominal Voltage	Analog_Value	97	4259_1	RD	Units: VAC
System Output Nominal Voltage	Analog_Value	98	4260_1	RD	Units: VAC
System Output Nominal Frequency	Analog_Value	99	4261_1	RD	Units: Hz
System Analog					
System Date and Time	Analog_Value	110	4293_1	RW	
Total System Operating Time	Analog_Value	111	4292_1	RD	Units: hr
Average system efficiency	Analog_Value	112	6069_1	RD	Units: %
Inlet Air Temperature	Analog_Value	113	4291_1	RD	Units: deg C
Inlet Air Temperature	Analog_Value	10113	4291_1_deg_F	RD	Units: deg F

Table 4-36 Liebert EPM™—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery					
UPS battery1 status	MultiState_Value	1	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
System Status					
Inverter On/Off State	MultiState_Value	12	4746_1	RD	1 = off 2 = on
Maintenance Bypass Breaker	MultiState_Value	13	4772_1	RD	1 = Open 2 = Close 3 = Not Installed
UPS Output Source	MultiState_Value	14	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Status	MultiState_Value	15	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
ECO Mode Operation State	MultiState_Value	16	5454_1	RD	1 = disabled 2 = enabled
Input Breaker	MultiState_Value	17	4766_1	RD	1 = Open 2 = Close 3 = Not Installed
Internal Bypass Breaker	MultiState_Value	18	4769_1	RD	1 = Open 2 = Close 3 = Not Installed
Output Breaker	MultiState_Value	19	4768_1	RD	1 = Open 2 = Close 3 = Not Installed
UPS Application Mode	MultiState_Value	20	6053_1	RD	1 = UPS Mode 2 = Frequency converter mode
MMS UPS Output Source	MultiState_Value	21	4874_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer

Table 4-36 Liebert EPM™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Intelligent Parallel Operation State	MultiState_Value	22	5448_1	RD	1 = disabled 2 = enabled
Advanced Efficiency Mode	MultiState_Value	23	6054_1	RD	1 = unknown 2 = ECO mode 3 = Intelligent ECO mode 4 = Active Inverter ECO mode

Table 4-37 Liebert EPM™—Glossary

Data Label	Data Description
Advanced Efficiency Mode	Advanced efficiency modes where the UPS supports the critical load using the static bypass.
Average system efficiency	Average system efficiency
Battery Breaker 1 Open Failure	Battery circuit breaker 1 failed to open
Battery Breaker 2 Open Failure	Battery circuit breaker 2 failed to open
Battery Breaker 3 Open Failure	Battery circuit breaker 3 failed to open
Battery Breaker 4 Open Failure	Battery circuit breaker 4 failed to open
Battery Capacity Low	Battery capacity is low
Battery Charge Equalization Timeout	The battery equalizing is time out.
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Converter Current Limit	The battery converter has reached is maximum current limit.
Battery Converter Failure	Battery converter failure. This is a summary event caused by one or more power sub-modules in a UPS module.
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Fault	A short circuit exists in the battery system.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Not Qualified	The UPS battery voltage is not qualified. This event will be detected even in the absence of battery disconnect or when it is open.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Room Alarm	The ambient temperature of the battery room is abnormal.
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass Backfeed Detected	The system detected a voltage on the bypass when none was expected
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage Fault	The system has detected the bypass voltage is unqualified.
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.

Table 4-37 Liebert EPM™—Glossary (continued)

Data Label	Data Description
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Temperature	The temperature of the inlet air
Input Breaker	Input breaker
Input Source Backfeed	The battery is backfeeding the input source.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Internal Bypass Breaker	Internal bypass breaker
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Overload	Inverter in overload fault
Inverter Relay Fault	The inverter relay has malfunctioned.
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
LBS Cable Failure	Load Bus Sync communications is abnormal. A problem with the LBS cable may exist.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Load Impact Transfer	On bypass as result of load impact.
Load Sharing Fault	Difference between any phase inverter current of unit and the relevant average output current of parallel system is more than a specific percent of nominal current.
Loss of Redundancy	The multi-module collection doesn't have enough modules to satisfy the redundancy configuration.
Loss of Synchronization	The inverter and bypass are no longer synchronized.
Main Battery Disconnect Open	Main battery disconnect is open
Mains Input Neutral Lost	Loss of neutral in the input source is detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Power	The sum total power of all system output modules
MMS Over Capacity	The multi-module system load is larger than the apparent power limit setting.
MMS Overload	Multi-module system overload
MMS UPS Output Source	Multi-module UPS output source
On Generator	A generator is supplying the power to the system
Output Breaker	Output breaker
Output Current Crest Factor Phs A	Output current crest factor of Phase A.
Output Current Crest Factor Phs B	Output current crest factor of Phase B.
Output Current Crest Factor Phs C	Output current crest factor of Phase C.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Parallel Cable Failure	The UPS parallel system communications is abnormal. A problem with the parallel cable may exist.

Table 4-37 Liebert EPM™—Glossary (continued)

Data Label	Data Description
Parallel Comm Warning	Parallel communication bus warning
Power Module Over Temperature	The Power Module has detected an over temperature condition.
Power Supply Failure	Power supply failure
Rectifier Failure	Rectifier failure - rectifier is off
System Date and Time	The system date and time
System Fan Failure	System fan failure - one or more fans have failed
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Current	The nominal (or rated) system input current
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Factor Phs A	The system input power factor for Phase A
System Input Power Factor Phs B	The system input power factor for Phase B
System Input Power Factor Phs C	The system input power factor for Phase C
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power Phs A	System output apparent power on phase A
System Output Apparent Power Phs B	System output apparent power on phase B
System Output Apparent Power Phs C	System output apparent power on phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power Phase A	The system output power on phase A.
System Output Power Phase B	The system output power on phase B.
System Output Power Phase C	The system output power on phase C.
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B

Table 4-37 Liebert EPM™—Glossary (continued)

Data Label	Data Description
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
Top Outlet Fan Fault	Top outlet fan fault - one or more top outlet fans have failed.
Total System Operating Time	The cumulative operation time of the unit
Transfer to Bypass - System Overload	The UPS System has transferred to bypass because the active power modules cannot support the critical load.
UPS Application Mode	UPS application mode.
UPS battery1 status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
User Operation Invalid	User attempted an invalid operation.

Table 4-38 Liebert *e*XL™—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input Power Problem	Binary_Value	1	4122_1	RD	Active on Alarm
System Input Current Limit	Binary_Value	2	4147_1	RD	Active on Alarm
Input Undervoltage	Binary_Value	3	5568_1	RD	Active on Alarm
Bypass					
Bypass Not Available	Binary_Value	14	4135_1	RD	Active on Alarm
Bypass Overload Phase A	Binary_Value	15	4132_1	RD	Active on Alarm
Bypass Overload Phase B	Binary_Value	16	4133_1	RD	Active on Alarm
Bypass Overload Phase C	Binary_Value	17	4134_1	RD	Active on Alarm
Bypass Auto Retransfer Primed	Binary_Value	18	4137_1	RD	Active on Alarm
Bypass Auto Retransfer Failed	Binary_Value	19	4138_1	RD	Active on Alarm
Bypass - Excess Auto Retransfers	Binary_Value	20	4139_1	RD	Active on Alarm
Bypass Static Switch Overload	Binary_Value	21	4142_1	RD	Active on Alarm
Bypass Static Switch Unavailable	Binary_Value	22	4143_1	RD	Active on Alarm
Bypass Excessive Pulse Parallel	Binary_Value	23	4144_1	RD	Active on Alarm
Bypass Auto Transfer Failed	Binary_Value	24	4145_1	RD	Active on Alarm
Bypass - Manual Rexfr Inhibited	Binary_Value	25	4218_1	RD	Active on Alarm
Bypass - Manual Xfr Inhibited	Binary_Value	26	4217_1	RD	Active on Alarm
Bypass Undervoltage Warning	Binary_Value	27	5984_1	RD	Active on Alarm
Battery					
Battery Test Inhibited	Binary_Value	38	4740_1	RD	Active on Alarm
Battery Capacity Low	Binary_Value	39	4166_1	RD	Active on Alarm
Battery Discharging	Binary_Value	40	4168_1	RD	Active on Alarm
Battery Temperature Imbalance	Binary_Value	41	4169_1	RD	Active on Alarm
Battery Equalize	Binary_Value	42	4170_1	RD	Active on Alarm
Battery Self Test	Binary_Value	43	4741_1	RD	Active on Alarm
Battery Test Failed	Binary_Value	44	4323_1	RD	Active on Alarm
Main Battery Disconnect Open	Binary_Value	45	4173_1	RD	Active on Alarm
Battery Low	Binary_Value	46	4162_1	RD	Active on Alarm
Battery Temperature Sensor Fault	Binary_Value	47	4174_1	RD	Active on Alarm
Battery Circuit Breaker 1 Open	Binary_Value	48	4176_1	RD	Active on Alarm
Battery Circuit Breaker 2 Open	Binary_Value	49	4179_1	RD	Active on Alarm
Battery Circuit Breaker 3 Open	Binary_Value	50	4182_1	RD	Active on Alarm
Battery Circuit Breaker 4 Open	Binary_Value	51	4185_1	RD	Active on Alarm
Battery Circuit Breaker 5 Open	Binary_Value	52	4188_1	RD	Active on Alarm
Battery Circuit Breaker 6 Open	Binary_Value	53	4191_1	RD	Active on Alarm
Battery Circuit Breaker 7 Open	Binary_Value	54	4194_1	RD	Active on Alarm
Battery Circuit Breaker 8 Open	Binary_Value	55	4197_1	RD	Active on Alarm
Battery Over Temperature Limit	Binary_Value	56	5871_1	RD	Active on Alarm
Battery - External Monitor 1	Binary_Value	57	4220_1	RD	Active on Alarm
Battery - External Monitor 2	Binary_Value	58	4221_1	RD	Active on Alarm
Battery Low Shutdown	Binary_Value	59	4742_1	RD	Active on Alarm

Table 4-38 Liebert *e*XL™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Output					
System Shutdown - EPO	Binary_Value	70	4213_1	RD	Active on Alarm
System Output Low Power Factor	Binary_Value	71	4230_1	RD	Active on Alarm
Output Amp Over User Limit-Phs A	Binary_Value	72	4286_1	RD	Active on Alarm
Output Amp Over User Limit-Phs B	Binary_Value	73	4287_1	RD	Active on Alarm
Output Amp Over User Limit-Phs C	Binary_Value	74	4288_1	RD	Active on Alarm
System Output Fault	Binary_Value	75	4389_1	RD	Active on Alarm
Output Of/Uf	Binary_Value	76	5144_1	RD	Active on Alarm
Ground Fault	Binary_Value	77	5970_1	RD	Active on Alarm
Inverter					
Inverter Failure	Binary_Value	87	4233_1	RD	Active on Alarm
Inverter Overload Phase A	Binary_Value	88	4234_1	RD	Active on Alarm
Inverter Overload Phase B	Binary_Value	89	4235_1	RD	Active on Alarm
Inverter Overload Phase C	Binary_Value	90	4236_1	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	91	4290_1	RD	Active on Alarm
Environment					
Inlet Air Over Temperature	Binary_Value	102	4294_1	RD	Active on Alarm
Equipment Over Temp Warning	Binary_Value	103	6011_1	RD	Active on Alarm
Outlet Air Overtemperature Limit	Binary_Value	104	5768_1	RD	Active on Alarm
Equipment Temperature Sensor Fail	Binary_Value	105	4747_1	RD	Active on Alarm
Memory Card Removed	Binary_Value	106	6217_1	RD	Active on Alarm
Auto Calibration Active	Binary_Value	107	6218_1	RD	Active on Alarm
Auto Calibration Failed	Binary_Value	108	6219_1	RD	Active on Alarm
External Input Signals					
Input Contact 01	Binary_Value	116	4270_1	RD	Active on Alarm
Input Contact 02	Binary_Value	117	4271_1	RD	Active on Alarm
Input Contact 03	Binary_Value	118	4272_1	RD	Active on Alarm
Input Contact 04	Binary_Value	119	4273_1	RD	Active on Alarm
Input Contact 05	Binary_Value	120	4274_1	RD	Active on Alarm
Input Contact 06	Binary_Value	121	4275_1	RD	Active on Alarm
Input Contact 07	Binary_Value	122	4276_1	RD	Active on Alarm
Input Contact 08	Binary_Value	123	4277_1	RD	Active on Alarm
Input Contact 09	Binary_Value	124	4278_1	RD	Active on Alarm
Input Contact 10	Binary_Value	125	4279_1	RD	Active on Alarm
Input Contact 11	Binary_Value	126	4280_1	RD	Active on Alarm
Input Contact 12	Binary_Value	127	4281_1	RD	Active on Alarm
Input Contact 13	Binary_Value	128	4282_1	RD	Active on Alarm
Input Contact 14	Binary_Value	129	4283_1	RD	Active on Alarm
Input Contact 15	Binary_Value	130	4284_1	RD	Active on Alarm
Input Contact 16	Binary_Value	131	4285_1	RD	Active on Alarm
Rectifier					
Rectifier Failure	Binary_Value	142	4295_1	RD	Active on Alarm

Table 4-38 Liebert *e*XL™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System					
System Fan Failure - Redundant	Binary_Value	153	4749_1	RD	Active on Alarm
Multiple Fan Failure	Binary_Value	154	4750_1	RD	Active on Alarm
Internal Communications Failure	Binary_Value	155	4300_1	RD	Active on Alarm
UPS Output on Bypass	Binary_Value	156	4298_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	157	4299_1	RD	Active on Alarm
Backfeed Breaker Open	Binary_Value	158	4325_1	RD	Active on Alarm
Auto Restart In Progress	Binary_Value	159	4316_1	RD	Active on Alarm
Power Supply Failure	Binary_Value	160	4314_1	RD	Active on Alarm
On Generator	Binary_Value	161	4315_1	RD	Active on Alarm
Auto Restart Inhibited - Ext	Binary_Value	162	4317_1	RD	Active on Alarm
Automatic Restart Failed	Binary_Value	163	4439_1	RD	Active on Alarm
Main Controller Fault	Binary_Value	164	4753_1	RD	Active on Alarm
Fuse Failure	Binary_Value	165	4440_1	RD	Active on Alarm
System Controller Error	Binary_Value	166	4441_1	RD	Active on Alarm
System Breaker(s) Open Failure	Binary_Value	167	4442_1	RD	Active on Alarm
System Breaker(s) Close Failure	Binary_Value	168	4754_1	RD	Active on Alarm
EMO Shutdown	Binary_Value	169	5769_1	RD	Active on Alarm
Service Code Active	Binary_Value	170	4756_1	RD	Active on Alarm
LBS Inhibited	Binary_Value	171	4758_1	RD	Active on Alarm
Regeneration Active	Binary_Value	172	5881_1	RD	Active on Alarm
Regeneration Operation Terminated	Binary_Value	173	5882_1	RD	Active on Alarm
Regeneration Operation Failure	Binary_Value	174	5883_1	RD	Active on Alarm
Controls Reset Required	Binary_Value	175	4760_1	RD	Active on Alarm
LBS Active - Master	Binary_Value	176	5561_1	RD	Active on Alarm
LBS Active - Slave	Binary_Value	177	5562_1	RD	Active on Alarm
Cont Tie Active	Binary_Value	178	5788_1	RD	Active on Alarm
UPSC Communication Failure	Binary_Value	179	6080_1	RD	Active on Alarm
Parallel Cable Failure	Binary_Value	180	6066_1	RD	Active on Alarm
MultiModule					
Parallel Comm Warning	Binary_Value	191	4823_1	RD	Active on Alarm
Loss of Redundancy	Binary_Value	192	4825_1	RD	Active on Alarm
MMS Transfer Inhibit	Binary_Value	193	4827_1	RD	Active on Alarm
MMS Retransfer Inhibit	Binary_Value	194	4828_1	RD	Active on Alarm
MMS Overload	Binary_Value	195	4831_1	RD	Active on Alarm
MMS On Battery	Binary_Value	196	4834_1	RD	Active on Alarm
MMS Low Battery Warning	Binary_Value	197	4835_1	RD	Active on Alarm
MMS Module Alarm Active	Binary_Value	198	5145_1	RD	Active on Alarm
Module Output Breaker Open	Binary_Value	199	6220_1	RD	Active on Alarm
Intelligent Paralleling					
Module In Standby - Intelligent Paralleling	Binary_Value	209	5453_1	RD	Active on Alarm
ECO Mode					
ECO Mode Active	Binary_Value	220	5456_1	RD	Active on Alarm
ECO Mode Suspended	Binary_Value	221	5457_1	RD	Active on Alarm
Excess ECO Suspends	Binary_Value	222	5458_1	RD	Active on Alarm

Table 4-38 Liebert *e*XL™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Service Reminder					
Service Required	Binary_Value	233	4726_1	RD	Active on Alarm
DC Bus					
Precharge Circuit Failed	Binary_Value	251	6216_1	RD	Active on Alarm

Table 4-39 Liebert *e*XL™—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input RMS A-B	Analog_Value	1	4097_1	RD	Units: VAC
System Input RMS B-C	Analog_Value	2	4099_1	RD	Units: VAC
System Input RMS C-A	Analog_Value	3	4101_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	4	4113_1	RD	Units: A AC
System Input RMS Current Phase B	Analog_Value	5	4114_1	RD	Units: A AC
System Input RMS Current Phase C	Analog_Value	6	4115_1	RD	Units: A AC
System Input Frequency	Analog_Value	7	4105_1	RD	Units: Hz
Bypass					
Bypass Input Voltage RMS A-B	Analog_Value	18	4125_1	RD	Units: VAC
Bypass Input Voltage RMS B-C	Analog_Value	19	4126_1	RD	Units: VAC
Bypass Input Voltage RMS C-A	Analog_Value	20	4127_1	RD	Units: VAC
Bypass Input Frequency	Analog_Value	21	4131_1	RD	Units: Hz
Bypass Sync Phase Difference	Analog_Value	22	4136_1	RD	Units: deg
Bypass SS Overload Time Remain	Analog_Value	23	4157_1	RD	Units: sec
Manual Transfer Bypass Voltage High Limit	Analog_Value	24	5980_1	RD	Units: %
Manual Transfer Bypass Voltage Low Limit	Analog_Value	25	5981_1	RD	Units: %
Auto Retransfer Time Remaining	Analog_Value	26	4738_1	RD	Units: sec
Battery					
Battery Total Discharge Time	Analog_Value	37	4152_1	RD	Units: hr
Battery Percentage Charge	Analog_Value	38	4153_1	RD	Units: %
Battery Volts for Cabinet 1	Analog_Value	39	4155_1_1	RD	Units: VDC
Battery Volts for Cabinet 2	Analog_Value	40	4155_1_2	RD	Units: VDC
Battery Volts for Cabinet 3	Analog_Value	41	4155_1_3	RD	Units: VDC
Battery Volts for Cabinet 4	Analog_Value	42	4155_1_4	RD	Units: VDC
Battery Volts for Cabinet 5	Analog_Value	43	4155_1_5	RD	Units: VDC
Battery Volts for Cabinet 6	Analog_Value	44	4155_1_6	RD	Units: VDC
Battery Volts for Cabinet 7	Analog_Value	45	4155_1_7	RD	Units: VDC
Battery Volts for Cabinet 8	Analog_Value	46	4155_1_8	RD	Units: VDC
Battery Temperature for Cabinet 1	Analog_Value	47	4156_1_1	RD	Units: deg C
Battery Temperature for Cabinet 1	Analog_Value	10047	4156_1_1_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 2	Analog_Value	48	4156_1_2	RD	Units: deg C
Battery Temperature for Cabinet 2	Analog_Value	10048	4156_1_2_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 3	Analog_Value	49	4156_1_3	RD	Units: deg C
Battery Temperature for Cabinet 3	Analog_Value	10049	4156_1_3_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 4	Analog_Value	50	4156_1_4	RD	Units: deg C
Battery Temperature for Cabinet 4	Analog_Value	10050	4156_1_4_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 5	Analog_Value	51	4156_1_5	RD	Units: deg C
Battery Temperature for Cabinet 5	Analog_Value	10051	4156_1_5_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 6	Analog_Value	52	4156_1_6	RD	Units: deg C
Battery Temperature for Cabinet 6	Analog_Value	10052	4156_1_6_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 7	Analog_Value	53	4156_1_7	RD	Units: deg C
Battery Temperature for Cabinet 7	Analog_Value	10053	4156_1_7_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 8	Analog_Value	54	4156_1_8	RD	Units: deg C
Battery Temperature for Cabinet 8	Analog_Value	10054	4156_1_8_deg_F	RD	Units: deg F
Battery Recharge Voltage	Analog_Value	55	5987_1	RD	Units: VDC

Table 4-39 Liebert eXL™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery Float Voltage	Analog_Value	56	5988_1	RD	Units: VDC
Battery Amp-Hours Consumed This Discharge	Analog_Value	57	4739_1	RD	Units: AH
Battery Time Remaining	Analog_Value	58	4150_1	RD	Units: min
Battery Discharge Time	Analog_Value	59	4151_1	RD	Units: sec
Battery Discharge Power	Analog_Value	60	4159_1	RD	Units: kW
Battery Commission Date	Analog_Value	61	4160_1	RD	—
Battery Equalize Voltage	Analog_Value	62	5989_1	RD	Units: VDC
Battery Equalize Time	Analog_Value	63	5990_1	RD	Units: hr
Battery Self Test Cycle Time	Analog_Value	64	5991_1	RD	Units: week(s)
Battery Self Test Time of Test	Analog_Value	65	5992_1	RD	Units: min
Battery Self Test Start Date	Analog_Value	66	5993_1	RD	—
Battery Self Test Duration	Analog_Value	67	5994_1	RD	Units: min
Battery Self Test Minimum Voltage	Analog_Value	68	5995_1	RD	Units: VDC
Low Battery Warning Time	Analog_Value	69	5802_1	RD	Units: min
Battery Over Temp Warn Setting	Analog_Value	70	5996_1	RD	Units: deg C
Battery Over Temp Warn Setting	Analog_Value	10070	5996_1_deg_F	RD	Units: deg F
Battery Over Temp Limit Setting	Analog_Value	71	5997_1	RD	Units: deg C
Battery Over Temp Limit Setting	Analog_Value	10071	5997_1_deg_F	RD	Units: deg F
Battery Cell Count Adjust	Analog_Value	72	6000_1	RD	—
Battery Cell Count	Analog_Value	73	6001_1	RD	—
DC Bus					
DC Bus Voltage	Analog_Value	84	4148_1	RD	Units: VDC
DC Bus Current	Analog_Value	85	4149_1	RD	Units: A DC
Output					
System Output Voltage RMS A-B	Analog_Value	96	4201_1	RD	Units: VAC
System Output Voltage RMS B-C	Analog_Value	97	4202_1	RD	Units: VAC
System Output Voltage RMS C-A	Analog_Value	98	4203_1	RD	Units: VAC
System Output RMS Current Phs A	Analog_Value	99	4204_1	RD	Units: A AC
System Output RMS Current Phs B	Analog_Value	100	4205_1	RD	Units: A AC
System Output RMS Current Phs C	Analog_Value	101	4206_1	RD	Units: A AC
System Output Frequency	Analog_Value	102	4207_1	RD	Units: Hz
System Output Power	Analog_Value	103	4208_1	RD	Units: kW
System Output Apparent Power	Analog_Value	104	4209_1	RD	Units: kVA
System Output Power Factor Phs A	Analog_Value	105	4210_1	RD	—
System Output Power Factor Phs B	Analog_Value	106	4211_1	RD	—
System Output Power Factor Phs C	Analog_Value	107	4212_1	RD	—
System Output Pct Power Phase A	Analog_Value	108	4223_1	RD	Units: %
System Output Pct Power Phase B	Analog_Value	109	4224_1	RD	Units: %
System Output Pct Power Phase C	Analog_Value	110	4225_1	RD	Units: %
System Output Pct Pwr (VA) Phs A	Analog_Value	111	4226_1	RD	Units: %
System Output Pct Pwr (VA) Phs B	Analog_Value	112	4227_1	RD	Units: %
System Output Pct Pwr (VA) Phs C	Analog_Value	113	4228_1	RD	Units: %

Table 4-39 Liebert eXL™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Inverter					
Inverter Overload Time Remaining	Analog_Value	124	4232_1	RD	Units: sec
Maximum Load Exceeded Phase A	Analog_Value	125	6005_1	RD	Units: %
Maximum Load Exceeded Phase B	Analog_Value	126	6006_1	RD	Units: %
Maximum Load Exceeded Phase C	Analog_Value	127	6007_1	RD	Units: %
Maximum Load Exceeded Delay	Analog_Value	128	6008_1	RD	Units: sec
Environment					
Inlet Air Warning Setting	Analog_Value	139	6010_1	RD	Units: deg C
Inlet Air Warning Setting	Analog_Value	10139	6010_1_deg_F	RD	Units: deg F
Inlet Air Temperature	Analog_Value	140	4291_1	RD	Units: deg C
Inlet Air Temperature	Analog_Value	10140	4291_1_deg_F	RD	Units: deg F
Total System Operating Time	Analog_Value	141	4292_1	RD	Units: hr
System Date and Time	Analog_Value	142	4293_1	RW	—
Total kW Hours Saved	Analog_Value	143	5446_1	RD	Units: kWH
External Input Signals					
Delay for Input Contact 01	Analog_Value	154	6013_1	RD	Units: sec
Delay for Input Contact 02	Analog_Value	155	6014_1	RD	Units: sec
Delay for Input Contact 03	Analog_Value	156	6015_1	RD	Units: sec
Delay for Input Contact 04	Analog_Value	157	6016_1	RD	Units: sec
Delay for Input Contact 05	Analog_Value	158	6017_1	RD	Units: sec
Delay for Input Contact 06	Analog_Value	159	6018_1	RD	Units: sec
Delay for Input Contact 07	Analog_Value	160	6019_1	RD	Units: sec
Delay for Input Contact 08	Analog_Value	161	6020_1	RD	Units: sec
Delay for Input Contact 09	Analog_Value	162	6021_1	RD	Units: sec
Delay for Input Contact 10	Analog_Value	163	6022_1	RD	Units: sec
Delay for Input Contact 11	Analog_Value	164	6023_1	RD	Units: sec
Delay for Input Contact 12	Analog_Value	165	6024_1	RD	Units: sec
Delay for Input Contact 13	Analog_Value	166	6025_1	RD	Units: sec
Delay for Input Contact 14	Analog_Value	167	6026_1	RD	Units: sec
Delay for Input Contact 15	Analog_Value	168	6027_1	RD	Units: sec
Delay for Input Contact 16	Analog_Value	169	6028_1	RD	Units: sec
External Output Signals 1					
PRB Relay Trigger Event # 1	Analog_Value	180	6075_1	RD	—
PRB Relay Trigger Event # 2	Analog_Value	181	6076_1	RD	—
PRB Relay Trigger Event # 3	Analog_Value	182	6077_1	RD	—
PRB Relay Trigger Event # 4	Analog_Value	183	6078_1	RD	—
PRB Delay	Analog_Value	184	6079_1	RD	—
External Output Signals 2					
PRB Relay Trigger Event # 1	Analog_Value	195	6075_2	RD	—
PRB Relay Trigger Event # 2	Analog_Value	196	6076_2	RD	—
PRB Relay Trigger Event # 3	Analog_Value	197	6077_2	RD	—
PRB Relay Trigger Event # 4	Analog_Value	198	6078_2	RD	—

Table 4-39 Liebert eXL™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
External Output Signals 16					
PRB Relay Trigger Event # 1	Analog_Value	405	6075_16	RD	—
PRB Relay Trigger Event # 2	Analog_Value	406	6076_16	RD	—
PRB Relay Trigger Event # 3	Analog_Value	407	6077_16	RD	—
PRB Relay Trigger Event # 4	Analog_Value	408	6078_16	RD	—
PRB Delay	Analog_Value	409	6079_16	RD	—
System					
System Accumulated Energy	Analog_Value	420	5789_1	RW	Units: kWH
Module Accumulated Energy	Analog_Value	421	5790_1	RW	Units: kWH
Output kWh Reset Timestamp	Analog_Value	422	5791_1	RD	—
Output Peak kW Demand	Analog_Value	423	5793_1	RD	Units: kW
Output Peak kW Demand Hist	Analog_Value	424	5794_1	RD	Units: kW
Peak kW Demand Timestamp	Analog_Value	425	5797_1	RD	—
Regeneration Time Remaining	Analog_Value	426	6048_1	RD	Units: min
Ratings					
Bypass Nominal Voltage	Analog_Value	437	4259_1	RD	Units: VAC
System Input Nominal Voltage	Analog_Value	438	4102_1	RD	Units: VAC
System Input Nominal Frequency	Analog_Value	439	4103_1	RD	Units: Hz
System Output Nominal Voltage	Analog_Value	440	4260_1	RD	Units: VAC
System Output Nominal Frequency	Analog_Value	441	4261_1	RD	Units: Hz
Battery Cell Count - Lead Acid	Analog_Value	442	4262_1	RD	—
Output Apparent Power Rating	Analog_Value	443	4264_1	RD	Units: kVA
Output Real Power Rating	Analog_Value	444	4265_1	RD	Units: kW
System UPS Module Count	Analog_Value	445	4800_1	RD	—
System Output Maximum Amp Rating	Analog_Value	446	4267_1	RD	Units: A AC
MultiModule					
Multi-module System Output Voltage RMS A-B	Analog_Value	457	4801_1	RD	Units: VAC
Multi-module System Output Voltage RMS B-C	Analog_Value	458	4802_1	RD	Units: VAC
Multi-module System Output Voltage RMS C-A	Analog_Value	459	4803_1	RD	Units: VAC
Multi-module System Output Voltage RMS A-N	Analog_Value	460	4804_1	RD	Units: VAC
Multi-module System Output Voltage RMS B-N	Analog_Value	461	4805_1	RD	Units: VAC
Multi-module System Output Voltage RMS C-N	Analog_Value	462	4806_1	RD	Units: VAC
Sum of MMS Output RMS Currents for Phase A	Analog_Value	463	4807_1	RD	Units: A AC
Sum of MMS Output RMS Currents for Phase B	Analog_Value	464	4808_1	RD	Units: A AC
Sum of MMS Output RMS Currents for Phase C	Analog_Value	465	4809_1	RD	Units: A AC
MMS Output Frequency	Analog_Value	466	4810_1	RD	Units: Hz
MMS Output Power	Analog_Value	467	4811_1	RD	Units: kW
MMS Output Apparent Power	Analog_Value	468	4812_1	RD	Units: kVA
MMS Output Power Factor Phase A	Analog_Value	469	4813_1	RD	—
MMS Output Power Factor Phase B	Analog_Value	470	4814_1	RD	—
MMS Output Power Factor Phase C	Analog_Value	471	4815_1	RD	—
MMS Output Pct Power Phase A	Analog_Value	472	4816_1	RD	Units: %
MMS Output Pct Power Phase B	Analog_Value	473	4817_1	RD	Units: %
MMS Output Pct Power Phase C	Analog_Value	474	4818_1	RD	Units: %
MMS Output Pct Apparent Pwr (kVA) Phase A	Analog_Value	475	4819_1	RD	Units: %
MMS Output Pct Apparent Pwr (kVA) Phase B	Analog_Value	476	4820_1	RD	Units: %

Table 4-39 Liebert eXL™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MMS Output Pct Apparent Pwr (kVA) Phase C	Analog_Value	477	4821_1	RD	Units: %
Number of Redundant Modules	Analog_Value	478	4822_1	RD	—
MMS Module Number	Analog_Value	479	4829_1	RD	—
Number of Modules in a MMS	Analog_Value	480	4833_1	RD	—
ModuleList 1					
MMS Module Total kW Output	Analog_Value	491	4861_1	RD	Units: kW
MMS Module Total kVA Output	Analog_Value	492	4862_1	RD	Units: kVA
MMS Module DC Bus Voltage	Analog_Value	493	4863_1	RD	Units: VDC
MMS Module Battery Current	Analog_Value	494	4864_1	RD	Units: A DC
MMS Module Battery Time Remaining	Analog_Value	495	4865_1	RD	Units: min
ModuleList 2					
MMS Module Total kW Output	Analog_Value	506	4861_2	RD	Units: kW
MMS Module Total kVA Output	Analog_Value	507	4862_2	RD	Units: kVA
MMS Module DC Bus Voltage	Analog_Value	508	4863_2	RD	Units: VDC
MMS Module Battery Current	Analog_Value	509	4864_2	RD	Units: A DC
MMS Module Battery Time Remaining	Analog_Value	510	4865_2	RD	Units: min
ModuleList 8					
MMS Module Total kW Output	Analog_Value	596	4861_8	RD	Units: kW
MMS Module Total kVA Output	Analog_Value	597	4862_8	RD	Units: kVA
MMS Module DC Bus Voltage	Analog_Value	598	4863_8	RD	Units: VDC
MMS Module Battery Current	Analog_Value	599	4864_8	RD	Units: A DC
MMS Module Battery Time Remaining	Analog_Value	600	4865_8	RD	Units: min
Intelligent Paralleling					
Intelligent Paralleling Shutdown Delay	Analog_Value	611	5450_1	RD	Units: min
Intelligent Parallel Minimum Redundancy	Analog_Value	612	5451_1	RD	—
Intelligent Parallel Maximum Time in Standby	Analog_Value	613	5452_1	RD	Units: day
ECO Mode					
Maximum Auto Suspensions - ECO Mode	Analog_Value	624	5459_1	RD	—
Restart Delay - ECO Mode	Analog_Value	625	5460_1	RD	Units: min
Time Remaining - ECO Mode	Analog_Value	626	5466_1	RD	Units: min
ECO Mode - EcoModeSchedule 1					
Schedule Hour - ECO Mode	Analog_Value	637	5464_1_1	RD	Units: hr
Schedule Minute - ECO Mode	Analog_Value	638	5465_1_1	RD	Units: min
ECO Mode - EcoModeSchedule 2					
Schedule Hour - ECO Mode	Analog_Value	649	5464_1_2	RD	Units: hr
Schedule Minute - ECO Mode	Analog_Value	650	5465_1_2	RD	Units: min
ECO Mode - EcoModeSchedule 16					
Schedule Hour - ECO Mode	Analog_Value	817	5464_1_16	RD	Units: hr
Schedule Minute - ECO Mode	Analog_Value	818	5465_1_16	RD	Units: min

Table 4-40 Liebert eXL™—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
Input Qualification Status	MultiState_Value	1	4735_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Input Breaker Operation	MultiState_Value	2	5979_1	RD	1 = Manual 2 = Elec Op
Bypass					
Static Bypass Switch	MultiState_Value	13	4736_1	RD	1 = off 2 = on
Bypass Qualification Status	MultiState_Value	14	4737_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Battery					
Battery Recharge Method	MultiState_Value	25	5986_1	RD	1 = Constant Voltage 2 = Two Step Constant Voltage
Automatic Battery Test	MultiState_Value	26	5803_1	RD	1 = disabled 2 = enabled
Battery Disconnect Setting	MultiState_Value	27	5999_1	RD	1 = disabled 2 = enabled
Battery Breaker Operation	MultiState_Value	28	6002_1	RD	1 = Manual 2 = Elec Op
DC Bus					
Data Label	Object Type	Instance	Object Name	Access	Notes
DC Bus Qualification Status	MultiState_Value	39	4743_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
DC Converter Status	MultiState_Value	40	6003_1	RD	1 = off 2 = on
Output					
Output Qualification Status	MultiState_Value	51	4744_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Output Breaker Operation	MultiState_Value	52	6004_1	RD	1 = Manual 2 = Elec Op
Inverter					
Inverter Output Qualification Status	MultiState_Value	63	4745_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Inverter On/Off State	MultiState_Value	64	4746_1	RD	1 = off 2 = on

Table 4-40 Liebert eXL™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
External Input Signals					
Include Input Contact Interface 1 Alarms In Summary	MultiState_Value	91	6073_1	RD	1 = Not Included 2 = Included
Include Input Contact Interface 2 Alarms In Summary	MultiState_Value	92	6074_1	RD	1 = Not Included 2 = Included
Rectifier					
Rectifier Status	MultiState_Value	103	4748_1	RD	1 = off 2 = on
System					
UPS Module Type	MultiState_Value	114	4303_1	RD	1 = Single Module System 2 = Module (1 + 1) 3 = Module (1 + N) 4 = Module (N + 1) 5 = System Control Cabinet 6 = Main Static Switch
UPS System Output Source	MultiState_Value	115	4752_1	RD	1 = Off 2 = Normal 3 = Bypass 4 = Maintenance Bypass
System Input Power Source	MultiState_Value	116	4318_1	RD	1 = None 2 = Utility (mains) 3 = Generator
System Status	MultiState_Value	117	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
UPS Output Source	MultiState_Value	118	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Peak kW Demand Period	MultiState_Value	119	5795_1	RD	1 = Hourly 2 = Daily 3 = Weekly 4 = Monthly 5 = Yearly

Table 4-40 Liebert eXL™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Device Status					
Backfeed Breaker	MultiState_Value	130	4764_1	RD	1 = Open 2 = Close 3 = Not Installed
Input Breaker (CB1/RIB)	MultiState_Value	131	4766_1	RD	1 = Open 2 = Close 3 = Not Installed
Output Breaker (CB2/IOB)	MultiState_Value	132	4768_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker	MultiState_Value	133	4770_1	RD	1 = Open 2 = Close 3 = Not Installed
Rectifier Feed Breaker (RFB)	MultiState_Value	134	4771_1	RD	1 = Open 2 = Close 3 = Not Installed
Maintenance Bypass Breaker	MultiState_Value	135	4772_1	RD	1 = Open 2 = Close 3 = Not Installed
Maintenance Isolation Breaker	MultiState_Value	136	4773_1	RD	1 = Open 2 = Close 3 = Not Installed
Precharge Contactor	MultiState_Value	137	6051_1	RD	1 = Open 2 = Close 3 = Not Installed
MultiModule					
Module Output Breaker for Module 1	MultiState_Value	148	4836_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 2	MultiState_Value	149	4837_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 3	MultiState_Value	150	4838_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 4	MultiState_Value	151	4839_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 5	MultiState_Value	152	4840_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 6	MultiState_Value	153	4841_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 7	MultiState_Value	154	4842_1	RD	1 = Open 2 = Close 3 = Not Installed

Table 4-40 Liebert eXL™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Module Output Breaker for Module 8	MultiState_Value	155	4843_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 1	MultiState_Value	156	4844_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 2	MultiState_Value	157	4845_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 3	MultiState_Value	158	4846_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 4	MultiState_Value	159	4847_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 5	MultiState_Value	160	4848_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 6	MultiState_Value	161	4849_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 7	MultiState_Value	162	4850_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 8	MultiState_Value	163	4851_1	RD	1 = Open 2 = Close 3 = Not Installed
System Output Breaker	MultiState_Value	164	4852_1	RD	1 = Open 2 = Close 3 = Not Installed
System Load Bank Breaker	MultiState_Value	165	4853_1	RD	1 = Open 2 = Close 3 = Not Installed
System Isolation Output Breaker	MultiState_Value	166	4854_1	RD	1 = Open 2 = Close 3 = Not Installed
SCC Event Summary	MultiState_Value	167	4855_1	RD	1 = None 2 = Alarm 3 = Fault
MMS UPS Battery Status	MultiState_Value	168	4873_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted

Table 4-40 Liebert eXL™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MMS UPS Output Source	MultiState_Value	169	4874_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
ModuleList 1					
MMS Inter-Module Comm Status	MultiState_Value	180	4856_1	RD	1 = Failed 2 = Normal
MMS Event Summary	MultiState_Value	181	4857_1	RD	1 = None 2 = Alarm 3 = Fault
MMS Module Inverter Status	MultiState_Value	182	4858_1	RD	1 = off 2 = on
MMS Module Output Voltage Status	MultiState_Value	183	4859_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
MMS Module Output Source	MultiState_Value	184	4860_1	RD	1 = Off 2 = Normal 3 = Bypass 4 = Maintenance Bypass
ModuleList 2					
MMS Inter-Module Comm Status	MultiState_Value	195	4856_2	RD	1 = Failed 2 = Normal
MMS Event Summary	MultiState_Value	196	4857_2	RD	1 = None 2 = Alarm 3 = Fault
MMS Module Inverter Status	MultiState_Value	197	4858_2	RD	1 = off 2 = on
MMS Module Output Voltage Status	MultiState_Value	198	4859_2	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
MMS Module Output Source	MultiState_Value	199	4860_2	RD	1 = Off 2 = Normal 3 = Bypass 4 = Maintenance Bypass
ModuleList 8					
MMS Inter-Module Comm Status	MultiState_Value	285	4856_8	RD	1 = Failed 2 = Normal
MMS Event Summary	MultiState_Value	286	4857_8	RD	1 = None 2 = Alarm 3 = Fault
MMS Module Inverter Status	MultiState_Value	287	4858_8	RD	1 = off 2 = on

Table 4-40 Liebert eXL™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MMS Module Output Voltage Status	MultiState_Value	288	4859_8	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
MMS Module Output Source	MultiState_Value	289	4860_8	RD	1 = Off 2 = Normal 3 = Bypass 4 = Maintenance Bypass
Intelligent Paralleling					
Intelligent Parallel Operation State	MultiState_Value	300	5448_1	RD	1 = disabled 2 = enabled
Intelligent Parallel Mode	MultiState_Value	301	5449_1	RD	1 = Idle (Fast Recovery) 2 = Disconnect (More Efficient) 3 = Off (Most Efficient)
ECO Mode					
ECO Mode Operation State	MultiState_Value	312	5454_1	RW	1 = Disabled 2 = Enabled
Continuous Operation - ECO Mode	MultiState_Value	313	5455_1	RD	1 = Disabled 2 = Enabled
ECO Mode - EcoModeSchedule 1					
Schedule Operation State - ECO Mode	MultiState_Value	324	5461_1_1	RD	1 = Disabled 2 = Enabled
Schedule Action - ECO Mode	MultiState_Value	325	5462_1_1	RD	1 = Stop 2 = Start
Schedule Day of Week - ECO Mode	MultiState_Value	326	5463_1_1	RD	1 = Unknown 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday 8 = Sunday
ECO Mode - EcoModeSchedule 2					
Schedule Operation State - ECO Mode	MultiState_Value	337	5461_1_2	RD	1 = Disabled 2 = Enabled
Schedule Action - ECO Mode	MultiState_Value	338	5462_1_2	RD	1 = Stop 2 = Start
Schedule Day of Week - ECO Mode	MultiState_Value	339	5463_1_2	RD	1 = Unknown 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday 8 = Sunday

Table 4-40 Liebert eXL™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
ECO Mode - EcoModeSchedule 16					
Schedule Operation State - ECO Mode	MultiState_Value	519	5461_1_16	RD	1 = Disabled 2 = Enabled
Schedule Action - ECO Mode	MultiState_Value	520	5462_1_16	RD	1 = Stop 2 = Start
Schedule Day of Week - ECO Mode	MultiState_Value	521	5463_1_16	RD	1 = Unknown 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday 8 = Sunday

Table 4-41 Liebert *e*XL™—Glossary

Data Label	Data Description
Auto Calibration Active	The system is automatically calibrating ADC channels
Auto Calibration Failed	ADC channel calibration has failed
Auto Restart In Progress	Auto restart is in progress
Auto Restart Inhibited - Ext	Auto restart inhibited due to an external signal
Auto Retransfer Time Remaining	Time remaining before an inverter overload or inverter fault can be cleared and auto retransfer from the bypass to the inverter can take place
Automatic Battery Test	Enable/disable the automatic battery test schedule.
Automatic Restart Failed	Automatic restart failed
Backfeed Breaker Open	The backfeed breaker is in the open position
Backfeed Breaker	Backfeed breaker
Battery - External Monitor 1	External battery monitor 1 - battery maintenance required
Battery - External Monitor 2	External battery monitor 2 - battery maintenance required
Battery Amp-Hours Consumed This Discharge	Battery amp-hours withdrawn this discharge.
Battery Breaker Operation	Indicates the type of breaker installed for the batteries.
Battery Capacity Low	Battery capacity is low
Battery Cell Count - Lead Acid	Battery cell count - lead acid
Battery Cell Count Adjust	The cell count adjustment for the batteries currently installed.
Battery Cell Count	The cell count of the attached battery.
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open.
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open.
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open.
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open.
Battery Circuit Breaker 5 Open	Battery circuit breaker 5 is open.
Battery Circuit Breaker 6 Open	Battery circuit breaker 6 is open.
Battery Circuit Breaker 7 Open	Battery circuit breaker 7 is open.
Battery Circuit Breaker 8 Open	Battery circuit breaker 8 is open.
Battery Commission Date	Date and time when battery placed into service
Battery Discharge Power	Instantaneous battery power while discharging
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging.
Battery Disconnect Setting	Allow the battery overtemp to initiate a battery disconnect.
Battery Equalize Time	The duration used when the battery is being equalized.
Battery Equalize Voltage	The cell voltage that will be used when the battery is being equalized.
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Float Voltage	The cell voltage of the battery at float recharging.
Battery Low Shutdown	Battery disconnect due to end-of-discharge.
Battery Low	The calculated battery time remaining has reached the low battery threshold.
Battery Over Temp Limit Setting	The temperature setting that will initiate an over temperature limit.
Battery Over Temp Warn Setting	The temperature setting that will initiate an over temperature warning.
Battery Over Temperature Limit	A battery temperature sensor is reporting a value above a predetermined limit.
Battery Percentage Charge	The percentage of battery charge
Battery Recharge Method	The recharge method used for battery recharging.
Battery Recharge Voltage	The recharge cell voltage for the battery.

Table 4-41 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Battery Self Test Cycle Time	The time between automatic battery self test cycles.
Battery Self Test Duration	The duration of a successful battery self test cycle.
Battery Self Test Minimum Voltage	Minimum cell voltage acceptable during a successful battery test.
Battery Self Test Start Date	The date that the battery self tests will begin happening.
Battery Self Test Time of Test	The time of day that the automatic self test will be initiated.
Battery Self Test	Battery self test is in progress.
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature Imbalance	Excessive temperature differences between battery sensors detected
Battery Temperature Sensor Fault	A battery temperature sensor fault has been detected
Battery Test Failed	Battery test failed
Battery Test Inhibited	Automatic (scheduled) battery tests are inhibited.
Battery Time Remaining	The calculated available time on battery
Battery Total Discharge Time	The cumulative battery discharge time
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval.
Bypass - Manual Rexfr Inhibited	Manual transfer from bypass to inverter is inhibited.
Bypass - Manual Xfr Inhibited	Manual transfer from inverter to bypass is inhibited.
Bypass Auto Retransfer Failed	After performing a recoverable transfer to bypass, an attempt to auto retransfer from bypass to inverter failed.
Bypass Auto Retransfer Primed	Automatic retransfer from bypass to inverter is possible.
Bypass Auto Transfer Failed	An automatic transfer to static bypass failed.
Bypass Excessive Pulse Parallel	The system has performed too many pulse parallel operations within a specified time interval.
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between Phases A and B
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between Phases B and C
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between Phases C and A
Bypass Isolation Breaker for Module 1	Bypass isolation breaker for Module 1
Bypass Isolation Breaker for Module 2	Bypass isolation breaker for Module 2
Bypass Isolation Breaker for Module 3	Bypass isolation breaker for Module 3
Bypass Isolation Breaker for Module 4	Bypass isolation breaker for Module 4
Bypass Isolation Breaker for Module 5	Bypass isolation breaker for Module 5
Bypass Isolation Breaker for Module 6	Bypass isolation breaker for Module 6
Bypass Isolation Breaker for Module 7	Bypass isolation breaker for Module 7
Bypass Isolation Breaker for Module 8	Bypass isolation breaker for Module 8
Bypass Isolation Breaker	Bypass isolation breaker
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected.
Bypass Overload Phase A	An overload exists on output Phase A while operating on the bypass
Bypass Overload Phase B	An overload exists on output Phase B while operating on the bypass
Bypass Overload Phase C	An overload exists on output Phase C while operating on the bypass.
Bypass Qualification Status	Bypass qualification status
Bypass SS Overload Time Remain	The calculated time remaining before bypass static switch shutdown due to the present overload condition.
Bypass Static Switch Overload	Bypass off due to static switch overload.

Table 4-41 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
Bypass Sync Phase Difference	The phase angle difference between the inverter output and bypass source
Bypass Undervoltage Warning	The voltage on one or more bypass phases is less than a specified percentage of the nominal voltage.
Cont Tie Active	Continuous Power Tie Active
Continuous Operation - ECO Mode	This setting gives the user the ability to Enable/Disable ECO Mode continuous operation.
Controls Reset Required	A controls reset is required due to one or more critical settings changing.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value.
DC Bus Qualification Status	DC bus qualification status
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
DC Converter Status	The operating state of the DC converter
Delay for Input Contact 01	The activation delay associated with input Contact 1
Delay for Input Contact 02	The activation delay associated with input Contact 2
Delay for Input Contact 03	The activation delay associated with input Contact 3
Delay for Input Contact 04	The activation delay associated with input Contact 4
Delay for Input Contact 05	The activation delay associated with input Contact 5
Delay for Input Contact 06	The activation delay associated with input Contact 6
Delay for Input Contact 07	The activation delay associated with input Contact 7
Delay for Input Contact 08	The activation delay associated with input Contact 8
Delay for Input Contact 09	The activation delay associated with input Contact 9
Delay for Input Contact 10	The activation delay associated with input Contact 10
Delay for Input Contact 11	The activation delay associated with input Contact 11
Delay for Input Contact 12	The activation delay associated with input Contact 12
Delay for Input Contact 13	The activation delay associated with input Contact 13
Delay for Input Contact 14	The activation delay associated with input Contact 14
Delay for Input Contact 15	The activation delay associated with input Contact 15
Delay for Input Contact 16	The activation delay associated with input Contact 16
ECO Mode Active	Conditions for Activation or Automatic Reactivation have been satisfied.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
ECO Mode Suspended	ECO Mode session is suspended.
EMO Shutdown	An Emergency Module Off command has been detected.
Equipment Over Temp Warning	Equipment over temperature warning is a summary event based on the detection of at least one measured temperature exceeding a threshold.
Equipment Temperature Sensor Fail	One or more temperature sensors report a temperature outside of the range of expected operation.
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Ground Fault	An AC phase to ground fault or three phase fault to ground exists on the output of the UPS.

Table 4-41 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Include Input Contact Interface 1 Alarms In Summary	Should the inputs on input contact Interface 1 be included in the summary event when activated.
Include Input Contact Interface 2 Alarms In Summary	Should the inputs on input contact Interface 2 be included in the summary event when activated.
Inlet Air Over Temperature	The inlet air exceeds the maximum temperature threshold.
Inlet Air Temperature	The temperature of the inlet air
Inlet Air Warning Setting	The temperature setting that will cause an input temperature warning
Input Breaker (CB1/RIB)	Input breaker (CB1/RIB)
Input Breaker Operation	Indicates the type of breaker installed for the Input.
Input Contact 01	The external input Contact 1
Input Contact 02	The external input Contact 2
Input Contact 03	The external input Contact 3
Input Contact 04	The external input Contact 4
Input Contact 05	The external input Contact 5
Input Contact 06	The external input Contact 6
Input Contact 07	The external input Contact 7
Input Contact 08	The external input Contact 8
Input Contact 09	The external input Contact 9
Input Contact 10	The external input Contact 10
Input Contact 11	The external input Contact 11
Input Contact 12	The external input Contact 12
Input Contact 13	The external input Contact 13
Input Contact 14	The external input Contact 14
Input Contact 15	The external input Contact 15
Input Contact 16	The external input Contact 16
Input Qualification Status	Input qualification status
Input Undervoltage	One or more of the input phase voltages has dropped below the limit.
Intelligent Parallel Maximum Time in Standby	The maximum time a module can be in standby mode due to Intelligent Paralleling.
Intelligent Parallel Minimum Redundancy	This is the minimum Number of Redundant Modules that the system will allow before bringing one or more modules back to normal operation and terminating Intelligent Paralleling.
Intelligent Parallel Mode	This setting gives the user the ability to choose between different energy consumption modes while Intelligent Paralleling is active and module is in standby.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Intelligent Paralleling Shutdown Delay	This is the length of time the conditions for module standby must remain satisfied before the module goes into standby.
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus.
Inverter Failure	Inverter failure - inverter output is off.
Inverter On/Off State	Inverter on/off state
Inverter Output Qualification Status	Inverter output qualification status
Inverter Overload Phase A	Inverter is operating with an overload on Phase A.
Inverter Overload Phase B	Inverter is operating with an overload on Phase B.
Inverter Overload Phase C	Inverter is operating with an overload on Phase C.
Inverter Overload Time Remaining	The calculated time remaining before inverter shutdown
Inverter Shutdown - Overload	The inverter has shut down due to a sustained overload.

Table 4-41 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
LBS Active - Master	This UPS system has been selected as the functional Master Load Bus Synchronization (LBS) system.
LBS Active - Slave	This UPS system is synchronized to the output bus of the UPS system that has been selected as the Master Load Bus Synchronization (LBS) system.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied.
Loss of Redundancy	The multi-module collection doesn't have enough modules to satisfy the redundancy configuration.
Low Battery Warning Time	When battery time remaining falls to, or below, this value the low battery alarm is activated.
Main Battery Disconnect Open	Main battery disconnect is open.
Main Controller Fault	A Main Controller fault has been detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
Maintenance Isolation Breaker	Maintenance isolation breaker
Manual Transfer Bypass Voltage High Limit	The manual bypass voltage high limit setting.
Manual Transfer Bypass Voltage Low Limit	The manual bypass voltage low limit setting.
Maximum Auto Suspensions - ECO Mode	This setting sets the maximum number of automatic ECO Mode suspensions in a session.
Maximum Load Exceeded Delay	The maximum load exceeded event delay time.
Maximum Load Exceeded Phase A	The maximum load current exceeded setting for Phase A.
Maximum Load Exceeded Phase B	The maximum load current exceeded setting for Phase B.
Maximum Load Exceeded Phase C	The maximum load current exceeded setting for Phase C.
Memory Card Removed	The memory card on the control board has been removed.
MMS Event Summary	Summary of any active user alarm or fault of this module in a multi-module system
MMS Inter-Module Comm Status	Inter-module communication status of this module in a multi-module system
MMS Low Battery Warning	Multi-module system low battery warning
MMS Module Alarm Active	Active alarm or fault of any module in a multi-module system
MMS Module Battery Current	Battery current of this module in a multi-module system
MMS Module Battery Time Remaining	Battery time remaining for this module in a multi-module system
MMS Module DC Bus Voltage	DC bus voltage of this module in a multi-module system
MMS Module Inverter Status	Multi-module inverter status of this module (on/off)
MMS Module Number	MMS module number
MMS Module Output Source	Module output source in a multi-module system (normal/bypass/maintenance bypass/off)
MMS Module Output Voltage Status	Output voltage status of this module in multi-module system
MMS Module Total kVA Output	Total kVA output of this module in a multi-module system
MMS Module Total kW Output	Total kW output of this module in a multi-module system
MMS On Battery	The multi-module system is on battery.
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Frequency	The multi-module system output frequency
MMS Output Pct Apparent Pwr (kVA) Phase A	The multi-module system output apparent power on Phase A as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase B	The multi-module system output apparent power on Phase B as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase C	The multi-module system output apparent power on Phase C as a percentage of the rated capacity

Table 4-41 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
MMS Output Pct Power Phase A	The multi-module system output power on Phase A as a percentage of the rated capacity
MMS Output Pct Power Phase B	The multi-module system output power on Phase B as a percentage of the rated capacity
MMS Output Pct Power Phase C	The multi-module system output power on Phase C as a percentage of the rated capacity
MMS Output Power Factor Phase A	The multi-module system output power factor for Phase A
MMS Output Power Factor Phase B	The multi-module system output power factor for Phase B
MMS Output Power Factor Phase C	The multi-module system output power factor for Phase C
MMS Output Power	The sum total power of all system output modules
MMS Overload	Multi-module system overload
MMS Retransfer Inhibit	The critical load cannot be manually retransferred from bypass to inverter.
MMS Transfer Inhibit	The critical load cannot be manually transferred from inverter to bypass.
MMS UPS Battery Status	Multi-module UPS battery status
MMS UPS Output Source	Multi-module UPS output source
Module Accumulated Energy	Total accumulated energy output for this module, since last energy reset.
Module In Standby - Intelligent Paralleling	Module is placed into standby operation per Intelligent Paralleling.
Module Output Breaker for Module 1	Module output breaker for Module 1
Module Output Breaker for Module 2	Module output breaker for Module 2
Module Output Breaker for Module 3	Module output breaker for Module 3
Module Output Breaker for Module 4	Module output breaker for Module 4
Module Output Breaker for Module 5	Module output breaker for Module 5
Module Output Breaker for Module 6	Module output breaker for Module 6
Module Output Breaker for Module 7	Module output breaker for Module 7
Module Output Breaker for Module 8	Module output breaker for Module 8
Module Output Breaker Open	The module output breaker is open.
Multi-module System Output Voltage RMS A-B	Multi-module system output RMS voltage between Phases A and B
Multi-module System Output Voltage RMS A-N	Multi-module system output RMS voltage between Phase B and Neutral
Multi-module System Output Voltage RMS B-C	Multi-module system output RMS voltage between Phases B and C
Multi-module System Output Voltage RMS B-N	Multi-module system output RMS voltage between Phase B and Neutral
Multi-module System Output Voltage RMS C-A	Multi-module system output RMS voltage between Phases C and A
Multi-module System Output Voltage RMS C-N	Multi-module system output RMS voltage between Phase C and Neutral
Multiple Fan Failure	Multiple fan failure
Number of Modules in a MMS	The number of modules in a multi-module system
Number of Redundant Modules	The number of redundant modules in a multi-module collective.
On Generator	A generator is supplying the power to the system.
Outlet Air Overtemperature Limit	The difference between the outlet air temperature and inlet air temperature exceeds a specified maximum temperature.
Output Amp Over User Limit-Phs A	The phase A output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs B	The phase B output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs C	The phase C output has exceeded the user amperage threshold
Output Apparent Power Rating	Output apparent power rating
Output Breaker (CB2/IOB)	Output breaker (CB2/IOB)

Table 4-41 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Output Breaker Operation	Indicates the type of breaker installed for the output.
Output kWh Reset Timestamp	The date/time stamp when the User kWh accumulator was last reset to zero.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass.
Output Of/Uf	The output frequency has exceeded a specified range for a specified period of time.
Output Peak kW Demand Hist	The Output Peak kW Demand for the last completed programmed time interval.
Output Peak kW Demand	The Output Peak kW Demand for the programmed time interval.
Output Qualification Status	Output qualification status
Output Real Power Rating	Output real power rating
Parallel Cable Failure	The UPS parallel system communications is abnormal. A problem with the parallel cable may exist.
Parallel Comm Warning	Parallel communication bus warning
Peak kW Demand Period	The peak kW demand period
Peak kW Demand Timestamp	The date/time stamp when the Peak kW Demand accumulator was last reset
Power Supply Failure	Power supply failure
PRB Delay	Programmable Relay Board activation delay time
PRB Relay Trigger Event # 1	Programmable Relay Board Trigger Event # 1
PRB Relay Trigger Event # 2	Programmable Relay Board Trigger Event # 2
PRB Relay Trigger Event # 3	Programmable Relay Board Trigger Event # 3
PRB Relay Trigger Event # 4	Programmable Relay Board Trigger Event # 4
Precharge Circuit Failed	DC Bus precharge/discharge did not reach specified level within a specified time.
Precharge Contactor	The Precharge Contactor is engaged to pre-charge the DC bus in preparation for starting the rectifier.
Rectifier Failure	Rectifier failure - rectifier is off.
Rectifier Feed Breaker (RFB)	Rectifier feed breaker (RFB)
Rectifier Status	Rectifier status
Regeneration Active	Regeneration operation is active.
Regeneration Operation Failure	Regeneration operation has been terminated due to bypass source instability or unit misoperation.
Regeneration Operation Terminated	Regeneration operation is not active.
Regeneration Time Remaining	The time remaining until the termination of regeneration mode.
Restart Delay - ECO Mode	The time delay that the conditions to activate ECO Mode must be satisfied before ECO Mode can be reactivated during an active session.
SCC Event Summary	Summary of any active user alarms or faults on the SCC
Schedule Action - ECO Mode	This setting gives the user the ability to choose the action of a schedule entry to be either stop or start.
Schedule Day of Week - ECO Mode	This setting represents the day of the week when an associated ECO Mode schedule entry action will take effect.
Schedule Hour - ECO Mode	This setting represents the hour of the day when an associated schedule entry action will take effect.
Schedule Minute - ECO Mode	This setting represents the minute of the hour when an associated schedule entry action will take effect.
Schedule Operation State - ECO Mode	This setting gives the user the ability to either enable or disable a schedule entry if the action is Start.
Service Code Active	Service code is running.

Table 4-41 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
Service Required	Unit requires servicing.
Static Bypass Switch	Static Bypass Switch state - On/Off
Sum of MMS Output RMS Currents for Phase A	The sum of the multi-module system output RMS currents for Phase A
Sum of MMS Output RMS Currents for Phase B	The sum of the multi-module system output RMS currents for Phase B
Sum of MMS Output RMS Currents for Phase C	The sum of the multi-module system output RMS currents for Phase C
System Accumulated Energy	Total accumulated energy output for the MMS system, since last energy reset.
System Breaker(s) Close Failure	One or more breakers in the system failed to close
System Breaker(s) Open Failure	One or more breakers in the system failed to open
System Controller Error	System controller internal error
System Date and Time	The system date and time
System Fan Failure - Redundant	Redundant system fan failure
System Input Current Limit	The RMS input current has reached the input current limit threshold.
System Input Frequency	The system input frequency
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Power Problem	The input is not qualified to provide power to the system.
System Input Power Source	System input power source
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Isolation Output Breaker	System isolation output breaker
System Load Bank Breaker	System load bank breaker
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Breaker	System output breaker
System Output Fault	A fault has been detected in the system output.
System Output Frequency	The system output frequency
System Output Low Power Factor	The system output power factor is low, resulting in reduced output capacity.
System Output Maximum Amp Rating	System output maximum amperage rating
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on Phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on Phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on Phase C as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs A	The system output apparent power on Phase A as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs B	The system output apparent power on Phase B as a percentage of the rated capacity

Table 4-41 Liebert *e*XL™—Glossary (continued)

Data Label	Data Description
System Output Pct Pwr (VA) Phs C	The system output apparent power on Phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of Phase A
System Output Power Factor Phs B	The system output power factor of Phase B
System Output Power Factor Phs C	The system output power factor of Phase C
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between Phases A and B
System Output Voltage RMS B-C	The system output RMS voltage between Phases B and C
System Output Voltage RMS C-A	The system output RMS voltage between Phases C and A
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
System UPS Module Count	Number of UPS modules in the system
Time Remaining - ECO Mode	Time remaining before current active ECO Mode session stops.
Total kW Hours Saved	Total kW hours saved by ECO Mode or Intelligent Paralleling.
Total System Operating Time	The cumulative operation time of the unit
UPS Module Type	UPS module type
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
UPS System Output Source	The UPS system's output power source
UPSC Communication Failure	The UPSC has failed to communicate in a designated time period.

Table 4-42 Liebert *e*XM™—Controller with LCD HMI—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
System Status					
Battery Equalize	Binary_Value	1	4170_1	RD	Active on Alarm
Battery Charging Inhibited	Binary_Value	2	4200_1	RD	Active on Alarm
On Generator	Binary_Value	3	4315_1	RD	Active on Alarm
Battery Self Test	Binary_Value	4	4741_1	RD	Active on Alarm
Battery Circuit Breaker 1 Open	Binary_Value	5	4176_1	RD	Active on Alarm
Battery Circuit Breaker 2 Open	Binary_Value	6	4179_1	RD	Active on Alarm
Battery Circuit Breaker 3 Open	Binary_Value	7	4182_1	RD	Active on Alarm
Battery Circuit Breaker 4 Open	Binary_Value	8	4185_1	RD	Active on Alarm
Main Battery Disconnect Open	Binary_Value	9	4173_1	RD	Active on Alarm
System Events					
System Input Power Problem	Binary_Value	20	4122_1	RD	Active on Alarm
Rectifier Failure	Binary_Value	21	4295_1	RD	Active on Alarm
Inverter Failure	Binary_Value	22	4233_1	RD	Active on Alarm
Bypass Not Available	Binary_Value	23	4135_1	RD	Active on Alarm
Battery Low	Binary_Value	24	4162_1	RD	Active on Alarm
LBS Inhibited	Binary_Value	25	4758_1	RD	Active on Alarm
System Fan Failure	Binary_Value	26	4311_1	RD	Active on Alarm
Equipment Over Temperature	Binary_Value	27	4310_1	RD	Active on Alarm
System Shutdown - EPO	Binary_Value	28	4213_1	RD	Active on Alarm
Bypass Static Switch Unavailable	Binary_Value	29	4143_1	RD	Active on Alarm
Bypass - Excess Auto Retransfers	Binary_Value	30	4139_1	RD	Active on Alarm
Parallel Comm Warning	Binary_Value	31	4823_1	RD	Active on Alarm
Power Supply Failure	Binary_Value	32	4314_1	RD	Active on Alarm
Battery Over Temperature	Binary_Value	33	4219_1	RD	Active on Alarm
System Input Phs Rotation Error	Binary_Value	34	4146_1	RD	Active on Alarm
Fuse Failure	Binary_Value	35	4440_1	RD	Active on Alarm
Inverter Overload	Binary_Value	36	5960_1	RD	Active on Alarm
MMS Overload	Binary_Value	37	4831_1	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	38	4290_1	RD	Active on Alarm
System Output Fault	Binary_Value	39	4389_1	RD	Active on Alarm
Internal Communications Failure	Binary_Value	40	4300_1	RD	Active on Alarm
Battery Charging Error	Binary_Value	41	4164_1	RD	Active on Alarm
System Input Current Imbalance	Binary_Value	42	4382_1	RD	Active on Alarm
Battery Not Qualified	Binary_Value	43	5149_1	RD	Active on Alarm
Battery Terminals Reversed	Binary_Value	44	5150_1	RD	Active on Alarm
Battery Converter Failure	Binary_Value	45	5151_1	RD	Active on Alarm
Load Sharing Fault	Binary_Value	46	5153_1	RD	Active on Alarm
DC Bus Abnormal	Binary_Value	47	5154_1	RD	Active on Alarm
Mains Input Neutral Lost	Binary_Value	48	5155_1	RD	Active on Alarm
Load Impact Transfer	Binary_Value	49	5156_1	RD	Active on Alarm
User Operation Invalid	Binary_Value	50	5157_1	RD	Active on Alarm
Battery Discharging	Binary_Value	51	4168_1	RD	Active on Alarm
UPS Output on Bypass	Binary_Value	52	4298_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	53	4299_1	RD	Active on Alarm
Battery Capacity Low	Binary_Value	54	4166_1	RD	Active on Alarm

Table 4-42 Liebert *e*XM™—Controller with LCD HMI—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MMS On Battery	Binary_Value	55	4834_1	RD	Active on Alarm
Loss of Redundancy	Binary_Value	56	4825_1	RD	Active on Alarm
Top Outlet Fan Fault	Binary_Value	57	5770_1	RD	Active on Alarm
MMS Over Capacity	Binary_Value	58	5771_1	RD	Active on Alarm
Bypass Input Voltage Fault	Binary_Value	59	5957_1	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	60	5839_1	RD	Active on Alarm
Excess ECO Suspends	Binary_Value	61	5458_1	RD	Active on Alarm
Battery Ground Fault	Binary_Value	62	4222_1	RD	Active on Alarm
System Input Current Limit	Binary_Value	63	4147_1	RD	Active on Alarm
Inverter Relay Fault	Binary_Value	64	6059_1	RD	Active on Alarm
Transfer to Bypass - System Overload	Binary_Value	65	6060_1	RD	Active on Alarm
Input Source Backfeed	Binary_Value	66	6061_1	RD	Active on Alarm
Loss of Synchronization	Binary_Value	67	6062_1	RD	Active on Alarm
Battery Converter Current Limit	Binary_Value	68	6063_1	RD	Active on Alarm
LBS Cable Failure	Binary_Value	69	6064_1	RD	Active on Alarm
Battery Charge Equalization Timeout	Binary_Value	70	6065_1	RD	Active on Alarm
Parallel Cable Failure	Binary_Value	71	6066_1	RD	Active on Alarm
Battery Fault	Binary_Value	72	6067_1	RD	Active on Alarm
Battery Room Alarm	Binary_Value	73	6068_1	RD	Active on Alarm
Battery Breaker 1 Open Failure	Binary_Value	74	4177_1	RD	Active on Alarm
Battery Breaker 2 Open Failure	Binary_Value	75	4180_1	RD	Active on Alarm
Battery Breaker 3 Open Failure	Binary_Value	76	4183_1	RD	Active on Alarm
Battery Breaker 4 Open Failure	Binary_Value	77	4186_1	RD	Active on Alarm
Bypass Backfeed Detected	Binary_Value	78	4216_1	RD	Active on Alarm
System Events					
System Input Power Problem	Binary_Value	20	4122_1	RD	Active on Alarm
Rectifier Failure	Binary_Value	21	4295_1	RD	Active on Alarm
Inverter Failure	Binary_Value	22	4233_1	RD	Active on Alarm
Bypass Not Available	Binary_Value	23	4135_1	RD	Active on Alarm
Battery Low	Binary_Value	24	4162_1	RD	Active on Alarm
LBS Inhibited	Binary_Value	25	4758_1	RD	Active on Alarm
System Fan Failure	Binary_Value	26	4311_1	RD	Active on Alarm
Equipment Over Temperature	Binary_Value	27	4310_1	RD	Active on Alarm
System Shutdown - EPO	Binary_Value	28	4213_1	RD	Active on Alarm
Bypass Static Switch Unavailable	Binary_Value	29	4143_1	RD	Active on Alarm
Bypass - Excess Auto Retransfers	Binary_Value	30	4139_1	RD	Active on Alarm
Parallel Comm Warning	Binary_Value	31	4823_1	RD	Active on Alarm
Power Supply Failure	Binary_Value	32	4314_1	RD	Active on Alarm
Battery Over Temperature	Binary_Value	33	4219_1	RD	Active on Alarm
System Input Phs Rotation Error	Binary_Value	34	4146_1	RD	Active on Alarm
Fuse Failure	Binary_Value	35	4440_1	RD	Active on Alarm
Inverter Overload	Binary_Value	36	5960_1	RD	Active on Alarm
MMS Overload	Binary_Value	37	4831_1	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	38	4290_1	RD	Active on Alarm
System Output Fault	Binary_Value	39	4389_1	RD	Active on Alarm
Internal Communications Failure	Binary_Value	40	4300_1	RD	Active on Alarm

Table 4-42 Liebert *e*XM™—Controller with LCD HMI—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery Charging Error	Binary_Value	41	4164_1	RD	Active on Alarm
System Input Current Imbalance	Binary_Value	42	4382_1	RD	Active on Alarm
Battery Not Qualified	Binary_Value	43	5149_1	RD	Active on Alarm
Battery Terminals Reversed	Binary_Value	44	5150_1	RD	Active on Alarm
Battery Converter Failure	Binary_Value	45	5151_1	RD	Active on Alarm
Load Sharing Fault	Binary_Value	46	5153_1	RD	Active on Alarm
DC Bus Abnormal	Binary_Value	47	5154_1	RD	Active on Alarm
Mains Input Neutral Lost	Binary_Value	48	5155_1	RD	Active on Alarm
Load Impact Transfer	Binary_Value	49	5156_1	RD	Active on Alarm
User Operation Invalid	Binary_Value	50	5157_1	RD	Active on Alarm
Battery Discharging	Binary_Value	51	4168_1	RD	Active on Alarm
UPS Output on Bypass	Binary_Value	52	4298_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	53	4299_1	RD	Active on Alarm
Battery Capacity Low	Binary_Value	54	4166_1	RD	Active on Alarm
MMS On Battery	Binary_Value	55	4834_1	RD	Active on Alarm
Loss of Redundancy	Binary_Value	56	4825_1	RD	Active on Alarm
Top Outlet Fan Fault	Binary_Value	57	5770_1	RD	Active on Alarm
MMS Over Capacity	Binary_Value	58	5771_1	RD	Active on Alarm
Bypass Input Voltage Fault	Binary_Value	59	5957_1	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	60	5839_1	RD	Active on Alarm
Excess ECO Suspends	Binary_Value	61	5458_1	RD	Active on Alarm
Battery Ground Fault	Binary_Value	62	4222_1	RD	Active on Alarm
System Input Current Limit	Binary_Value	63	4147_1	RD	Active on Alarm
Inverter Relay Fault	Binary_Value	64	6059_1	RD	Active on Alarm
Transfer to Bypass - System Overload	Binary_Value	65	6060_1	RD	Active on Alarm
Input Source Backfeed	Binary_Value	66	6061_1	RD	Active on Alarm
Loss of Synchronization	Binary_Value	67	6062_1	RD	Active on Alarm
Battery Converter Current Limit	Binary_Value	68	6063_1	RD	Active on Alarm
LBS Cable Failure	Binary_Value	69	6064_1	RD	Active on Alarm
Battery Charge Equalization Timeout	Binary_Value	70	6065_1	RD	Active on Alarm
Parallel Cable Failure	Binary_Value	71	6066_1	RD	Active on Alarm
Battery Fault	Binary_Value	72	6067_1	RD	Active on Alarm
Battery Room Alarm	Binary_Value	73	6068_1	RD	Active on Alarm
Battery Breaker 1 Open Failure	Binary_Value	74	4177_1	RD	Active on Alarm
Battery Breaker 2 Open Failure	Binary_Value	75	4180_1	RD	Active on Alarm
Battery Breaker 3 Open Failure	Binary_Value	76	4183_1	RD	Active on Alarm
Battery Breaker 4 Open Failure	Binary_Value	77	4186_1	RD	Active on Alarm
Bypass Backfeed Detected	Binary_Value	78	4216_1	RD	Active on Alarm

Table 4-43 Liebert eXM™—Controller with LCD HMI—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input RMS A-B	Analog_Value	1	4097_1	RD	Units: VAC
System Input RMS B-C	Analog_Value	2	4099_1	RD	Units: VAC
System Input RMS C-A	Analog_Value	3	4101_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	4	4113_1	RD	Units: A AC
System Input RMS Current Phase B	Analog_Value	5	4114_1	RD	Units: A AC
System Input RMS Current Phase C	Analog_Value	6	4115_1	RD	Units: A AC
System Input Frequency	Analog_Value	7	4105_1	RD	Units: Hz
System Input RMS A-N	Analog_Value	8	4096_1	RD	Units: VAC
System Input RMS B-N	Analog_Value	9	4098_1	RD	Units: VAC
System Input RMS C-N	Analog_Value	10	4100_1	RD	Units: VAC
System Input Power Factor Phs A	Analog_Value	11	4116_1	RD	—
System Input Power Factor Phs B	Analog_Value	12	4117_1	RD	—
System Input Power Factor Phs C	Analog_Value	13	4118_1	RD	—
Bypass					
Bypass Input Voltage RMS A-N	Analog_Value	24	4128_1	RD	Units: VAC
Bypass Input Voltage RMS B-N	Analog_Value	25	4129_1	RD	Units: VAC
Bypass Input Voltage RMS C-N	Analog_Value	26	4130_1	RD	Units: VAC
Bypass Input Frequency	Analog_Value	27	4131_1	RD	Units: Hz
Bypass Input Voltage RMS A-B	Analog_Value	28	4125_1	RD	Units: VAC
Bypass Input Voltage RMS B-C	Analog_Value	29	4126_1	RD	Units: VAC
Bypass Input Voltage RMS C-A	Analog_Value	30	4127_1	RD	Units: VAC
Battery					
Battery Time Remaining	Analog_Value	41	4150_1	RD	Units: min
Battery Volts for Cabinet	Analog_Value	42	4155_1	RD	Units: VDC
Battery Temperature for Cabinet	Analog_Value	43	4156_1	RD	Units: deg C
Battery Temperature for Cabinet	Analog_Value	10043	4156_1_deg_F	RD	Units: deg F
DC Bus Current	Analog_Value	44	4149_1	RD	Units: A DC
Output					
System Output Voltage RMS A-N	Analog_Value	55	4385_1	RD	Units: VAC
System Output Voltage RMS B-N	Analog_Value	56	4386_1	RD	Units: VAC
System Output Voltage RMS C-N	Analog_Value	57	4387_1	RD	Units: VAC
System Output RMS Current Phs A	Analog_Value	58	4204_1	RD	Units: A AC
System Output RMS Current Phs B	Analog_Value	59	4205_1	RD	Units: A AC
System Output RMS Current Phs C	Analog_Value	60	4206_1	RD	Units: A AC
System Output Frequency	Analog_Value	61	4207_1	RD	Units: Hz
System Output Voltage RMS A-B	Analog_Value	62	4201_1	RD	Units: VAC
System Output Voltage RMS B-C	Analog_Value	63	4202_1	RD	Units: VAC
System Output Voltage RMS C-A	Analog_Value	64	4203_1	RD	Units: VAC
System Output Power Factor Phs A	Analog_Value	65	4210_1	RD	—
System Output Power Factor Phs B	Analog_Value	66	4211_1	RD	—
System Output Power Factor Phs C	Analog_Value	67	4212_1	RD	—
System Output Pct Power Phase A	Analog_Value	68	4223_1	RD	Units: %
System Output Pct Power Phase B	Analog_Value	69	4224_1	RD	Units: %
System Output Pct Power Phase C	Analog_Value	70	4225_1	RD	Units: %
MMS Output Apparent Power	Analog_Value	71	4812_1	RD	Units: kVA

Table 4-43 Liebert eXM™—Controller with LCD HMI—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MMS Output Power	Analog_Value	72	4811_1	RD	Units: kW
Output Current Crest Factor Phs A	Analog_Value	73	5159_1	RD	—
Output Current Crest Factor Phs B	Analog_Value	74	5160_1	RD	—
Output Current Crest Factor Phs C	Analog_Value	75	5161_1	RD	—
System Output Power Phase A	Analog_Value	76	5859_1	RD	Units: kW
System Output Power Phase B	Analog_Value	77	5860_1	RD	Units: kW
System Output Power Phase C	Analog_Value	78	5959_1	RD	Units: kW
System Output Apparent Power Phs A	Analog_Value	79	5868_1	RD	Units: kVA
System Output Apparent Power Phs B	Analog_Value	80	5869_1	RD	Units: kVA
System Output Apparent Power Phs C	Analog_Value	81	5870_1	RD	Units: kVA
System Output Power	Analog_Value	82	4208_1	RD	Units: kW
System Output Apparent Power	Analog_Value	83	4209_1	RD	Units: kVA
System Configuration					
System Input Nominal Voltage	Analog_Value	94	4102_1	RD	Units: VAC
System Input Nominal Frequency	Analog_Value	95	4103_1	RD	Units: Hz
System Input Nominal Current	Analog_Value	96	4104_1	RD	Units: A AC
Bypass Nominal Voltage	Analog_Value	97	4259_1	RD	Units: VAC
System Output Nominal Voltage	Analog_Value	98	4260_1	RD	Units: VAC
System Output Nominal Frequency	Analog_Value	99	4261_1	RD	Units: Hz
System Analog					
System Date and Time	Analog_Value	110	4293_1	RW	—
Total System Operating Time	Analog_Value	111	4292_1	RD	Units: hr
Average system efficiency	Analog_Value	112	6069_1	RD	Units: %
Inlet Air Temperature	Analog_Value	113	4291_1	RD	Units: deg C
Inlet Air Temperature	Analog_Value	10113	4291_1_deg_F	RD	Units: deg F

Table 4-44 Liebert *e*XM™—Controller with LCD HMI—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery					
UPS Battery1 Status	MultiState_Value	1	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
System Status					
Inverter On/Off State	MultiState_Value	12	4746_1	RD	1 = off 2 = on
Maintenance Bypass Breaker	MultiState_Value	13	4772_1	RD	1 = Open 2 = Close 3 = Not Installed
UPS Output Source	MultiState_Value	14	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Status	MultiState_Value	15	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
ECO Mode Operation State	MultiState_Value	16	5454_1	RD	1 = disabled 2 = enabled
Input Breaker	MultiState_Value	17	4766_1	RD	1 = Open 2 = Close 3 = Not Installed
Internal Bypass Breaker	MultiState_Value	18	4769_1	RD	1 = Open 2 = Close 3 = Not Installed
Output Breaker	MultiState_Value	19	4768_1	RD	1 = Open 2 = Close 3 = Not Installed
UPS Application Mode	MultiState_Value	20	6053_1	RD	1 = UPS Mode 2 = Frequency converter mode
MMS UPS Output Source	MultiState_Value	21	4874_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Intelligent Parallel Operation State	MultiState_Value	22	5448_1	RD	1 = disabled 2 = enabled
Advanced Efficiency Mode	MultiState_Value	23	6054_1	RD	1 = unknown 2 = ECO mode 3 = Intelligent ECO mode 4 = Active Inverter ECO mode

Table 4-45 Liebert *e*XM™—Controller with LCD HMI—Glossary

Data Label	Data Description
Advanced Efficiency Mode	Advanced efficiency modes where the UPS supports the critical load using the static bypass.
Average system efficiency	Average system efficiency
Battery Breaker 1 Open Failure	Battery circuit breaker 1 failed to open
Battery Breaker 2 Open Failure	Battery circuit breaker 2 failed to open
Battery Breaker 3 Open Failure	Battery circuit breaker 3 failed to open
Battery Breaker 4 Open Failure	Battery circuit breaker 4 failed to open
Battery Capacity Low	Battery capacity is low
Battery Charge Equalization Timeout	The battery equalizing is time out.
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Converter Current Limit	The battery converter has reached is maximum current limit.
Battery Converter Failure	Battery converter failure. This is a summary event caused by one or more power sub-modules in a UPS module.
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Fault	A short circuit exists in the battery system.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Not Qualified	The UPS battery voltage is not qualified. This event will be detected even in the absence of battery disconnect or when it is open.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Room Alarm	The ambient temperature of the battery room is abnormal.
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass Backfeed Detected	The system detected a voltage on the bypass when none was expected
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage Fault	The system has detected the bypass voltage is unqualified.
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.

Table 4-45 Liebert *e*XM™—Controller with LCD HMI—Glossary (continued)

Data Label	Data Description
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Temperature	The temperature of the inlet air
Input Breaker	Input breaker
Input Source Backfeed	The battery is backfeeding the input source.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Internal Bypass Breaker	Internal bypass breaker
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Overload	Inverter in overload fault
Inverter Relay Fault	The inverter relay has malfunctioned.
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
LBS Cable Failure	Load Bus Sync communications is abnormal. A problem with the LBS cable may exist.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Load Impact Transfer	On bypass as result of load impact.
Load Sharing Fault	Difference between any phase inverter current of unit and the relevant average output current of parallel system is more than a specific percent of nominal current.
Loss of Redundancy	The multi-module collection doesn't have enough modules to satisfy the redundancy configuration.
Loss of Synchronization	The inverter and bypass are no longer synchronized.
Main Battery Disconnect Open	Main battery disconnect is open
Mains Input Neutral Lost	Loss of neutral in the input source is detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Power	The sum total power of all system output modules
MMS Over Capacity	The multi-module system load is larger than the apparent power limit setting.
MMS Overload	Multi-module system overload
MMS UPS Output Source	Multi-module UPS output source
On Generator	A generator is supplying the power to the system
Output Breaker	Output breaker
Output Current Crest Factor Phs A	Output current crest factor of Phase A.
Output Current Crest Factor Phs B	Output current crest factor of Phase B.
Output Current Crest Factor Phs C	Output current crest factor of Phase C.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Parallel Cable Failure	The UPS parallel system communications is abnormal. A problem with the parallel cable may exist.
Parallel Comm Warning	Parallel communication bus warning
Power Module Over Temperature	The Power Module has detected an over temperature condition.
Power Supply Failure	Power supply failure

Table 4-45 Liebert *e*XM™—Controller with LCD HMI—Glossary (continued)

Data Label	Data Description
Rectifier Failure	Rectifier failure - rectifier is off
System Date and Time	The system date and time
System Fan Failure	System fan failure - one or more fans have failed
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Current	The nominal (or rated) system input current
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Factor Phs A	The system input power factor for Phase A
System Input Power Factor Phs B	The system input power factor for Phase B
System Input Power Factor Phs C	The system input power factor for Phase C
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power Phs A	System output apparent power on phase A
System Output Apparent Power Phs B	System output apparent power on phase B
System Output Apparent Power Phs C	System output apparent power on phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power Phase A	The system output power on phase A.
System Output Power Phase B	The system output power on phase B.
System Output Power Phase C	The system output power on phase C.
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral

Table 4-45 Liebert *e*XM™—Controller with LCD HMI—Glossary (continued)

Data Label	Data Description
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
Top Outlet Fan Fault	Top outlet fan fault - one or more top outlet fans have failed.
Total System Operating Time	The cumulative operation time of the unit
Transfer to Bypass - System Overload	The UPS System has transferred to bypass because the active power modules cannot support the critical load.
UPS Application Mode	UPS application mode.
UPS battery1 status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
User Operation Invalid	User attempted an invalid operation.

Table 4-46 Liebert *e*XM™—Controller with Touchscreen HMI—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
Mains Input Neutral Lost	Binary_Value	1	5155_1	RD	Active on Alarm
System Input Phs Rotation Error	Binary_Value	2	4146_1	RD	Active on Alarm
System Input Power Problem	Binary_Value	3	4122_1	RD	Active on Alarm
Input Source Backfeed	Binary_Value	4	6061_1	RD	Active on Alarm
Bypass					
Bypass Not Available	Binary_Value	15	4135_1	RD	Active on Alarm
Bypass Static Switch Unavailable	Binary_Value	16	4143_1	RD	Active on Alarm
Bypass - Excess Auto Retransfers	Binary_Value	17	4139_1	RD	Active on Alarm
UPS Output on Bypass	Binary_Value	18	4298_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	19	4299_1	RD	Active on Alarm
Bypass Input Voltage Fault	Binary_Value	20	5957_1	RD	Active on Alarm
Bypass Backfeed Detected	Binary_Value	21	4216_1	RD	Active on Alarm
Battery					
Main Battery Disconnect Open	Binary_Value	32	4173_1	RD	Active on Alarm
Battery Circuit Breaker 4 Open	Binary_Value	33	4185_1	RD	Active on Alarm
Battery Circuit Breaker 3 Open	Binary_Value	34	4182_1	RD	Active on Alarm
Battery Circuit Breaker 2 Open	Binary_Value	35	4179_1	RD	Active on Alarm
Battery Circuit Breaker 1 Open	Binary_Value	36	4176_1	RD	Active on Alarm
Battery Self Test	Binary_Value	37	4741_1	RD	Active on Alarm
Battery Charging Inhibited	Binary_Value	38	4200_1	RD	Active on Alarm
Battery Discharging	Binary_Value	39	4168_1	RD	Active on Alarm
Battery Manual Test In Progress	Binary_Value	40	4171_1	RD	Active on Alarm
Battery Auto Test In Progress	Binary_Value	41	4172_1	RD	Active on Alarm
Battery Test Passed	Binary_Value	42	4322_1	RD	Active on Alarm
Battery Test Failed	Binary_Value	43	4323_1	RD	Active on Alarm
Battery Over Temperature	Binary_Value	44	4219_1	RD	Active on Alarm
Battery Low	Binary_Value	45	4162_1	RD	Active on Alarm
Battery Ground Fault	Binary_Value	46	4222_1	RD	Active on Alarm
Battery Not Qualified	Binary_Value	47	5149_1	RD	Active on Alarm
Battery Terminals Reversed	Binary_Value	48	5150_1	RD	Active on Alarm
Battery Capacity Low	Binary_Value	49	4166_1	RD	Active on Alarm
Battery Converter Current Limit	Binary_Value	50	6063_1	RD	Active on Alarm
Battery Charge Equalization Timeout	Binary_Value	51	6065_1	RD	Active on Alarm
Battery Room Alarm	Binary_Value	52	6068_1	RD	Active on Alarm
Battery Breaker 1 Open Failure	Binary_Value	53	4177_1	RD	Active on Alarm
Battery Breaker 2 Open Failure	Binary_Value	54	4180_1	RD	Active on Alarm
Battery Breaker 3 Open Failure	Binary_Value	55	4183_1	RD	Active on Alarm
Battery Breaker 4 Open Failure	Binary_Value	56	4186_1	RD	Active on Alarm
Battery Equalize	Binary_Value	57	4170_1	RD	Active on Alarm
Inverter					
Loss of Synchronization	Binary_Value	68	6062_1	RD	Active on Alarm
Output					
Output Overload	Binary_Value	79	5806_1	RD	Active on Alarm
System Output Fault	Binary_Value	80	4389_1	RD	Active on Alarm

Table 4-46 Liebert *e*XM™—Controller with Touchscreen HMI—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Power Modules 1					
Power Module Input Current Abnormal	Binary_Value	91	6438_1	RD	Active on Alarm
Rectifier Failure	Binary_Value	92	4295_1	RD	Active on Alarm
Inverter Failure	Binary_Value	93	4233_1	RD	Active on Alarm
DC Bus Abnormal	Binary_Value	94	5154_1	RD	Active on Alarm
Load Sharing Fault	Binary_Value	95	5153_1	RD	Active on Alarm
Inverter Relay Fault	Binary_Value	96	6059_1	RD	Active on Alarm
Battery Charging Error	Binary_Value	97	4164_1	RD	Active on Alarm
Battery Converter Failure	Binary_Value	98	5151_1	RD	Active on Alarm
Power Module Balancer of DC Bus Failure	Binary_Value	99	6439_1	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	100	4290_1	RD	Active on Alarm
Power Module Fuse Failure	Binary_Value	101	6440_1	RD	Active on Alarm
Power Module Power Supply Failure	Binary_Value	102	6441_1	RD	Active on Alarm
Power Module Fan Fault	Binary_Value	103	5838_1	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	104	5839_1	RD	Active on Alarm
Power Mdules 2					
Power Module Input Current Abnormal	Binary_Value	115	6438_2	RD	Active on Alarm
Rectifier Failure	Binary_Value	116	4295_2	RD	Active on Alarm
Inverter Failure	Binary_Value	117	4233_2	RD	Active on Alarm
DC Bus Abnormal	Binary_Value	118	5154_2	RD	Active on Alarm
Load Sharing Fault	Binary_Value	119	5153_2	RD	Active on Alarm
Inverter Relay Fault	Binary_Value	120	6059_2	RD	Active on Alarm
Battery Charging Error	Binary_Value	121	4164_2	RD	Active on Alarm
Battery Converter Failure	Binary_Value	122	5151_2	RD	Active on Alarm
Power Module Balancer of DC Bus Failure	Binary_Value	123	6439_2	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	124	4290_2	RD	Active on Alarm
Power Module Fuse Failure	Binary_Value	125	6440_2	RD	Active on Alarm
Power Module Power Supply Failure	Binary_Value	126	6441_2	RD	Active on Alarm
Power Module Fan Fault	Binary_Value	127	5838_2	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	128	5839_2	RD	Active on Alarm
Power Modules 20					
Power Module Input Current Abnormal	Binary_Value	547	6438_20	RD	Active on Alarm
Rectifier Failure	Binary_Value	548	4295_20	RD	Active on Alarm
Inverter Failure	Binary_Value	549	4233_20	RD	Active on Alarm
DC Bus Abnormal	Binary_Value	550	5154_20	RD	Active on Alarm
Load Sharing Fault	Binary_Value	551	5153_20	RD	Active on Alarm
Inverter Relay Fault	Binary_Value	552	6059_20	RD	Active on Alarm
Battery Charging Error	Binary_Value	553	4164_20	RD	Active on Alarm
Battery Converter Failure	Binary_Value	554	5151_20	RD	Active on Alarm
Power Module Balancer of DC Bus Failure	Binary_Value	555	6439_20	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	556	4290_20	RD	Active on Alarm
Power Module Fuse Failure	Binary_Value	557	6440_20	RD	Active on Alarm
Power Module Power Supply Failure	Binary_Value	558	6441_20	RD	Active on Alarm
Power Module Fan Fault	Binary_Value	559	5838_20	RD	Active on Alarm
Power Module Over Temperature	Binary_Value	560	5839_20	RD	Active on Alarm

Table 4-46 Liebert *e*XM™—Controller with Touchscreen HMI—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Status					
Loss of Redundancy	Binary_Value	571	5817_1	RD	Active on Alarm
Parallel Cable Failure	Binary_Value	572	6066_1	RD	Active on Alarm
LBS Cable Failure	Binary_Value	573	6064_1	RD	Active on Alarm
Transfer to Bypass - System Overload	Binary_Value	574	6060_1	RD	Active on Alarm
Excess ECO Suspends	Binary_Value	575	5458_1	RD	Active on Alarm
User Operation Invalid	Binary_Value	576	5157_1	RD	Active on Alarm
Load Impact Transfer	Binary_Value	577	5156_1	RD	Active on Alarm
Internal Communications Failure	Binary_Value	578	4300_1	RD	Active on Alarm
MMS Overload	Binary_Value	579	4831_1	RD	Active on Alarm
Parallel Comm Warning	Binary_Value	580	4823_1	RD	Active on Alarm
Equipment Over Temperature	Binary_Value	581	4310_1	RD	Active on Alarm
LBS Inhibited	Binary_Value	582	4758_1	RD	Active on Alarm
On Generator	Binary_Value	583	4315_1	RD	Active on Alarm
LBS Active	Binary_Value	584	4757_1	RD	Active on Alarm
System Shutdown - EPO	Binary_Value	585	4213_1	RD	Active on Alarm
Top Outlet Fan Fault	Binary_Value	586	5770_1	RD	Active on Alarm

Table 4-47 Liebert *e*XM™—Controller with Touchscreen HMI—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input RMS A-B	Analog_Value	1	4097_1	RD	Units: VAC
System Input RMS B-C	Analog_Value	2	4099_1	RD	Units: VAC
System Input RMS C-A	Analog_Value	3	4101_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	4	4113_1	RD	Units: A AC
System Input RMS Current Phase B	Analog_Value	5	4114_1	RD	Units: A AC
System Input RMS Current Phase C	Analog_Value	6	4115_1	RD	Units: A AC
System Input Frequency	Analog_Value	7	4105_1	RD	Units: Hz
System Input RMS A-N	Analog_Value	8	4096_1	RD	Units: VAC
System Input RMS B-N	Analog_Value	9	4098_1	RD	Units: VAC
System Input RMS C-N	Analog_Value	10	4100_1	RD	Units: VAC
System Input Power Factor Phs A	Analog_Value	11	4116_1	RD	
System Input Power Factor Phs B	Analog_Value	12	4117_1	RD	
System Input Power Factor Phs C	Analog_Value	13	4118_1	RD	
System Input Nominal Voltage	Analog_Value	14	4102_1	RD	Units: VAC
System Input Nominal Frequency	Analog_Value	15	4103_1	RD	Units: Hz
System Input Nominal Current	Analog_Value	16	4104_1	RD	Units: A AC
System Input Brown Out Count	Analog_Value	17	4119_1	RD	
System Input Black Out Count	Analog_Value	18	4120_1	RD	
Bypass					
Bypass Input Voltage RMS A-N	Analog_Value	29	4128_1	RD	Units: VAC
Bypass Input Voltage RMS B-N	Analog_Value	30	4129_1	RD	Units: VAC
Bypass Input Voltage RMS C-N	Analog_Value	31	4130_1	RD	Units: VAC
Bypass Input Frequency	Analog_Value	32	4131_1	RD	Units: Hz
Bypass Input Voltage RMS A-B	Analog_Value	33	4125_1	RD	Units: VAC
Bypass Input Voltage RMS B-C	Analog_Value	34	4126_1	RD	Units: VAC
Bypass Input Voltage RMS C-A	Analog_Value	35	4127_1	RD	Units: VAC
Bypass Nominal Voltage	Analog_Value	36	4259_1	RD	Units: VAC
Battery					
Battery Time Remaining	Analog_Value	47	4150_1	RD	Units: min
DC Bus Current	Analog_Value	48	4149_1	RD	Units: A DC
Time Until Next Auto Battery Test	Analog_Value	49	5804_1	RD	Units: min
Battery Percentage Charge	Analog_Value	50	4153_1	RD	Units: %
Number of Discharge Cycles	Analog_Value	51	5845_1	RD	
Accumulated Discharge Time	Analog_Value	52	5846_1	RD	Units: hr
Low Battery Warning Time	Analog_Value	53	5802_1	RD	Units: min
Battery Self Test Cycle Time	Analog_Value	54	5991_1	RD	Units: day
DC Bus Voltage	Analog_Value	55	4148_1	RD	Units: VDC
Battery Temperature	Analog_Value	56	5853_1	RD	Units: deg C
Battery Temperature	Analog_Value	10056	5853_1_deg_F	RD	Units: deg F
Battery - Battery Cabinets 1					
Battery Temperature for Cabinet	Analog_Value	67	4156_1_1	RD	Units: deg C
Battery Temperature for Cabinet	Analog_Value	10067	4156_1_1_deg_F	RD	Units: deg F
Battery Volts for Cabinet	Analog_Value	68	4155_1_1	RD	Units: VDC

Table 4-47 Liebert eXM™—Controller with Touchscreen HMI—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery - Battery Cabinets 2					
Battery Temperature for Cabinet	Analog_Value	79	4156_1_2	RD	Units: deg C
Battery Temperature for Cabinet	Analog_Value	10079	4156_1_2_deg_F	RD	Units: deg F
Battery Volts for Cabinet	Analog_Value	80	4155_1_2	RD	Units: VDC
Battery - Battery Cabinets 8					
Battery Temperature for Cabinet	Analog_Value	151	4156_1_8	RD	Units: deg C
Battery Temperature for Cabinet	Analog_Value	10151	4156_1_8_deg_F	RD	Units: deg F
Battery Volts for Cabinet	Analog_Value	152	4155_1_8	RD	Units: VDC
Output					
System Output Voltage RMS A-N	Analog_Value	163	4385_1	RD	Units: VAC
System Output Voltage RMS B-N	Analog_Value	164	4386_1	RD	Units: VAC
System Output Voltage RMS C-N	Analog_Value	165	4387_1	RD	Units: VAC
System Output RMS Current Phs A	Analog_Value	166	4204_1	RD	Units: A AC
System Output RMS Current Phs B	Analog_Value	167	4205_1	RD	Units: A AC
System Output RMS Current Phs C	Analog_Value	168	4206_1	RD	Units: A AC
System Output Frequency	Analog_Value	169	4207_1	RD	Units: Hz
System Output Voltage RMS A-B	Analog_Value	170	4201_1	RD	Units: VAC
System Output Voltage RMS B-C	Analog_Value	171	4202_1	RD	Units: VAC
System Output Voltage RMS C-A	Analog_Value	172	4203_1	RD	Units: VAC
System Output Power Factor Phs A	Analog_Value	173	4210_1	RD	
System Output Power Factor Phs B	Analog_Value	174	4211_1	RD	
System Output Power Factor Phs C	Analog_Value	175	4212_1	RD	
System Output Pct Power Phase A	Analog_Value	176	4223_1	RD	Units: %
System Output Pct Power Phase B	Analog_Value	177	4224_1	RD	Units: %
System Output Pct Power Phase C	Analog_Value	178	4225_1	RD	Units: %
MMS Output Apparent Power	Analog_Value	179	4812_1	RD	Units: kVA
MMS Output Power	Analog_Value	180	4811_1	RD	Units: kW
Output Current Crest Factor Phs A	Analog_Value	181	5159_1	RD	
Output Current Crest Factor Phs B	Analog_Value	182	5160_1	RD	
Output Current Crest Factor Phs C	Analog_Value	183	5161_1	RD	
System Output Power Phase A	Analog_Value	184	5859_1	RD	Units: kW
System Output Power Phase B	Analog_Value	185	5860_1	RD	Units: kW
System Output Power Phase C	Analog_Value	186	5959_1	RD	Units: kW
System Output Apparent Power Phs A	Analog_Value	187	5868_1	RD	Units: kVA
System Output Apparent Power Phs B	Analog_Value	188	5869_1	RD	Units: kVA
System Output Apparent Power Phs C	Analog_Value	189	5870_1	RD	Units: kVA
System Output Power	Analog_Value	190	4208_1	RD	Units: kW
System Output Apparent Power	Analog_Value	191	4209_1	RD	Units: kVA
System Output Pct Pwr (VA) Phs A	Analog_Value	192	4226_1	RD	Units: %
System Output Pct Pwr (VA) Phs B	Analog_Value	193	4227_1	RD	Units: %
System Output Pct Pwr (VA) Phs C	Analog_Value	194	4228_1	RD	Units: %
System Output Nominal Voltage	Analog_Value	195	4260_1	RD	Units: VAC
System Output Nominal Frequency	Analog_Value	196	4261_1	RD	Units: Hz

Table 4-47 Liebert eXM™—Controller with Touchscreen HMI—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Bypass Control Module					
Power Module Bypass Input Frequency	Analog_Value	207	6442_1	RD	Units: Hz
Power Module Bypass Input Voltage RMS A-N	Analog_Value	208	6443_1	RD	Units: VAC
Power Module Bypass Input Voltage RMS B-N	Analog_Value	209	6444_1	RD	Units: VAC
Power Module Bypass Input Voltage RMS C-N	Analog_Value	210	6445_1	RD	Units: VAC
Power Module Bypass Input Voltage RMS A-B	Analog_Value	211	6446_1	RD	Units: VAC
Power Module Bypass Input Voltage RMS B-C	Analog_Value	212	6447_1	RD	Units: VAC
Power Module Bypass Input Voltage RMS C-A	Analog_Value	213	6448_1	RD	Units: VAC
System Status					
Number Of Active Power Modules	Analog_Value	224	5824_1	RD	
Number of Installed Power Modules	Analog_Value	225	5823_1	RD	
Inlet Air Temperature	Analog_Value	226	4291_1	RD	Units: deg C
Inlet Air Temperature	Analog_Value	10226	4291_1_deg_F	RD	Units: deg F
Average system efficiency	Analog_Value	227	6069_1	RD	Units: %
System Configuration					
System Date and Time	Analog_Value	238	4293_1	RW	
Total System Operating Time	Analog_Value	239	4292_1	RD	Units: hr
System Capacity	Analog_Value	240	5821_1	RD	Units: kVA

Table 4-48 Liebert *e*XM™—Controller with Touchscreen HMI—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
Input Breaker	MultiState_Value	1	4766_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass					
External Bypass Breaker	MultiState_Value	12	6057_1	RD	1 = Open 2 = Close 3 = Not Installed
Battery					
UPS Battery Status	MultiState_Value	23	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Battery charge status.	MultiState_Value	24	5799_1	RD	1 = fully charged 2 = charging 3 = discharging 4 = not charging (charger off)
Automatic Battery Test	MultiState_Value	25	5803_1	RD	1 = disabled 2 = enabled
Inverter					
Output Breaker	MultiState_Value	36	4768_1	RD	1 = Open 2 = Close 3 = Not Installed
Inverter On/Off State	MultiState_Value	37	4746_1	RD	1 = off 2 = on
Power Modules 1					
Power Module Sleep Status	MultiState_Value	48	6437_1	RD	1 = Sleeping 2 = Not Sleeping
Module Operating Status	MultiState_Value	49	5833_1	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault
Inverter Status	MultiState_Value	50	5864_1	RD	1 = Inverter Inactive 2 = Inverter Active
Power Modules 2					
Power Module Sleep Status	MultiState_Value	61	6437_2	RD	1 = Sleeping 2 = Not Sleeping
Module Operating Status	MultiState_Value	62	5833_2	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault
Inverter Status	MultiState_Value	63	5864_2	RD	1 = Inverter Inactive 2 = Inverter Active

Table 4-48 Liebert *e*XM™—Controller with Touchscreen HMI—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Power Modules 20					
Power Module Sleep Status	MultiState_Value	295	6437_20	RD	1 = Sleeping 2 = Not Sleeping
Module Operating Status	MultiState_Value	296	5833_20	RD	1 = Normal 2 = Warning 3 = Alarm 4 = Fault
Inverter Status	MultiState_Value	297	5864_20	RD	1 = Inverter Inactive 2 = Inverter Active
System Status					
System Set To Operate With	MultiState_Value	308	5820_1	RD	1 = No Redundancy 2 = Redundancy
Maintenance Bypass Breaker	MultiState_Value	309	4772_1	RD	1 = Open 2 = Close 3 = Not Installed
ECO Mode Operation State	MultiState_Value	310	5454_1	RD	1 = disabled 2 = enabled
UPS Application Mode	MultiState_Value	311	6053_1	RD	1 = UPS Mode 2 = Frequency converter mode
MMS UPS Output Source	MultiState_Value	312	4874_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Intelligent Parallel Operation State	MultiState_Value	313	5448_1	RD	1 = disabled 2 = enabled
System Configuration					
UPS Output Source	MultiState_Value	324	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Status	MultiState_Value	325	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning = Normal with Alarm 5 = Abnormal Operation

Table 4-49 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary

Data Label	Data Description
Accumulated Discharge Time	Total accumulated discharge time for the Battery Module since it was made.
Automatic Battery Test	Enable/disable the automatic battery test schedule.
Average system efficiency	Average system efficiency
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Breaker 1 Open Failure	Battery circuit breaker 1 failed to open
Battery Breaker 2 Open Failure	Battery circuit breaker 2 failed to open
Battery Breaker 3 Open Failure	Battery circuit breaker 3 failed to open
Battery Breaker 4 Open Failure	Battery circuit breaker 4 failed to open
Battery Capacity Low	Battery capacity is low
Battery Charge Equalization Timeout	The battery equalizing is time out.
Battery charge status.	Battery charge status.
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Converter Current Limit	The battery converter has reached is maximum current limit.
Battery Converter Failure	Battery converter failure. This is a summary event caused by one or more power sub-modules in a UPS module.
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Manual Test In Progress	Manual battery test is in progress
Battery Not Qualified	The UPS battery voltage is not qualified. This event will be detected even in the absence of battery disconnect or when it is open.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Percentage Charge	The percentage of battery charge
Battery Room Alarm	The ambient temperature of the battery room is abnormal.
Battery Self Test Cycle Time	The time between automatic battery self test cycles.
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature	The highest battery temperature among all Battery Cabinets
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Test Failed	Battery test failed
Battery Test Passed	Battery test passed
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass Backfeed Detected	The system detected a voltage on the bypass when none was expected
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage Fault	The system has detected the bypass voltage is unqualified.
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral

Table 4-49 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary (continued)

Data Label	Data Description
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
External Bypass Breaker	The status of the external bypass breaker.
Inlet Air Temperature	The temperature of the inlet air
Input Breaker	Input breaker
Input Source Backfeed	The battery is backfeeding the input source.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Relay Fault	The inverter relay has malfunctioned.
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Status	Status of the inverter output. Active means the inverter is online with regulated output voltage and ready to power the load. Inactive means the inverter is offline and not ready to power the load.
LBS Active	The Load Bus Sync option is active
LBS Cable Failure	Load Bus Sync communications is abnormal. A problem with the LBS cable may exist.
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Load Impact Transfer	On bypass as result of load impact.
Load Sharing Fault	Difference between any phase inverter current of unit and the relevant average output current of parallel system is more than a specific percent of nominal current.
Loss of Redundancy	The system has an insufficient number of power modules to provide redundancy.
Loss of Synchronization	The inverter and bypass are no longer synchronized.
Low Battery Warning Time	When battery time remaining falls to, or below, this value the low battery alarm is activated.
Main Battery Disconnect Open	Main battery disconnect is open
Mains Input Neutral Lost	Loss of neutral in the input source is detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Power	The sum total power of all system output modules
MMS Overload	Multi-module system overload
MMS UPS Output Source	Multi-module UPS output source

Table 4-49 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary (continued)

Data Label	Data Description
Module Operating Status	The operating status for this Power Module.
Number Of Active Power Modules	The total number of active power modules.
Number of Discharge Cycles	The total number of battery discharge cycles for the Battery Module since it was made.
Number of Installed Power Modules	The total number of Power Modules installed.
On Generator	A generator is supplying the power to the system
Output Breaker	Output breaker
Output Current Crest Factor Phs A	Output current crest factor of Phase A.
Output Current Crest Factor Phs B	Output current crest factor of Phase B.
Output Current Crest Factor Phs C	Output current crest factor of Phase C.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Overload	An overload exists on the output.
Parallel Cable Failure	The UPS parallel system communications is abnormal. A problem with the parallel cable may exist.
Parallel Comm Warning	Parallel communication bus warning
Power Module Balancer of DC Bus Failure	Balancer of DC Bus in the power module has failed
Power Module Bypass Input Frequency	The bypass input frequency detected by power module
Power Module Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B detected by power module
Power Module Bypass Input Voltage RMS A-N	The bypass input RMS voltage between phase A and Neutral detected by power module
Power Module Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C detected by power module
Power Module Bypass Input Voltage RMS B-N	The bypass input RMS voltage between phase B and Neutral detected by power module
Power Module Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A detected by power module
Power Module Bypass Input Voltage RMS C-N	The bypass input RMS voltage between phase C and Neutral detected by power module
Power Module Fan Fault	The Power Module has detected a fan fault.
Power Module Fuse Failure	A summary event indicating one or more fuse failures in the power module
Power Module Input Current Abnormal	Input current of the power module is abnormal
Power Module Over Temperature	The Power Module has detected an over temperature condition.
Power Module Power Supply Failure	Power module power supply failure
Power Module Sleep Status	Sleep status of the Power module
Rectifier Failure	Rectifier failure - rectifier is off
System Capacity	System capacity supported by the installed power modules.
System Date and Time	The system date and time
System Input Black Out Count	The number of occurrences, since the last reset, where the input was not qualified to provide power to the system
System Input Brown Out Count	The number of occurrences, since the last reset, where the system input voltage has fallen below a pre-determined threshold for a specified amount of time
System Input Frequency	The system input frequency
System Input Nominal Current	The nominal (or rated) system input current
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)

Table 4-49 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary (continued)

Data Label	Data Description
System Input Power Factor Phs A	The system input power factor for Phase A
System Input Power Factor Phs B	The system input power factor for Phase B
System Input Power Factor Phs C	The system input power factor for Phase C
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS A-N	The System Input RMS Voltage between Phase A and Neutral
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS B-N	The System Input RMS Voltage between Phase B and Neutral
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS C-N	The System Input RMS Voltage between Phase C and Neutral
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power Phs A	System output apparent power on phase A
System Output Apparent Power Phs B	System output apparent power on phase B
System Output Apparent Power Phs C	System output apparent power on phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs A	The system output apparent power on phase A as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs B	The system output apparent power on phase B as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs C	The system output apparent power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power Phase A	The system output power on phase A.
System Output Power Phase B	The system output power on phase B.
System Output Power Phase C	The system output power on phase C.
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral

Table 4-49 Liebert *e*XM™—Controller with Touchscreen HMI—Glossary (continued)

Data Label	Data Description
System Set To Operate With	If this point reports 'Redundancy' then the system is configured for redundancy and the 'Loss of Redundancy' alarm is enabled.
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Status	The operating status for the system
Time Until Next Auto Battery Test	The time until the next automatic battery test is started.
Top Outlet Fan Fault	Top outlet fan fault - one or more top outlet fans have failed.
Total System Operating Time	The cumulative operation time of the unit
Transfer to Bypass - System Overload	The UPS System has transferred to bypass because the active power modules cannot support the critical load.
UPS Application Mode	UPS application mode.
UPS Battery Status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
User Operation Invalid	User attempted an invalid operation.

Table 4-50 Liebert GXT3™ and Liebert GXT4™—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
Input Undervoltage	Binary_Value	1	5568_1	RD	Active on Alarm
Input Overvoltage	Binary_Value	2	5569_1	RD	Active on Alarm
Bypass					
Bypass Not Available	Binary_Value	13	4135_1	RD	Active on Alarm
Battery					
Battery Self Test	Binary_Value	24	4741_1	RD	Active on Alarm
Battery Low	Binary_Value	25	4162_1	RD	Active on Alarm
Battery Under Voltage	Binary_Value	26	6180_1	RD	Active on Alarm
Battery Over Voltage	Binary_Value	27	5874_1	RD	Active on Alarm
Battery Test Failed	Binary_Value	28	4323_1	RD	Active on Alarm
Replace Battery	Binary_Value	29	6182_1	RD	Active on Alarm
Output					
Output Overload	Binary_Value	40	5806_1	RD	Active on Alarm
Output Undervoltage	Binary_Value	41	5179_1	RD	Active on Alarm
Output Overvoltage	Binary_Value	42	5178_1	RD	Active on Alarm
System Output Off	Binary_Value	43	4215_1	RD	Active on Alarm
System					
Unspecified General Event	Binary_Value	60	5588_1	RD	Active on Alarm
Parallel Comm Warning	Binary_Value	61	4823_1	RD	Active on Alarm
Loss of Redundancy	Binary_Value	62	4825_1	RD	Active on Alarm
Charger Failure	Binary_Value	63	6254_1	RD	Active on Alarm
Rectifier Failure	Binary_Value	64	4295_1	RD	Active on Alarm
Inverter Failure	Binary_Value	65	4233_1	RD	Active on Alarm
Maintenance Bypass Breaker Closed	Binary_Value	66	5976_1	RD	Active on Alarm
System Fan Failure	Binary_Value	67	4311_1	RD	Active on Alarm
Emergency Power Off - Latched	Binary_Value	68	4229_1	RD	Active on Alarm
Input Wiring Fault	Binary_Value	69	6453_1	RD	Active on Alarm
DC to DC Converter Fault	Binary_Value	70	6454_1	RD	Active on Alarm

Table 4-51 Liebert GXT3™ and Liebert GXT4™—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input RMS L1-N	Analog_Value	1	4096_1	RD	Units: VAC
System Input RMS L2-N	Analog_Value	2	4098_1	RD	Units: VAC
System Input RMS L1-L2	Analog_Value	3	4097_1	RD	Units: VAC
System Input RMS Current L1	Analog_Value	4	4113_1	RD	Units: A AC
System Input RMS Current L2	Analog_Value	5	4114_1	RD	Units: A AC
System Input Frequency	Analog_Value	6	4105_1	RD	Units: Hz
System Input Max Voltage L1-N	Analog_Value	7	4106_1	RD	Units: VAC
System Input Min Voltage L1-N	Analog_Value	8	4107_1	RD	Units: VAC
System Input Max Voltage L2-N	Analog_Value	9	4108_1	RD	Units: VAC
System Input Min Voltage L2-N	Analog_Value	10	4109_1	RD	Units: VAC
System Input Nominal Voltage	Analog_Value	11	4102_1	RD	Units: VAC
System Input Nominal Current	Analog_Value	12	4104_1	RD	Units: A AC
System Input Nominal Frequency	Analog_Value	13	4103_1	RD	Units: Hz
Bypass					
Bypass Input Voltage RMS L1-N	Analog_Value	24	4128_1	RD	Units: VAC
Bypass Input Voltage RMS L1-L2	Analog_Value	25	4125_1	RD	Units: VAC
Bypass Input Voltage RMS L2-N	Analog_Value	26	4129_1	RD	Units: VAC
Bypass Input RMS Current	Analog_Value	27	5570_1	RD	Units: A AC
Bypass Input RMS Current Line 2	Analog_Value	28	5571_1	RD	Units: A AC
Bypass Input Frequency	Analog_Value	29	4131_1	RD	Units: Hz
Bypass Nominal Voltage	Analog_Value	30	4259_1	RD	Units: VAC
Battery					
Battery Time Remaining	Analog_Value	41	4150_1	RD	Units: min
Battery Percentage Charge	Analog_Value	42	4153_1	RD	Units: %
DC Bus Voltage	Analog_Value	43	4148_1	RD	Units: VDC
DC Bus Nominal Voltage	Analog_Value	44	6189_1	RD	Units: VDC
Battery Rating	Analog_Value	45	4898_1	RD	Units: AH
Low Battery Warning Time	Analog_Value	46	5802_1	RW	Units: min
Number of EBC Installed	Analog_Value	47	5800_1	RD	
Nominal Battery Capacity	Analog_Value	48	6195_1	RD	Units: min
Battery Discharge Time	Analog_Value	49	4151_1	RD	Units: min
Battery Float Voltage	Analog_Value	50	5988_1	RD	Units: VDC
Output					
System Output Voltage RMS L1-N	Analog_Value	61	4385_1	RD	Units: VAC
System Output Voltage RMS L1-L2	Analog_Value	62	4201_1	RD	Units: VAC
System Output RMS Current L1	Analog_Value	63	4204_1	RD	Units: A AC
System Output Voltage RMS L2-N	Analog_Value	64	4386_1	RD	Units: VAC
System Output RMS Current L2	Analog_Value	65	4205_1	RD	Units: A AC
System Output Frequency	Analog_Value	66	4207_1	RD	Units: Hz
System Output Max Voltage L1-N	Analog_Value	67	6184_1	RD	Units: VAC
System Output Min Voltage L1-N	Analog_Value	68	6185_1	RD	Units: VAC
System Output Max Voltage L2-N	Analog_Value	69	6213_1	RD	Units: VAC
System Output Min Voltage L2-N	Analog_Value	70	6214_1	RD	Units: VAC
System Output Power	Analog_Value	71	4208_1	RD	Units: W
System Output Power L1	Analog_Value	72	5859_1	RD	Units: W

Table 4-51 Liebert GXT3™ and Liebert GXT4™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Output Power L2	Analog_Value	73	5860_1	RD	Units: W
System Output Pct Power	Analog_Value	74	5861_1	RD	Units: %
System Output Pct Power L1	Analog_Value	75	4223_1	RD	Units: %
System Output Pct Power L2	Analog_Value	76	4224_1	RD	Units: %
System Output Apparent Power	Analog_Value	77	4209_1	RD	Units: VA
System Output Apparent Power L1	Analog_Value	78	5868_1	RD	Units: VA
System Output Apparent Power L2	Analog_Value	79	5869_1	RD	Units: VA
System Output Nominal Voltage	Analog_Value	80	4260_1	RD	Units: VAC
Output Apparent Power Rating	Analog_Value	81	4264_1	RD	Units: VA
System Output Nominal Frequency	Analog_Value	82	4261_1	RD	Units: Hz
Output On Delay	Analog_Value	83	5816_1	RW	Units: sec
Reboot With Delay	Analog_Value	84	5815_1	RW	Units: sec
Shutdown After Delay	Analog_Value	85	5814_1	RW	Units: sec
Nominal Power Factor	Analog_Value	86	5812_1	RD	
Outlet Group 1					
Outlet Group Identifier	Analog_Value	97	4510_1	RD	
Outlet Group 2					
Outlet Group Identifier	Analog_Value	108	4510_2	RD	‘
System					
System Input Black Out Count	Analog_Value	119	4120_1	RD	
System Input Brown Out Count	Analog_Value	120	4119_1	RD	
Auto Restart Delay	Analog_Value	121	4710_1	RW	Units: sec
Inlet Air Temperature	Analog_Value	122	4291_1	RD	Units: deg C
Inlet Air Temperature	Analog_Value	10122	4291_1_deg_F	RD	Units: deg F

Table 4-52 Liebert GXT3™ and Liebert GXT4™—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Protocol					
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
Battery					
UPS Battery Status	MultiState_Value	12	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Battery Charge Status	MultiState_Value	13	5799_1	RD	1 = fully charged 2 = charging 3 = discharging 4 = not charging (charger off)
Battery Cabinet Type	MultiState_Value	14	6183_1	RD	1 = Internal 2 = External 3 = LRT
Battery Charge Compensating	MultiState_Value	15	6190_1	RD	1 = false 2 = true
Battery Charger State	MultiState_Value	16	6192_1	RD	1 = off 2 = on
Battery Test Result	MultiState_Value	17	6181_1	RD	1 = Unknown 2 = Passed 3 = Failed 4 = In Progress 5 = System Failure 6 = Inhibited
Manual Battery Test	MultiState_Value	18	5858_1	WO	1 = Start Test
Automatic Battery Test	MultiState_Value	19	5803_1	RD	1 = disabled 2 = enabled
Output					
UPS Output Source	MultiState_Value	30	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Power Factor Correction	MultiState_Value	31	6196_1	RD	1 = off 2 = on
Outlet Group 1					
Outlet Group Power Control	MultiState_Value	42	4365_1	RW	1 = Off 2 = On 3 = Cycle Power

Table 4-52 Liebert GXT3™ and Liebert GXT4™—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Outlet Group 2					
Outlet Group Power Control	MultiState_Value	53	4365_2	RW	1 = Off 2 = On 3 = Cycle Power
ECO Mode					
ECO Mode Status	MultiState_Value	64	6198_1	RD	1 = off 2 = on
ECO Mode Operation State	MultiState_Value	65	5454_1	RW	1 = disabled 2 = enabled
System					
System Status	MultiState_Value	76	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
Auto Restart	MultiState_Value	77	5831_1	RW	1 = disabled 2 = enabled
Inverter On/Off State	MultiState_Value	78	4746_1	RD	1 = off 2 = on
Shutdown Reason	MultiState_Value	79	6197_1	RD	1 = None 2 = Over Temperature 3 = Overload 4 = DC Bus Overload 5 = Output Short 6 = Line Swap 7 = Low Battery 8 = Remote Command 9 = Input Under Voltage 10 = Power Factor Correction Fail 11 = External Signal Command
Abort Command	MultiState_Value	80	6200_1	WO	1 = Issue Command
DC Converter Status	MultiState_Value	81	6003_1	RD	1 = off 2 = on
UPS Topology	MultiState_Value	82	6199_1	RD	1 = unknown 2 = Offline 3 = Line Interactive 4 = Online
Bypass/Inverter Input Config	MultiState_Value	83	6224_1	RD	1 = Single/Combined Source 2 = Dual/Separate Sources
Reset Power Statistics	MultiState_Value	84	6191_1	WO	1 = Reset
Audible Alarm Control	MultiState_Value	85	6188_1	RW	1 = off 2 = on
Silence Audible Alarm	MultiState_Value	86	6257_1	WO	1 = Silence Alarm

Table 4-53 Liebert GXT3™ and Liebert GXT4™—Glossary

Data Label	Data Description
Abort Command	Attempt to abort a previously issued command to the device that is still pending
Audible Alarm Control	Audible Alarm Control
Auto Restart Delay	If power is lost, the control will delay this amount of time after power is restored before restarting the unit.
Auto Restart	When 'enabled', the UPS will automatically restart the load when utility power is restored after a battery discharge.
Automatic Battery Test	Enable/disable the automatic battery test schedule.
Battery Cabinet Type	Type of extended battery cabinets.
Battery Charge Compensating	Battery charge algorithm changed due to battery temperature
Battery Charge Status	Battery charge status.
Battery Charger State	Current state of the battery charger
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging
Battery Float Voltage	The cell voltage of the battery at float recharging.
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Over Voltage	The system has detected that the battery voltage has exceeded a predetermined limit.
Battery Percentage Charge	The percentage of battery charge
Battery Rating	Total rating of all parallel strings in the battery.
Battery Self Test	Battery self test is in progress
Battery Test Failed	Battery test failed
Battery Test Result	The outcome of the previous battery test.
Battery Time Remaining	The calculated available time on battery
Battery Under Voltage	Battery voltage is too low.
Bypass Input Frequency	The bypass input frequency
Bypass Input RMS Current Line 2	The bypass input RMS current for Line 2
Bypass Input RMS Current	The bypass input RMS current.
Bypass Input Voltage RMS L1-L2	The bypass input RMS voltage between Lines 1 and 2
Bypass Input Voltage RMS L1-N	The bypass input RMS voltage between Line 1 and Neutral
Bypass Input Voltage RMS L2-N	The bypass input RMS voltage between Line 2 and Neutral
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass/Inverter Input Config	Input source configuration for the bypass and inverter.
Charger Failure	Charger Failure - Charger is off
DC Bus Nominal Voltage	The nominal (or rated) voltage between the positive and negative terminals of the DC bus at the battery input
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
DC Converter Status	The operating state of the dc converter.
DC to DC Converter Fault	A failure has occurred in the battery discharge circuit.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
ECO Mode Status	Current ECO Mode Status
Emergency Power Off - Latched	System output is off - 'Emergency Power Off (EPO) - latched' requires manual reset
Equipment Over Temperature	Equipment over temperature summary event
Inlet Air Temperature	The temperature of the inlet air
Input Frequency Deviation	The input frequency is outside of the normal range.
Input Overvoltage	One or more of the input phase voltages has exceeded the limit.

Table 4-53 Liebert GXT3™ and Liebert GXT4™—Glossary (continued)

Data Label	Data Description
Input Undervoltage	One or more of the input phase voltages has dropped below the limit.
Input Wiring Fault	The neutral/ground conductors on the input wiring are not properly bonded, or the line/neutral conductors have been swapped.
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Loss of Redundancy	The multi-module collection doesn't have enough modules to satisfy the redundancy configuration.
Low Battery Warning Time	When battery time remaining falls to, or below, this value the low battery alarm is activated.
Maintenance Bypass Breaker Closed	The maintenance bypass breaker is closed.
Manual Battery Test	Command to initiate a manual battery test.
Nominal Battery Capacity	The nominal (or rated) battery capacity time at full load
Nominal Power Factor	The nominal (or rated) system power factor.
Number of EBC Installed	The total number of Extended Battery Cabinets installed.
Outlet Group Identifier	A runtime assigned outlet group identification number
Outlet Group Power Control	Outlet Group Power Control (OFF, ON, Cycle, etc)
Output Apparent Power Rating	Output apparent power rating
Output On Delay	When a value is written to this point the output will be turned on after the specified time has elapsed.
Output Overload	An overload exists on the output.
Output Overvoltage	One or more of the output phase voltages has exceeded the limit.
Output Undervoltage	One or more of the output phase voltages has dropped below the limit.
Parallel Comm Warning	Parallel communication bus warning
Power Factor Correction	The state of the power factor correction circuitry of the system
Reboot With Delay	When a value is written to this point the output will be turned off immediately and then turned back on after the specified time has elapsed.
Rectifier Failure	Rectifier failure - rectifier is off
Replace Battery	The battery is due for replacement.
Reset Power Statistics	Reset Power Statistics
Server Class	The general classification for this system
Shutdown After Delay	When a value is written to this point the system will shutdown after the specified time has elapsed and output will remain off.
Shutdown Pending	Shutdown is pending.
Shutdown Reason	The reason for the most recent shutdown
Silence Audible Alarm	Silence Audible Alarm
System Fan Failure	System fan failure - one or more fans have failed
System Input Black Out Count	The number of occurrences, since the last reset, where the input was not qualified to provide power to the system
System Input Brown Out Count	The number of occurrences, since the last reset, where the system input voltage has fallen below a pre-determined threshold for a specified amount of time
System Input Frequency	The system input frequency
System Input Max Voltage L1-N	The maximum system input voltage measurement for Line 1-N since the last reset
System Input Max Voltage L2-N	The maximum system input voltage measurement for Line 2-N since the last reset
System Input Min Voltage L1-N	The minimum system input voltage measurement for Line 1-N since the last reset
System Input Min Voltage L2-N	The minimum system input voltage measurement for Line 2-N since the last reset
System Input Nominal Current	The nominal (or rated) system input current
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage

Table 4-53 Liebert GXT3™ and Liebert GXT4™—Glossary (continued)

Data Label	Data Description
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS Current L1	The system input RMS current for Line 1
System Input RMS Current L2	The system input RMS current for Line 2
System Input RMS L1-L2	The System Input RMS Voltage between Line 1 and Line 2
System Input RMS L1-N	The System Input RMS Voltage between Line 1 and Neutral
System Input RMS L2-N	The System Input RMS Voltage between Line 2 and Neutral
System Output Apparent Power L1	System output apparent power on Line 1
System Output Apparent Power L2	System output apparent power on Line 2
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Frequency	The system output frequency
System Output Max Voltage L1-N	The maximum system output voltage measurement for Line 1-N since the last reset.
System Output Max Voltage L2-N	The maximum system output voltage measurement for Line 2-N since the last reset.
System Output Min Voltage L1-N	The minimum system output voltage measurement for Line 1-N since the last reset.
System Output Min Voltage L2-N	The minimum system output voltage measurement for Line 2-N since the last reset.
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Off	The system output is off
System Output Pct Power L1	The system output power on Line 1 as a percentage of the rated capacity
System Output Pct Power L2	The system output power on Line 2 as a percentage of the rated capacity
System Output Pct Power	The system output power as a percentage of the rated capacity.
System Output Power L1	The system output power on Line 1.
System Output Power L2	The system output power on Line 2.
System Output Power	The sum total power of all system output phases
System Output RMS Current L1	The system output RMS current for Line 1
System Output RMS Current L2	The system output RMS current for Line 2
System Output Voltage RMS L1-L2	The system output RMS voltage between Lines 1 and 2
System Output Voltage RMS L1-N	The system output RMS voltage between Line 1 and Neutral
System Output Voltage RMS L2-N	The system output RMS voltage between Line 2 and Neutral
System Status	The operating status for the system
Unspecified General Event	One or more unspecified events active. See local unit display for further details.
UPS Battery Status	UPS battery status
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
UPS Topology	UPS Topology

Table 4-54 Liebert NX™ 225-600kVA—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
Rectifier Failure	Binary_Value	1	4295_1	RD	Active on Alarm
System Input Phs Rotation Error	Binary_Value	2	4146_1	RD	Active on Alarm
System Input Current Limit	Binary_Value	3	4147_1	RD	Active on Alarm
System Input Power Problem	Binary_Value	4	4122_1	RD	Active on Alarm
Bypass					
Bypass Static Switch Unavailable	Binary_Value	15	4143_1	RD	Active on Alarm
Bypass Input Voltage Fault	Binary_Value	16	5957_1	RD	Active on Alarm
Bypass Not Available	Binary_Value	17	4135_1	RD	Active on Alarm
Bypass Overload	Binary_Value	18	5798_1	RD	Active on Alarm
Battery					
Bypass Static Switch Unavailable	Binary_Value	15	4143_1	RD	Active on Alarm
Bypass Input Voltage Fault	Binary_Value	16	5957_1	RD	Active on Alarm
Bypass Not Available	Binary_Value	17	4135_1	RD	Active on Alarm
Bypass Overload	Binary_Value	18	5798_1	RD	Active on Alarm
Battery Test Failed	Binary_Value	29	4323_1	RD	Active on Alarm
Battery Test Passed	Binary_Value	30	4322_1	RD	Active on Alarm
Battery Terminals Reversed	Binary_Value	31	5150_1	RD	Active on Alarm
Battery Over Voltage	Binary_Value	32	5874_1	RD	Active on Alarm
Battery Temperature Out of Range	Binary_Value	33	5958_1	RD	Active on Alarm
Battery Low	Binary_Value	34	4162_1	RD	Active on Alarm
Battery Over Temperature	Binary_Value	35	4219_1	RD	Active on Alarm
Battery Discharging	Binary_Value	36	4168_1	RD	Active on Alarm
Battery Auto Test In Progress	Binary_Value	37	4172_1	RD	Active on Alarm
Battery Manual Test In Progress	Binary_Value	38	4171_1	RD	Active on Alarm
Battery Ground Fault	Binary_Value	39	4222_1	RD	Active on Alarm
DC Bus Abnormal	Binary_Value	40	5154_1	RD	Active on Alarm
Output					
System Output Off	Binary_Value	51	4215_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	52	4299_1	RD	Active on Alarm
UPS Output on Bypass	Binary_Value	53	4298_1	RD	Active on Alarm
Inverter					
Inverter Failure	Binary_Value	64	4233_1	RD	Active on Alarm
Inverter Overload	Binary_Value	65	5960_1	RD	Active on Alarm
System Output Fault	Binary_Value	66	4389_1	RD	Active on Alarm
Output Of/Uf	Binary_Value	67	5144_1	RD	Active on Alarm
System Shutdown - Output Short	Binary_Value	68	5808_1	RD	Active on Alarm
Inverter Desaturation	Binary_Value	69	5968_1	RD	Active on Alarm
Booster-Charger					
Booster Failure	Binary_Value	80	6253_1	RD	Active on Alarm
Charger Failure	Binary_Value	81	6254_1	RD	Active on Alarm

Table 4-54 Liebert NX™ 225-600kVA—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Status					
System Shutdown - EPO	Binary_Value	92	4213_1	RD	Active on Alarm
Generic DIC Fault	Binary_Value	93	5969_1	RD	Active on Alarm
Inlet Air Over Temperature	Binary_Value	94	4294_1	RD	Active on Alarm
Generic Test Event	Binary_Value	95	4551_1	RD	Active on Alarm
Fan Hours Exceeded	Binary_Value	96	5054_1	RD	Active on Alarm
Unit Shutdown	Binary_Value	97	5113_1	RD	Active on Alarm
Main Controller Fault	Binary_Value	98	4753_1	RD	Active on Alarm
Equipment Over Temperature	Binary_Value	99	4310_1	RD	Active on Alarm
Maximum Load Alarm	Binary_Value	100	5851_1	RD	Active on Alarm
Ground Fault	Binary_Value	101	5970_1	RD	Active on Alarm
Switch Gear					
Backfeed Breaker Open	Binary_Value	112	4325_1	RD	Active on Alarm
Input Breaker Open	Binary_Value	113	5973_1	RD	Active on Alarm
Output Breaker Open	Binary_Value	114	5975_1	RD	Active on Alarm
Maintenance Bypass Breaker Closed	Binary_Value	115	5976_1	RD	Active on Alarm
Battery Breaker Open	Binary_Value	116	5977_1	RD	Active on Alarm

Table 4-55 Liebert NX™ 225-600kVA—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input RMS A-B	Analog_Value	1	4097_1	RD	Units: VAC
System Input RMS B-C	Analog_Value	2	4099_1	RD	Units: VAC
System Input RMS C-A	Analog_Value	3	4101_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	4	4113_1	RD	Units: A AC
System Input RMS Current Phase B	Analog_Value	5	4114_1	RD	Units: A AC
System Input RMS Current Phase C	Analog_Value	6	4115_1	RD	Units: A AC
System Input Frequency	Analog_Value	7	4105_1	RD	Units: Hz
Input - Rectifier Module Temperatures 1					
Rectifier Phase A Temperature sensor	Analog_Value	18	6245_1_1	RD	Units: deg C
Rectifier Phase A Temperature sensor	Analog_Value	10018	6245_1_1_deg_F	RD	Units: deg F
Rectifier Phase B Temperature sensor	Analog_Value	19	6246_1_1	RD	Units: deg C
Rectifier Phase B Temperature sensor	Analog_Value	10019	6246_1_1_deg_F	RD	Units: deg F
Rectifier Phase C Temperature sensor	Analog_Value	20	6247_1_1	RD	Units: deg C
Rectifier Phase C Temperature sensor	Analog_Value	10020	6247_1_1_deg_F	RD	Units: deg F
Input - Rectifier Module Temperatures 2					
Rectifier Phase A Temperature sensor	Analog_Value	31	6245_1_2	RD	Units: deg C
Rectifier Phase A Temperature sensor	Analog_Value	10031	6245_1_2_deg_F	RD	Units: deg F
Rectifier Phase B Temperature sensor	Analog_Value	32	6246_1_2	RD	Units: deg C
Rectifier Phase B Temperature sensor	Analog_Value	10032	6246_1_2_deg_F	RD	Units: deg F
Rectifier Phase C Temperature sensor	Analog_Value	33	6247_1_2	RD	Units: deg C
Rectifier Phase C Temperature sensor	Analog_Value	10033	6247_1_2_deg_F	RD	Units: deg F
Input - Rectifier Module Temperatures 4					
Rectifier Phase A Temperature Sensor	Analog_Value	57	6245_1_4	RD	Units: deg C
Rectifier Phase A Temperature Sensor	Analog_Value	10057	6245_1_4_deg_F	RD	Units: deg F
Rectifier Phase B Temperature Sensor	Analog_Value	58	6246_1_4	RD	Units: deg C
Rectifier Phase B Temperature Sensor	Analog_Value	10058	6246_1_4_deg_F	RD	Units: deg F
Rectifier Phase C Temperature Sensor	Analog_Value	59	6247_1_4	RD	Units: deg C
Rectifier Phase C Temperature Sensor	Analog_Value	10059	6247_1_4_deg_F	RD	Units: deg F
Bypass					
Bypass Input Voltage RMS A-B	Analog_Value	70	4125_1	RD	Units: VAC
Bypass Input Voltage RMS B-C	Analog_Value	71	4126_1	RD	Units: VAC
Bypass Input Voltage RMS C-A	Analog_Value	72	4127_1	RD	Units: VAC
Bypass Input Frequency	Analog_Value	73	4131_1	RD	Units: Hz
Battery					
DC Bus Voltage	Analog_Value	84	4148_1	RD	Units: VDC
Battery Volts for Cabinet	Analog_Value	85	4155_1	RD	Units: VDC
DC Bus Current	Analog_Value	86	4149_1	RD	Units: A DC
Battery Time Remaining	Analog_Value	87	4150_1	RD	Units: min
Battery Percentage Charge	Analog_Value	88	4153_1	RD	Units: %
Battery Temperature for Cabinet	Analog_Value	89	4156_1	RD	Units: deg C
Battery Temperature for Cabinet	Analog_Value	10089	4156_1_deg_F	RD	Units: deg F

Table 4-55 Liebert NX™ 225-600kVA—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Output					
System Output Voltage RMS A-B	Analog_Value	100	4201_1	RD	Units: VAC
System Output Voltage RMS B-C	Analog_Value	101	4202_1	RD	Units: VAC
System Output Voltage RMS C-A	Analog_Value	102	4203_1	RD	Units: VAC
System Output RMS Current Phs A	Analog_Value	103	4204_1	RD	Units: A AC
System Output RMS Current Phs B	Analog_Value	104	4205_1	RD	Units: A AC
System Output RMS Current Phs C	Analog_Value	105	4206_1	RD	Units: A AC
System Output Frequency	Analog_Value	106	4207_1	RD	Units: Hz
System Output Apparent Power	Analog_Value	107	4209_1	RD	Units: kVA
System Output Power	Analog_Value	108	4208_1	RD	Units: kW
System Output Apparent Power Phs A	Analog_Value	109	5868_1	RD	Units: kVA
System Output Apparent Power Phs B	Analog_Value	110	5869_1	RD	Units: kVA
System Output Apparent Power Phs C	Analog_Value	111	5870_1	RD	Units: kVA
System Output Power Phase A	Analog_Value	112	5859_1	RD	Units: kW
System Output Power Phase B	Analog_Value	113	5860_1	RD	Units: kW
System Output Power Phase C	Analog_Value	114	5959_1	RD	Units: kW
System Output Pct Power Phase A	Analog_Value	115	4223_1	RD	Units: %
System Output Pct Power Phase B	Analog_Value	116	4224_1	RD	Units: %
System Output Pct Power Phase C	Analog_Value	117	4225_1	RD	Units: %
Output Percent Load	Analog_Value	118	5168_1	RD	Units: %
Temperature	Analog_Value	119	6248_1	RD	Units: deg C
Temperature	Analog_Value	10119	6248_1_deg_F	RD	Units: deg F
Inverter					
Inverter Overload Time Remaining	Analog_Value	130	4232_1	RD	Units: sec
Inverter - Inverter Module Temperatures 1					
Inverter Phase A Temperature Sensor	Analog_Value	141	6249_1_1	RD	Units: deg C
Inverter Phase A Temperature Sensor	Analog_Value	10141	6249_1_1_deg_F	RD	Units: deg F
Inverter Phase B Temperature Sensor	Analog_Value	142	6250_1_1	RD	Units: deg C
Inverter Phase B Temperature Sensor	Analog_Value	10142	6250_1_1_deg_F	RD	Units: deg F
Inverter Phase C Temperature Sensor	Analog_Value	143	6251_1_1	RD	Units: deg C
Inverter Phase C Temperature Sensor	Analog_Value	10143	6251_1_1_deg_F	RD	Units: deg F
Inverter - Inverter Module Temperatures 2					
Inverter Phase A Temperature Sensor	Analog_Value	154	6249_1_2	RD	Units: deg C
Inverter Phase A Temperature Sensor	Analog_Value	10154	6249_1_2_deg_F	RD	Units: deg F
Inverter Phase B Temperature Sensor	Analog_Value	155	6250_1_2	RD	Units: deg C
Inverter Phase B Temperature Sensor	Analog_Value	10155	6250_1_2_deg_F	RD	Units: deg F
Inverter Phase C Temperature Sensor	Analog_Value	156	6251_1_2	RD	Units: deg C
Inverter Phase C Temperature Sensor	Analog_Value	10156	6251_1_2_deg_F	RD	Units: deg F
Inverter - Inverter Module Temperatures 4					
Inverter Phase A Temperature Sensor	Analog_Value	180	6249_1_4	RD	Units: deg C
Inverter Phase A Temperature Sensor	Analog_Value	10180	6249_1_4_deg_F	RD	Units: deg F
Inverter Phase B Temperature Sensor	Analog_Value	181	6250_1_4	RD	Units: deg C
Inverter Phase B Temperature Sensor	Analog_Value	10181	6250_1_4_deg_F	RD	Units: deg F
Inverter Phase C Temperature Sensor	Analog_Value	182	6251_1_4	RD	Units: deg C
Inverter Phase C Temperature Sensor	Analog_Value	10182	6251_1_4_deg_F	RD	Units: deg F

Table 4-55 Liebert NX™ 225-600kVA—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Booster-Charger					
Battery Recharge Voltage	Analog_Value	193	5987_1	RD	Units: VDC
Max Charge Current	Analog_Value	194	6252_1	RD	Units: A DC
Booster-Charger - Booster Charger Module Temperatures 1					
Booster-Charger Temperature	Analog_Value	205	5963_1_1	RD	Units: deg C
Booster-Charger Temperature	Analog_Value	10205	5963_1_1_deg_F	RD	Units: deg F
Booster-Charger - Booster Charger Module Temperatures 2					
Booster-Charger Temperature	Analog_Value	216	5963_1_2	RD	Units: deg C
Booster-Charger Temperature	Analog_Value	10216	5963_1_2_deg_F	RD	Units: deg F
Booster-charger - Booster Charger Module Temperatures 4					
Booster-Charger Temperature	Analog_Value	238	5963_1_4	RD	Units: deg C
Booster-Charger Temperature	Analog_Value	10238	5963_1_4_deg_F	RD	Units: deg F
Ratings					
Output Apparent Power Rating	Analog_Value	249	4264_1	RD	Units: kVA
System Input Nominal Voltage	Analog_Value	250	4102_1	RD	Units: VAC
System Input Nominal Frequency	Analog_Value	251	4103_1	RD	Units: Hz

Table 4-56 Liebert NX™ 225-600kVA—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
Rectifier Status	MultiState_Value	1	4748_1	RD	1 = Off 2 = On
Bypass					
Static Bypass Switch	MultiState_Value	12	4736_1	RD	1 = Off 2 = On
Bypass Qualification Status	MultiState_Value	13	4737_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Battery					
DC Bus Qualification Status	MultiState_Value	24	4743_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
UPS battery1 status	MultiState_Value	25	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
Output					
UPS Output Source	MultiState_Value	36	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
Load Power Source	MultiState_Value	37	4319_1	RD	1 = Load Off 2 = Ups 3 = Maintenance Bypass
Inverter					
Inverter On/Off State	MultiState_Value	48	4746_1	RD	1 = Off 2 = On
Inverter Synchronization Source	MultiState_Value	49	5961_1	RD	1 = External 2 = Self Clock (Internal) 3 = Output 4 = Bypass
Booster-Charger					
Booster On/Off State	MultiState_Value	60	6255_1	RD	1 = Off 2 = On
Charger On/Off State	MultiState_Value	61	6256_1	RD	1 = Off 2 = On

Table 4-56 Liebert NX™ 225-600kVA—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Status					
System Status	MultiState_Value	72	4123_1	RD	1 = Normal Operation 2 = Startup 3 = Normal With Warning 4 = Normal With Alarm 5 = Abnormal Operation
UPS Operating Mode	MultiState_Value	73	5971_1	RD	1 = Idle 2 = Double Conversion Mode (Vfi) 3 = Interactive Mode (Vi) 4 = Stand-by Mode (Vfd) 5 = Cr Mode (Cr) 6 = Eco Mode (Dim)
ECO Mode Operation State	MultiState_Value	74	5454_1	RD	1 = Disabled 2 = Enabled

Table 4-57 Liebert NX™ 225-600kVA—Glossary

Data Label	Data Description
Backfeed Breaker Open	The backfeed breaker is in the open position
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Breaker Open	The battery circuit is open.
Battery Discharging	The battery is discharging
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Manual Test In Progress	Manual battery test is in progress
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Over Voltage	The system has detected that the battery voltage has exceeded a predetermined limit.
Battery Percentage Charge	The percentage of battery charge
Battery Recharge Voltage	The recharge cell voltage for the battery.
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature Out of Range	Battery temperature is outside of acceptable range.
Battery Terminals Reversed	The measured battery voltage is a negative value due to reverse battery terminal connections.
Battery Test Failed	Battery test failed
Battery Test Passed	Battery test passed
Battery Time Remaining	The calculated available time on battery
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Booster Failure	Booster failure - boost is off
Booster On/Off State	Booster on/off state
Booster-Charger Temperature	Temperature measured at the charger stage
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage Fault	The system has detected the bypass voltage is unqualified.
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload	Bypass overloaded, reduce load immediately.
Bypass Qualification Status	bypass qualification status
Bypass Static Switch Unavailable	The static bypass is unavailable to support the critical load.
Charger Failure	Charger Failure - Charger is off
Charger On/Off State	Charger on/off state
DC Bus Abnormal	The system has detected an abnormal DC Bus Voltage.
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Qualification Status	dc bus qualification status
DC Bus Voltage	The voltage between the postivie and negative terminals of the internal DC Bus.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
Equipment Over Temperature	Equipment over temperature summary event
Fan Hours Exceeded	Operating hours for the unit blower fan have exceeded the threshold.
Generic DIC Fault	The control board reports a fault - Service required.
Generic Test Event	A generic test event designed to evaluate system handling of events
Ground Fault	An AC phase to ground fault or three phase fault to ground exists on the output of the UPS.
Inlet Air Over Temperature	The inlet air exceeds the maximum temperature threshold

Table 4-57 Liebert NX™ 225-600kVA—Glossary (continued)

Data Label	Data Description
Input Breaker Open	The main input breaker is open.
Inverter Desaturation	Inverter Desaturation
Inverter Failure	Inverter failure - inverter output is off
Inverter On/Off State	inverter on/off state
Inverter Overload Time Remaining	The calculated time remaining before inverter shutdown
Inverter Overload	Inverter in overload fault
Inverter Phase A Temperature sensor	Inverter temperature sensor reading for Phase A.
Inverter Phase B Temperature sensor	Inverter temperature sensor reading for Phase B.
Inverter Phase C temperature sensor	Inverter temperature sensor reading for Phase C.
Inverter Synchronization Source	The reference source for inverter synchronization
Load Power Source	Load power source
Main Controller Fault	A Main Controller fault has been detected.
Maintenance Bypass Breaker Closed	The maintenance bypass breaker is closed.
Max Charge Current	The maximum allowed current to be used for charging the batteries.
Maximum Load Alarm	Maximum load alarm indicating load setting has been exceeded.
Output Apparent Power Rating	Output apparent power rating
Output Breaker Open	The output breaker is open.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Of/Uf	The output frequency has exceeded a specified range for a specified period of time.
Output Percent Load	The percentage of the system's total rated output current that is flowing from the system.
Rectifier Failure	Rectifier failure - rectifier is off
Rectifier Phase A Temperature sensor	Rectifier temperature sensor reading for Phase A.
Rectifier Phase B Temperature sensor	Rectifier temperature sensor reading for Phase B.
Rectifier Phase C Temperature sensor	Rectifier temperature sensor reading for Phase C.
Rectifier Status	rectifier status
Static Bypass Switch	Static Bypass Switch state - On/Off
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Problem	The input is not qualified to provide power to the system
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Output Apparent Power Phs A	System output apparent power on phase A
System Output Apparent Power Phs B	System output apparent power on phase B
System Output Apparent Power Phs C	System output apparent power on phase C
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Off	The system output is off

Table 4-57 Liebert NX™ 225-600kVA—Glossary (continued)

Data Label	Data Description
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Power Phase A	The system output power on phase A.
System Output Power Phase B	The system output power on phase B.
System Output Power Phase C	The system output power on phase C.
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Shutdown - Output Short	Shutdown was due to a short on the output.
System Status	The operating status for the system
Temperature	Temperature measured at the temperature sensor
Unit Shutdown	An event has occurred requiring the unit to be shutdown and disabled to prevent damage to the system.
UPS battery1 status	UPS battery status
UPS Operating Mode	UPS Operating Mode
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source

Table 4-58 Liebert NXL™- 60Hz, UL version (Model 40)—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Input						
System Input Power Problem	Binary_Value	1	4122_1	RD	Active on Alarm	SMS, 1+N, N+1
System Input Phs Rotation Error	Binary_Value	2	4146_1	RD	Active on Alarm	SMS, 1+N, N+1
System Input Current Limit	Binary_Value	3	4147_1	RD	Active on Alarm	SMS, 1+N, N+1
System Input Current Imbalance	Binary_Value	4	4382_1	RD	Active on Alarm	SMS, 1+N,
Bypass						
Bypass Not Available	Binary_Value	15	4135_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Overload Phase A	Binary_Value	16	4132_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Overload Phase B	Binary_Value	17	4133_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Overload Phase C	Binary_Value	18	4134_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Auto Retransfer Failed	Binary_Value	19	4138_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass - Excess Auto Retransfers	Binary_Value	20	4139_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Bypass Static Switch Overload	Binary_Value	21	4142_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Static Switch Unavailable	Binary_Value	22	4143_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Excessive Pulse Parallel	Binary_Value	23	4144_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Auto Transfer Failed	Binary_Value	24	4145_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Frequency Error	Binary_Value	25	4175_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass - Manual Rexfr Inhibited	Binary_Value	26	4218_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass - Manual Xfr Inhibited	Binary_Value	27	4217_1	RD	Active on Alarm	SMS, 1+N, SCC
Bypass Static Switch Off Extrnl	Binary_Value	28	4383_1	RD	Active on Alarm	CE models only
Battery						
Battery Charging Error	Binary_Value	39	4164_1	RD	Active on Alarm	—
Battery Test Inhibited	Binary_Value	40	4740_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Charging Reduced-Extrnl	Binary_Value	41	4165_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Capacity Low	Binary_Value	42	4166_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Discharging	Binary_Value	43	4168_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Temperature Imbalance	Binary_Value	44	4169_1	RD	Active on Alarm	SMS, 1+N, N+1

Table 4-58 Liebert NXL™- 60Hz, UL version (Model 40)—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Battery Equalize	Binary_Value	45	4170_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Self Test	Binary_Value	46	4741_1	RD	Active on Alarm	SMS, 1+N, N+1
Main Battery Disconnect Open	Binary_Value	47	4173_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Low	Binary_Value	48	4162_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Temperature Sensor Fault	Binary_Value	49	4174_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Charging Inhibited	Binary_Value	50	4200_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Circuit Breaker 1 Open	Binary_Value	51	4176_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Circuit Breaker 2 Open	Binary_Value	52	4179_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Circuit Breaker 3 Open	Binary_Value	53	4182_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Circuit Breaker 4 Open	Binary_Value	54	4185_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Circuit Breaker 5 Open	Binary_Value	55	4188_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Circuit Breaker 6 Open	Binary_Value	56	4191_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Circuit Breaker 7 Open	Binary_Value	57	4194_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Circuit Breaker 8 Open	Binary_Value	58	4197_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery - External Monitor 1	Binary_Value	59	4220_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery - External Monitor 2	Binary_Value	60	4221_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Ground Fault	Binary_Value	61	4222_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Low Shutdown	Binary_Value	62	4742_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Over Temperature	Binary_Value	63	4219_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Test Failed	Binary_Value	64	4323_1	RD	Active on Alarm	SMS, 1+N, N+1
Battery Charging	Binary_Value	65	6354_1	RD	Active on Alarm	SMS, 1+N, N+1
DC Bus						
DC Bus Ground Fault - Positive	Binary_Value	75	4308_1	RD	Active on Alarm	SMS, 1+N, N+1
DC Bus Ground Fault - Negative	Binary_Value	76	4309_1	RD	Active on Alarm	SMS, 1+N, N+1
Output						
System Shutdown - EPO	Binary_Value	87	4213_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC

Table 4-58 Liebert NXL™- 60Hz, UL version (Model 40)—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
System Shutdown - REPO	Binary_Value	88	4214_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
System Output Off	Binary_Value	89	4215_1	RD	Active on Alarm	SMS, 1+N, N+1
System Output Low Power Factor	Binary_Value	90	4230_1	RD	Active on Alarm	SMS, 1+N, N+1
Output Amp Over User Limit-Phs A	Binary_Value	91	4286_1	RD	Active on Alarm	SMS, 1+N, SCC
Output Amp Over User Limit-Phs B	Binary_Value	92	4287_1	RD	Active on Alarm	SMS, 1+N, SCC
Output Amp Over User Limit-Phs C	Binary_Value	93	4288_1	RD	Active on Alarm	SMS, 1+N, SCC
System Output Fault	Binary_Value	94	4389_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Output Of/Uf	Binary_Value	95	5144_1	RD	Active on Alarm	SMS, 1+N, N+1
Inverter						
Inverter Failure	Binary_Value	106	4233_1	RD	Active on Alarm	SMS, 1+N, N+1
Inverter Overload Phase A	Binary_Value	107	4234_1	RD	Active on Alarm	SMS, 1+N, N+1
Inverter Overload Phase B	Binary_Value	108	4235_1	RD	Active on Alarm	SMS, 1+N, N+1
Inverter Overload Phase C	Binary_Value	109	4236_1	RD	Active on Alarm	SMS, 1+N, N+1
Inverter Inhibit - External	Binary_Value	110	4237_1	RD	Active on Alarm	SMS, 1+N, N+1
Inverter Shutdown - Overload	Binary_Value	111	4290_1	RD	Active on Alarm	SMS, 1+N, N+1
Inverter Off - External	Binary_Value	112	4390_1	RD	Active on Alarm	CE models only
Inverter Static Switch SCR Short	Binary_Value	113	4391_1	RD	Active on Alarm	CE models only
Environment						
Inlet Air Over Temperature	Binary_Value	124	4294_1	RD	Active on Alarm	SMS, 1+N, N+1
Outlet Air Overtemperature Limit	Binary_Value	125	5768_1	RD	Active on Alarm	SMS, 1+N, N+1
Equipment Temperature Sensor Fail	Binary_Value	126	4747_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Equipment Over Temperature	Binary_Value	127	4310_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
External Input Signals						
Input Contact 01	Binary_Value	138	4270_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 02	Binary_Value	139	4271_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 03	Binary_Value	140	4272_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 04	Binary_Value	141	4273_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC

Table 4-58 Liebert NXL™- 60Hz, UL version (Model 40)—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Input Contact 05	Binary_Value	142	4274_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 06	Binary_Value	143	4275_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 07	Binary_Value	144	4276_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 08	Binary_Value	145	4277_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 09	Binary_Value	146	4278_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 10	Binary_Value	147	4279_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 11	Binary_Value	148	4280_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 12	Binary_Value	149	4281_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 13	Binary_Value	150	4282_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 14	Binary_Value	151	4283_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 15	Binary_Value	152	4284_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Contact 16	Binary_Value	153	4285_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Rectifier						
Rectifier Failure	Binary_Value	164	4295_1	RD	Active on Alarm	SMS, 1+N, N+1
Rectifier Operation Inhibit-Ext	Binary_Value	165	4296_1	RD	Active on Alarm	CE models only
System						
System Fan Failure - Redundant	Binary_Value	176	4749_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Multiple Fan Failure	Binary_Value	177	4750_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Internal Communications Failure	Binary_Value	178	4300_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
UPS Output on Bypass	Binary_Value	179	4298_1	RD	Active on Alarm	SMS, 1+N, SCC
Output Load on Maint. Bypass	Binary_Value	180	4299_1	RD	Active on Alarm	SMS, 1+N, SCC
Backfeed Breaker Open	Binary_Value	181	4325_1	RD	Active on Alarm	SMS, 1+N, SCC
Auto Restart In Progress	Binary_Value	182	4316_1	RD	Active on Alarm	SMS
Power Supply Failure	Binary_Value	183	4314_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
On Generator	Binary_Value	184	4315_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Auto Restart Inhibited - Ext	Binary_Value	185	4317_1	RD	Active on Alarm	SMS
Automatic Restart Failed	Binary_Value	186	4439_1	RD	Active on Alarm	SMS

Table 4-58 Liebert NXL™- 60Hz, UL version (Model 40)—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Main Controller Fault	Binary_Value	187	4753_1	RD	Active on Alarm	SMS, 1+N, N+1
Fuse Failure	Binary_Value	188	4440_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
System Controller Error	Binary_Value	189	4441_1	RD	Active on Alarm	SMS, 1+N, N+1
System Breaker(s) Open Failure	Binary_Value	190	4442_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
System Breaker(s) Close Failure	Binary_Value	191	4754_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Input Filter Cycle Lock	Binary_Value	192	4755_1	RD	Active on Alarm	SMS, 1+N, N+1
EMO Shutdown	Binary_Value	193	5769_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Service Code Active	Binary_Value	194	4756_1	RD	Active on Alarm	SMS, 1+N, N+1
LBS Active	Binary_Value	195	4757_1	RD	Active on Alarm	Deprecated
LBS Inhibited	Binary_Value	196	4758_1	RD	Active on Alarm	SMS, 1+N, SCC
Leading Power Factor	Binary_Value	197	4759_1	RD	Active on Alarm	SMS, 1+N, N+1
Controls Reset Required	Binary_Value	198	4760_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
LBS Active - Master	Binary_Value	199	5561_1	RD	Active on Alarm	SMS, 1+N, SCC
LBS Active - Slave	Binary_Value	200	5562_1	RD	Active on Alarm	SMS, 1+N, SCC
Cont Tie Active	Binary_Value	201	5788_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
User kWh Reset	Binary_Value	202	5792_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Peak kW Reset	Binary_Value	203	5796_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
MultiModule						
Parallel Comm Warning	Binary_Value	214	4823_1	RD	Active on Alarm	1+N, N+1, SCC
System Comm Fail	Binary_Value	215	4824_1	RD	Active on Alarm	1+N, N+1, SCC
Loss of Redundancy	Binary_Value	216	4825_1	RD	Active on Alarm	1+N, SCC
BPSS Startup Inhibit	Binary_Value	217	4826_1	RD	Active on Alarm	Deprecated
MMS Transfer Inhibit	Binary_Value	218	4827_1	RD	Active on Alarm	1+N, SCC
MMS Retransfer Inhibit	Binary_Value	219	4828_1	RD	Active on Alarm	1+N, SCC
MMS Loss of Sync Pulse	Binary_Value	220	4830_1	RD	Active on Alarm	Deprecated
MMS Overload	Binary_Value	221	4831_1	RD	Active on Alarm	SCC
MMS On Battery	Binary_Value	222	4834_1	RD	Active on Alarm	1+N, SCC
MMS Low Battery Warning	Binary_Value	223	4835_1	RD	Active on Alarm	1+N, SCC
MMS Module Alarm Active	Binary_Value	224	5145_1	RD	Active on Alarm	SCC
MMS Sharing Calib Active	Binary_Value	225	5447_1	RD	Active on Alarm	1+N, N+1
Intelligent Paralleling						

Table 4-58 Liebert NXL™- 60Hz, UL version (Model 40)—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Module In Standby - Intelligent Paralleling	Binary_Value	236	5453_1	RD	Active on Alarm	1+N, N+1
ECO Mode						
ECO Mode Active	Binary_Value	247	5456_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
ECO Mode Suspended	Binary_Value	248	5457_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Excess ECO Suspends	Binary_Value	249	5458_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC
Service Reminder						
Service Required	Binary_Value	260	4726_1	RD	Active on Alarm	SMS, 1+N, N+1, SCC

Table 4-59 Liebert NXL™ - 60Hz, UL version (Model 40)—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Input						
System Input RMS A-B	Analog_Value	1	4097_1	RD	Units: VAC	SMS, 1+N, N+1
System Input RMS B-C	Analog_Value	2	4099_1	RD	Units: VAC	SMS, 1+N, N+1
System Input RMS C-A	Analog_Value	3	4101_1	RD	Units: VAC	SMS, 1+N, N+1
System Input RMS Current Phase A	Analog_Value	4	4113_1	RD	Units: A AC	SMS, 1+N, N+1
System Input RMS Current Phase B	Analog_Value	5	4114_1	RD	Units: A AC	SMS, 1+N, N+1
System Input RMS Current Phase C	Analog_Value	6	4115_1	RD	Units: A AC	SMS, 1+N, N+1
System Input Frequency	Analog_Value	7	4105_1	RD	Units: Hz	SMS, 1+N,
Bypass						
Bypass Input Voltage RMS A-B	Analog_Value	18	4125_1	RD	Units: VAC	SMS, 1+N, SCC
Bypass Input Voltage RMS B-C	Analog_Value	19	4126_1	RD	Units: VAC	SMS, 1+N, SCC
Bypass Input Voltage RMS C-A	Analog_Value	20	4127_1	RD	Units: VAC	SMS, 1+N, SCC
Bypass Input Frequency	Analog_Value	21	4131_1	RD	Units: Hz	SMS, 1+N, SCC
Bypass Sync Phase Difference	Analog_Value	22	4136_1	RD	Units: deg	SMS, 1+N, SCC
Bypass SS Overload Time Remain	Analog_Value	23	4157_1	RD	Units: sec	SMS, 1+N, SCC
Auto Retransfer Time Remaining	Analog_Value	24	4738_1	RD	Units: sec	SMS, 1+N, SCC
Total Bypass Operating Time	Analog_Value	25	6456_1	RD	Units: hr	SMS, 1+N, SCC
Battery						
Battery Total Discharge Time	Analog_Value	35	4152_1	RD	Units: hr	SMS, 1+N, N+1
Battery Percentage Charge	Analog_Value	36	4153_1	RD	—	SMS, 1+N, N+1
Battery Volts at Main Disconnect	Analog_Value	37	4154_1	RD	Units: VDC	SMS, 1+N, N+1
Battery Volts for Cabinet 1	Analog_Value	38	4155_1_1	RD	Units: VDC	SMS, 1+N, N+1
Battery Volts for Cabinet 2	Analog_Value	39	4155_1_2	RD	Units: VDC	SMS, 1+N, N+1
Battery Volts for Cabinet 3	Analog_Value	40	4155_1_3	RD	Units: VDC	SMS, 1+N, N+1
Battery Volts for Cabinet 4	Analog_Value	41	4155_1_4	RD	Units: VDC	SMS, 1+N, N+1
Battery Volts for Cabinet 5	Analog_Value	42	4155_1_5	RD	Units: VDC	SMS, 1+N, N+1
Battery Volts for Cabinet 6	Analog_Value	43	4155_1_6	RD	Units: VDC	SMS, 1+N, N+1

Table 4-59 Liebert NXL™ - 60Hz, UL version (Model 40)—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Battery Volts for Cabinet 7	Analog_Value	44	4155_1_7	RD	Units: VDC	SMS, 1+N, N+1
Battery Volts for Cabinet 8	Analog_Value	45	4155_1_8	RD	Units: VDC	SMS, 1+N, N+1
Battery Temperature for Cabinet 1	Analog_Value	46	4156_1_1	RD	Units: deg C	SMS, 1+N, N+1
Battery Temperature for Cabinet 1	Analog_Value	10046	4156_1_1_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Battery Temperature for Cabinet 2	Analog_Value	47	4156_1_2	RD	Units: deg C	SMS, 1+N, N+1
Battery Temperature for Cabinet 2	Analog_Value	10047	4156_1_2_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Battery Temperature for Cabinet 3	Analog_Value	48	4156_1_3	RD	Units: deg C	SMS, 1+N, N+1
Battery Temperature for Cabinet 3	Analog_Value	10048	4156_1_3_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Battery Temperature for Cabinet 4	Analog_Value	49	4156_1_4	RD	Units: deg C	SMS, 1+N, N+1
Battery Temperature for Cabinet 4	Analog_Value	10049	4156_1_4_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Battery Temperature for Cabinet 5	Analog_Value	50	4156_1_5	RD	Units: deg C	SMS, 1+N, N+1
Battery Temperature for Cabinet 5	Analog_Value	10050	4156_1_5_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Battery Temperature for Cabinet 6	Analog_Value	51	4156_1_6	RD	Units: deg C	SMS, 1+N, N+1
Battery Temperature for Cabinet 6	Analog_Value	10051	4156_1_6_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Battery Temperature for Cabinet 7	Analog_Value	52	4156_1_7	RD	Units: deg C	SMS, 1+N, N+1
Battery Temperature for Cabinet 7	Analog_Value	10052	4156_1_7_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Battery Temperature for Cabinet 8	Analog_Value	53	4156_1_8	RD	Units: deg C	SMS, 1+N, N+1
Battery Temperature for Cabinet 8	Analog_Value	10053	4156_1_8_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Battery Amp-Hours Consumed This Discharge	Analog_Value	54	4739_1	RD	Units: AH	SMS, 1+N, N+1
Battery Time Remaining	Analog_Value	55	4150_1	RD	Units: min	SMS, 1+N, N+1
Battery Discharge Time	Analog_Value	56	4151_1	RD	Units: sec	SMS, 1+N, N+1
Battery Discharge Power	Analog_Value	57	4159_1	RD	Units: W	SMS, 1+N, N+1
Battery Last Discharge Date	Analog_Value	58	4161_1	RD	—	SMS, 1+N, N+1
Battery Commission Date	Analog_Value	59	4160_1	RD	—	SMS, 1+N, N+1
Battery Amp-Hours Consumed	Analog_Value	60	4158_1	RD	Units: AH	SMS, 1+N, N+1

Table 4-59 Liebert NXL™ - 60Hz, UL version (Model 40)—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Total Number of Battery Discharges	Analog_Value	61	5767_1	RD	—	SMS, 1+N, N+1
DC Bus						
DC Bus Voltage	Analog_Value	72	4148_1	RD	Units: VDC	SMS, 1+N, N+1
DC Bus Current	Analog_Value	73	4149_1	RD	Units: A DC	SMS, 1+N, N+1
Output						
System Output Voltage RMS A-B	Analog_Value	84	4201_1	RD	Units: VAC	SMS, 1+N, N+1, SCC
System Output Voltage RMS B-C	Analog_Value	85	4202_1	RD	Units: VAC	SMS, 1+N, N+1, SCC
System Output Voltage RMS C-A	Analog_Value	86	4203_1	RD	Units: VAC	SMS, 1+N, N+1, SCC
System Output Voltage RMS A-N	Analog_Value	87	4385_1	RD	Units: VAC	SMS, 1+N, N+1, SCC
System Output Voltage RMS B-N	Analog_Value	88	4386_1	RD	Units: VAC	SMS, 1+N, N+1, SCC
System Output Voltage RMS C-N	Analog_Value	89	4387_1	RD	Units: VAC	SMS, 1+N, N+1, SCC
System Output RMS Current Phs A	Analog_Value	90	4204_1	RD	Units: A AC	SMS, 1+N, N+1, SCC
System Output RMS Current Phs B	Analog_Value	91	4205_1	RD	Units: A AC	SMS, 1+N, N+1, SCC
System Output RMS Current Phs C	Analog_Value	92	4206_1	RD	Units: A AC	SMS, 1+N, N+1, SCC
System Output Frequency	Analog_Value	93	4207_1	RD	Units: Hz	SMS, 1+N, N+1, SCC
System Output Power	Analog_Value	94	4208_1	RD	Units: kW	SMS, 1+N, N+1, SCC
System Output Apparent Power	Analog_Value	95	4209_1	RD	Units: kVA	SMS, 1+N, N+1, SCC
System Output Power Factor Phs A	Analog_Value	96	4210_1	RD	—	SMS, 1+N, N+1, SCC
System Output Power Factor Phs B	Analog_Value	97	4211_1	RD	—	SMS, 1+N, N+1, SCC
System Output Power Factor Phs C	Analog_Value	98	4212_1	RD	—	SMS, 1+N, N+1, SCC
System Output Pct Power Phase A	Analog_Value	99	4223_1	RD	Units: %	SMS, 1+N, N+1
System Output Pct Power Phase B	Analog_Value	100	4224_1	RD	Units: %	SMS, 1+N, N+1
System Output Pct Power Phase C	Analog_Value	101	4225_1	RD	Units: %	SMS, 1+N, N+1
System Output Pct Pwr (VA) Phs A	Analog_Value	102	4226_1	RD	Units: %	SMS, 1+N, N+1
System Output Pct Pwr (VA) Phs B	Analog_Value	103	4227_1	RD	Units: %	SMS, 1+N, N+1
System Output Pct Pwr (VA) Phs C	Analog_Value	104	4228_1	RD	Units: %	SMS, 1+N, N+1

Table 4-59 Liebert NXL™ - 60Hz, UL version (Model 40)—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Inverter						
Inverter Overload Time Remaining	Analog_Value	115	4232_1	RD	Units: sec	SMS, 1+N, N+1
Environment						
Inlet Air Temperature	Analog_Value	126	4291_1	RD	Units: deg C	SMS, 1+N, N+1
Inlet Air Temperature	Analog_Value	10126	4291_1_deg_F	RD	Units: deg F	SMS, 1+N, N+1
Total System Operating Time	Analog_Value	127	4292_1	RD	Units: hr	CE models only
System Date and Time	Analog_Value	128	4293_1	RW	—	SMS, 1+N, N+1, SCC
Total kW Hours Saved	Analog_Value	129	5446_1	RD	Units: kWH	SMS, 1+N, N+1, SCC
System						
System Accumulated Energy	Analog_Value	140	5789_1	RW	Units: kWH	SCC, 1+N, N+1
Module Accumulated Energy	Analog_Value	141	5790_1	RW	Units: kWH	SCC, 1+N, N+1
Output kWh Reset Timestamp	Analog_Value	142	5791_1	RD	—	SMS, 1+N, N+1, SCC
Output Peak kW Demand	Analog_Value	143	5793_1	RD	Units: kW	SMS, 1+N, N+1, SCC
Output Peak kW Demand Hist	Analog_Value	144	5794_1	RD	Units: kW	SMS, 1+N, N+1, SCC
Peak kW Demand Timestamp	Analog_Value	145	5797_1	RD	—	SMS, 1+N, N+1, SCC
Ratings						
Bypass Nominal Voltage	Analog_Value	156	4259_1	RD	Units: VAC	SMS, 1+N, SCC
System Input Nominal Voltage	Analog_Value	157	4102_1	RD	Units: VAC	SMS, 1+N, N+1
System Input Nominal Frequency	Analog_Value	158	4103_1	RD	Units: Hz	SMS, 1+N, N+1
System Output Nominal Voltage	Analog_Value	159	4260_1	RD	Units: VAC	SMS, 1+N, N+1, SCC
System Output Nominal Frequency	Analog_Value	160	4261_1	RD	Units: Hz	SMS, 1+N, N+1, SCC
Battery Cell Count - Lead Acid	Analog_Value	161	4262_1	RD	—	SMS, 1+N, N+1
Battery Cell Count-Nickel Cadmium	Analog_Value	162	4263_1	RD	—	SMS, 1+N, N+1
Output Apparent Power Rating	Analog_Value	163	4264_1	RD	Units: kVA	SMS, 1+N, N+1
Output Real Power Rating	Analog_Value	164	4265_1	RD	Units: kW	SMS, 1+N, N+1
System UPS Module Count	Analog_Value	165	4800_1	RD	—	SMS, 1+N, SCC
System Output Maximum Amp Rating	Analog_Value	166	4267_1	RD	Units: A AC	1+N, SCC

Table 4-59 Liebert NXL™ - 60Hz, UL version (Model 40)—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
MultiModule						
Multi-module System Output Voltage RMS A-B	Analog_Value	177	4801_1	RD	Units: VAC	1+N, SCC
Multi-module System Output Voltage RMS B-C	Analog_Value	178	4802_1	RD	Units: VAC	1+N, SCC
Multi-module System Output Voltage RMS C-A	Analog_Value	179	4803_1	RD	Units: VAC	1+N, SCC
Multi-module System Output Voltage RMS A-N	Analog_Value	180	4804_1	RD	Units: VAC	1+N, SCC
Multi-module System Output Voltage RMS B-N	Analog_Value	181	4805_1	RD	Units: VAC	1+N, SCC
Multi-module System Output Voltage RMS C-N	Analog_Value	182	4806_1	RD	Units: VAC	1+N, SCC
Sum of MMS Output RMS Currents for Phase A	Analog_Value	183	4807_1	RD	Units: A AC	1+N, SCC
Sum of MMS Output RMS Currents for Phase B	Analog_Value	184	4808_1	RD	Units: A AC	1+N, SCC
Sum of MMS Output RMS Currents for Phase C	Analog_Value	185	4809_1	RD	Units: A AC	1+N, SCC
MMS Output Frequency	Analog_Value	186	4810_1	RD	Units: Hz	1+N, SCC
MMS Output Power	Analog_Value	187	4811_1	RD	Units: kW	1+N, SCC
MMS Output Apparent Power	Analog_Value	188	4812_1	RD	Units: kVA	1+N, SCC
MMS Output Power Factor Phase A	Analog_Value	189	4813_1	RD	—	1+N, SCC
MMS Output Power Factor Phase B	Analog_Value	190	4814_1	RD	—	1+N, SCC
MMS Output Power Factor Phase C	Analog_Value	191	4815_1	RD	—	1+N, SCC
MMS Output Pct Power Phase A	Analog_Value	192	4816_1	RD	Units: %	1+N, SCC
MMS Output Pct Power Phase B	Analog_Value	193	4817_1	RD	Units: %	1+N, SCC
MMS Output Pct Power Phase C	Analog_Value	194	4818_1	RD	Units: %	1+N, SCC
MMS Output Pct Apparent Pwr (kVA) Phase A	Analog_Value	195	4819_1	RD	Units: %	1+N, SCC
MMS Output Pct Apparent Pwr (kVA) Phase B	Analog_Value	196	4820_1	RD	Units: %	1+N, SCC
MMS Output Pct Apparent Pwr (kVA) Phase C	Analog_Value	197	4821_1	RD	Units: %	1+N, SCC
Number of Redundant Modules	Analog_Value	198	4822_1	RD	—	1+N, SCC
MMS Module Number	Analog_Value	199	4829_1	RD	—	1+N, N+1
Number of Modules in a MMS	Analog_Value	200	4833_1	RD	—	1+N, SCC
ModuleList 1						
MMS Module Total kW Output	Analog_Value	211	4861_2	RD	Units: kW	SCC
MMS Module Total kVA Output	Analog_Value	212	4862_2	RD	Units: kVA	SCC
MMS Module DC Bus Voltage	Analog_Value	213	4863_2	RD	Units: VDC	SCC
MMS Module Battery Current	Analog_Value	214	4864_2	RD	Units: A DC	SCC
MMS Module Battery Time Remaining	Analog_Value	215	4865_2	RD	Units: min	SCC

Table 4-59 Liebert NXL™ - 60Hz, UL version (Model 40)—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
ModuleList 2						
MMS Module Total kW Output	Analog_Value	226	4861_2	RD	Units: kW	SCC
MMS Module Total kVA Output	Analog_Value	227	4862_2	RD	Units: kVA	SCC
MMS Module DC Bus Voltage	Analog_Value	228	4863_2	RD	Units: VDC	SCC
MMS Module Battery Current	Analog_Value	229	4864_2	RD	Units: A DC	SCC
MMS Module Battery Time Remaining	Analog_Value	230	4865_2	RD	Units: min	SCC
ModuleList 8						
MMS Module Total kW Output	Analog_Value	316	4861_8	RD	Units: kW	SCC
MMS Module Total kVA Output	Analog_Value	317	4862_8	RD	Units: kVA	SCC
MMS Module DC Bus Voltage	Analog_Value	318	4863_8	RD	Units: VDC	SCC
MMS Module Battery Current	Analog_Value	319	4864_8	RD	Units: A DC	SCC
MMS Module Battery Time Remaining	Analog_Value	320	4865_8	RD	Units: min	SCC
Intelligent Paralleling						
Intelligent Paralleling Shutdown Delay	Analog_Value	331	5450_1	RD	Units: min	1+N, N+1, SCC
Intelligent Parallel Minimum Redundancy	Analog_Value	332	5451_1	RD	—	1+N, N+1, SCC
Intelligent Parallel Maximum Time in Standby	Analog_Value	333	5452_1	RD	Units: day	1+N, N+1, SCC
ECO Mode						
Maximum Auto Suspensions - ECO Mode	Analog_Value	344	5459_1	RD	—	SMS, 1+N, SCC
Restart Delay - ECO Mode	Analog_Value	345	5460_1	RD	Units: min	SMS, 1+N, SCC
Time Remaining - ECO Mode	Analog_Value	346	5466_1	RD	Units: min	SMS, 1+N, SCC
ECO Mode - EcoModeSchedule 1						
Schedule Hour - ECO Mode	Analog_Value	357	5464_1_1	RD	Units: hr	SMS, 1+N, SCC
Schedule Minute - ECO Mode	Analog_Value	358	5465_1_1	RD	Units: min	SMS, 1+N, SCC
ECO Mode - EcoModeSchedule 2						
Schedule Hour - ECO Mode	Analog_Value	369	5464_1_2	RD	Units: hr	SMS, 1+N, SCC
Schedule Minute - ECO Mode	Analog_Value	370	5465_1_2	RD	Units: min	SMS, 1+N, SCC
ECO Mode - EcoModeSchedule 16						
Schedule Hour - ECO Mode	Analog_Value	537	5464_1_16	RD	Units: hr	SMS, 1+N, SCC
Schedule Minute - ECO Mode	Analog_Value	538	5465_1_16	RD	Units: min	SMS, 1+N, SCC

Table 4-60 Liebert NXL™—60Hz, UL version (Model 40)—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Input						
Input Qualification Status	MultiState_Value	1	4735_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High	SMS, 1+N, N+1
Bypass						
Static Bypass Switch	MultiState_Value	12	4736_1	RD	1 = off	SMS, 1+N, SCC
Bypass Qualification Status	MultiState_Value	13	4737_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High	SMS, 1+N, SCC
Battery						
UPS Battery Status	MultiState_Value	24	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted	SMS, 1+N, N+1
DC Bus						
DC Bus Qualification Status	MultiState_Value	35	4743_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High	SMS, 1+N, N+1
Output						
Output Qualification Status	MultiState_Value	46	4744_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High	SMS, 1+N, N+1, SCC
Inverter						
Inverter Output Qualification Status	MultiState_Value	57	4745_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High	SMS, 1+N, N+1
Inverter On/Off State	MultiState_Value	58	4746_1	RD	1 = off 2 = on	SMS, 1+N, N+1
Rectifier						
Rectifier Pulse Count	MultiState_Value	69	4257_1	RD	1 = 6 Pulse 2 = 12 Pulse 3 = 18 Pulse 4 = 24 Pulse	SMS, 1+N, N+1
Rectifier Input Passive Filter	MultiState_Value	70	4258_1	RD	1 = Not Installed 2 = Installed	SMS, 1+N, N+1
Rectifier Passive Filter Switch	MultiState_Value	71	4301_1	RD	1 = Not Installed 2 = Installed	SMS, 1+N, N+1
Rectifier Active Filter	MultiState_Value	72	4302_1	RD	1 = Not Installed 2 = Installed	SMS, 1+N, N+1
Rectifier Status	MultiState_Value	73	4748_1	RD	1 = off 2 = on	SMS, 1+N, N+1

Table 4-60 Liebert NXL™—60Hz, UL version (Model 40)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
System						
UPS Module Type	MultiState_Value	84	4303_1	RD	1 = Single Module System 2 = Module (1 + 1) 3 = Module (1 + N) 4 = Module (N + 1) 5 = System Control Cabinet 6 = Main Static Switch	SMS, 1+N, N+1, SCC
Bypass Input Wire Configuration	MultiState_Value	85	4304_1	RD	1 = Two Wire (single phase + return) 2 = Two Wire (2 phase, no neutral) 3 = Three Wire (2 phase + neutral) 4 = Three Wire (3 phase, no neutral) 5 = Four Wire (3 phases + neutral)	SMS, 1+N, SCC
Output Wire Configuration	MultiState_Value	86	4305_1	RD	1 = Two Wire (single phase + return) 2 = Two Wire (2 phase, no neutral) 3 = Three Wire (2 phase + neutral) 4 = Three Wire (3 phase, no neutral) 5 = Four Wire (3 phases + neutral)	SMS, 1+N, N+1, SCC
Static Switch Type	MultiState_Value	87	4306_1	RD	1 = Not Applicable 2 = Continuous Duty 3 = Momentary Duty	SMS, 1+N, SCC

Table 4-60 Liebert NXL™—60Hz, UL version (Model 40)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Configuration Description	MultiState_Value	88	4751_1	RD	1 = Single Module System 33 2 = Single Module System 34 3 = Single Module System 44 4 = 1+1 33 5 = 1+1 34 6 = 1+1 44 7 = 1+N 33 8 = 1+N 34 9 = 1+N 44 10 = N+1 33 11 = N+1 34 12 = N+1 44 13 = SCC w/Continuous Duty SS 33 14 = SCC w/Continuous Duty SS 44 15 = SCC w/Momentary Duty SS 16 = Main Static Switch	SMS, 1+N, N+1, SCC
UPS System Output Source	MultiState_Value	89	4752_1	RD	1 = off 2 = Normal 3 = Bypass 4 = Maintenance Bypass	SMS, 1+N, SCC
System Input Power Source	MultiState_Value	90	4318_1	RD	1 = None 2 = Utility (mains) 3 = Generator	SMS, 1+N, N+1, SCC
System Status	MultiState_Value	91	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = AbNormalOperation	SMS, 1+N, N+1, SCC
UPS Output Source	MultiState_Value	92	4872_1	RD	1 = Other 2 = off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer	SMS, 1+N, N+1, SCC
Peak kW Demand Period	MultiState_Value	93	5795_1	RD	1 = Hourly 2 = Daily 3 = Weekly 4 = Monthly 5 = Yearl	SMS, 1+N, N+1, SCC

Table 4-60 Liebert NXL™—60Hz, UL version (Model 40)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Ratings						
Input Isolation Transformer	MultiState_Value	104	4266_1	RD	1 = Not Installed 2 = Installed	SMS, 1+N, N
Device Status						
Backfeed Breaker	MultiState_Value	115	4764_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N, SCC
SBS Load Disconnect	MultiState_Value	116	4765_1	RD	1 = Open 2 = Close 3 = Not Installed	Obsolete
Input Breaker (CB1/RIB)	MultiState_Value	117	4766_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N, N+1
Trap Filter Disconnect	MultiState_Value	118	4767_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N, N+1
Output Breaker (CB2/IOB)	MultiState_Value	119	4768_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N, N+1
Internal Bypass Breaker (CB3)	MultiState_Value	120	4769_1	RD	1 = Open 2 = Close 3 = Not Installed	Obsolete
Bypass Isolation Breaker (BIB)	MultiState_Value	121	4770_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N
Rectifier Feed Breaker (RFB)	MultiState_Value	122	4771_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS
Maintenance Bypass Breaker (MBB)	MultiState_Value	123	4772_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N, SCC
Maintenance Isolation Breaker (MIB)	MultiState_Value	124	4773_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N, SCC
Output Series Static Switch	MultiState_Value	125	4774_1	RD	1 = off 2 = on 3 = Not Installed	LEU/LAP only
Module Output Breaker (MOB)	MultiState_Value	126	4775_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC
MultiModule						
Module Output Breaker for Module 1 (MOB1)	MultiState_Value	137	4836_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC
Module Output Breaker for Module 2 (MOB2)	MultiState_Value	138	4837_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC

Table 4-60 Liebert NXL™—60Hz, UL version (Model 40)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
Module Output Breaker for Module 3 (MOB3)	MultiState_Value	139	4838_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC
Module Output Breaker for Module 4 (MOB4)	MultiState_Value	140	4839_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC
Module Output Breaker for Module 5 (MOB5)	MultiState_Value	141	4840_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC
Module Output Breaker for Module 6 (MOB6)	MultiState_Value	142	4841_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC
Module Output Breaker for Module 7 (MOB7)	MultiState_Value	143	4842_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC
Module Output Breaker for Module 8 (MOB8)	MultiState_Value	144	4843_1	RD	1 = Open 2 = Close 3 = Not Installed	1+N, SCC
Bypass Isolation Breaker for Module 1 (BIB1)	MultiState_Value	145	4844_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N
Bypass Isolation Breaker for Module 2 (BIB2)	MultiState_Value	146	4845_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N
Bypass Isolation Breaker for Module 3 (BIB3)	MultiState_Value	147	4846_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N
Bypass Isolation Breaker for Module 4 (BIB4)	MultiState_Value	148	4847_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N
Bypass Isolation Breaker for Module 5 (BIB5)	MultiState_Value	149	4848_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N,
Bypass Isolation Breaker for Module 6 (BIB6)	MultiState_Value	150	4849_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N,
Bypass Isolation Breaker for Module 7 (BIB7)	MultiState_Value	151	4850_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N,
Bypass Isolation Breaker for Module 8 (BIB8)	MultiState_Value	152	4851_1	RD	1 = Open 2 = Close 3 = Not Installed	SMS, 1+N,
System Output Breaker (UOB)	MultiState_Value	153	4852_1	RD	1 = Open 2 = Close 3 = Not Installed	SCC
System Load Bank Breaker (LBB)	MultiState_Value	154	4853_1	RD	1 = Open 2 = Close 3 = Not Installed	SCC

Table 4-60 Liebert NXL™—60Hz, UL version (Model 40)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
System Isolation Output Breaker (IOB)	MultiState_Value	155	4854_1	RD	1 = Open 2 = Close 3 = Not Installed	SCC
SCC Event Summary	MultiState_Value	156	4855_1	RD	1 = None 2 = Alarm 3 = Fault	SCC
MMS UPS Battery Status	MultiState_Value	157	4873_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted	1+N, N+1
MMS UPS Output Source	MultiState_Value	158	4874_1	RD	1 = Other 2 = off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer	1+N, SCC
ModuleList 1						
MMS Inter-Module Comm Status	MultiState_Value	169	4856_1	RD	1 = Failed 2 = Normal	1+N, SCC
MMS Event Summary	MultiState_Value	170	4857_1	RD	1 = None 2 = Alarm 3 = Fault	1+N, SCC
MMS Module Inverter Status	MultiState_Value	171	4858_1	RD	1 = off 2 = on	1+N
MMS Module Output Voltage Status	MultiState_Value	172	4859_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High	1+N, SCC
MMS Module Output Source	MultiState_Value	173	4860_1	RD	1 = off 2 = Normal 3 = Bypass 4 = Maintenance Bypass	1+N, SCC
ModuleList 2						
MMS Inter-Module Comm Status	MultiState_Value	184	4856_2	RD	1 = Failed 2 = Normal	1+N, SCC
MMS Event Summary	MultiState_Value	185	4857_2	RD	1 = None 2 = Alarm 3 = Fault	1+N, SCC
MMS Module Inverter Status	MultiState_Value	186	4858_2	RD	1 = off 2 = on	1+N
MMS Module Output Voltage Status	MultiState_Value	187	4859_2	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High	1+N, SCC

Table 4-60 Liebert NXL™—60Hz, UL version (Model 40)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
MMS Module Output Source	MultiState_Value	188	4860_2	RD	1 = off 2 = Normal 3 = Bypass 4 = Maintenance Bypass	1+N, SCC
ModuleList 8						
MMS Inter-Module Comm Status	MultiState_Value	274	4856_8	RD	1 = Failed 2 = Normal	1+N, SCC
MMS Event Summary	MultiState_Value	275	4857_8	RD	1 = None 2 = Alarm 3 = Fault	1+N, SCC
MMS Module Inverter Status	MultiState_Value	276	4858_8	RD	1 = off 2 = on	1+N
MMS Module Output Voltage Status	MultiState_Value	277	4859_8	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High	1+N, SCC
MMS Module Output Source	MultiState_Value	278	4860_8	RD	1 = off 2 = Normal 3 = Bypass 4 = Maintenance Bypass	1+N, SCC
Intelligent Paralleling						
Intelligent Parallel Operation State	MultiState_Value	289	5448_1	RD	1 = disabled 2 = enabled	1+N, N+1, SCC
Intelligent Parallel Mode	MultiState_Value	290	5449_1	RD	1 = Idle (Fast Recovery) 2 = Disconnect (More Efficient) 3 = off (Most Efficient)	1+N, N+1, SCC
ECO Mode						
ECO Mode Operation State	MultiState_Value	301	5454_1	RW	1 = disabled 2 = enabled	SMS, 1+N, SCC
Continuous Operation - ECO Mode	MultiState_Value	302	5455_1	RD	1 = disabled 2 = enabled	SMS, 1+N, SCC
ECO Mode - EcoModeSchedule 1						
Schedule Operation State - ECO Mode	MultiState_Value	313	5461_1_1	RD	1 = disabled 2 = enabled	SMS, 1+N, SCC
Schedule Action - ECO Mode	MultiState_Value	314	5462_1_1	RD	1 = stop 2 = start	SMS, 1+N, SCC

Table 4-60 Liebert NXL™—60Hz, UL version (Model 40)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes	Liebert NXL Type
ECO Mode - EcoModeSchedule 2						
Schedule Operation State - ECO Mode	MultiState_Value	326	5461_1_2	RD	1 = disabled 2 = enabled	SMS, 1+N, SCC
Schedule Action - ECO Mode	MultiState_Value	327	5462_1_2	RD	1 = stop 2 = start	SMS, 1+N, SCC
Schedule Day of Week - ECO Mode	MultiState_Value	328	5463_1_2	RD	1 = Unknown 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday 8 = Sunday	SMS, 1+N, SCC
ECO Mode - EcoModeSchedule 16						
Schedule Operation State - ECO Mode	MultiState_Value	508	5461_1_16	RD	1 = disabled 2 = enabled	SMS, 1+N, SCC
Schedule Action - ECO Mode	MultiState_Value	509	5462_1_16	RD	1 = stop 2 = start	SMS, 1+N, SCC
Schedule Day of Week - ECO Mode	MultiState_Value	510	5463_1_16	RD	1 = Unknown 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday 8 = Sunday	SMS, 1+N, SCC

Table 4-61 Liebert NXL™—60Hz, UL version (Model 40)—Glossary

Data Label	Data Description
Auto Restart In Progress	Auto restart is in progress
Auto Restart Inhibited - Ext	Auto restart inhibited due to an external signal
Auto Retransfer Time Remaining	Time remaining before an inverter overload or inverter fault can be cleared and auto retransfer from the bypass to the inverter can take place
Automatic Restart Failed	Automatic restart failed
Backfeed Breaker Open	The backfeed breaker is in the open position
Backfeed Breaker	Backfeed breaker
Battery - External Monitor 1	External battery monitor 1 - battery maintenance required
Battery - External Monitor 2	External battery monitor 2 - battery maintenance required
Battery Amp-Hours Consumed This Discharge	Battery amp-hours withdrawn this discharge.
Battery Amp-Hours Consumed	Cumulative battery amp-hours withdrawn over the life of the battery
Battery Capacity Low	Battery capacity is low
Battery Cell Count - Lead Acid	Battery cell count - lead acid
Battery Cell Count-Nickel Cadmium	Battery cell count - nickel cadmium
Battery Charging	The UPS battery is charging (battery charge percentage lower than 98)
Battery Charging Error	The battery is not charging properly
Battery Charging Inhibited	Battery charging is inhibited due to an external inhibit signal
Battery Charging Reduced-Extrnl	Using a reduced battery charging algorithm due to an external signal
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Circuit Breaker 5 Open	Battery circuit breaker 5 is open
Battery Circuit Breaker 6 Open	Battery circuit breaker 6 is open
Battery Circuit Breaker 7 Open	Battery circuit breaker 7 is open
Battery Circuit Breaker 8 Open	Battery circuit breaker 8 is open
Battery Commission Date	Date and time when battery placed into service
Battery Discharge Power	Instantaneous battery power while discharging
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Last Discharge Date	The date and time of the last battery discharge
Battery Low Shutdown	Battery disconnect due to end-of-discharge.
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Percentage Charge	The percentage of battery charge
Battery Self Test	Battery self test is in progress
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature Imbalance	Excessive temperature differences between battery sensors detected
Battery Temperature Sensor Fault	A battery temperature sensor fault has been detected
Battery Test Failed	Battery test failed
Battery Test Inhibited	Automatic (scheduled) battery tests are inhibited
Battery Time Remaining	The calculated available time on battery
Battery Total Discharge Time	The cumulative battery discharge time
Battery Volts at Main Disconnect	The voltage between the positive and the negative battery terminals of the common battery disconnect

Table 4-61 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
BPSS Startup Inhibit	The Bypass Static Switch startup is inhibited
Bypass - Excess Auto Retransfers	The number of auto retransfers, from bypass to inverter, has exceeded the maximum for a specified time interval
Bypass - Manual Rexfr Inhibited	Manual transfer from bypass to inverter is inhibited.
Bypass - Manual Xfr Inhibited	Manual transfer from inverter to bypass is inhibited.
Bypass Auto Retransfer Failed	After performing a recoverable transfer to bypass, an attempt to auto retransfer from bypass to inverter failed
Bypass Auto Transfer Failed	An automatic transfer to static bypass failed
Bypass Excessive Pulse Parallel	The system has performed too many pulse parallel operations within a specified time interval
Bypass Frequency Error	The bypass frequency is outside the inverter synchronization limits
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Wire Configuration	Bypass input wire configuration
Bypass Isolation Breaker (BIB)	Bypass isolation breaker (BIB)
Bypass Isolation Breaker for Module 1 (BIB1)	Bypass isolation breaker for module 1 (BIB1)
Bypass Isolation Breaker for Module 2 (BIB2)	Bypass isolation breaker for module 2 (BIB2)
Bypass Isolation Breaker for Module 3 (BIB3)	Bypass isolation breaker for module 3 (BIB3)
Bypass Isolation Breaker for Module 4 (BIB4)	Bypass isolation breaker for module 4 (BIB4)
Bypass Isolation Breaker for Module 5 (BIB5)	Bypass isolation breaker for module 5 (BIB5)
Bypass Isolation Breaker for Module 6 (BIB6)	Bypass isolation breaker for module 6 (BIB6)
Bypass Isolation Breaker for Module 7 (BIB7)	Bypass isolation breaker for module 7 (BIB7)
Bypass Isolation Breaker for Module 8 (BIB8)	Bypass isolation breaker for module 8 (BIB8)
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload Phase A	An overload exists on output phase A while operating on the bypass
Bypass Overload Phase B	An overload exists on output phase B while operating on the bypass
Bypass Overload Phase C	An overload exists on output phase C while operating on the bypass
Bypass Qualification Status	bypass qualification status
Bypass SS Overload Time Remain	The calculated time remaining before bypass static switch shutdown due to the present overload condition
Bypass Static Switch Off Extrnl	Bypass static switch is off due to the state of an external signal
Bypass Static Switch Overload	Bypass off due to static switch overload
Bypass Static Switch Unavailable	The static bypass switch is off, and unable to operate
Bypass Sync Phase Difference	The phase angle difference between the inverter output and bypass source
Configuration Description	Configuration description
Cont Tie Active	Continuous Power Tie Active.
Continuous Operation - ECO Mode	This setting gives the user the ability to Enable/Disable ECO Mode continuous operation.
Controls Reset Required	A controls reset is required due to one or more critical settings changing
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Ground Fault - Negative	A ground fault has been detected on the negative DC Bus link
DC Bus Ground Fault - Positive	A ground fault has been detected on the positive DC Bus link

Table 4-61 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
DC Bus Qualification Status	dc bus qualification status
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
ECO Mode Active	Conditions for Activation or Automatic Reactivation have been satisfied.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
ECO Mode Suspended	ECO Mode session is suspended.
EMO Shutdown	An Emergency Module Off command has been detected.
Equipment Over Temperature	Equipment over temperature summary event
Equipment Temperature Sensor Fail	One or more temperature sensors report a temperature outside of the range of expected operation.
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Over Temperature	The inlet air exceeds the maximum temperature threshold
Inlet Air Temperature	The temperature of the inlet air
Input Breaker (CB1/RIB)	Input breaker (CB1/RIB)
Input Contact 01	The external input contact 1
Input Contact 02	The external input contact 2
Input Contact 03	The external input contact 3
Input Contact 04	The external input contact 4
Input Contact 05	The external input contact 5
Input Contact 06	The external input contact 6
Input Contact 07	The external input contact 7
Input Contact 08	The external input contact 8
Input Contact 09	The external input contact 9
Input Contact 10	The external input contact 10
Input Contact 11	The external input contact 11
Input Contact 12	The external input contact 12
Input Contact 13	The external input contact 13
Input Contact 14	The external input contact 14
Input Contact 15	The external input contact 15
Input Contact 16	The external input contact 16
Input Filter Cycle Lock	The input filter disconnect is open due to exceeding the maximum number of cycles.
Input Isolation Transformer	Input isolation transformer
Input Qualification Status	input qualification status
Intelligent Parallel Maximum Time in Standby	The maximum time a module can be in standby mode due to Intelligent Paralleling.
Intelligent Parallel Minimum Redundancy	This is the minimum Number of Redundant Modules that the system will allow before bringing one or more modules back to normal operation and terminating Intelligent Paralleling.
Intelligent Parallel Mode	This setting gives the user the ability to choose between different energy consumption modes while Intelligent Paralleling is active and module is in standby.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Intelligent Paralleling Shutdown Delay	This is the length of time the conditions for module standby must remain satisfied before the module goes into standby.
Internal Bypass Breaker (CB3)	Internal bypass breaker (CB3)

Table 4-61 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter Inhibit - External	Restart of the inverter is inhibited by an external signal
Inverter Off - External	Inverter is off (operation is inhibited) due to external signal state
Inverter On/Off State	inverter on/off state
Inverter Output Qualification Status	inverter output qualification status
Inverter Overload Phase A	Inverter is operating with an overload on phase A
Inverter Overload Phase B	Inverter is operating with an overload on phase B
Inverter Overload Phase C	Inverter is operating with an overload on phase C
Inverter Overload Time Remaining	The calculated time remaining before inverter shutdown
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Static Switch SCR Short	The system has detected a short across one or more inverter static switch Silicon Controlled Rectifiers (SCR)
LBS Active - Master	This UPS system has been selected as the functional Master Load Bus Synchronization (LBS) system.
LBS Active - Slave	This UPS system is synchronized to the output bus of the UPS system that has been selected as the Master Load Bus Synchronization (LBS) system.
LBS Active	The Load Bus Sync option is active
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied
Leading Power Factor	The leading output Power Factor has fallen below a specified value
Loss of Redundancy	The multi-module collection doesn't have enough modules to redundantly support the load
Main Battery Disconnect Open	Main battery disconnect is open
Main Controller Fault	A Main Controller fault has been detected.
Maintenance Bypass Breaker (MBB)	Maintenance bypass breaker (MBB)
Maintenance Isolation Breaker (MIB)	Maintenance isolation breaker (MIB)
Maximum Auto Suspensions - ECO Mode	This setting sets the maximum number of automatic ECO Mode suspensions in a session.
MMS Event Summary	Summary of any active user alarm or fault of this module in a multi-module system
MMS Inter-Module Comm Status	Inter-module communication status of this module in a multi-module system
MMS Loss of Sync Pulse	Multi-module system loss of sync pulse
MMS Low Battery Warning	Multi-module system low battery warning
MMS Module Alarm Active	Active alarm or fault of any module in a multi-module system
MMS Module Battery Current	Battery current of this module in a multi-module system
MMS Module Battery Time Remaining	Battery time remaining for this module in a multi-module system
MMS Module DC Bus Voltage	DC bus voltage of this module in a multi-module system
MMS Module Inverter Status	Multi-module inverter status of this module (on/off)
MMS Module Number	MMS module number
MMS Module Output Source	Module output source in a multi-module system (normal/bypass/maintenance bypass/off)
MMS Module Output Voltage Status	Output voltage status of this module in multi-module system
MMS Module Total kVA Output	Total kVA output of this module in a multi-module system
MMS Module Total kW Output	Total kW output of this module in a multi-module system
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules

Table 4-61 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
MMS Output Frequency	The multi-module system output frequency
MMS Output Pct Apparent Pwr (kVA) Phase A	The multi-module system output apparent power on phase A as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase B	The multi-module system output apparent power on phase B as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase C	The multi-module system output apparent power on phase C as a percentage of the rated capacity
MMS Output Pct Power Phase A	The multi-module system output power on phase A as a percentage of the rated capacity
MMS Output Pct Power Phase B	The multi-module system output power on phase B as a percentage of the rated capacity
MMS Output Pct Power Phase C	The multi-module system output power on phase C as a percentage of the rated capacity
MMS Output Power Factor Phase A	The multi-module system output power factor for phase A
MMS Output Power Factor Phase B	The multi-module system output power factor for phase B
MMS Output Power Factor Phase C	The multi-module system output power factor for phase C
MMS Output Power	The sum total power of all system output modules
MMS Overload	Multi-module system overload
MMS Retransfer Inhibit	The critical load can not be manually retransferred from bypass to inverter
MMS Sharing Calib Active	A module is not sharing power with the other modules in a multi-module system.
MMS Transfer Inhibit	The critical load can not be manually transferred from inverter to bypass
MMS UPS Battery Status	Multi-module UPS battery status
MMS UPS Output Source	Multi-module UPS output source
Module Accumulated Energy	Total accumulated energy output for this module, since last energy reset.
Module In Standby - Intelligent Paralleling	Module is placed into standby operation per Intelligent Paralleling.
Module Output Breaker (MOB)	Module output breaker (MOB)
Module Output Breaker for Module 1 (MOB1)	Module output breaker for module 1 (MOB1)
Module Output Breaker for Module 2 (MOB2)	Module output breaker for module 2 (MOB2)
Module Output Breaker for Module 3 (MOB3)	Module output breaker for module 3 (MOB3)
Module Output Breaker for Module 4 (MOB4)	Module output breaker for module 4 (MOB4)
Module Output Breaker for Module 5 (MOB5)	Module output breaker for module 5 (MOB5)
Module Output Breaker for Module 6 (MOB6)	Module output breaker for module 6 (MOB6)
Module Output Breaker for Module 7 (MOB7)	Module output breaker for module 7 (MOB7)
Module Output Breaker for Module 8 (MOB8)	Module output breaker for module 8 (MOB8)
Multi-module System Output Voltage RMS A-B	Multi-module system output RMS voltage between phases A and B
Multi-module System Output Voltage RMS A-N	Multi-module system output RMS voltage between phase B and Neutral
Multi-module System Output Voltage RMS B-C	Multi-module system output RMS voltage between phases B and C
Multi-module System Output Voltage RMS B-N	Multi-module system output RMS voltage between phase B and Neutral
Multi-module System Output Voltage RMS C-A	Multi-module system output RMS voltage between phases C and A
Multi-module System Output Voltage RMS C-N	Multi-module system output RMS voltage between phase C and Neutral
Multiple Fan Failure	Multiple fan failure
Number of Modules in a MMS	The number of modules in a multi-module system
Number of Redundant Modules	The number of redundant modules in a multi-module collective.
On Generator	A generator is supplying the power to the system
Outlet Air Overtemperature Limit	The difference between the outlet air temperature and inlet air temperature exceeds a specified maximum temperature.
Output Amp Over User Limit-Phs A	The phase A output has exceeded the user amperage threshold

Table 4-61 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
Output Amp Over User Limit-Phs B	The phase B output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs C	The phase C output has exceeded the user amperage threshold
Output Apparent Power Rating	Output apparent power rating
Output Breaker (CB2/IOB)	Output breaker (CB2/IOB)
Output kWh Reset Timestamp	The date/time stamp when the User kWh accumulator was last reset to zero.
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Of/Uf	The output frequency has exceeded a specified range for a specified period of time.
Output Peak kW Demand Hist	The Output Peak kW Demand for the last completed programmed time interval.
Output Peak kW Demand	The Output Peak kW Demand for the programmed time interval.
Output Qualification Status	Output qualification status
Output Real Power Rating	Output real power rating
Output Series Static Switch	Output series static switch
Output Wire Configuration	Output wire configuration
Parallel Comm Warning	Parallel communication bus warning
Peak kW Demand Period	The Peak kW Demand Period.
Peak kW Demand Timestamp	The date/time stamp when the Peak kW Demand accumulator was last reset.
Peak kW Reset	The Peak kW was reset.
Power Supply Failure	Power supply failure
Rectifier Active Filter	Rectifier input active filter configuration
Rectifier Failure	Rectifier failure - rectifier is off
Rectifier Feed Breaker (RFB)	Rectifier feed breaker (RFB)
Rectifier Input Passive Filter	Rectifier input passive filter configuration
Rectifier Operation Inhibit-Ext	The operation of the rectifier is inhibited by an external signal
Rectifier Passive Filter Switch	Rectifier input passive filter switch configuration
Rectifier Pulse Count	Rectifier pulse count per cycle configuration
Rectifier Status	Rectifier status
Restart Delay - ECO Mode	The time delay that the conditions to activate ECO Mode must be satisfied before ECO Mode can be reactivated during an active session.
SBS Load Disconnect	SBS load disconnect
SCC Event Summary	Summary of any active user alarms or faults on the SCC
Schedule Action - ECO Mode	This setting gives the user the ability to choose the action of a schedule entry to be either stop or start.
Schedule Day of Week - ECO Mode	This setting represents the day of the week when an associated ECO Mode schedule entry action will take effect.
Schedule Hour - ECO Mode	This setting represents the hour of the day when an associated schedule entry action will take effect.
Schedule Minute - ECO Mode	This setting represents the minute of the hour when an associated schedule entry action will take effect.
Schedule Operation State - ECO Mode	This setting gives the user the ability to either enable or disable a schedule entry if the action is Start.
Service Code Active	Service code is running
Service Required	Unit requires servicing.
Static Bypass Switch	Static Bypass Switch state - On/Off
Static Switch Type	Static switch type configuration
Sum of MMS Output RMS Currents for Phase A	The sum of the multi-module system output RMS currents for phase A

Table 4-61 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
Sum of MMS Output RMS Currents for Phase B	The sum of the multi-module system output RMS currents for phase B
Sum of MMS Output RMS Currents for Phase C	The sum of the multi-module system output RMS currents for phase C
System Accumulated Energy	Total accumulated energy output for the mms system, since last energy reset.
System Breaker(s) Close Failure	One or more breakers in the system failed to close
System Breaker(s) Open Failure	One or more breakers in the system failed to open
System Comm Fail	Failure of a device on the multi-module system communication bus
System Controller Error	System controller internal error
System Date and Time	The system date and time
System Fan Failure - Redundant	Redundant system fan failure
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Problem	The input is not qualified to provide power to the system
System Input Power Source	System input power source
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Isolation Output Breaker (IOB)	System isolation output breaker (IOB)
System Load Bank Breaker (LBB)	System load bank breaker (LBB)
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Breaker (UOB)	System output breaker (UOB)
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Low Power Factor	The system output power factor is low, resulting in reduced output capacity
System Output Maximum Amp Rating	System output maximum amperage rating
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Off	The system output is off
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs A	The system output apparent power on phase A as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs B	The system output apparent power on phase B as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs C	The system output apparent power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B

Table 4-61 Liebert NXL™—60Hz, UL version (Model 40)—Glossary (continued)

Data Label	Data Description
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)
System Shutdown - REPO	System shutdown due to Remote Emergency Power Off (REPO)
System Status	The operating status for the system
System UPS Module Count	Number of UPS modules in the system
Time Remaining - ECO Mode	Time remaining before current active ECO Mode session stops.
Total Bypass Operating Time	The cumulative bypass time of the unit.
Total kW Hours Saved	Total kW hours saved by ECO Mode or Intelligent Paralleling.
Total Number of Battery Discharges	The total number of battery discharges.
Total System Operating Time	The cumulative operation time of the unit
Trap Filter Disconnect	Trap filter disconnect
UPS Battery Status	UPS battery status
UPS Module Type	UPS module type
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
UPS System Output Source	The UPS system's output power source
User kWh Reset	The user kWh accumulator was reset to zero by the operator.

Table 4-62 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input Power Problem	Binary_Value	1	4122_1	RD	Active on Alarm
System Input Phs Rotation Error	Binary_Value	2	4146_1	RD	Active on Alarm
System Input Current Limit	Binary_Value	3	4147_1	RD	Active on Alarm
System Input Current Imbalance	Binary_Value	4	4382_1	RD	Active on Alarm
Bypass					
Bypass Not Available	Binary_Value	15	4135_1	RD	Active on Alarm
Bypass Overload Phase A	Binary_Value	16	4132_1	RD	Active on Alarm
Bypass Overload Phase B	Binary_Value	17	4133_1	RD	Active on Alarm
Bypass Overload Phase C	Binary_Value	18	4134_1	RD	Active on Alarm
Bypass Auto Retransfer Failed	Binary_Value	19	4138_1	RD	Active on Alarm
Bypass Static Switch Overload	Binary_Value	20	4142_1	RD	Active on Alarm
Bypass Static Switch Unavailable	Binary_Value	21	4143_1	RD	Active on Alarm
Bypass Auto Transfer Failed	Binary_Value	22	4145_1	RD	Active on Alarm
Bypass Frequency Error	Binary_Value	23	4175_1	RD	Active on Alarm
Bypass - Manual Rexfr Inhibited	Binary_Value	24	4218_1	RD	Active on Alarm
Bypass - Manual Xfr Inhibited	Binary_Value	25	4217_1	RD	Active on Alarm
Battery					
Battery Automatic Test Inhibited	Binary_Value	36	4740_1	RD	Active on Alarm
Battery Capacity Low	Binary_Value	37	4166_1	RD	Active on Alarm
Battery Discharging	Binary_Value	38	4168_1	RD	Active on Alarm
Battery Temperature Imbalance	Binary_Value	39	4169_1	RD	Active on Alarm
Battery Equalize	Binary_Value	40	4170_1	RD	Active on Alarm
Battery Auto Test In Progress	Binary_Value	41	4172_1	RD	Active on Alarm
Main Battery Disconnect Open	Binary_Value	42	4173_1	RD	Active on Alarm
Battery Low	Binary_Value	43	4162_1	RD	Active on Alarm
Battery Temperature Sensor Fault	Binary_Value	44	4174_1	RD	Active on Alarm
Battery Circuit Breaker 1 Open	Binary_Value	45	4176_1	RD	Active on Alarm
Battery Circuit Breaker 2 Open	Binary_Value	46	4179_1	RD	Active on Alarm
Battery Circuit Breaker 3 Open	Binary_Value	47	4182_1	RD	Active on Alarm
Battery Circuit Breaker 4 Open	Binary_Value	48	4185_1	RD	Active on Alarm
Battery Circuit Breaker 5 Open	Binary_Value	49	4188_1	RD	Active on Alarm
Battery Circuit Breaker 6 Open	Binary_Value	50	4191_1	RD	Active on Alarm
Battery - External Monitor 1	Binary_Value	51	4220_1	RD	Active on Alarm
Battery - External Monitor 2	Binary_Value	52	4221_1	RD	Active on Alarm
Battery Ground Fault	Binary_Value	53	4222_1	RD	Active on Alarm
Battery Over Temperature Limit	Binary_Value	54	5871_1	RD	Active on Alarm
Battery Low Shutdown	Binary_Value	55	4742_1	RD	Active on Alarm
Battery Over Temperature	Binary_Value	56	4219_1	RD	Active on Alarm
Battery Test Failed	Binary_Value	57	4323_1	RD	Active on Alarm
Unexpected Main Battery Disconnect Closure	Binary_Value	58	5873_1	RD	Active on Alarm
Battery Over Voltage	Binary_Value	59	5874_1	RD	Active on Alarm
Battery Fuse Fault	Binary_Value	60	5875_1	RD	Active on Alarm
Main Battery Disconnect Forced To Unlock	Binary_Value	61	5878_1	RD	Active on Alarm
Battery Charging	Binary_Value	65	6354_1	RD	Active on Alarm

Table 4-62 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
DC Bus					
DC Bus Low Fault	Binary_Value	74	5563_1	RD	Active on Alarm
Output					
System Shutdown - EPO	Binary_Value	85	4213_1	RD	Active on Alarm
System Shutdown - REPO	Binary_Value	86	4214_1	RD	Active on Alarm
System Output Low Power Factor	Binary_Value	88	4230_1	RD	Active on Alarm
Output Amp Over User Limit-Phs A	Binary_Value	89	4286_1	RD	Active on Alarm
Output Amp Over User Limit-Phs B	Binary_Value	90	4287_1	RD	Active on Alarm
Output Amp Over User Limit-Phs C	Binary_Value	91	4288_1	RD	Active on Alarm
System Output Fault	Binary_Value	92	4389_1	RD	Active on Alarm
Output Of/Uf	Binary_Value	93	5144_1	RD	Active on Alarm
Inverter					
Inverter Failure	Binary_Value	104	4233_1	RD	Active on Alarm
Inverter Overload Phase A	Binary_Value	105	4234_1	RD	Active on Alarm
Inverter Overload Phase B	Binary_Value	106	4235_1	RD	Active on Alarm
Inverter Overload Phase C	Binary_Value	107	4236_1	RD	Active on Alarm
Inverter Inhibit - External	Binary_Value	108	4237_1	RD	Active on Alarm
Inverter Shutdown - Overload	Binary_Value	109	4290_1	RD	Active on Alarm
Inverter Static Switch SCR Short	Binary_Value	110	4391_1	RD	Active on Alarm
Environment					
Inlet Air Over Temperature	Binary_Value	121	4294_1	RD	Active on Alarm
Outlet Air Overtemperature Limit	Binary_Value	122	5768_1	RD	Active on Alarm
Equipment Temperature Sensor Fail	Binary_Value	123	4747_1	RD	Active on Alarm
External Input Signals					
Input Contact 01	Binary_Value	134	4270_1	RD	Active on Alarm
Input Contact 02	Binary_Value	135	4271_1	RD	Active on Alarm
Input Contact 03	Binary_Value	136	4272_1	RD	Active on Alarm
Input Contact 04	Binary_Value	137	4273_1	RD	Active on Alarm
Input Contact 05	Binary_Value	138	4274_1	RD	Active on Alarm
Input Contact 06	Binary_Value	139	4275_1	RD	Active on Alarm
Input Contact 07	Binary_Value	140	4276_1	RD	Active on Alarm
Input Contact 08	Binary_Value	141	4277_1	RD	Active on Alarm
Input Contact 09	Binary_Value	142	4278_1	RD	Active on Alarm
Input Contact 10	Binary_Value	143	4279_1	RD	Active on Alarm
Input Contact 11	Binary_Value	144	4280_1	RD	Active on Alarm
Input Contact 12	Binary_Value	145	4281_1	RD	Active on Alarm
Input Contact 13	Binary_Value	146	4282_1	RD	Active on Alarm
Input Contact 14	Binary_Value	147	4283_1	RD	Active on Alarm
Input Contact 15	Binary_Value	148	4284_1	RD	Active on Alarm
Input Contact 16	Binary_Value	149	4285_1	RD	Active on Alarm
Rectifier					
Rectifier Failure	Binary_Value	160	4295_1	RD	Active on Alarm
Vdc Backfeed	Binary_Value	162	5879_1	RD	Active on Alarm
Rectifier Configuration Change Request	Binary_Value	163	5880_1	RD	Active on Alarm

Table 4-62 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System					
System Fan Failure - Redundant	Binary_Value	174	4749_1	RD	Active on Alarm
Multiple Fan Failure	Binary_Value	175	4750_1	RD	Active on Alarm
Internal Communications Failure	Binary_Value	176	4300_1	RD	Active on Alarm
UPS Output on Bypass	Binary_Value	177	4298_1	RD	Active on Alarm
Output Load on Maint. Bypass	Binary_Value	178	4299_1	RD	Active on Alarm
Backfeed Breaker Open	Binary_Value	179	4325_1	RD	Active on Alarm
Auto Restart In Progress	Binary_Value	180	4316_1	RD	Active on Alarm
Power Supply Failure	Binary_Value	181	4314_1	RD	Active on Alarm
Auto Restart Inhibited - Ext	Binary_Value	183	4317_1	RD	Active on Alarm
Automatic Restart Failed	Binary_Value	184	4439_1	RD	Active on Alarm
Main Controller Fault	Binary_Value	185	4753_1	RD	Active on Alarm
Fuse Failure	Binary_Value	186	4440_1	RD	Active on Alarm
System Controller Error	Binary_Value	187	4441_1	RD	Active on Alarm
System Breaker(s) Open Failure	Binary_Value	188	4442_1	RD	Active on Alarm
System Breaker(s) Close Failure	Binary_Value	189	4754_1	RD	Active on Alarm
Input Filter Cycle Lock	Binary_Value	190	4755_1	RD	Active on Alarm
EMO Shutdown	Binary_Value	191	5769_1	RD	Active on Alarm
Service Code Active	Binary_Value	192	4756_1	RD	Active on Alarm
LBS Active	Binary_Value	193	4757_1	RD	Active on Alarm
LBS Inhibited	Binary_Value	194	4758_1	RD	Active on Alarm
Regeneration Active	Binary_Value	195	5881_1	RD	Active on Alarm
Regeneration Operation Terminated	Binary_Value	196	5882_1	RD	Active on Alarm
Regeneration Operation Failure	Binary_Value	197	5883_1	RD	Active on Alarm
Leading Power Factor	Binary_Value	198	4759_1	RD	Active on Alarm
Controls Reset Required	Binary_Value	199	4760_1	RD	Active on Alarm
MultiModule					
Loss of Redundancy	Binary_Value	212	4825_1	RD	Active on Alarm
MMS Overload	Binary_Value	215	4831_1	RD	Active on Alarm
MMS On Battery	Binary_Value	216	4834_1	RD	Active on Alarm
MMS Module Alarm Active	Binary_Value	218	5145_1	RD	Active on Alarm
Program Input Signals					
Program Input Contact 01	Binary_Value	229	5884_1	RD	Active on Alarm
Program Input Contact 02	Binary_Value	230	5885_1	RD	Active on Alarm
Program Input Contact 03	Binary_Value	231	5886_1	RD	Active on Alarm
Program Input Contact 04	Binary_Value	232	5887_1	RD	Active on Alarm
Program Input Contact 05	Binary_Value	233	5888_1	RD	Active on Alarm
Program Input Contact 06	Binary_Value	234	5889_1	RD	Active on Alarm
Program Input Contact 07	Binary_Value	235	5890_1	RD	Active on Alarm
Program Input Contact 08	Binary_Value	236	5891_1	RD	Active on Alarm
Program Input Contact 09	Binary_Value	237	5892_1	RD	Active on Alarm
Program Input Contact 10	Binary_Value	238	5893_1	RD	Active on Alarm
Program Input Contact 11	Binary_Value	239	5894_1	RD	Active on Alarm
Program Input Contact 12	Binary_Value	240	5895_1	RD	Active on Alarm

Table 4-62 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Intelligent Paralleling					
IP Inhibit	Binary_Value	251	5567_1	RD	Active on Alarm
ECO Mode					
ECO Mode Active	Binary_Value	262	5456_1	RD	Active on Alarm
ECO Mode Suspended	Binary_Value	263	5457_1	RD	Active on Alarm
Excess ECO Suspends	Binary_Value	264	5458_1	RD	Active on Alarm

Table 4-63 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
System Input RMS A-B	Analog_Value	1	4097_1	RD	Units: VAC
System Input RMS B-C	Analog_Value	2	4099_1	RD	Units: VAC
System Input RMS C-A	Analog_Value	3	4101_1	RD	Units: VAC
System Input RMS Current Phase A	Analog_Value	4	4113_1	RD	Units: A AC
System Input RMS Current Phase B	Analog_Value	5	4114_1	RD	Units: A AC
System Input RMS Current Phase C	Analog_Value	6	4115_1	RD	Units: A AC
System Input Frequency	Analog_Value	7	4105_1	RD	Units: Hz
Bypass					
Bypass Input Voltage RMS A-B	Analog_Value	18	4125_1	RD	Units: VAC
Bypass Input Voltage RMS B-C	Analog_Value	19	4126_1	RD	Units: VAC
Bypass Input Voltage RMS C-A	Analog_Value	20	4127_1	RD	Units: VAC
Bypass Input Frequency	Analog_Value	21	4131_1	RD	Units: Hz
Bypass Sync Phase Difference	Analog_Value	22	4136_1	RD	Units: deg
Bypass SS Overload Time Remain	Analog_Value	23	4157_1	RD	Units: sec
Auto Retransfer Time Remaining	Analog_Value	24	4738_1	RD	Units: sec
Total Bypass Operating Time	Analog_Value	25	6456_1	RD	Units: hr
Battery					
Battery Total Discharge Time	Analog_Value	35	4152_1	RD	Units: hr
Battery Percentage Charge	Analog_Value	36	4153_1	RD	
Battery Volts at Main Disconnect	Analog_Value	37	4154_1	RD	Units: VDC
Battery Volts for Cabinet 1	Analog_Value	38	4155_1_1	RD	Units: VDC
Battery Volts for Cabinet 2	Analog_Value	39	4155_1_2	RD	Units: VDC
Battery Volts for Cabinet 3	Analog_Value	40	4155_1_3	RD	Units: VDC
Battery Volts for Cabinet 4	Analog_Value	41	4155_1_4	RD	Units: VDC
Battery Volts for Cabinet 5	Analog_Value	42	4155_1_5	RD	Units: VDC
Battery Volts for Cabinet 6	Analog_Value	43	4155_1_6	RD	Units: VDC
Battery Temperature for Cabinet 1	Analog_Value	44	4156_1_1	RD	Units: deg C
Battery Temperature for Cabinet 1	Analog_Value	10044	4156_1_1_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 2	Analog_Value	45	4156_1_2	RD	Units: deg C
Battery Temperature for Cabinet 2	Analog_Value	10045	4156_1_2_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 3	Analog_Value	46	4156_1_3	RD	Units: deg C
Battery Temperature for Cabinet 3	Analog_Value	10046	4156_1_3_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 4	Analog_Value	47	4156_1_4	RD	Units: deg C
Battery Temperature for Cabinet 4	Analog_Value	10047	4156_1_4_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 5	Analog_Value	48	4156_1_5	RD	Units: deg C
Battery Temperature for Cabinet 5	Analog_Value	10048	4156_1_5_deg_F	RD	Units: deg F
Battery Temperature for Cabinet 6	Analog_Value	49	4156_1_6	RD	Units: deg C
Battery Temperature for Cabinet 6	Analog_Value	10049	4156_1_6_deg_F	RD	Units: deg F
Battery Amp-Hours Consumed This Discharge	Analog_Value	50	4739_1	RD	Units: AH
Battery Time Remaining	Analog_Value	51	4150_1	RD	Units: min
Battery Discharge Time	Analog_Value	52	4151_1	RD	Units: sec
Battery Discharge Power	Analog_Value	53	4159_1	RD	Units: W
Battery Last Discharge Date	Analog_Value	54	4161_1	RD	
Battery Amp-Hours Consumed	Analog_Value	55	4158_1	RD	Units: AH

Table 4-63 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
DC Bus					
DC Bus Voltage	Analog_Value	66	4148_1	RD	Units: VDC
DC Bus Current	Analog_Value	67	4149_1	RD	Units: A DC
Output					
System Output Voltage RMS A-B	Analog_Value	78	4201_1	RD	Units: VAC
System Output Voltage RMS B-C	Analog_Value	79	4202_1	RD	Units: VAC
System Output Voltage RMS C-A	Analog_Value	80	4203_1	RD	Units: VAC
System Output Voltage RMS A-N	Analog_Value	81	4385_1	RD	Units: VAC
System Output Voltage RMS B-N	Analog_Value	82	4386_1	RD	Units: VAC
System Output Voltage RMS C-N	Analog_Value	83	4387_1	RD	Units: VAC
System Output RMS Current Phs A	Analog_Value	84	4204_1	RD	Units: A AC
System Output RMS Current Phs B	Analog_Value	85	4205_1	RD	Units: A AC
System Output RMS Current Phs C	Analog_Value	86	4206_1	RD	Units: A AC
System Output Frequency	Analog_Value	87	4207_1	RD	Units: Hz
System Output Power	Analog_Value	88	4208_1	RD	Units: kW
System Output Apparent Power	Analog_Value	89	4209_1	RD	Units: kVA
System Output Power Factor Phs A	Analog_Value	90	4210_1	RD	—
System Output Power Factor Phs B	Analog_Value	91	4211_1	RD	—
System Output Power Factor Phs C	Analog_Value	92	4212_1	RD	—
System Output Pct Power Phase A	Analog_Value	93	4223_1	RD	Units: %
System Output Pct Power Phase B	Analog_Value	94	4224_1	RD	Units: %
System Output Pct Power Phase C	Analog_Value	95	4225_1	RD	Units: %
System Output Pct Pwr (VA) Phs A	Analog_Value	96	4226_1	RD	Units: %
System Output Pct Pwr (VA) Phs B	Analog_Value	97	4227_1	RD	Units: %
System Output Pct Pwr (VA) Phs C	Analog_Value	98	4228_1	RD	Units: %
Inverter					
Inverter Overload Time Remaining	Analog_Value	109	4232_1	RD	Units: sec
Environment					
Inlet Air Temperature	Analog_Value	120	4291_1	RD	Units: deg C
Inlet Air Temperature	Analog_Value	10120	4291_1_deg_F	RD	Units: deg F
Total System Operating Time	Analog_Value	121	4292_1	RD	Units: hr
System Date and Time	Analog_Value	122	4293_1	RW	—
Ratings					
Bypass Nominal Voltage	Analog_Value	133	4259_1	RD	Units: VAC
System Input Nominal Voltage	Analog_Value	134	4102_1	RD	Units: VAC
System Input Nominal Frequency	Analog_Value	135	4103_1	RD	Units: Hz
System Output Nominal Voltage	Analog_Value	136	4260_1	RD	Units: VAC
System Output Nominal Frequency	Analog_Value	137	4261_1	RD	Units: Hz
Battery Cell Count - Lead Acid	Analog_Value	138	4262_1	RD	—
Battery Cell Count-Nickel Cadmium	Analog_Value	139	4263_1	RD	—
Output Apparent Power Rating	Analog_Value	140	4264_1	RD	Units: kVA
Output Real Power Rating	Analog_Value	141	4265_1	RD	Units: kW
System UPS Module Count	Analog_Value	142	4268_1	RD	—
System Output Maximum Amp Rating	Analog_Value	143	4267_1	RD	Units: A AC
System Redundant UPS Modules	Analog_Value	144	4269_1	RD	—

Table 4-63 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MultiModule					
Multi-module System Output Voltage RMS A-B	Analog_Value	155	4801_1	RD	Units: VAC
Multi-module System Output Voltage RMS B-C	Analog_Value	156	4802_1	RD	Units: VAC
Multi-module System Output Voltage RMS C-A	Analog_Value	157	4803_1	RD	Units: VAC
Multi-module System Output Voltage RMS A-N	Analog_Value	158	4804_1	RD	Units: VAC
Multi-module System Output Voltage RMS B-N	Analog_Value	159	4805_1	RD	Units: VAC
Multi-module System Output Voltage RMS C-N	Analog_Value	160	4806_1	RD	Units: VAC
Sum of MMS Output RMS Currents for Phase A	Analog_Value	161	4807_1	RD	Units: A AC
Sum of MMS Output RMS Currents for Phase B	Analog_Value	162	4808_1	RD	Units: A AC
Sum of MMS Output RMS Currents for Phase C	Analog_Value	163	4809_1	RD	Units: A AC
MMS Output Frequency	Analog_Value	164	4810_1	RD	Units: Hz
MMS Output Power	Analog_Value	165	4811_1	RD	Units: kW
MMS Output Apparent Power	Analog_Value	166	4812_1	RD	Units: kVA
MMS Output Power Factor Phase A	Analog_Value	167	4813_1	RD	—
MMS Output Power Factor Phase B	Analog_Value	168	4814_1	RD	—
MMS Output Power Factor Phase C	Analog_Value	169	4815_1	RD	—
MMS Output Pct Power Phase A	Analog_Value	170	4816_1	RD	Units: %
MMS Output Pct Power Phase B	Analog_Value	171	4817_1	RD	Units: %
MMS Output Pct Power Phase C	Analog_Value	172	4818_1	RD	Units: %
MMS Output Pct Apparent Pwr (kVA) Phase A	Analog_Value	173	4819_1	RD	Units: %
MMS Output Pct Apparent Pwr (kVA) Phase B	Analog_Value	174	4820_1	RD	Units: %
MMS Output Pct Apparent Pwr (kVA) Phase C	Analog_Value	175	4821_1	RD	Units: %
Number of Redundant Modules	Analog_Value	176	4822_1	RD	—
MMS Module Number	Analog_Value	177	4829_1	RD	—
Number of Modules in a MMS	Analog_Value	178	4833_1	RD	—
Intelligent Paralleling					
Intelligent Parallel Minimum Redundancy	Analog_Value	189	5451_1	RD	
Intelligent Parallel Maximum Time in Standby	Analog_Value	190	5452_1	RD	Units: day
ECO Mode					
Maximum Auto Suspensions - ECO Mode	Analog_Value	201	5459_1	RD	
Restart Delay - ECO Mode	Analog_Value	202	5460_1	RD	Units: min
Time Remaining - ECO Mode	Analog_Value	203	5466_1	RD	Units: min
ECO Mode - EcoModeSchedule 1					
Schedule Hour - ECO Mode	Analog_Value	214	5464_1_1	RD	Units: hr
Schedule Minute - ECO Mode	Analog_Value	215	5465_1_1	RD	Units: min
ECO Mode - EcoModeSchedule 2					
Schedule Hour - ECO Mode	Analog_Value	226	5464_1_2	RD	Units: hr
Schedule Minute - ECO Mode	Analog_Value	227	5465_1_2	RD	Units: min
ECO Mode - EcoModeSchedule 14					
Schedule Hour - ECO Mode	Analog_Value	370	5464_1_14	RD	Units: hr
Schedule Minute - ECO Mode	Analog_Value	371	5465_1_14	RD	Units: min

Table 4-64 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Input					
Input Qualification Status	MultiState_Value	1	4735_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Bypass					
Static Bypass Switch	MultiState_Value	12	4736_1	RD	1 = off 2 = on
Bypass Qualification Status	MultiState_Value	13	4737_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Battery					
UPS Battery Status	MultiState_Value	24	4871_1	RD	1 = Unknown 2 = Normal 3 = Low 4 = Depleted
The main battery disconnect status.	MultiState_Value	25	5872_1	RD	1 = Open 2 = Closed 3 = Disabled
Battery SCR Status	MultiState_Value	26	5876_1	RD	1 = OK 2 = Fault 3 = unknown
Main Battery Disconnect Switch Lock Status	MultiState_Value	27	5877_1	RD	1 = Locked 2 = Unlocked 3 = unknown
DC Bus					
DC Bus Qualification Status	MultiState_Value	38	4743_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Output					
Output Qualification Status	MultiState_Value	49	4744_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Inverter					
Inverter Output Qualification Status	MultiState_Value	60	4745_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
Inverter On/Off State	MultiState_Value	61	4746_1	RD	1 = off 2 = on

Table 4-64 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Rectifier					
Rectifier Pulse Count	MultiState_Value	72	4257_1	RD	1 = 6 Pulse 2 = 12 Pulse 3 = 18 Pulse 4 = 24 Pulse
Rectifier Input Passive Filter	MultiState_Value	73	4258_1	RD	1 = Not Installed 2 = Installed
Rectifier Passive Filter Switch	MultiState_Value	74	4301_1	RD	1 = Not Installed 2 = Installed
Rectifier Active Filter	MultiState_Value	75	4302_1	RD	1 = Not Installed 2 = Installed
Rectifier Status	MultiState_Value	76	4748_1	RD	1 = off 2 = on
System					
UPS Module Type	MultiState_Value	87	4303_1	RD	1 = Single Module System 2 = Module (1 + 1) 3 = Module (1 + N) 4 = Module (N + 1) 5 = System Control Cabinet 6 = Main Static Switch
Bypass Input Wire Configuration	MultiState_Value	88	4304_1	RD	1 = Two Wire (single phase + return) 2 = Two Wire (2 phase, no neutral) 3 = Three Wire (2 phase + neutral) 4 = Three Wire (3 phase, no neutral) 5 = Four Wire (3 phases + neutral)
Output Wire Configuration	MultiState_Value	89	4305_1	RD	1 = Two Wire (single phase + return) 2 = Two Wire (2 phase, no neutral) 3 = Three Wire (2 phase + neutral) 4 = Three Wire (3 phase, no neutral) 5 = Four Wire (3 phases + neutral)
Static Switch Type	MultiState_Value	90	4306_1	RD	1 = Not Applicable 2 = Continuous Duty 3 = Momentary Duty

Table 4-64 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Configuration Description	MultiState_Value	91	4751_1	RD	1 = Single Module System 33 2 = Single Module System 34 3 = Single Module System 44 4 = 1+1 33 5 = 1+1 34 6 = 1+1 44 7 = 1+N 33 8 = 1+N 34 9 = 1+N 44 10 = N+1 33 11 = N+1 34 12 = N+1 44 13 = SCC w/Continuous Duty SS 33 14 = SCC w/Continuous Duty SS 44 15 = SCC w/Momentary Duty SS 16 = Main Static Switch
UPS System Output Source	MultiState_Value	92	4307_1	RD	1 = None 2 = Inverter 3 = Bypass
System Input Power Source	MultiState_Value	93	4318_1	RD	1 = None 2 = Utility (mains) 3 = Generator
System Status	MultiState_Value	94	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
UPS Output Source	MultiState_Value	95	4872_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
System Fan Status	MultiState_Value	96	4326_1	RD	1 = Unknown 2 = Normal 3 = Failure

Table 4-64 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Fan Redundant Status	MultiState_Value	97	4327_1	RD	1 = Unknown 2 = Redundancy Available 3 = Loss of Redundancy
System Fan Capacity Status	MultiState_Value	98	4328_1	RD	1 = Unknown 2 = Normal 3 = Failure
Ratings					
Input Isolation Transformer	MultiState_Value	109	4266_1	RD	1 = Not Installed 2 = Installed
Device Status					
Backfeed Breaker	MultiState_Value	120	4764_1	RD	1 = Open 2 = Close 3 = Not Installed
SBS Load Disconnect	MultiState_Value	121	4765_1	RD	1 = Open 2 = Close 3 = Not Installed
Input Breaker	MultiState_Value	122	4766_1	RD	1 = Open 2 = Close 3 = Not Installed
Trap Filter Disconnect	MultiState_Value	123	4767_1	RD	1 = Open 2 = Close 3 = Not Installed
Output Breaker	MultiState_Value	124	4768_1	RD	1 = Open 2 = Close 3 = Not Installed
Internal Bypass Breaker	MultiState_Value	125	4769_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker	MultiState_Value	126	4770_1	RD	1 = Open 2 = Close 3 = Not Installed
Maintenance Bypass Breaker	MultiState_Value	127	4772_1	RD	1 = Open 2 = Close 3 = Not Installed
Maintenance Isolation Breaker	MultiState_Value	128	4773_1	RD	1 = Open 2 = Close 3 = Not Installed
Output Series Static Switch	MultiState_Value	129	4774_1	RD	1 = Off 2 = On 3 = Not Installed
Module Output Breaker	MultiState_Value	130	4775_1	RD	1 = Open 2 = Close 3 = Not Installed

Table 4-64 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MultiModule					
Module Output Breaker for Module 1	MultiState_Value	141	4836_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 2	MultiState_Value	142	4837_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 3	MultiState_Value	143	4838_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 4	MultiState_Value	144	4839_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 5	MultiState_Value	145	4840_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 6	MultiState_Value	146	4841_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 7	MultiState_Value	147	4842_1	RD	1 = Open 2 = Close 3 = Not Installed
Module Output Breaker for Module 8	MultiState_Value	148	4843_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 1	MultiState_Value	149	4844_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 2	MultiState_Value	150	4845_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 3	MultiState_Value	151	4846_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 4	MultiState_Value	152	4847_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 5	MultiState_Value	153	4848_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 6	MultiState_Value	154	4849_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 7	MultiState_Value	155	4850_1	RD	1 = Open 2 = Close 3 = Not Installed
Bypass Isolation Breaker for Module 8	MultiState_Value	156	4851_1	RD	1 = Open 2 = Close 3 = Not Installed

Table 4-64 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
System Output Breaker	MultiState_Value	157	4852_1	RD	1 = Open 2 = Close 3 = Not Installed
System Load Bank Breaker	MultiState_Value	158	4853_1	RD	1 = Open 2 = Close 3 = Not Installed
System Isolation Output Breaker	MultiState_Value	159	4854_1	RD	1 = Open 2 = Close 3 = Not Installed
SCC Event Summary	MultiState_Value	160	4855_1	RD	1 = None 2 = Alarm 3 = Fault
MMS UPS Output Source	MultiState_Value	162	4874_1	RD	1 = Other 2 = Off 3 = Normal 4 = Bypass 5 = Battery 6 = Booster 7 = Reducer
ModuleList 1					
MMS Inter-Module Comm Status	MultiState_Value	173	4856_1	RD	1 = Failed 2 = Normal
MMS Event Summary	MultiState_Value	174	4857_1	RD	1 = None 2 = Alarm 3 = Fault
MMS Module Inverter Status	MultiState_Value	175	4858_1	RD	1 = off 2 = on
MMS Module Output Voltage Status	MultiState_Value	176	4859_1	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
MMS Module Output Source	MultiState_Value	177	4860_1	RD	1 = Off 2 = Normal 3 = Bypass 4 = Maintenance Bypass
ModuleList 2					
MMS Inter-Module Comm Status	MultiState_Value	188	4856_2	RD	1 = Failed 2 = Normal
MMS Event Summary	MultiState_Value	189	4857_2	RD	1 = None 2 = Alarm 3 = Fault
MMS Module Inverter Status	MultiState_Value	190	4858_2	RD	1 = off 2 = on
MMS Module Output Voltage Status	MultiState_Value	191	4859_2	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High

Table 4-64 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
MMS Module Output Source	MultiState_Value	192	4860_2	RD	1 = Off 2 = Normal 3 = Bypass 4 = Maintenance Bypass
ModuleList 8					
MMS Inter-Module Comm Status	MultiState_Value	278	4856_8	RD	1 = Failed 2 = Normal
MMS Event Summary	MultiState_Value	279	4857_8	RD	1 = None 2 = Alarm 3 = Fault
MMS Module Inverter Status	MultiState_Value	280	4858_8	RD	1 = off 2 = on
MMS Module Output Voltage Status	MultiState_Value	281	4859_8	RD	1 = Fail 2 = Marginal Low 3 = Normal 4 = Marginal High
MMS Module Output Source	MultiState_Value	282	4860_8	RD	1 = Off 2 = Normal 3 = Bypass 4 = Maintenance Bypass
Intelligent Paralleling					
Intelligent Parallel Operation State	MultiState_Value	293	5448_1	RD	1 = disabled 2 = enabled
ECO Mode					
ECO Mode Operation State	MultiState_Value	304	5454_1	RW	1 = disabled 2 = enabled
Continuous Operation - ECO Mode	MultiState_Value	305	5455_1	RD	1 = disabled 2 = enabled
ECO Mode - EcoModeSchedule 1					
Schedule Operation State - ECO Mode	MultiState_Value	316	5461_1_1	RD	1 = disabled 2 = enabled
Schedule Action - ECO Mode	MultiState_Value	317	5462_1_1	RD	1 = stop 2 = start
Schedule Day of Week - ECO Mode	MultiState_Value	318	5463_1_1	RD	1 = Unknown 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday 8 = Sunday

Table 4-64 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
ECO Mode - EcoModeSchedule 2					
Schedule Operation State - ECO Mode	MultiState_Value	329	5461_1_2	RD	1 = disabled 2 = enabled
Schedule Action - ECO Mode	MultiState_Value	330	5462_1_2	RD	1 = stop 2 = start
Schedule Day of Week - ECO Mode	MultiState_Value	331	5463_1_2	RD	1 = Unknown 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday 8 = Sunday
ECO Mode - EcoModeSchedule 14					
Schedule Operation State - ECO Mode	MultiState_Value	485	5461_1_14	RD	1 = disabled 2 = enabled
Schedule Action - ECO Mode	MultiState_Value	486	5462_1_14	RD	1 = stop 2 = start
Schedule Day of Week - ECO Mode	MultiState_Value	487	5463_1_14	RD	1 = Unknown 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday 8 = Sunday

Table 4-65 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Glossary

Data Label	Data Description
Auto Restart In Progress	Auto restart is in progress
Auto Restart Inhibited - Ext	Auto restart inhibited due to an external signal
Auto Retransfer Time Remaining	Time remaining before an inverter overload or inverter fault can be cleared and auto retransfer from the bypass to the inverter can take place
Automatic Restart Failed	Automatic restart failed
Backfeed Breaker Open	The backfeed breaker is in the open position
Backfeed Breaker	Backfeed breaker
Battery - External Monitor 1	External battery monitor 1 - battery maintenance required
Battery - External Monitor 2	External battery monitor 2 - battery maintenance required
Battery Amp-Hours Consumed This Discharge	Battery amp-hours withdrawn this discharge.
Battery Amp-Hours Consumed	Cumulative battery amp-hours withdrawn over the life of the battery
Battery Auto Test In Progress	Automatic battery test is in progress
Battery Automatic Test Inhibited	Automatic (scheduled) battery tests are inhibited
Battery Capacity Low	Battery capacity is low
Battery Cell Count - Lead Acid	Battery cell count - lead acid
Battery Cell Count-Nickel Cadmium	Battery cell count - nickel cadmium
Battery Charging	The UPS battery is charging (battery charge percentage lower than 98)
Battery Circuit Breaker 1 Open	Battery circuit breaker 1 is open
Battery Circuit Breaker 2 Open	Battery circuit breaker 2 is open
Battery Circuit Breaker 3 Open	Battery circuit breaker 3 is open
Battery Circuit Breaker 4 Open	Battery circuit breaker 4 is open
Battery Circuit Breaker 5 Open	Battery circuit breaker 5 is open
Battery Circuit Breaker 6 Open	Battery circuit breaker 6 is open
Battery Discharge Power	Instantaneous battery power while discharging
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging
Battery Equalize	The rectifier output voltage is increased to equalize the battery voltage level.
Battery Fuse Fault	One or more battery fuse faults has occurred.
Battery Ground Fault	Battery system ground fault amperage exceeds the threshold
Battery Last Discharge Date	The date and time of the last battery discharge
Battery Low Shutdown	The battery voltage has dropped to the End of Discharge value.
Battery Low	The calculated battery time remaining has reached the low battery threshold
Battery Over Temperature Limit	A battery temperature sensor is reporting a value above a predetermined limit.
Battery Over Temperature	A battery temperature sensor is reporting a value above a threshold
Battery Over Voltage	The system has detected that the battery voltage has exceeded a predetermined limit.
Battery Percentage Charge	The percentage of battery charge
Battery SCR Status	The status of the battery SCR.
Battery Temperature for Cabinet	The battery temperature for a cabinet
Battery Temperature Imbalance	Excessive temperature differences between battery sensors detected
Battery Temperature Sensor Fault	A battery temperature sensor fault has been detected
Battery Test Failed	Battery test failed
Battery Time Remaining	The calculated available time on battery
Battery Total Discharge Time	The cumulative battery discharge time
Battery Volts at Main Disconnect	The voltage between the positive and the negative battery terminals of the common battery disconnect

Table 4-65 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Battery Volts for Cabinet	The voltage between the positive and negative battery terminals of a battery cabinet
Bypass - Manual Rexfr Inhibited	Manual transfer from bypass to inverter is inhibited.
Bypass - Manual Xfr Inhibited	Manual transfer from inverter to bypass is inhibited.
Bypass Auto Retransfer Failed	After performing a recoverable transfer to bypass, an attempt to auto retransfer from bypass to inverter failed
Bypass Auto Transfer Failed	An automatic transfer to static bypass failed
Bypass Frequency Error	The bypass frequency is outside the inverter synchronization limits
Bypass Input Frequency	The bypass input frequency
Bypass Input Voltage RMS A-B	The bypass input RMS voltage between phases A and B
Bypass Input Voltage RMS B-C	The bypass input RMS voltage between phases B and C
Bypass Input Voltage RMS C-A	The bypass input RMS voltage between phases C and A
Bypass Input Wire Configuration	Bypass input wire configuration
Bypass Isolation Breaker for Module 1	Bypass isolation breaker for module 1
Bypass Isolation Breaker for Module 2	Bypass isolation breaker for module 2
Bypass Isolation Breaker for Module 3	Bypass isolation breaker for module 3
Bypass Isolation Breaker for Module 4	Bypass isolation breaker for module 4
Bypass Isolation Breaker for Module 5	Bypass isolation breaker for module 5
Bypass Isolation Breaker for Module 6	Bypass isolation breaker for module 6
Bypass Isolation Breaker for Module 7	Bypass isolation breaker for module 7
Bypass Isolation Breaker for Module 8	Bypass isolation breaker for module 8
Bypass Isolation Breaker	Bypass isolation breaker
Bypass Nominal Voltage	Bypass nominal (or rated) voltage
Bypass Not Available	A problem associated with the bypass has been detected
Bypass Overload Phase A	An overload exists on output phase A while operating on the bypass
Bypass Overload Phase B	An overload exists on output phase B while operating on the bypass
Bypass Overload Phase C	An overload exists on output phase C while operating on the bypass
Bypass Qualification Status	bypass qualification status
Bypass SS Overload Time Remain	The calculated time remaining before bypass static switch shutdown due to the present overload condition
Bypass Static Switch Overload	Bypass off due to static switch overload
Bypass Static Switch Unavailable	The static bypass switch is off, and unable to operate
Bypass Sync Phase Difference	The phase angle difference between the inverter output and bypass source
Configuration Description	Configuration description
Continuous Operation - ECO Mode	This setting gives the user the ability to Enable/Disable ECO Mode continuous operation.
Controls Reset Required	A controls reset is required due to one or more critical settings changing
DC Bus Current	The current at the battery input terminals. In charging mode, the current will be a positive value. In discharging mode, the current will be a negative value
DC Bus Low Fault	The DC Bus voltage has reached a critical low level.
DC Bus Qualification Status	dc bus qualification status
DC Bus Voltage	The voltage between the positive and negative terminals of the DC bus at the battery input
ECO Mode Active	Conditions for Activation or Automatic Reactivation have been satisfied.
ECO Mode Operation State	This setting is used to enable or disable ECO Mode.
ECO Mode Suspended	ECO Mode session is suspended.
EMO Shutdown	An Emergency Module Off command has been detected.
Equipment Temperature Sensor Fail	One or more temperature sensors report a temperature outside of the range of expected operation.

Table 4-65 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Excess ECO Suspends	Number of automatic suspensions has exceeded the ECO Mode - Maximum Auto Suspensions setting.
Fuse Failure	A summary event indicating one or more fuse failures
Inlet Air Over Temperature	The inlet air exceeds the maximum temperature threshold
Inlet Air Temperature	The temperature of the inlet air
Input Breaker	Input breaker
Input Contact 01	The external input contact 1
Input Contact 02	The external input contact 2
Input Contact 03	The external input contact 3
Input Contact 04	The external input contact 4
Input Contact 05	The external input contact 5
Input Contact 06	The external input contact 6
Input Contact 07	The external input contact 7
Input Contact 08	The external input contact 8
Input Contact 09	The external input contact 9
Input Contact 10	The external input contact 10
Input Contact 11	The external input contact 11
Input Contact 12	The external input contact 12
Input Contact 13	The external input contact 13
Input Contact 14	The external input contact 14
Input Contact 15	The external input contact 15
Input Contact 16	The external input contact 16
Input Filter Cycle Lock	The input filter disconnect is open due to exceeding the maximum number of cycles.
Input Isolation Transformer	Input isolation transformer
Input Qualification Status	input qualification status
Intelligent Parallel Maximum Time in Standby	The maximum time a module can be in standby mode due to Intelligent Paralleling.
Intelligent Parallel Minimum Redundancy	This is the minimum Number of Redundant Modules that the system will allow before bringing one or more modules back to normal operation and terminating Intelligent Paralleling.
Intelligent Parallel Operation State	This setting is used to enable or disable Intelligent Paralleling.
Internal Bypass Breaker	Internal bypass breaker
Internal Communications Failure	The control has detected a communication failure of a component on the internal communication bus
Inverter Failure	Inverter failure - inverter output is off
Inverter Inhibit - External	Restart of the inverter is inhibited by an external signal
Inverter On/Off State	inverter on/off state
Inverter Output Qualification Status	inverter output qualification status
Inverter Overload Phase A	Inverter is operating with an overload on phase A
Inverter Overload Phase B	Inverter is operating with an overload on phase B
Inverter Overload Phase C	Inverter is operating with an overload on phase C
Inverter Overload Time Remaining	The calculated time remaining before inverter shutdown
Inverter Shutdown - Overload	The inverter has shutdown due to a sustained overload
Inverter Static Switch SCR Short	The system has detected a short across one or more inverter static switch Silicon Controlled Rectifiers (SCR)
IP Inhibit	The intelligent paralleling operation is inhibited.
LBS Active	The Load Bus Sync option is active
LBS Inhibited	The system has detected that conditions to perform Load Bus Sync are not satisfied

Table 4-65 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Leading Power Factor	The leading output Power Factor has fallen below a specified value
Loss of Redundancy	The multi-module collection doesn't have enough modules to redundantly support the load
Main Battery Disconnect Forced To Unlock	The main battery disconnect is forced to the unlocked state.
Main Battery Disconnect Open	Main battery disconnect is open
Main Battery Disconnect Switch Lock Status	The main battery disconnect switch lock status.
Main Controller Fault	A Main Controller fault has been detected.
Maintenance Bypass Breaker	Maintenance bypass breaker
Maintenance Isolation Breaker	Maintenance isolation breaker
Maximum Auto Suspensions - ECO Mode	This setting sets the maximum number of automatic ECO Mode suspensions in a session.
MMS Event Summary	Summary of any active user alarm or fault of this module in a multi-module system
MMS Inter-Module Comm Status	Inter-module communication status of this module in a multi-module system
MMS Module Alarm Active	Active alarm or fault of any module in a multi-module system
MMS Module Inverter Status	Multi-module inverter status of this module (on/off)
MMS Module Number	MMS module number
MMS Module Output Source	Module output source in a multi-module system (normal/bypass/maintenance bypass/off)
MMS Module Output Voltage Status	Output voltage status of this module in multi-module system
MMS On Battery	The multi-module system is on battery
MMS Output Apparent Power	The sum total apparent power of all system output modules
MMS Output Frequency	The multi-module system output frequency
MMS Output Pct Apparent Pwr (kVA) Phase A	The multi-module system output apparent power on phase A as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase B	The multi-module system output apparent power on phase B as a percentage of the rated capacity
MMS Output Pct Apparent Pwr (kVA) Phase C	The multi-module system output apparent power on phase C as a percentage of the rated capacity
MMS Output Pct Power Phase A	The multi-module system output power on phase A as a percentage of the rated capacity
MMS Output Pct Power Phase B	The multi-module system output power on phase B as a percentage of the rated capacity
MMS Output Pct Power Phase C	The multi-module system output power on phase C as a percentage of the rated capacity
MMS Output Power Factor Phase A	The multi-module system output power factor for phase A
MMS Output Power Factor Phase B	The multi-module system output power factor for phase B
MMS Output Power Factor Phase C	The multi-module system output power factor for phase C
MMS Output Power	The sum total power of all system output modules
MMS Overload	Multi-module system overload
MMS UPS Output Source	Multi-module UPS output source
Module Output Breaker for Module 1	Module output breaker for module 1
Module Output Breaker for Module 2	Module output breaker for module 2
Module Output Breaker for Module 3	Module output breaker for module 3
Module Output Breaker for Module 4	Module output breaker for module 4
Module Output Breaker for Module 5	Module output breaker for module 5
Module Output Breaker for Module 6	Module output breaker for module 6
Module Output Breaker for Module 7	Module output breaker for module 7

Table 4-65 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Module Output Breaker for Module 8	Module output breaker for module 8
Module Output Breaker	Module output breaker
Multi-module System Output Voltage RMS A-B	Multi-module system output RMS voltage between phases A and B
Multi-module System Output Voltage RMS A-N	Multi-module system output RMS voltage between phase A and Neutral
Multi-module System Output Voltage RMS B-C	Multi-module system output RMS voltage between phases B and C
Multi-module System Output Voltage RMS B-N	Multi-module system output RMS voltage between phase B and Neutral
Multi-module System Output Voltage RMS C-A	Multi-module system output RMS voltage between phases C and A
Multi-module System Output Voltage RMS C-N	Multi-module system output RMS voltage between phase C and Neutral
Multiple Fan Failure	Multiple fan failure
Number of Modules in a MMS	The number of modules in a multi-module system
Number of Redundant Modules	The number of redundant modules in a multi-module collective.
Outlet Air Overtemperature Limit	The difference between the outlet air temperature and inlet air temperature exceeds a specified maximum temperature.
Output Amp Over User Limit-Phs A	The phase A output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs B	The phase B output has exceeded the user amperage threshold
Output Amp Over User Limit-Phs C	The phase C output has exceeded the user amperage threshold
Output Apparent Power Rating	Output apparent power rating
Output Breaker	Output breaker
Output Load on Maint. Bypass	The output power is supplied by the maintenance bypass
Output Of/Uf	The output frequency has exceeded a specified range for a specified period of time.
Output Qualification Status	Output qualification status
Output Real Power Rating	Output real power rating
Output Series Static Switch	Output series static switch
Output Wire Configuration	Output wire configuration
Power Supply Failure	Power supply failure
Program Input Contact 01	When the signal from [Program Input Contact 01] is active the function assigned to this contact is executed.
Program Input Contact 02	When the signal from [Program Input Contact 02] is active the function assigned to this contact is executed.
Program Input Contact 03	When the signal from [Program Input Contact 03] is active the function assigned to this contact is executed.
Program Input Contact 04	When the signal from [Program Input Contact 04] is active the function assigned to this contact is executed.
Program Input Contact 05	When the signal from [Program Input Contact 05] is active the function assigned to this contact is executed.
Program Input Contact 06	When the signal from [Program Input Contact 06] is active the function assigned to this contact is executed.
Program Input Contact 07	When the signal from [Program Input Contact 07] is active the function assigned to this contact is executed.
Program Input Contact 08	When the signal from [Program Input Contact 08] is active the function assigned to this contact is executed.
Program Input Contact 09	When the signal from [Program Input Contact 09] is active the function assigned to this contact is executed.

Table 4-65 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
Program Input Contact 10	When the signal from [Program Input Contact 10] is active the function assigned to this contact is executed.
Program Input Contact 11	When the signal from [Program Input Contact 11] is active the function assigned to this contact is executed.
Program Input Contact 12	When the signal from [Program Input Contact 12] is active the function assigned to this contact is executed.
Rectifier Active Filter	Rectifier input active filter configuration
Rectifier Configuration Change Request	This event indicates that the battery is not configured and PFC is not enabled.
Rectifier Failure	Rectifier failure - rectifier is off
Rectifier Input Passive Filter	Rectifier input passive filter configuration
Rectifier Passive Filter Switch	Rectifier input passive filter switch configuration
Rectifier Pulse Count	Rectifier pulse count per cycle configuration
Rectifier Status	rectifier status
Regeneration Active	Regeneration operation is active.
Regeneration Operation Failure	Regeneration operation has been terminated due to bypass source instability or unit misoperation.
Regeneration Operation Terminated	Regeneration operation is not active.
Restart Delay - ECO Mode	The time delay that the conditions to activate ECO Mode must be satisfied before ECO Mode can be reactivated during an active session.
SBS Load Disconnect	SBS load disconnect
SCC Event Summary	Summary of any active user alarms or faults on the SCC
Schedule Action - ECO Mode	This setting gives the user the ability to choose the action of a schedule entry to be either stop or start.
Schedule Day of Week - ECO Mode	This setting represents the day of the week when an associated ECO Mode schedule entry action will take effect.
Schedule Hour - ECO Mode	This setting represents the hour of the day when an associated schedule entry action will take effect.
Schedule Minute - ECO Mode	This setting represents the minute of the hour when an associated schedule entry action will take effect.
Schedule Operation State - ECO Mode	This setting gives the user the ability to either enable or disable a schedule entry if the action is Start.
Service Code Active	Service code is running
Static Bypass Switch	Static Bypass Switch state - On/Off
Static Switch Type	Static switch type configuration
Sum of MMS Output RMS Currents for Phase A	The sum of the multi-module system output RMS currents for phase A
Sum of MMS Output RMS Currents for Phase B	The sum of the multi-module system output RMS currents for phase B
Sum of MMS Output RMS Currents for Phase C	The sum of the multi-module system output RMS currents for phase C
System Breaker(s) Close Failure	One or more breakers in the system failed to close
System Breaker(s) Open Failure	One or more breakers in the system failed to open
System Controller Error	System controller internal error
System Date and Time	The system date and time
System Fan Capacity Status	System fan capacity status
System Fan Failure - Redundant	Redundant system fan failure
System Fan Redundant Status	System fan redundant status
System Fan Status	System fan status

Table 4-65 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
System Input Current Imbalance	System Input Currents are Imbalanced
System Input Current Limit	The RMS input current has reached the input current limit threshold
System Input Frequency	The system input frequency
System Input Nominal Frequency	The nominal (or rated) system input frequency
System Input Nominal Voltage	The nominal (or rated) system input voltage
System Input Phs Rotation Error	The power conductors on the input line are not wired to the UPS in the sequence preferred for the rectifier (A-B-C)
System Input Power Problem	The input is not qualified to provide power to the system
System Input Power Source	System input power source
System Input RMS A-B	The System Input RMS Voltage between Phase A and Phase B
System Input RMS B-C	The System Input RMS Voltage between Phase B and Phase C
System Input RMS C-A	The System Input RMS Voltage between Phase C and Phase A
System Input RMS Current Phase A	The system input RMS current for Phase A
System Input RMS Current Phase B	The system input RMS current for Phase B
System Input RMS Current Phase C	The system input RMS current for Phase C
System Isolation Output Breaker	System isolation output breaker
System Load Bank Breaker	System load bank breaker
System Output Apparent Power	The sum total apparent power of all system output phases
System Output Breaker	System output breaker
System Output Fault	A fault has been detected in the system output
System Output Frequency	The system output frequency
System Output Low Power Factor	The system output power factor is low, resulting in reduced output capacity
System Output Maximum Amp Rating	System output maximum amperage rating
System Output Nominal Frequency	The nominal (or rated) system output frequency
System Output Nominal Voltage	The nominal (or rated) system output voltage
System Output Pct Power Phase A	The system output power on phase A as a percentage of the rated capacity
System Output Pct Power Phase B	The system output power on phase B as a percentage of the rated capacity
System Output Pct Power Phase C	The system output power on phase C as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs A	The system output apparent power on phase A as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs B	The system output apparent power on phase B as a percentage of the rated capacity
System Output Pct Pwr (VA) Phs C	The system output apparent power on phase C as a percentage of the rated capacity
System Output Power Factor Phs A	The system output power factor of phase A
System Output Power Factor Phs B	The system output power factor of phase B
System Output Power Factor Phs C	The system output power factor of phase C
System Output Power	The sum total power of all system output phases
System Output RMS Current Phs A	The system output RMS current for Phase A
System Output RMS Current Phs B	The system output RMS current for Phase B
System Output RMS Current Phs C	The system output RMS current for Phase C
System Output Voltage RMS A-B	The system output RMS voltage between phases A and B
System Output Voltage RMS A-N	The system output RMS voltage between phases A and Neutral
System Output Voltage RMS B-C	The system output RMS voltage between phases B and C
System Output Voltage RMS B-N	The system output RMS voltage between phases B and Neutral
System Output Voltage RMS C-A	The system output RMS voltage between phases C and A
System Output Voltage RMS C-N	The system output RMS voltage between phases C and Neutral
System Redundant UPS Modules	Number of redundant UPS modules in the system
System Shutdown - EPO	System shutdown due to Emergency Power Off (EPO)

Table 4-65 Liebert NXL™—50 Hz, CE version (Models 48 and 49)—Glossary (continued)

Data Label	Data Description
System Shutdown - REPO	System shutdown due to Remote Emergency Power Off (REPO)
System Status	The operating status for the system
System UPS Module Count	Number of UPS modules in the system
The main battery disconnect status.	Main Battery Disconnect Status
Time Remaining - ECO Mode	Time remaining before current active ECO Mode session stops.
Total Bypass Operating Time	The cumulative bypass time of the unit.
Total System Operating Time	The cumulative operation time of the unit
Trap Filter Disconnect	Trap filter disconnect
Unexpected Main Battery Disconnect Closure	The main battery disconnect has closed unexpectedly.
UPS Battery Status	UPS battery status
UPS Module Type	UPS module type
UPS Output on Bypass	The output power is supplied by the bypass
UPS Output Source	UPS output source
UPS System Output Source	The UPS system's output power source
Vdc Backfeed	The voltage between battery and DC bus measurements is out of tolerance.

4.4 Power Distribution and Power Conditioning Products

Table 4-66 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Binary Data

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel 1					
Panel Summary Alarm	Binary_Value	65	5212_1	RD	Active on Alarm
Panel Overvoltage	Binary_Value	66	5213_1	RD	Active on Alarm
Panel Undervoltage	Binary_Value	67	5214_1	RD	Active on Alarm
Panel Phase Overcurrent	Binary_Value	68	5215_1	RD	Active on Alarm
Panel Neutral Overcurrent	Binary_Value	69	5216_1	RD	Active on Alarm
Panel Ground Overcurrent	Binary_Value	70	5217_1	RD	Active on Alarm
Panel 1 Branch 1					
Branch Overcurrent	Binary_Value	81	5226_1_1	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	82	5227_1_1	RD	Active on Alarm
Panel 1 Branch 2					
Branch Overcurrent	Binary_Value	93	5226_1_2	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	94	5227_1_2	RD	Active on Alarm
Panel 1 Branch 84					
Branch Overcurrent	Binary_Value	1077	5226_1_84	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	1078	5227_1_84	RD	Active on Alarm
Panel 2					
Panel Summary Alarm	Binary_Value	1089	5212_2	RD	Active on Alarm
Panel Overvoltage	Binary_Value	1090	5213_2	RD	Active on Alarm
Panel Undervoltage	Binary_Value	1091	5214_2	RD	Active on Alarm
Panel Phase Overcurrent	Binary_Value	1092	5215_2	RD	Active on Alarm
Panel Neutral Overcurrent	Binary_Value	1093	5216_2	RD	Active on Alarm
Panel Ground Overcurrent	Binary_Value	1094	5217_2	RD	Active on Alarm
Panel 2 Branch 1					
Branch Overcurrent	Binary_Value	1105	5226_2_1	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	1106	5227_2_1	RD	Active on Alarm
Panel 2 Branch 2					
Branch Overcurrent	Binary_Value	1117	5226_2_2	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	1118	5227_2_2	RD	Active on Alarm
Panel 2 Branch 84					
Branch Overcurrent	Binary_Value	2101	5226_2_84	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	2102	5227_2_84	RD	Active on Alarm
Panel 4					
Panel Summary Alarm	Binary_Value	3137	5212_4	RD	Active on Alarm
Panel Overvoltage	Binary_Value	3138	5213_4	RD	Active on Alarm
Panel Undervoltage	Binary_Value	3139	5214_4	RD	Active on Alarm
Panel Phase Overcurrent	Binary_Value	3140	5215_4	RD	Active on Alarm
Panel Neutral Overcurrent	Binary_Value	3141	5216_4	RD	Active on Alarm
Panel Ground Overcurrent	Binary_Value	3142	5217_4	RD	Active on Alarm
Panel 4 Branch 1					
Branch Overcurrent	Binary_Value	3153	5226_4_1	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	3154	5227_4_1	RD	Active on Alarm

Table 4-66 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Binary Data (continued)

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel 4 Branch 2					
Branch Overcurrent	Binary_Value	3165	5226_4_2	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	3166	5227_4_2	RD	Active on Alarm
Panel 4 Branch 84					
Branch Overcurrent	Binary_Value	4149	5226_4_84	RD	Active on Alarm
Branch Undercurrent Warning	Binary_Value	4150	5227_4_84	RD	Active on Alarm
Subfeed 1					
Subfeed Phase Overcurrent	Binary_Value	4161	5245_1	RD	Active on Alarm
Subfeed Neutral Overcurrent	Binary_Value	4162	5246_1	RD	Active on Alarm
Subfeed Ground Overcurrent	Binary_Value	4163	5247_1	RD	Active on Alarm
Subfeed 2					
Subfeed Phase Overcurrent	Binary_Value	4174	5245_2	RD	Active on Alarm
Subfeed Neutral Overcurrent	Binary_Value	4175	5246_2	RD	Active on Alarm
Subfeed Ground Overcurrent	Binary_Value	4176	5247_2	RD	Active on Alarm
Subfeed 64					
Subfeed Phase Overcurrent	Binary_Value	4980	5245_64	RD	Active on Alarm
Subfeed Neutral Overcurrent	Binary_Value	4981	5246_64	RD	Active on Alarm
Subfeed Ground Overcurrent	Binary_Value	4982	5247_64	RD	Active on Alarm

Table 4-67 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Analog Data

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel 1					
Columns of Breakers	Analog_Value	105	5515_1	RD	—
Number of Breakers	Analog_Value	106	5516_1	RD	—
Panel Main Voltage X-Y	Analog_Value	107	5187_1	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	108	5188_1	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	109	5189_1	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	110	5190_1	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	111	5191_1	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	112	5192_1	RD	Units: VAC
Panel Main Current Ix	Analog_Value	113	5193_1	RD	Units: A AC
Panel Main Current Iy	Analog_Value	114	5194_1	RD	Units: A AC
Panel Main Current Iz	Analog_Value	115	5195_1	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	116	5196_1	RD	Units: A AC
Panel Main Ground Current	Analog_Value	117	5197_1	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	118	5198_1	RD	Units: kVA
Panel Main Output Power (kW)	Analog_Value	119	5199_1	RD	Units: kW
Panel Main Output kW-Hrs	Analog_Value	120	5200_1	RW	Units: kWH
Panel Main Output Power Factor	Analog_Value	121	5201_1	RD	—
Panel Main Output Percent Load	Analog_Value	122	5202_1	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	123	5203_1	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	124	5204_1	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	125	5205_1	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	126	5206_1	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	127	5207_1	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	128	5208_1	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	129	5209_1	RD	—
Panel Main Current Iy Crest Factor	Analog_Value	130	5210_1	RD	—
Panel Main Current Iz Crest Factor	Analog_Value	131	5211_1	RD	—
Panel 1 Branch 1					
Breaker position	Analog_Value	142	5421_1_1	RD	—
Branch Current Phase 1	Analog_Value	143	5219_1_1	RD	Units: A AC
Branch Current Phase 2	Analog_Value	144	5220_1_1	RD	Units: A AC
Branch Current Phase 3	Analog_Value	145	5221_1_1	RD	Units: A AC
Branch Output Power (W)	Analog_Value	146	5222_1_1	RD	Units: kW
Output kW-Hrs	Analog_Value	147	5223_1_1	RD	Units: kWH
Branch Output Power Factor	Analog_Value	148	5224_1_1	RD	—
Branch Output Percent Load	Analog_Value	149	5225_1_1	RD	Units: %

Table 4-67 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Analog Data (continued)

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel 1 Branch 2					
Breaker position	Analog_Value	160	5421_1_2	RD	—
Branch Current Phase 1	Analog_Value	161	5219_1_2	RD	Units: A AC
Branch Current Phase 2	Analog_Value	162	5220_1_2	RD	Units: A AC
Branch Current Phase 3	Analog_Value	163	5221_1_2	RD	Units: A AC
Branch Output Power (W)	Analog_Value	164	5222_1_2	RD	Units: kW
Output kW-Hrs	Analog_Value	165	5223_1_2	RD	Units: kWH
Branch Output Power Factor	Analog_Value	166	5224_1_2	RD	—
Branch Output Percent Load	Analog_Value	167	5225_1_2	RD	Units: %
Panel 1 Branch 84					
Breaker position	Analog_Value	1636	5421_1_84	RD	—
Branch Current Phase 1	Analog_Value	1637	5219_1_84	RD	Units: A AC
Branch Current Phase 2	Analog_Value	1638	5220_1_84	RD	Units: A AC
Branch Current Phase 3	Analog_Value	1639	5221_1_84	RD	Units: A AC
Branch Output Power (W)	Analog_Value	1640	5222_1_84	RD	Units: kW
Output kW-Hrs	Analog_Value	1641	5223_1_84	RD	Units: kWH
Branch Output Power Factor	Analog_Value	1642	5224_1_84	RD	—
Branch Output Percent Load	Analog_Value	1643	5225_1_84	RD	Units: %
Panel 2					
Columns of Breakers	Analog_Value	1654	5515_2	RD	—
Number of Breakers	Analog_Value	1655	5516_2	RD	—
Panel Main Voltage X-Y	Analog_Value	1656	5187_2	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	1657	5188_2	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	1658	5189_2	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	1659	5190_2	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	1660	5191_2	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	1661	5192_2	RD	Units: VAC
Panel Main Current Ix	Analog_Value	1662	5193_2	RD	Units: A AC
Panel Main Current Iy	Analog_Value	1663	5194_2	RD	Units: A AC
Panel Main Current Iz	Analog_Value	1664	5195_2	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	1665	5196_2	RD	Units: A AC
Panel Main Ground Current	Analog_Value	1666	5197_2	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	1667	5198_2	RD	Units: kVA
Panel Main Output Power (kW)	Analog_Value	1668	5199_2	RD	Units: kW
Panel Main Output kW-Hrs	Analog_Value	1669	5200_2	RW	Units: kWH
Panel Main Output Power Factor	Analog_Value	1670	5201_2	RD	—
Panel Main Output Percent Load	Analog_Value	1671	5202_2	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	1672	5203_2	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	1673	5204_2	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	1674	5205_2	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	1675	5206_2	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	1676	5207_2	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	1677	5208_2	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	1678	5209_2	RD	—

Table 4-67 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Analog Data (continued)

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel Main Current Iy Crest Factor	Analog_Value	1679	5210_2	RD	—
Panel Main Current Iz Crest Factor	Analog_Value	1680	5211_2	RD	—
Panel 2 Branch 1					
Breaker position	Analog_Value	1691	5421_2_1	RD	—
Branch Current Phase 1	Analog_Value	1692	5219_2_1	RD	Units: A AC
Branch Current Phase 2	Analog_Value	1693	5220_2_1	RD	Units: A AC
Branch Current Phase 3	Analog_Value	1694	5221_2_1	RD	Units: A AC
Branch Output Power (W)	Analog_Value	1695	5222_2_1	RD	Units: kW
Output kW-Hrs	Analog_Value	1696	5223_2_1	RD	Units: kWH
Branch Output Power Factor	Analog_Value	1697	5224_2_1	RD	—
Branch Output Percent Load	Analog_Value	1698	5225_2_1	RD	Units: %
Panel 2 Branch 2					
Breaker position	Analog_Value	1709	5421_2_2	RD	—
Branch Current Phase 1	Analog_Value	1710	5219_2_2	RD	Units: A AC
Branch Current Phase 2	Analog_Value	1711	5220_2_2	RD	Units: A AC
Branch Current Phase 3	Analog_Value	1712	5221_2_2	RD	Units: A AC
Branch Output Power (W)	Analog_Value	1713	5222_2_2	RD	Units: kW
Output kW-Hrs	Analog_Value	1714	5223_2_2	RD	Units: kWH
Branch Output Power Factor	Analog_Value	1715	5224_2_2	RD	—
Panel 2 Branch 84					
Breaker position	Analog_Value	3185	5421_2_84	RD	—
Branch Current Phase 1	Analog_Value	3186	5219_2_84	RD	Units: A AC
Branch Current Phase 2	Analog_Value	3187	5220_2_84	RD	Units: A AC
Branch Current Phase 3	Analog_Value	3188	5221_2_84	RD	Units: A AC
Branch Output Power (W)	Analog_Value	3189	5222_2_84	RD	Units: kW
Output kW-Hrs	Analog_Value	3190	5223_2_84	RD	Units: kWH
Branch Output Power Factor	Analog_Value	3191	5224_2_84	RD	—
Branch Output Percent Load	Analog_Value	3192	5225_2_84	RD	Units: %
Panel 4					
Columns of Breakers	Analog_Value	4752	5515_4	RD	—
Number of Breakers	Analog_Value	4753	5516_4	RD	—
Panel Main Voltage X-Y	Analog_Value	4754	5187_4	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	4755	5188_4	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	4756	5189_4	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	4757	5190_4	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	4758	5191_4	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	4759	5192_4	RD	Units: VAC
Panel Main Current Ix	Analog_Value	4760	5193_4	RD	Units: A AC
Panel Main Current Iy	Analog_Value	4761	5194_4	RD	Units: A AC
Panel Main Current Iz	Analog_Value	4762	5195_4	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	4763	5196_4	RD	Units: A AC
Panel Main Ground Current	Analog_Value	4764	5197_4	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	4765	5198_4	RD	Units: kVA
Panel Main Output Power (kW)	Analog_Value	4766	5199_4	RD	Units: kW

Table 4-67 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Analog Data (continued)

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel Main Output kW-Hrs	Analog_Value	4767	5200_4	RW	Units: kWH
Panel Main Output Power Factor	Analog_Value	4768	5201_4	RD	—
Panel Main Output Percent Load	Analog_Value	4769	5202_4	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	4770	5203_4	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	4771	5204_4	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	4772	5205_4	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	4773	5206_4	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	4774	5207_4	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	4775	5208_4	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	4776	5209_4	RD	—
Panel Main Current Iy Crest Factor	Analog_Value	4777	5210_4	RD	—
Panel Main Current Iz Crest Factor	Analog_Value	4778	5211_4	RD	—
Panel 4 Branch 1					
Breaker position	Analog_Value	4789	5421_4_1	RD	—
Branch Current Phase 1	Analog_Value	4790	5219_4_1	RD	Units: A AC
Branch Current Phase 2	Analog_Value	4791	5220_4_1	RD	Units: A AC
Branch Current Phase 3	Analog_Value	4792	5221_4_1	RD	Units: A AC
Branch Output Power (W)	Analog_Value	4793	5222_4_1	RD	Units: kW
Output kW-Hrs	Analog_Value	4794	5223_4_1	RD	Units: kWH
Branch Output Power Factor	Analog_Value	4795	5224_4_1	RD	—
Branch Output Percent Load	Analog_Value	4796	5225_4_1	RD	Units: %
Panel 4 Branch 2					
Breaker position	Analog_Value	4807	5421_4_2	RD	—
Branch Current Phase 1	Analog_Value	4808	5219_4_2	RD	Units: A AC
Branch Current Phase 2	Analog_Value	4809	5220_4_2	RD	Units: A AC
Branch Current Phase 3	Analog_Value	4810	5221_4_2	RD	Units: A AC
Branch Output Power (W)	Analog_Value	4811	5222_4_2	RD	Units: kW
Output kW-Hrs	Analog_Value	4812	5223_4_2	RD	Units: kWH
Branch Output Power Factor	Analog_Value	4813	5224_4_2	RD	—
Branch Output Percent Load	Analog_Value	4814	5225_4_2	RD	Units: %
Panel 4 Branch 84					
Breaker position	Analog_Value	6283	5421_4_84	RD	—
Branch Current Phase 1	Analog_Value	6284	5219_4_84	RD	Units: A AC
Branch Current Phase 2	Analog_Value	6285	5220_4_84	RD	Units: A AC
Branch Current Phase 3	Analog_Value	6286	5221_4_84	RD	Units: A AC
Branch Output Power (W)	Analog_Value	6287	5222_4_84	RD	Units: kW
Output kW-Hrs	Analog_Value	6288	5223_4_84	RD	Units: kWH
Branch Output Power Factor	Analog_Value	6289	5224_4_84	RD	—
Branch Output Percent Load	Analog_Value	6290	5225_4_84	RD	Units: %

Table 4-67 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Analog Data (continued)

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Subfeed 1					
Subfeed Current Ix	Analog_Value	6301	5229_1	RD	Units: A AC
Subfeed Current Iy	Analog_Value	6302	5230_1	RD	Units: A AC
Subfeed Current Iz	Analog_Value	6303	5231_1	RD	Units: A AC
Subfeed Neutral Current	Analog_Value	6304	5232_1	RD	Units: A AC
Subfeed Ground Current	Analog_Value	6305	5233_1	RD	Units: A AC
Subfeed Output Power (kVA)	Analog_Value	6306	5234_1	RD	Units: kVA
Subfeed Output Power (kW)	Analog_Value	6307	5235_1	RD	Units: kW
Subfeed Output kW-Hrs	Analog_Value	6308	5236_1	RW	Units: kWH
Subfeed Power Factor	Analog_Value	6309	5237_1	RD	—
Subfeed Output Percent Load	Analog_Value	6310	5238_1	RD	Units: %
Subfeed Current Ix THD	Analog_Value	6311	5239_1	RD	Units: %
Subfeed Current Iy THD	Analog_Value	6312	5240_1	RD	Units: %
Subfeed Current Iz THD	Analog_Value	6313	5241_1	RD	Units: %
Subfeed Current Ix Crest Factor	Analog_Value	6314	5242_1	RD	—
Subfeed Current Iy Crest Factor	Analog_Value	6315	5243_1	RD	—
Subfeed Current Iz Crest Factor	Analog_Value	6316	5244_1	RD	—
Subfeed 2					
Subfeed Current Ix	Analog_Value	6327	5229_2	RD	Units: A AC
Subfeed Current Iy	Analog_Value	6328	5230_2	RD	Units: A AC
Subfeed Current Iz	Analog_Value	6329	5231_2	RD	Units: A AC
Subfeed Neutral Current	Analog_Value	6330	5232_2	RD	Units: A AC
Subfeed Ground Current	Analog_Value	6331	5233_2	RD	Units: A AC
Subfeed Output Power (kVA)	Analog_Value	6332	5234_2	RD	Units: kVA
Subfeed Output Power (kW)	Analog_Value	6333	5235_2	RD	Units: kW
Subfeed Output kW-Hrs	Analog_Value	6334	5236_2	RW	Units: kWH
Subfeed Power Factor	Analog_Value	6335	5237_2	RD	
Subfeed Output Percent Load	Analog_Value	6336	5238_2	RD	Units: %
Subfeed Current Ix THD	Analog_Value	6337	5239_2	RD	Units: %
Subfeed Current Iy THD	Analog_Value	6338	5240_2	RD	Units: %
Subfeed Current Iz THD	Analog_Value	6339	5241_2	RD	Units: %
Subfeed Current Ix Crest Factor	Analog_Value	6340	5242_2	RD	—
Subfeed Current Iy Crest Factor	Analog_Value	6341	5243_2	RD	—
Subfeed Current Iz Crest Factor	Analog_Value	6342	5244_2	RD	—

Table 4-67 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Analog Data (continued)

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Subfeed 64					
Subfeed Current Ix	Analog_Value	7939	5229_64	RD	Units: A AC
Subfeed Current Iy	Analog_Value	7940	5230_64	RD	Units: A AC
Subfeed Current Iz	Analog_Value	7941	5231_64	RD	Units: A AC
Subfeed Neutral Current	Analog_Value	7942	5232_64	RD	Units: A AC
Subfeed Ground Current	Analog_Value	7943	5233_64	RD	Units: A AC
Subfeed Output Power (kVA)	Analog_Value	7944	5234_64	RD	Units: kVA
Subfeed Output Power (kW)	Analog_Value	7945	5235_64	RD	Units: kW
Subfeed Output kW-Hrs	Analog_Value	7946	5236_64	RW	Units: kWH
Subfeed Power Factor	Analog_Value	7947	5237_64	RD	—
Subfeed Output Percent Load	Analog_Value	7948	5238_64	RD	Units: %
Subfeed Current Ix THD	Analog_Value	7949	5239_64	RD	Units: %
Subfeed Current Iy THD	Analog_Value	7950	5240_64	RD	Units: %
Subfeed Current Iz THD	Analog_Value	7951	5241_64	RD	Units: %
Subfeed Current Ix Crest Factor	Analog_Value	7952	5242_64	RD	—
Subfeed Current Iy Crest Factor	Analog_Value	7953	5243_64	RD	—
Subfeed Current Iz Crest Factor	Analog_Value	7954	5244_64	RD	—
System					
System Date and Time	Analog_Value	7965	4293_1	RW	—

Table 4-68 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Multistate Data

Controller	Liebert LDMF				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Protocol					
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
System					
System Status	MultiState_Value	12	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
System Event Acknowledge/Reset	MultiState_Value	13	4717_1	WO	1 = Reset 2 = Acknowledge

Table 4-69 Liebert FDC™, Liebert FPC™, Liebert PPC™ and Liebert RDC™—Binary Data

Controller	Liebert CPM				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel 1					
Panel Summary Alarm	Binary_Value	65	5212_1	RD	Active on Alarm
Panel Overvoltage	Binary_Value	66	5213_1	RD	Active on Alarm
Panel Undervoltage	Binary_Value	67	5214_1	RD	Active on Alarm
Panel Phase Overcurrent	Binary_Value	68	5215_1	RD	Active on Alarm
Panel Neutral Overcurrent	Binary_Value	69	5216_1	RD	Active on Alarm
Panel Ground Overcurrent	Binary_Value	70	5217_1	RD	Active on Alarm
Panel 2					
Panel Summary Alarm	Binary_Value	1089	5212_2	RD	Active on Alarm
Panel Overvoltage	Binary_Value	1090	5213_2	RD	Active on Alarm
Panel Undervoltage	Binary_Value	1091	5214_2	RD	Active on Alarm
Panel Phase Overcurrent	Binary_Value	1092	5215_2	RD	Active on Alarm
Panel Neutral Overcurrent	Binary_Value	1093	5216_2	RD	Active on Alarm
Panel Ground Overcurrent	Binary_Value	1094	5217_2	RD	Active on Alarm
Panel 4					
Panel Summary Alarm	Binary_Value	3137	5212_4	RD	Active on Alarm
Panel Overvoltage	Binary_Value	3138	5213_4	RD	Active on Alarm
Panel Undervoltage	Binary_Value	3139	5214_4	RD	Active on Alarm
Panel Phase Overcurrent	Binary_Value	3140	5215_4	RD	Active on Alarm
Panel Neutral Overcurrent	Binary_Value	3141	5216_4	RD	Active on Alarm
Panel Ground Overcurrent	Binary_Value	3142	5217_4	RD	Active on Alarm

Table 4-70 Liebert FDC™, Liebert FPC™, Liebert PPC™ and Liebert RDC™—Analog Data

Controller	Liebert CPM				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel 1					
Columns of Breakers	Analog_Value	105	5515_1	RD	—
Number of Breakers	Analog_Value	106	5516_1	RD	—
Panel Main Voltage X-Y	Analog_Value	107	5187_1	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	108	5188_1	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	109	5189_1	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	110	5190_1	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	111	5191_1	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	112	5192_1	RD	Units: VAC
Panel Main Current Ix	Analog_Value	113	5193_1	RD	Units: A AC
Panel Main Current Iy	Analog_Value	114	5194_1	RD	Units: A AC
Panel Main Current Iz	Analog_Value	115	5195_1	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	116	5196_1	RD	Units: A AC
Panel Main Ground Current	Analog_Value	117	5197_1	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	118	5198_1	RD	Units: kVA
Panel Main Output Power (kW)	Analog_Value	119	5199_1	RD	Units: kW
Panel Main Output kW-Hrs	Analog_Value	120	5200_1	RW	Units: kWH
Panel Main Output Power Factor	Analog_Value	121	5201_1	RD	—
Panel Main Output Percent Load	Analog_Value	122	5202_1	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	123	5203_1	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	124	5204_1	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	125	5205_1	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	126	5206_1	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	127	5207_1	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	128	5208_1	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	129	5209_1	RD	—
Panel Main Current Iy Crest Factor	Analog_Value	130	5210_1	RD	—
Panel Main Current Iz Crest Factor	Analog_Value	131	5211_1	RD	—
Panel 2					
Columns of Breakers	Analog_Value	1654	5515_2	RD	—
Number of Breakers	Analog_Value	1655	5516_2	RD	—
Panel Main Voltage X-Y	Analog_Value	1656	5187_2	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	1657	5188_2	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	1658	5189_2	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	1659	5190_2	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	1660	5191_2	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	1661	5192_2	RD	Units: VAC
Panel Main Current Ix	Analog_Value	1662	5193_2	RD	Units: A AC
Panel Main Current Iy	Analog_Value	1663	5194_2	RD	Units: A AC
Panel Main Current Iz	Analog_Value	1664	5195_2	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	1665	5196_2	RD	Units: A AC
Panel Main Ground Current	Analog_Value	1666	5197_2	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	1667	5198_2	RD	Units: kVA
Panel Main Output Power (kW)	Analog_Value	1668	5199_2	RD	Units: kW
Panel Main Output kW-Hrs	Analog_Value	1669	5200_2	RW	Units: kWH

Table 4-70 Liebert FDC™, Liebert FPC™, Liebert PPC™ and Liebert RDC™—Analog Data (continued)

Controller	Liebert CPM				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel Main Output Power Factor	Analog_Value	1670	5201_2	RD	—
Panel Main Output Percent Load	Analog_Value	1671	5202_2	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	1672	5203_2	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	1673	5204_2	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	1674	5205_2	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	1675	5206_2	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	1676	5207_2	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	1677	5208_2	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	1678	5209_2	RD	—
Panel Main Current Iy Crest Factor	Analog_Value	1679	5210_2	RD	—
Panel Main Current Iz Crest Factor	Analog_Value	1680	5211_2	RD	—
Panel 4					
Columns of Breakers	Analog_Value	4752	5515_4	RD	—
Number of Breakers	Analog_Value	4753	5516_4	RD	—
Panel Main Voltage X-Y	Analog_Value	4754	5187_4	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	4755	5188_4	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	4756	5189_4	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	4757	5190_4	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	4758	5191_4	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	4759	5192_4	RD	Units: VAC
Panel Main Current Ix	Analog_Value	4760	5193_4	RD	Units: A AC
Panel Main Current Iy	Analog_Value	4761	5194_4	RD	Units: A AC
Panel Main Current Iz	Analog_Value	4762	5195_4	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	4763	5196_4	RD	Units: A AC
Panel Main Ground Current	Analog_Value	4764	5197_4	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	4765	5198_4	RD	Units: kVA
Panel Main Output Power (kW)	Analog_Value	4766	5199_4	RD	Units: kW
Panel Main Output kW-Hrs	Analog_Value	4767	5200_4	RW	Units: kWH
Panel Main Output Power Factor	Analog_Value	4768	5201_4	RD	—
Panel Main Output Percent Load	Analog_Value	4769	5202_4	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	4770	5203_4	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	4771	5204_4	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	4772	5205_4	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	4773	5206_4	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	4774	5207_4	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	4775	5208_4	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	4776	5209_4	RD	—
Panel Main Current Iy Crest Factor	Analog_Value	4777	5210_4	RD	—
Panel Main Current Iz Crest Factor	Analog_Value	4778	5211_4	RD	—

Table 4-71 Liebert FDC™, Liebert FPC™, Liebert PPC™and Liebert RDC™—Multistate Data

Controller	Liebert CPM				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Protocol					
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
System					
System Status	MultiState_Value	12	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
System Event Acknowledge/Reset	MultiState_Value	13	4717_1	WO	1 = Reset 2 = Acknowledge

Table 4-72 Liebert FPC™ and Liebert PPC™—Analog Data

Controller	Liebert VPMP				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Input Power 1					
Input Voltage A-B	Analog_Value	1	4097_1	RD	Units: VAC
Input Voltage B-C	Analog_Value	2	4099_1	RD	Units: VAC
Input Voltage C-A	Analog_Value	3	4101_1	RD	Units: VAC
Input Power 2					
Input Voltage A-B	Analog_Value	14	4097_2	RD	Units: VAC
Input Voltage B-C	Analog_Value	15	4099_2	RD	Units: VAC
Input Voltage C-A	Analog_Value	16	4101_2	RD	Units: VAC
Output Power 1					
Output Voltage X-Y	Analog_Value	27	4201_1	RD	Units: VAC
Output Voltage Y-Z	Analog_Value	28	4202_1	RD	Units: VAC
Output Voltage Z-X	Analog_Value	29	4203_1	RD	Units: VAC
Output Voltage Vx	Analog_Value	30	4385_1	RD	Units: VAC
Output Voltage Vy	Analog_Value	31	4386_1	RD	Units: VAC
Output Voltage Vz	Analog_Value	32	4387_1	RD	Units: VAC
Output Current Ix	Analog_Value	33	4204_1	RD	Units: A AC
Output Current Iy	Analog_Value	34	4205_1	RD	Units: A AC
Output Current Iz	Analog_Value	35	4206_1	RD	Units: A AC
Output Neutral Current	Analog_Value	36	5164_1	RD	Units: A AC
Ground Current	Analog_Value	37	5165_1	RD	Units: A AC
Output Frequency	Analog_Value	38	4207_1	RD	Units: Hz
Output Power (kVA)	Analog_Value	39	4209_1	RD	Units: kVA
Output Power (kW)	Analog_Value	40	4208_1	RD	Units: kW
Output kW-Hrs	Analog_Value	41	5166_1	RW	Units: kWH
Output Power Factor	Analog_Value	42	5167_1	RD	—
Output Percent Load	Analog_Value	43	5168_1	RD	Units: %
Output Voltage Vx THD	Analog_Value	44	5169_1	RD	Units: % THD
Output Voltage Vy THD	Analog_Value	45	5170_1	RD	Units: % THD
Output Voltage Vz THD	Analog_Value	46	5171_1	RD	Units: % THD
Output Current Ix THD	Analog_Value	47	5172_1	RD	Units: % THD
Output Current Iy THD	Analog_Value	48	5173_1	RD	Units: % THD
Output Current Iz THD	Analog_Value	49	5174_1	RD	Units: % THD
Output Current Ix K-Factor	Analog_Value	50	5175_1	RD	—
Output Current Iy K-Factor	Analog_Value	51	5176_1	RD	—
Output Current Iz K-Factor	Analog_Value	52	5177_1	RD	—
Output Current Ix Crest Factor	Analog_Value	53	5250_1	RD	—
Output Current Iy Crest Factor	Analog_Value	54	5251_1	RD	—
Output Current Iz Crest Factor	Analog_Value	55	5252_1	RD	—

Table 4-72 Liebert FPC™ and Liebert PPC™—Analog Data (continued)

Controller	Liebert VPMP				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Output Power 2					
Output Voltage X-Y	Analog_Value	66	4201_2	RD	Units: VAC
Output Voltage Y-Z	Analog_Value	67	4202_2	RD	Units: VAC
Output Voltage Z-X	Analog_Value	68	4203_2	RD	Units: VAC
Output Voltage Vx	Analog_Value	69	4385_2	RD	Units: VAC
Output Voltage Vy	Analog_Value	70	4386_2	RD	Units: VAC
Output Voltage Vz	Analog_Value	71	4387_2	RD	Units: VAC
Output Current Ix	Analog_Value	72	4204_2	RD	Units: A AC
Output Current Iy	Analog_Value	73	4205_2	RD	Units: A AC
Output Current Iz	Analog_Value	74	4206_2	RD	Units: A AC
Output Neutral Current	Analog_Value	75	5164_2	RD	Units: A AC
Ground Current	Analog_Value	76	5165_2	RD	Units: A AC
Output Frequency	Analog_Value	77	4207_2	RD	Units: Hz
Output Power (kVA)	Analog_Value	78	4209_2	RD	Units: kVA
Output Power (kW)	Analog_Value	79	4208_2	RD	Units: kW
Output kW-Hrs	Analog_Value	80	5166_2	RW	Units: kWH
Output Power Factor	Analog_Value	81	5167_2	RD	—
Output Percent Load	Analog_Value	82	5168_2	RD	Units: %
Output Voltage Vx THD	Analog_Value	83	5169_2	RD	Units: % THD
Output Voltage Vy THD	Analog_Value	84	5170_2	RD	Units: % THD
Output Voltage Vz THD	Analog_Value	85	5171_2	RD	Units: % THD
Output Current Ix THD	Analog_Value	86	5172_2	RD	Units: % THD
Output Current Iy THD	Analog_Value	87	5173_2	RD	Units: % THD
Output Current Iz THD	Analog_Value	88	5174_2	RD	Units: % THD
Output Current Ix K-Factor	Analog_Value	89	5175_2	RD	—
Output Current Iy K-Factor	Analog_Value	90	5176_2	RD	—
Output Current Iz K-Factor	Analog_Value	91	5177_2	RD	—
Output Current Ix Crest Factor	Analog_Value	92	5250_2	RD	—
Output Current Iy Crest Factor	Analog_Value	93	5251_2	RD	—
Output Current Iz Crest Factor	Analog_Value	94	5252_2	RD	—
Panel 1					
Columns of Breakers	Analog_Value	105	5515_1	RD	—
Number of Breakers	Analog_Value	106	5516_1	RD	—
Panel Main Voltage X-Y	Analog_Value	107	5187_1	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	108	5188_1	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	109	5189_1	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	110	5190_1	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	111	5191_1	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	112	5192_1	RD	Units: VAC
Panel Main Current Ix	Analog_Value	113	5193_1	RD	Units: A AC
Panel Main Current Iy	Analog_Value	114	5194_1	RD	Units: A AC
Panel Main Current Iz	Analog_Value	115	5195_1	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	116	5196_1	RD	Units: A AC
Panel Main Ground Current	Analog_Value	117	5197_1	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	118	5198_1	RD	Units: kVA

Table 4-72 Liebert FPC™ and Liebert PPC™—Analog Data (continued)

Controller	Liebert VPMP				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel Main Output Power (kW)	Analog_Value	119	5199_1	RD	Units: kW
Panel Main Output kW-Hrs	Analog_Value	120	5200_1	RW	Units: kWH
Panel Main Output Power Factor	Analog_Value	121	5201_1	RD	—
Panel Main Output Percent Load	Analog_Value	122	5202_1	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	123	5203_1	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	124	5204_1	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	125	5205_1	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	126	5206_1	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	127	5207_1	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	128	5208_1	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	129	5209_1	RD	—
Panel Main Current Iy Crest Factor	Analog_Value	130	5210_1	RD	—
Panel Main Current Iz Crest Factor	Analog_Value	131	5211_1	RD	—
Panel 1 Branch 1					
Breaker position	Analog_Value	142	5421_1_1	RD	—
Branch Current Phase 1	Analog_Value	143	5219_1_1	RD	Units: A AC
Branch Current Phase 2	Analog_Value	144	5220_1_1	RD	Units: A AC
Branch Current Phase 3	Analog_Value	145	5221_1_1	RD	Units: A AC
Branch Output Power (W)	Analog_Value	146	5222_1_1	RD	Units: kW
Output kW-Hrs	Analog_Value	147	5223_1_1	RD	Units: kWH
Branch Output Power Factor	Analog_Value	148	5224_1_1	RD	—
Branch Output Percent Load	Analog_Value	149	5225_1_1	RD	Units: %
Panel 1 Branch 2					
Breaker position	Analog_Value	160	5421_1_2	RD	—
Branch Current Phase 1	Analog_Value	161	5219_1_2	RD	Units: A AC
Branch Current Phase 2	Analog_Value	162	5220_1_2	RD	Units: A AC
Branch Current Phase 3	Analog_Value	163	5221_1_2	RD	Units: A AC
Branch Output Power (W)	Analog_Value	164	5222_1_2	RD	Units: kW
Output kW-Hrs	Analog_Value	165	5223_1_2	RD	Units: kWH
Branch Output Power Factor	Analog_Value	166	5224_1_2	RD	—
Branch Output Percent Load	Analog_Value	167	5225_1_2	RD	Units: %
Panel 1 Branch 84					
Breaker position	Analog_Value	1636	5421_1_84	RD	—
Branch Current Phase 1	Analog_Value	1637	5219_1_84	RD	Units: A AC
Branch Current Phase 2	Analog_Value	1638	5220_1_84	RD	Units: A AC
Branch Current Phase 3	Analog_Value	1639	5221_1_84	RD	Units: A AC
Branch Output Power (W)	Analog_Value	1640	5222_1_84	RD	Units: kW
Output kW-Hrs	Analog_Value	1641	5223_1_84	RD	Units: kWH
Branch Output Power Factor	Analog_Value	1642	5224_1_84	RD	—
Branch Output Percent Load	Analog_Value	1643	5225_1_84	RD	Units: %

Table 4-72 Liebert FPC™ and Liebert PPC™—Analog Data (continued)

Controller	Liebert VPMP				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel 2					
Columns of Breakers	Analog_Value	1654	5515_2	RD	—
Number of Breakers	Analog_Value	1655	5516_2	RD	—
Panel Main Voltage X-Y	Analog_Value	1656	5187_2	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	1657	5188_2	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	1658	5189_2	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	1659	5190_2	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	1660	5191_2	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	1661	5192_2	RD	Units: VAC
Panel Main Current Ix	Analog_Value	1662	5193_2	RD	Units: A AC
Panel Main Current Iy	Analog_Value	1663	5194_2	RD	Units: A AC
Panel Main Current Iz	Analog_Value	1664	5195_2	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	1665	5196_2	RD	Units: A AC
Panel Main Ground Current	Analog_Value	1666	5197_2	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	1667	5198_2	RD	Units: kVA
Panel Main Output Power (kW)	Analog_Value	1668	5199_2	RD	Units: kW
Panel Main Output kW-Hrs	Analog_Value	1669	5200_2	RW	Units: kWH
Panel Main Output Power Factor	Analog_Value	1670	5201_2	RD	—
Panel Main Output Percent Load	Analog_Value	1671	5202_2	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	1672	5203_2	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	1673	5204_2	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	1674	5205_2	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	1675	5206_2	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	1676	5207_2	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	1677	5208_2	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	1678	5209_2	RD	—
Panel Main Current Iy Crest Factor	Analog_Value	1679	5210_2	RD	—
Panel Main Current Iz Crest Factor	Analog_Value	1680	5211_2	RD	—
Panel 2 Branch 1					
Breaker position	Analog_Value	1691	5421_2_1	RD	—
Branch Current Phase 1	Analog_Value	1692	5219_2_1	RD	Units: A AC
Branch Current Phase 2	Analog_Value	1693	5220_2_1	RD	Units: A AC
Branch Current Phase 3	Analog_Value	1694	5221_2_1	RD	Units: A AC
Branch Output Power (W)	Analog_Value	1695	5222_2_1	RD	Units: kW
Output kW-Hrs	Analog_Value	1696	5223_2_1	RD	Units: kWH
Branch Output Power Factor	Analog_Value	1697	5224_2_1	RD	—
Branch Output Percent Load	Analog_Value	1698	5225_2_1	RD	Units: %

Table 4-72 Liebert FPC™ and Liebert PPC™—Analog Data (continued)

Controller	Liebert VPMP				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel 2 Branch 2					
Breaker position	Analog_Value	1709	5421_2_2	RD	—
Branch Current Phase 1	Analog_Value	1710	5219_2_2	RD	Units: A AC
Branch Current Phase 2	Analog_Value	1711	5220_2_2	RD	Units: A AC
Branch Current Phase 3	Analog_Value	1712	5221_2_2	RD	Units: A AC
Branch Output Power (W)	Analog_Value	1713	5222_2_2	RD	Units: kW
Output kW-Hrs	Analog_Value	1714	5223_2_2	RD	Units: kWH
Branch Output Power Factor	Analog_Value	1715	5224_2_2	RD	—
Branch Output Percent Load	Analog_Value	1716	5225_2_2	RD	Units: %
Panel 2 Branch 84					
Breaker position	Analog_Value	3185	5421_2_84	RD	—
Branch Current Phase 1	Analog_Value	3186	5219_2_84	RD	Units: A AC
Branch Current Phase 2	Analog_Value	3187	5220_2_84	RD	Units: A AC
Branch Current Phase 3	Analog_Value	3188	5221_2_84	RD	Units: A AC
Branch Output Power (W)	Analog_Value	3189	5222_2_84	RD	Units: kW
Output kW-Hrs	Analog_Value	3190	5223_2_84	RD	Units: kWH
Branch Output Power Factor	Analog_Value	3191	5224_2_84	RD	—
Branch Output Percent Load	Analog_Value	3192	5225_2_84	RD	Units: %
Panel 4					
Columns of Breakers	Analog_Value	4752	5515_4	RD	—
Number of Breakers	Analog_Value	4753	5516_4	RD	—
Panel Main Voltage X-Y	Analog_Value	4754	5187_4	RD	Units: VAC
Panel Main Voltage Y-Z	Analog_Value	4755	5188_4	RD	Units: VAC
Panel Main Voltage Z-X	Analog_Value	4756	5189_4	RD	Units: VAC
Panel Main Voltage X-N	Analog_Value	4757	5190_4	RD	Units: VAC
Panel Main Voltage Y-N	Analog_Value	4758	5191_4	RD	Units: VAC
Panel Main Voltage Z-N	Analog_Value	4759	5192_4	RD	Units: VAC
Panel Main Current Ix	Analog_Value	4760	5193_4	RD	Units: A AC
Panel Main Current Iy	Analog_Value	4761	5194_4	RD	Units: A AC
Panel Main Current Iz	Analog_Value	4762	5195_4	RD	Units: A AC
Panel Main Neutral Current	Analog_Value	4763	5196_4	RD	Units: A AC
Panel Main Ground Current	Analog_Value	4764	5197_4	RD	Units: A AC
Panel Main Output Power (kVA)	Analog_Value	4765	5198_4	RD	Units: kVA
Panel Main Output Power (kW)	Analog_Value	4766	5199_4	RD	Units: kW
Panel Main Output kW-Hrs	Analog_Value	4767	5200_4	RW	Units: kWH
Panel Main Output Power Factor	Analog_Value	4768	5201_4	RD	—
Panel Main Output Percent Load	Analog_Value	4769	5202_4	RD	Units: %
Panel Main Voltage Vx THD	Analog_Value	4770	5203_4	RD	Units: % THD
Panel Main Voltage Vy THD	Analog_Value	4771	5204_4	RD	Units: % THD
Panel Main Voltage Vz THD	Analog_Value	4772	5205_4	RD	Units: % THD
Panel Main Current Ix THD	Analog_Value	4773	5206_4	RD	Units: % THD
Panel Main Current Iy THD	Analog_Value	4774	5207_4	RD	Units: % THD
Panel Main Current Iz THD	Analog_Value	4775	5208_4	RD	Units: % THD
Panel Main Current Ix Crest Factor	Analog_Value	4776	5209_4	RD	—
Panel Main Current Iy Crest Factor	Analog_Value	4777	5210_4	RD	—

Table 4-72 Liebert FPC™ and Liebert PPC™—Analog Data (continued)

Controller	Liebert VPMP				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Panel Main Current Iz Crest Factor	Analog_Value	4778	5211_4	RD	—
Panel 4 Branch 1					
Breaker position	Analog_Value	4789	5421_4_1	RD	—
Branch Current Phase 1	Analog_Value	4790	5219_4_1	RD	Units: A AC
Branch Current Phase 2	Analog_Value	4791	5220_4_1	RD	Units: A AC
Branch Current Phase 3	Analog_Value	4792	5221_4_1	RD	Units: A AC
Branch Output Power (W)	Analog_Value	4793	5222_4_1	RD	Units: kW
Output kW-Hrs	Analog_Value	4794	5223_4_1	RD	Units: kWH
Branch Output Power Factor	Analog_Value	4795	5224_4_1	RD	—
Branch Output Percent Load	Analog_Value	4796	5225_4_1	RD	Units: %
Panel 4 Branch 2					
Breaker position	Analog_Value	4807	5421_4_2	RD	—
Branch Current Phase 1	Analog_Value	4808	5219_4_2	RD	Units: A AC
Branch Current Phase 2	Analog_Value	4809	5220_4_2	RD	Units: A AC
Branch Current Phase 3	Analog_Value	4810	5221_4_2	RD	Units: A AC
Branch Output Power (W)	Analog_Value	4811	5222_4_2	RD	Units: kW
Output kW-Hrs	Analog_Value	4812	5223_4_2	RD	Units: kWH
Branch Output Power Factor	Analog_Value	4813	5224_4_2	RD	—
Branch Output Percent Load	Analog_Value	4814	5225_4_2	RD	Units: %
Panel 4 Branch 84					
Breaker position	Analog_Value	6283	5421_4_84	RD	—
Branch Current Phase 1	Analog_Value	6284	5219_4_84	RD	Units: A AC
Branch Current Phase 2	Analog_Value	6285	5220_4_84	RD	Units: A AC
Branch Current Phase 3	Analog_Value	6286	5221_4_84	RD	Units: A AC
Branch Output Power (W)	Analog_Value	6287	5222_4_84	RD	Units: kW
Output kW-Hrs	Analog_Value	6288	5223_4_84	RD	Units: kWH
Branch Output Power Factor	Analog_Value	6289	5224_4_84	RD	—
Branch Output Percent Load	Analog_Value	6290	5225_4_84	RD	Units: %
Subfeed 1					
Subfeed Current Ix	Analog_Value	6301	5229_1	RD	Units: A AC
Subfeed Current Iy	Analog_Value	6302	5230_1	RD	Units: A AC
Subfeed Current Iz	Analog_Value	6303	5231_1	RD	Units: A AC
Subfeed Neutral Current	Analog_Value	6304	5232_1	RD	Units: A AC
Subfeed Ground Current	Analog_Value	6305	5233_1	RD	Units: A AC
Subfeed Output Power (kVA)	Analog_Value	6306	5234_1	RD	Units: kVA
Subfeed Output Power (kW)	Analog_Value	6307	5235_1	RD	Units: kW
Subfeed Output kW-Hrs	Analog_Value	6308	5236_1	RW	Units: kWH
Subfeed Power Factor	Analog_Value	6309	5237_1	RD	—
Subfeed Output Percent Load	Analog_Value	6310	5238_1	RD	Units: %
Subfeed Current Ix THD	Analog_Value	6311	5239_1	RD	Units: %
Subfeed Current Iy THD	Analog_Value	6312	5240_1	RD	Units: %
Subfeed Current Iz THD	Analog_Value	6313	5241_1	RD	Units: %
Subfeed Current Ix Crest Factor	Analog_Value	6314	5242_1	RD	—
Subfeed Current Iy Crest Factor	Analog_Value	6315	5243_1	RD	—
Subfeed Current Iz Crest Factor	Analog_Value	6316	5244_1	RD	—

Table 4-72 Liebert FPC™ and Liebert PPC™—Analog Data (continued)

Controller	Liebert VPMP				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Subfeed 2					
Subfeed Current Ix	Analog_Value	6327	5229_2	RD	Units: A AC
Subfeed Current Iy	Analog_Value	6328	5230_2	RD	Units: A AC
Subfeed Current Iz	Analog_Value	6329	5231_2	RD	Units: A AC
Subfeed Neutral Current	Analog_Value	6330	5232_2	RD	Units: A AC
Subfeed Ground Current	Analog_Value	6331	5233_2	RD	Units: A AC
Subfeed Output Power (kVA)	Analog_Value	6332	5234_2	RD	Units: kVA
Subfeed Output Power (kW)	Analog_Value	6333	5235_2	RD	Units: kW
Subfeed Output kW-Hrs	Analog_Value	6334	5236_2	RW	Units: kWH
Subfeed Power Factor	Analog_Value	6335	5237_2	RD	—
Subfeed Output Percent Load	Analog_Value	6336	5238_2	RD	Units: %
Subfeed Current Ix THD	Analog_Value	6337	5239_2	RD	Units: %
Subfeed Current Iy THD	Analog_Value	6338	5240_2	RD	Units: %
Subfeed Current Iz THD	Analog_Value	6339	5241_2	RD	Units: %
Subfeed Current Ix Crest Factor	Analog_Value	6340	5242_2	RD	—
Subfeed Current Iy Crest Factor	Analog_Value	6341	5243_2	RD	—
Subfeed Current Iz Crest Factor	Analog_Value	6342	5244_2	RD	—
Subfeed 64					
Subfeed Current Ix	Analog_Value	7939	5229_64	RD	Units: A AC
Subfeed Current Iy	Analog_Value	7940	5230_64	RD	Units: A AC
Subfeed Current Iz	Analog_Value	7941	5231_64	RD	Units: A AC
Subfeed Neutral Current	Analog_Value	7942	5232_64	RD	Units: A AC
Subfeed Ground Current	Analog_Value	7943	5233_64	RD	Units: A AC
Subfeed Output Power (kVA)	Analog_Value	7944	5234_64	RD	Units: kVA
Subfeed Output Power (kW)	Analog_Value	7945	5235_64	RD	Units: kW
Subfeed Output kW-Hrs	Analog_Value	7946	5236_64	RW	Units: kWH
Subfeed Power Factor	Analog_Value	7947	5237_64	RD	—
Subfeed Output Percent Load	Analog_Value	7948	5238_64	RD	Units: %
Subfeed Current Ix THD	Analog_Value	7949	5239_64	RD	Units: %
Subfeed Current Iy THD	Analog_Value	7950	5240_64	RD	Units: %
Subfeed Current Iz THD	Analog_Value	7951	5241_64	RD	Units: %
Subfeed Current Ix Crest Factor	Analog_Value	7952	5242_64	RD	—
Subfeed Current Iy Crest Factor	Analog_Value	7953	5243_64	RD	—
Subfeed Current Iz Crest Factor	Analog_Value	7954	5244_64	RD	—
System					
System Date and Time	Analog_Value	7965	4293_1	RW	—

Table 4-73 Liebert FPC™ and Liebert PPC™—Multistate Data

Controller	Liebert VPMP				
Data Label	**Object Type**	**Instance**	**Object Name**	**Access**	**Notes**
Protocol					
Server Class	MultiState_Value	1	4553_1	RD	1 = UPS 2 = AIR 3 = PMP 4 = PDU 5 = MONITOR
System					
System Status	MultiState_Value	12	4123_1	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
System Event Acknowledge/Reset	MultiState_Value	13	4717_1	WO	1 = Reset 2 = Acknowledge

Table 4-74 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Glossary

Data Label	Data Description
Branch Current Phase 1	Branch breaker Phase 1 RMS current
Branch Current Phase 2	Branch Breaker Phase 2 RMS current
Branch Current Phase 3	Branch breaker Phase 3 RMS current
Branch Output Percent Load	Branch breaker percent load of rated current
Branch Output Power (W)	Branch breaker W
Branch Output Power Factor	Branch breaker Power Factor (real power/apparent power)
Branch Overcurrent	Branch breaker current has exceeded the limit.
Branch Undercurrent Warning	Branch breaker current is less than the limit.
Breaker position	Panelboard pole position of the branch breaker. First position if 2 or 3 pole breaker
Columns of Breakers	The breakers in this panel are physically arranged in this many columns.
Equipment Temperature Sensor Fail	Transformer temperature sensor has failed
Event State	Alarm present
Frequency Deviation	The output frequency is outside a specified range.
Ground Current	Unit Ground RMS current.
Ground Overcurrent	Unit ground current has exceeded the limit.
Input Voltage A-B	Unit Input RMS Voltage between Phase A and Phase B
Input Voltage B-C	Unit Input RMS Voltage between Phase B and Phase C
Input Voltage C-A	Unit Input RMS Voltage between Phase C and Phase A
Neutral Overcurrent	Unit neutral current has exceeded the limit.
Number of Breakers	Number of Breakers in this panelboard.
Output Current Ix Crest Factor	Unit phase X Current Crest Factor (peak/RMS).
Output Current Ix K-Factor	Unit output Current Harmonic K-Factor for phase X.
Output Current Ix THD	Unit Current Total Harmonic Distortion for phase X.
Output Current Ix	Unit Phase X output RMS current.
Output Current Iy Crest Factor	Unit phase Y Current Crest Factor (peak/RMS).
Output Current Iy K-Factor	Unit output Current Harmonic K-Factor for phase Y.
Output Current Iy THD	Unit Current Total Harmonic Distortion for phase Y.
Output Current Iy	Unit Phase Y output RMS current.
Output Current Iz Crest Factor	Unit phase Z Current Crest Factor (peak/RMS).
Output Current Iz K-Factor	Unit output Current Harmonic K-Factor for phase Z.
Output Current Iz THD	Unit Current Total Harmonic Distortion for phase Z.
Output Current Iz	Unit Phase Z output RMS current.
Output Frequency	The system output frequency
Output kW-Hrs	Branch Breaker accumulated KW-Hours since last KW-Hours reset.
Output kW-Hrs	Unit accumulated KW-Hours since last KW-Hours reset.
Output Neutral Current	Unit output Neutral RMS current.
Output Overcurrent	Unit phase current has exceeded the limit.
Output Overvoltage	Unit voltage has exceeded the limit.
Output Percent Load	Unit percent load of rated current
Output Power (kVA)	Unit output kVA
Output Power (kW)	Unit output KW
Output Power Factor	Unit output Power Factor (real power/apparent power)
Output Undervoltage	Unit voltage is less than the limit.
Output Voltage THD	Unit output Voltage Total Harmonic Distortion has exceeded the limit.
Output Voltage Vx THD	Unit Voltage Total Harmonic Distortion for phase X.

Table 4-74 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Glossary (continued)

Data Label	Data Description
Output Voltage Vx	Unit output RMS voltage between phase X and Neutral
Output Voltage Vy THD	Unit Voltage Total Harmonic Distortion for phase Y.
Output Voltage Vy	Unit output RMS voltage between phase Y and Neutral
Output Voltage Vz THD	Unit Voltage Total Harmonic Distortion for phase Z.
Output Voltage Vz	Unit output RMS voltage between phase Z and Neutral
Output Voltage X-Y	Unit output RMS voltage between phases X and Y
Output Voltage Y-Z	Unit output RMS voltage between phases Y and Z.
Output Voltage Z-X	Unit output RMS voltage between phases Z and X.
Panel Ground Overcurrent	Panelboard Ground current has exceeded the limit.
Panel Main Current Ix Crest Factor	Panelboard phase X Current Crest Factor (peak/RMS).
Panel Main Current Ix THD	Current Total Harmonic Distortion for Panelboard phase X.
Panel Main Current Ix	Panelboard RMS current for phase X.
Panel Main Current Iy Crest Factor	Panelboard phase Y Current Crest Factor (peak/RMS).
Panel Main Current Iy THD	Current Total Harmonic Distortion for Panelboard phase Y.
Panel Main Current Iy	Panelboard RMS current for phase Y.
Panel Main Current Iz Crest Factor	Panelboard phase Z Current Crest Factor (peak/RMS).
Panel Main Current Iz THD	Current Total Harmonic Distortion for Panelboard phase Z.
Panel Main Current Iz	Panelboard RMS current for phase Z.
Panel Main Ground Current	Panelboard Ground RMS current.
Panel Main Neutral Current	Panelboard Neutral RMS current.
Panel Main Output kW-Hrs	Panelboard accumulated KW-Hours since last KW-Hours reset.
Panel Main Output Percent Load	Panelboard percent load of rated current
Panel Main Output Power (kVA)	Panelboard output kVA.
Panel Main Output Power (kW)	Panelboard output KW
Panel Main Output Power Factor	Panelboard Output Power Factor (real power/apparent power)
Panel Main Voltage Vx THD	Voltage Total Harmonic Distortion for Panelboard phase X.
Panel Main Voltage Vy THD	Voltage Total Harmonic Distortion for Panelboard phase Y.
Panel Main Voltage Vz THD	Voltage Total Harmonic Distortion for Panelboard phase Z.
Panel Main Voltage X-N	Panelboard RMS voltage between Phase X and Neutral.
Panel Main Voltage X-Y	Panelboard RMS voltage between phases X and Y.
Panel Main Voltage Y-N	Panelboard RMS voltage between Phase Y and Neutral.
Panel Main Voltage Y-Z	Panelboard RMS voltage between phases Y and Z.
Panel Main Voltage Z-N	Panelboard RMS voltage between Phase Z and Neutral.
Panel Main Voltage Z-X	Panelboard RMS voltage between phases Z and X.
Panel Neutral Overcurrent	Panelboard Neutral current has exceeded the limit.
Panel Overvoltage	Panelboard voltage has exceeded the limit.
Panel Phase Overcurrent	Panelboard phase current has exceeded the limit.
Panel Summary Alarm	Panelboard Summary Alarm. Annunciates upon occurrence of any branch or panelboard main breaker alarm.
Panel Undervoltage	Panelboard voltage is less than the limit.
Phase Loss	Voltage and/or Frequency on one or more of the phases is outside the limit.
Phase Rotation Error	Unit input phase sequence is not A, B, C. The phase sequence should be verified and corrected.
Server Class	The general classification for this system
Subfeed Current Ix Crest Factor	Subfeed breaker phase X Current Crest Factor (peak/RMS).
Subfeed Current Ix THD	Current Total Harmonic Distortion for Subfeed breaker phase X.

Table 4-74 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™ and Liebert RX™— Glossary (continued)

Data Label	Data Description
Subfeed Current Ix	Subfeed breaker RMS current for phase X.
Subfeed Current Iy Crest Factor	Subfeed breaker phase Y Current Crest Factor (peak/RMS).
Subfeed Current Iy THD	Current Total Harmonic Distortion for Subfeed breaker phase Y.
Subfeed Current Iy	Subfeed breaker RMS current for phase Y.
Subfeed Current Iz Crest Factor	Subfeed breaker phase Z Current Crest Factor (peak/RMS).
Subfeed Current Iz THD	Current Total Harmonic Distortion for Subfeed breaker phase Z.
Subfeed Current Iz	Subfeed breaker RMS current for phase Z.
Subfeed Ground Current	Subfeed breaker Ground RMS current.
Subfeed Ground Overcurrent	Subfeed breaker Ground current has exceeded the limit.
Subfeed Neutral Current	Subfeed breaker Neutral RMS current.
Subfeed Neutral Overcurrent	Subfeed breaker Neutral current has exceeded the limit.
Subfeed Output kW-Hrs	Subfeed breaker accumulated KW-Hours since last KW-Hours reset.
Subfeed Output Percent Load	Subfeed breaker percent load of rated current
Subfeed Output Power (kVA)	Subfeed breaker output kVA.
Subfeed Output Power (kW)	Subfeed breaker output KW
Subfeed Phase Overcurrent	Subfeed breaker phase current has exceeded the limit.
Subfeed Power Factor	Subfeed breaker Power Factor (real power/apparent power)
System Date and Time	Unit date and time
System Event Acknowledge/Reset	Alarm Present/Reset
System Shutdown - EPO	Unit shutdown by Emergency Power Off (EPO) switch
System Shutdown - REPO	Unit shutdown by Remote Emergency Power Off (REPO) switch
System Status	The operating status for the system
Transformer Overtemperature Power Off	Output power shutdown due to high transformer temperature
Transformer Overtemperature Shutdown	Unit shutdown due to transformer over temperature
Transformer Overtemperature	Transformer temperature has exceeded the limit
Transformer Overtemperaturew	Transformer temperature has exceeded the limit
Transformer Temperature Sensor Fail	Transformer temperature sensor has failed

Table 4-75 Alber® BDSU™—Binary Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery Entity 1					
Battery Discharging	Binary_Value	1	4168_1	RD	Active on Alarm
Battery Entity 2					
Battery Discharging	Binary_Value	12	4168_2	RD	Active on Alarm
Battery Entity 32					
Battery Discharging	Binary_Value	342	4168_32	RD	Active on Alarm
String Entity 1 String Entity instances are assigned and configured to specific Battery Entity instances in a given BDSU device. Thus, their hierarchy mapping information is not known until the Liebert IS-UNITY-DP card connects with the device, discovers its populated modules, maps its data points to Instance numbers and generates a BACnetDataMap.txt file that can be downloaded from the Liebert IS-UNITY-DP card. The data points whose hierarchy mapping is determined at runtime have an Object Name that includes <*SeeDnldMap*>, which means the data point's hierarchy information is identified in the downloadable BACnetDataMap.txt file.					
Low Ambient Temperature	Binary_Value	353	4906_<SeeDnldMap>	RW	Active on Alarm
High Ambient Temperature	Binary_Value	354	4907_<SeeDnldMap>	RW	Active on Alarm
Low Ambient Temperature Probe Two	Binary_Value	355	5436_<SeeDnldMap>	RW	Active on Alarm
High Ambient Temperature Probe Two	Binary_Value	356	5437_<SeeDnldMap>	RW	Active on Alarm
Low Overall Voltage	Binary_Value	357	4908_<SeeDnldMap>	RW	Active on Alarm
High Overall Voltage	Binary_Value	358	4909_<SeeDnldMap>	RW	Active on Alarm
High Battery String Current	Binary_Value	359	4910_<SeeDnldMap>	RW	Active on Alarm
Low Battery String Float Current	Binary_Value	360	4911_<SeeDnldMap>	RW	Active on Alarm
High Battery String Float Current	Binary_Value	361	4912_<SeeDnldMap>	RW	Active on Alarm
High Battery String Ripple Current	Binary_Value	362	4913_<SeeDnldMap>	RW	Active on Alarm
Battery String Discharge Detected	Binary_Value	363	4914_<SeeDnldMap>	RW	Active on Alarm
Maximum Discharge Time Exceeded	Binary_Value	364	4915_<SeeDnldMap>	RW	Active on Alarm
Discharge Low Overall Voltage	Binary_Value	365	4916_<SeeDnldMap>	RW	Active on Alarm
Discharge High Battery String Current	Binary_Value	366	4918_<SeeDnldMap>	RW	Active on Alarm
Excessive Cell to Ambient Temperature Deviation	Binary_Value	367	4920_<SeeDnldMap>	RW	Active on Alarm
Excessive Cell to Cell Temperature Deviation	Binary_Value	368	4919_<SeeDnldMap>	RW	Active on Alarm
Battery String Equalize	Binary_Value	369	5439_<SeeDnldMap>	RW	Active on Alarm
Battery String Offline	Binary_Value	370	5440_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Detected	Binary_Value	371	5438_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Cell to Ambient Temperature Event	Binary_Value	372	5609_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Cell to Cell Temperature Event	Binary_Value	373	5610_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Charger Current Level One Event	Binary_Value	374	5611_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Charger Current Level Two Event	Binary_Value	375	5612_<SeeDnldMap>	RW	Active on Alarm
Ground Fault Detected	Binary_Value	376	5896_<SeeDnldMap>	RW	Active on Alarm

Table 4-75 Alber® BDSU™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
String Entity 2					
Low Ambient Temperature	Binary_Value	387	4906_<SeeDnldMap>	RW	Active on Alarm
High Ambient Temperature	Binary_Value	388	4907_<SeeDnldMap>	RW	Active on Alarm
Low Ambient Temperature Probe Two	Binary_Value	389	5436_<SeeDnldMap>	RW	Active on Alarm
High Ambient Temperature Probe Two	Binary_Value	390	5437_<SeeDnldMap>	RW	Active on Alarm
Low Overall Voltage	Binary_Value	391	4908_<SeeDnldMap>	RW	Active on Alarm
High Overall Voltage	Binary_Value	392	4909_<SeeDnldMap>	RW	Active on Alarm
High Battery String Current	Binary_Value	393	4910_<SeeDnldMap>	RW	Active on Alarm
Low Battery String Float Current	Binary_Value	394	4911_<SeeDnldMap>	RW	Active on Alarm
High Battery String Float Current	Binary_Value	395	4912_<SeeDnldMap>	RW	Active on Alarm
High Battery String Ripple Current	Binary_Value	396	4913_<SeeDnldMap>	RW	Active on Alarm
Battery String Discharge Detected	Binary_Value	397	4914_<SeeDnldMap>	RW	Active on Alarm
Maximum Discharge Time Exceeded	Binary_Value	398	4915_<SeeDnldMap>	RW	Active on Alarm
Discharge Low Overall Voltage	Binary_Value	399	4916_<SeeDnldMap>	RW	Active on Alarm
Discharge High Battery String Current	Binary_Value	400	4918_<SeeDnldMap>	RW	Active on Alarm
Excessive Cell to Ambient Temperature Deviation	Binary_Value	401	4920_<SeeDnldMap>	RW	Active on Alarm
Excessive Cell to Cell Temperature Deviation	Binary_Value	402	4919_<SeeDnldMap>	RW	Active on Alarm
Battery String Equalize	Binary_Value	403	5439_<SeeDnldMap>	RW	Active on Alarm
Battery String Offline	Binary_Value	404	5440_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Detected	Binary_Value	405	5438_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Cell to Ambient Temperature Event	Binary_Value	406	5609_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Cell to Cell Temperature Event	Binary_Value	407	5610_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Charger Current Level One Event	Binary_Value	408	5611_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Charger Current Level Two Event	Binary_Value	409	5612_<SeeDnldMap>	RW	Active on Alarm
Ground Fault Detected	Binary_Value	410	5896_<SeeDnldMap>	RW	Active on Alarm
String Entity 32					
Low Ambient Temperature	Binary_Value	1407	4906_<SeeDnldMap>	RW	Active on Alarm
High Ambient Temperature	Binary_Value	1408	4907_<SeeDnldMap>	RW	Active on Alarm
Low Ambient Temperature Probe Two	Binary_Value	1409	5436_<SeeDnldMap>	RW	Active on Alarm
High Ambient Temperature Probe Two	Binary_Value	1410	5437_<SeeDnldMap>	RW	Active on Alarm
Low Overall Voltage	Binary_Value	1411	4908_<SeeDnldMap>	RW	Active on Alarm
High Overall Voltage	Binary_Value	1412	4909_<SeeDnldMap>	RW	Active on Alarm
High Battery String Current	Binary_Value	1413	4910_<SeeDnldMap>	RW	Active on Alarm
Low Battery String Float Current	Binary_Value	1414	4911_<SeeDnldMap>	RW	Active on Alarm
High Battery String Float Current	Binary_Value	1415	4912_<SeeDnldMap>	RW	Active on Alarm
High Battery String Ripple Current	Binary_Value	1416	4913_<SeeDnldMap>	RW	Active on Alarm
Battery String Discharge Detected	Binary_Value	1417	4914_<SeeDnldMap>	RW	Active on Alarm
Maximum Discharge Time Exceeded	Binary_Value	1418	4915_<SeeDnldMap>	RW	Active on Alarm
Discharge Low Overall Voltage	Binary_Value	1419	4916_<SeeDnldMap>	RW	Active on Alarm
Discharge High Battery String Current	Binary_Value	1420	4918_<SeeDnldMap>	RW	Active on Alarm
Excessive Cell to Ambient Temperature Deviation	Binary_Value	1421	4920_<SeeDnldMap>	RW	Active on Alarm

Table 4-75 Alber® BDSU™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Excessive Cell to Cell Temperature Deviation	Binary_Value	1422	4919_<SeeDnldMap>	RW	Active on Alarm
Battery String Equalize	Binary_Value	1423	5439_<SeeDnldMap>	RW	Active on Alarm
Battery String Offline	Binary_Value	1424	5440_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Detected	Binary_Value	1425	5438_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Cell to Ambient Temperature Event	Binary_Value	1426	5609_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Cell to Cell Temperature Event	Binary_Value	1427	5610_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Charger Current Level One Event	Binary_Value	1428	5611_<SeeDnldMap>	RW	Active on Alarm
Thermal Runaway Charger Current Level Two Event	Binary_Value	1429	5612_<SeeDnldMap>	RW	Active on Alarm
Ground Fault Detected	Binary_Value	1430	5896_<SeeDnldMap>	RW	Active on Alarm
Cell Entity 1 Cell Entity instances are assigned and configured to specific String Entity instances in a given BDSU device. Thus, their hierarchy mapping information is not known until the Liebert IS-UNITY-DP card connects with the device, discovers its populated modules, maps its data points to Instance numbers and generates a BACnetDataMap.txt file that can be downloaded from the Liebert IS-UNITY-DP card. The data points whose hierarchy mapping is determined at runtime have an Object Name that includes <*SeeDnldMap*>, which means the data point's hierarchy information is identified in the downloadable BACnetDataMap.txt file.					
Low Cell Voltage	Binary_Value	1441	4964_<SeeDnldMap>	RD	Active on Alarm
High Cell Voltage	Binary_Value	1442	4965_<SeeDnldMap>	RD	Active on Alarm
Low Cell Temperature	Binary_Value	1443	4966_<SeeDnldMap>	RD	Active on Alarm
High Cell Temperature	Binary_Value	1444	4967_<SeeDnldMap>	RD	Active on Alarm
Low Internal Resistance	Binary_Value	1445	4968_<SeeDnldMap>	RD	Active on Alarm
High Internal Resistance	Binary_Value	1446	4969_<SeeDnldMap>	RD	Active on Alarm
High Intercell Resistance	Binary_Value	1447	4970_<SeeDnldMap>	RD	Active on Alarm
Discharge Low Cell Voltage	Binary_Value	1448	5442_<SeeDnldMap>	RD	Active on Alarm
Intertier Resistance High	Binary_Value	1449	4978_<SeeDnldMap>	RD	Active on Alarm
Cell Entity 2					
Low Cell Voltage	Binary_Value	1460	4964_<SeeDnldMap>	RD	Active on Alarm
High Cell Voltage	Binary_Value	1461	4965_<SeeDnldMap>	RD	Active on Alarm
Low Cell Temperature	Binary_Value	1462	4966_<SeeDnldMap>	RD	Active on Alarm
High Cell Temperature	Binary_Value	1463	4967_<SeeDnldMap>	RD	Active on Alarm
Low Internal Resistance	Binary_Value	1464	4968_<SeeDnldMap>	RD	Active on Alarm
High Internal Resistance	Binary_Value	1465	4969_<SeeDnldMap>	RD	Active on Alarm
High Intercell Resistance	Binary_Value	1466	4970_<SeeDnldMap>	RD	Active on Alarm
Discharge Low Cell Voltage	Binary_Value	1467	5442_<SeeDnldMap>	RD	Active on Alarm
Intertier Resistance High	Binary_Value	1468	4978_<SeeDnldMap>	RD	Active on Alarm

Table 4-75 Alber® BDSU™—Binary Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Cell Entity 360					
Low Cell Voltage	Binary_Value	8262	4964_<SeeDnldMap>	RD	Active on Alarm
High Cell Voltage	Binary_Value	8263	4965_<SeeDnldMap>	RD	Active on Alarm
Low Cell Temperature	Binary_Value	8264	4966_<SeeDnldMap>	RD	Active on Alarm
High Cell Temperature	Binary_Value	8265	4967_<SeeDnldMap>	RD	Active on Alarm
Low Internal Resistance	Binary_Value	8266	4968_<SeeDnldMap>	RD	Active on Alarm
High Internal Resistance	Binary_Value	8267	4969_<SeeDnldMap>	RD	Active on Alarm
High Intercell Resistance	Binary_Value	8268	4970_<SeeDnldMap>	RD	Active on Alarm
Discharge Low Cell Voltage	Binary_Value	8269	5442_<SeeDnldMap>	RD	Active on Alarm
Intertier Resistance High	Binary_Value	8270	4978_<SeeDnldMap>	RD	Active on Alarm

Table 4-76 Alber® BDSU™—Analog Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery Entity 1					
Battery Time Remaining	Analog_Value	1	4150_1	RD	Units: sec
Battery Discharge Time	Analog_Value	2	4151_1	RD	Units: sec
Battery Entity 1 Battery Configuration 1					
Battery Rating	Analog_Value	13	4898_1_1	RD	Units: AH
Battery Entity 2					
Battery Time Remaining	Analog_Value	24	4150_2	RD	Units: sec
Battery Discharge Time	Analog_Value	25	4151_2	RD	Units: sec
Battery Entity 2 Battery Configuration 1					
Battery Rating	Analog_Value	36	4898_2_1	RD	Units: AH
Battery Entity 32					
Battery Time Remaining	Analog_Value	714	4150_32	RD	Units: sec
Battery Discharge Time	Analog_Value	715	4151_32	RD	Units: sec
Battery Entity 32 Battery Configuration 1					
Battery Rating	Analog_Value	726	4898_32_1	RD	Units: AH
String Entity 1 String Entity instances are assigned and configured to specific Battery Entity instances in a given BDSU device. Thus, their hierarchy mapping information is not known until the Liebert IS-UNITY-DP card connects with the device, discovers its populated modules, maps its data points to Instance numbers and generates a BACnetDataMap.txt file that can be downloaded from the Liebert IS-UNITY-DP card. The data points whose hierarchy mapping is determined at runtime have an Object Name that includes <*SeeDnldMap*>, which means the data point's hierarchy information is identified in the downloadable BACnetDataMap.txt file.					
String Ambient Temperature 1	Analog_Value	737	4899_<SeeDnldMap>_1	RD	Units: deg C
String Ambient Temperature 1	Analog_Value	20737	4899_<SeeDnldMap>_1_deg_F	RD	Units: deg F
String Ambient Temperature 2	Analog_Value	738	4899_<SeeDnldMap>_2	RD	Units: deg C
String Ambient Temperature 2	Analog_Value	20738	4899_<SeeDnldMap>_2_deg_F	RD	Units: deg F
String Overall Voltage	Analog_Value	739	4900_<SeeDnldMap>	RD	Units: VDC
String Current	Analog_Value	740	4901_<SeeDnldMap>	RD	Units: A DC
Float Current	Analog_Value	741	4902_<SeeDnldMap>	RD	Units: mA DC
Ripple Current	Analog_Value	742	4903_<SeeDnldMap>	RD	Units: A AC
Battery String Discharge Time	Analog_Value	743	4947_<SeeDnldMap>	RD	Units: sec
Total Active Alarms on a Battery String	Analog_Value	744	4904_<SeeDnldMap>	RD	—
String Entity 1 State Of String 1					
Battery String Time-To-Go	Analog_Value	755	4945_<SeeDnldMap>	RD	Units: min
Amp-Hours Remaining in Battery String	Analog_Value	756	4946_<SeeDnldMap>	RD	Units: AH
String Entity 1 String Alarm Thresholds 1					
Low Ambient Temperature Global Threshold	Analog_Value	767	4921_<SeeDnldMap>	RD	Units: deg C
Low Ambient Temperature Global Threshold	Analog_Value	20767	4921_<SeeDnldMap>_deg_F	RD	Units: deg F
High Ambient Temperature Global Threshold	Analog_Value	768	4922_<SeeDnldMap>	RD	Units: deg C
High Ambient Temperature Global Threshold	Analog_Value	20768	4922_<SeeDnldMap>_deg_F	RD	Units: deg F
Battery String Overall Voltage Low Threshold	Analog_Value	769	4923_<SeeDnldMap>	RD	Units: VDC

Table 4-76 Alber® BDSU™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery String Overall Voltage High Threshold	Analog_Value	770	4924_<SeeDnldMap>	RD	Units: VDC
Battery String Current High Threshold	Analog_Value	771	4925_<SeeDnldMap>	RD	Units: A DC
Battery String Float Current Low Threshold	Analog_Value	772	4926_<SeeDnldMap>	RD	Units: mA DC
Battery String Float Current High Threshold	Analog_Value	773	4927_<SeeDnldMap>	RD	Units: mA DC
Battery String Ripple Current High Threshold	Analog_Value	774	4928_<SeeDnldMap>	RD	Units: A AC
Cell Voltage Low Global Threshold	Analog_Value	775	4929_<SeeDnldMap>	RD	Units: VDC
Cell Voltage High Global Threshold	Analog_Value	776	4930_<SeeDnldMap>	RD	Units: VDC
Cell Temperature Low Global Threshold	Analog_Value	777	4931_<SeeDnldMap>	RD	Units: deg C
Cell Temperature Low Global Threshold	Analog_Value	20777	4931_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell Temperature High Global Threshold	Analog_Value	778	4932_<SeeDnldMap>	RD	Units: deg C
Cell Temperature High Global Threshold	Analog_Value	20778	4932_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Low Global Threshold	Analog_Value	779	4933_<SeeDnldMap>	RD	Units: microOhm
Internal Resistance High Global Threshold	Analog_Value	780	4934_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance High Global Threshold	Analog_Value	781	4935_<SeeDnldMap>	RD	Units: microOhm
Intertier Resistance High Global Threshold	Analog_Value	782	4936_<SeeDnldMap>	RD	Units: microOhm
Cell to Cell Temperature Deviation Threshold	Analog_Value	783	4937_<SeeDnldMap>	RD	Units: deg C
Cell to Cell Temperature Deviation Threshold	Analog_Value	20783	4937_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell to Ambient Temperature Deviation Threshold	Analog_Value	784	4938_<SeeDnldMap>	RD	Units: deg C
Cell to Ambient Temperature Deviation Threshold	Analog_Value	20784	4938_<SeeDnldMap>_deg_F	RD	Units: deg F
String Entity 1 String Configuration 1					
Installation Date	Analog_Value	795	4940_<SeeDnldMap>	RD	—
Cell/Monobloc Rating	Analog_Value	796	4943_<SeeDnldMap>	RD	Units: AH
String Entity 1 Discharge Thresholds 1					
Discharge Low Cell Voltage Threshold	Analog_Value	807	4948_<SeeDnldMap>	RD	Units: VDC
Discharge Low Overall Voltage Threshold	Analog_Value	808	4949_<SeeDnldMap>	RD	Units: VDC
Discharge Battery String Current High Threshold	Analog_Value	809	4950_<SeeDnldMap>	RD	Units: A DC
Discharge Maximum Time	Analog_Value	810	4951_<SeeDnldMap>	RD	Units: min
String Entity 1 String Startup Information 1					
Startup Date	Analog_Value	821	4961_<SeeDnldMap>	RD	—

Table 4-76 Alber® BDSU™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
String Entity 2					
String Ambient Temperature 1	Analog_Value	832	4899_<SeeDnldMap>_1	RD	Units: deg C
String Ambient Temperature 1	Analog_Value	20832	4899_<SeeDnldMap>_1_deg_F	RD	Units: deg F
String Ambient Temperature 2	Analog_Value	833	4899_<SeeDnldMap>_2	RD	Units: deg C
String Ambient Temperature 2	Analog_Value	20833	4899_<SeeDnldMap>_2_deg_F	RD	Units: deg F
String Overall Voltage	Analog_Value	834	4900_<SeeDnldMap>	RD	Units: VDC
String Current	Analog_Value	835	4901_<SeeDnldMap>	RD	Units: A DC
Float Current	Analog_Value	836	4902_<SeeDnldMap>	RD	Units: mA DC
Ripple Current	Analog_Value	837	4903_<SeeDnldMap>	RD	Units: A AC
Battery String Discharge Time	Analog_Value	838	4947_<SeeDnldMap>	RD	Units: sec
Total Active Alarms on a Battery String	Analog_Value	839	4904_<SeeDnldMap>	RD	—
String Entity 2 State Of String 1					
Battery String Time-To-Go	Analog_Value	850	4945_<SeeDnldMap>	RD	Units: min
Amp-Hours Remaining in Battery String	Analog_Value	851	4946_<SeeDnldMap>	RD	Units: AH
String Entity 2 String Alarm Thresholds 1					
Low Ambient Temperature Global Threshold	Analog_Value	862	4921_<SeeDnldMap>	RD	Units: deg C
Low Ambient Temperature Global Threshold	Analog_Value	20862	4921_<SeeDnldMap>_deg_F	RD	Units: deg F
High Ambient Temperature Global Threshold	Analog_Value	863	4922_<SeeDnldMap>	RD	Units: deg C
High Ambient Temperature Global Threshold	Analog_Value	20863	4922_<SeeDnldMap>_deg_F	RD	Units: deg F
Battery String Overall Voltage Low Threshold	Analog_Value	864	4923_<SeeDnldMap>	RD	Units: VDC
Battery String Overall Voltage High Threshold	Analog_Value	865	4924_<SeeDnldMap>	RD	Units: VDC
Battery String Current High Threshold	Analog_Value	866	4925_<SeeDnldMap>	RD	Units: A DC
Battery String Float Current Low Threshold	Analog_Value	867	4926_<SeeDnldMap>	RD	Units: mA DC
Battery String Float Current High Threshold	Analog_Value	868	4927_<SeeDnldMap>	RD	Units: mA DC
Battery String Ripple Current High Threshold	Analog_Value	869	4928_<SeeDnldMap>	RD	Units: A AC
Cell Voltage Low Global Threshold	Analog_Value	870	4929_<SeeDnldMap>	RD	Units: VDC
Cell Voltage High Global Threshold	Analog_Value	871	4930_<SeeDnldMap>	RD	Units: VDC
Cell Temperature Low Global Threshold	Analog_Value	872	4931_<SeeDnldMap>	RD	Units: deg C
Cell Temperature Low Global Threshold	Analog_Value	20872	4931_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell Temperature High Global Threshold	Analog_Value	873	4932_<SeeDnldMap>	RD	Units: deg C
Cell Temperature High Global Threshold	Analog_Value	20873	4932_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Low Global Threshold	Analog_Value	874	4933_<SeeDnldMap>	RD	Units: microOhm

Table 4-76 Alber® BDSU™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Internal Resistance High Global Threshold	Analog_Value	875	4934_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance High Global Threshold	Analog_Value	876	4935_<SeeDnldMap>	RD	Units: microOhm
Intertier Resistance High Global Threshold	Analog_Value	877	4936_<SeeDnldMap>	RD	Units: microOhm
Cell to Cell Temperature Deviation Threshold	Analog_Value	878	4937_<SeeDnldMap>	RD	Units: deg C
Cell to Cell Temperature Deviation Threshold	Analog_Value	20878	4937_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell to Ambient Temperature Deviation Threshold	Analog_Value	879	4938_<SeeDnldMap>	RD	Units: deg C
Cell to Ambient Temperature Deviation Threshold	Analog_Value	20879	4938_<SeeDnldMap>_deg_F	RD	Units: deg F
String Entity 2 String Configuration 1					
Installation Date	Analog_Value	890	4940_<SeeDnldMap>	RD	—
Cell/Monobloc Rating	Analog_Value	891	4943_<SeeDnldMap>	RD	Units: AH
String Entity 2 Discharge Thresholds 1					
Discharge Low Cell Voltage Threshold	Analog_Value	902	4948_<SeeDnldMap>	RD	Units: VDC
Discharge Low Overall Voltage Threshold	Analog_Value	903	4949_<SeeDnldMap>	RD	Units: VDC
Discharge Battery String Current High Threshold	Analog_Value	904	4950_<SeeDnldMap>	RD	Units: A DC
Discharge Maximum Time	Analog_Value	905	4951_<SeeDnldMap>	RD	Units: min
String Entity 2 Discharge Thresholds 1					
Discharge Low Cell Voltage Threshold	Analog_Value	902	4948_<SeeDnldMap>	RD	Units: VDC
Discharge Low Overall Voltage Threshold	Analog_Value	903	4949_<SeeDnldMap>	RD	Units: VDC
Discharge Battery String Current High Threshold	Analog_Value	904	4950_<SeeDnldMap>	RD	Units: A DC
Discharge Maximum Time	Analog_Value	905	4951_<SeeDnldMap>	RD	Units: min
String Entity 2 String Startup Information 1					
Startup Date	Analog_Value	916	4961_<SeeDnldMap>	RD	—
String Entity 32					
String Ambient Temperature 1	Analog_Value	3682	4899_<SeeDnldMap>_1	RD	Units: deg C
String Ambient Temperature 1	Analog_Value	23682	4899_<SeeDnldMap>_1_deg_F	RD	Units: deg F
String Ambient Temperature 2	Analog_Value	3683	4899_<SeeDnldMap>_2	RD	Units: deg C
String Ambient Temperature 2	Analog_Value	23683	4899_<SeeDnldMap>_2_deg_F	RD	Units: deg F
String Overall Voltage	Analog_Value	3684	4900_<SeeDnldMap>	RD	Units: VDC
String Current	Analog_Value	3685	4901_<SeeDnldMap>	RD	Units: A DC
Float Current	Analog_Value	3686	4902_<SeeDnldMap>	RD	Units: mA DC
Ripple Current	Analog_Value	3687	4903_<SeeDnldMap>	RD	Units: A AC
Battery String Discharge Time	Analog_Value	3688	4947_<SeeDnldMap>	RD	Units: sec
Total Active Alarms on a Battery String	Analog_Value	3689	4904_<SeeDnldMap>	RD	—

Table 4-76 Alber® BDSU™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
String Entity 32 State Of String 1					
Battery String Time-To-Go	Analog_Value	3700	4945_<SeeDnldMap>	RD	Units: min
Amp-Hours Remaining in Battery String	Analog_Value	3701	4946_<SeeDnldMap>	RD	Units: AH
String Entity 32 String Alarm Thresholds 1					
Low Ambient Temperature Global Threshold	Analog_Value	3712	4921_<SeeDnldMap>	RD	Units: deg C
Low Ambient Temperature Global Threshold	Analog_Value	23712	4921_<SeeDnldMap>_deg_F	RD	Units: deg F
High Ambient Temperature Global Threshold	Analog_Value	3713	4922_<SeeDnldMap>	RD	Units: deg C
High Ambient Temperature Global Threshold	Analog_Value	23713	4922_<SeeDnldMap>_deg_F	RD	Units: deg F
Battery String Overall Voltage Low Threshold	Analog_Value	3714	4923_<SeeDnldMap>	RD	Units: VDC
Battery String Overall Voltage High Threshold	Analog_Value	3715	4924_<SeeDnldMap>	RD	Units: VDC
Battery String Current High Threshold	Analog_Value	3716	4925_<SeeDnldMap>	RD	Units: A DC
Battery String Float Current Low Threshold	Analog_Value	3717	4926_<SeeDnldMap>	RD	Units: mA DC
Battery String Float Current High Threshold	Analog_Value	3718	4927_<SeeDnldMap>	RD	Units: mA DC
Battery String Ripple Current High Threshold	Analog_Value	3719	4928_<SeeDnldMap>	RD	Units: A AC
Cell Voltage Low Global Threshold	Analog_Value	3720	4929_<SeeDnldMap>	RD	Units: VDC
Cell Voltage High Global Threshold	Analog_Value	3721	4930_<SeeDnldMap>	RD	Units: VDC
Cell Temperature Low Global Threshold	Analog_Value	3722	4931_<SeeDnldMap>	RD	Units: deg C
Cell Temperature Low Global Threshold	Analog_Value	23722	4931_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell Temperature High Global Threshold	Analog_Value	3723	4932_<SeeDnldMap>	RD	Units: deg C
Cell Temperature High Global Threshold	Analog_Value	23723	4932_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Low Global Threshold	Analog_Value	3724	4933_<SeeDnldMap>	RD	Units: microOhm
Internal Resistance High Global Threshold	Analog_Value	3725	4934_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance High Global Threshold	Analog_Value	3726	4935_<SeeDnldMap>	RD	Units: microOhm
Intertier Resistance High Global Threshold	Analog_Value	3727	4936_<SeeDnldMap>	RD	Units: microOhm
Cell to Cell Temperature Deviation Threshold	Analog_Value	3728	4937_<SeeDnldMap>	RD	Units: deg C
Cell to Cell Temperature Deviation Threshold	Analog_Value	23728	4937_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell to Ambient Temperature Deviation Threshold	Analog_Value	3729	4938_<SeeDnldMap>	RD	Units: deg C

Table 4-76 Alber® BDSU™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Cell to Ambient Temperature Deviation Threshold	Analog_Value	23729	4938_<SeeDnldMap>_deg_F	RD	Units: deg F
String Entity 32 String Configuration 1					
Installation Date	Analog_Value	3740	4940_<SeeDnldMap>	RD	—
Cell/Monobloc Rating	Analog_Value	3741	4943_<SeeDnldMap>	RD	Units: AH
String Entity 32 Discharge Thresholds 1					
Discharge Low Cell Voltage Threshold	Analog_Value	3752	4948_<SeeDnldMap>	RD	Units: VDC
Discharge Low Overall Voltage Threshold	Analog_Value	3753	4949_<SeeDnldMap>	RD	Units: VDC
Discharge Battery String Current High Threshold	Analog_Value	3754	4950_<SeeDnldMap>	RD	Units: A DC
Discharge Maximum Time	Analog_Value	3755	4951_<SeeDnldMap>	RD	Units: min
String Entity 32 String Startup Information 1					
Startup Date	Analog_Value	3766	4961_<SeeDnldMap>	RD	—
Cell Entity 1 Cell Entity instances are assigned and configured to specific String Entity instances in a given BDSU device. Thus, their hierarchy mapping information is not known until the Liebert IS-UNITY-DP card connects with the device, discovers its populated modules, maps its data points to Instance numbers and generates a BACnetDataMap.txt file that can be downloaded from the Liebert IS-UNITY-DP card. The data points whose hierarchy mapping is determined at runtime have an Object Name that includes <*SeeDnldMap*>, which means the data point's hierarchy information is identified in the downloadable BACnetDataMap.txt file.					
Cell Voltage	Analog_Value	3777	4962_<SeeDnldMap>	RD	Units: VDC
Cell Temperature	Analog_Value	3778	4963_<SeeDnldMap>	RD	Units: deg C
Cell Temperature	Analog_Value	23778	4963_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Value	Analog_Value	3779	5443_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance Value	Analog_Value	3780	5444_<SeeDnldMap>	RD	Units: microOhm
Cell Entity 1 Threshold settings for a Cell 1					
Cell Voltage Low Threshold	Analog_Value	3791	4971_<SeeDnldMap>	RD	Units: VDC
Cell Voltage High Threshold	Analog_Value	3792	4972_<SeeDnldMap>	RD	Units: VDC
Cell Temperature Low Threshold	Analog_Value	3793	4973_<SeeDnldMap>	RD	Units: deg C
Cell Temperature Low Threshold	Analog_Value	23793	4973_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell Temperature High Threshold	Analog_Value	3794	4974_<SeeDnldMap>	RD	Units: deg C
Cell Temperature High Threshold	Analog_Value	23794	4974_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Low Threshold	Analog_Value	3795	4975_<SeeDnldMap>	RD	Units: microOhm
Internal Resistance High Threshold	Analog_Value	3796	4976_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance High Threshold	Analog_Value	3797	4977_<SeeDnldMap>	RD	Units: microOhm
Cell Entity 2					
Cell Voltage	Analog_Value	3808	4962_<SeeDnldMap>	RD	Units: VDC
Cell Temperature	Analog_Value	3809	4963_<SeeDnldMap>	RD	Units: deg C
Cell Temperature	Analog_Value	23809	4963_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Value	Analog_Value	3810	5443_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance Value	Analog_Value	3811	5444_<SeeDnldMap>	RD	Units: microOhm
Cell Entity 2 Threshold settings for a Cell 1					
Cell Voltage Low Threshold	Analog_Value	3822	4971_<SeeDnldMap>	RD	Units: VDC
Cell Voltage High Threshold	Analog_Value	3823	4972_<SeeDnldMap>	RD	Units: VDC
Cell Temperature Low Threshold	Analog_Value	3824	4973_<SeeDnldMap>	RD	Units: deg C

Table 4-76 Alber® BDSU™—Analog Data (continued)

Data Label	Object Type	Instance	Object Name	Access	Notes
Cell Temperature Low Threshold	Analog_Value	23824	4973_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell Temperature High Threshold	Analog_Value	3825	4974_<SeeDnldMap>	RD	Units: deg C
Cell Temperature High Threshold	Analog_Value	23825	4974_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Low Threshold	Analog_Value	3826	4975_<SeeDnldMap>	RD	Units: microOhm
Internal Resistance High Threshold	Analog_Value	3827	4976_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance High Threshold	Analog_Value	3828	4977_<SeeDnldMap>	RD	Units: microOhm
Cell Entity 360					
Cell Voltage	Analog_Value	14906	4962_<SeeDnldMap>	RD	Units: VDC
Cell Temperature	Analog_Value	14907	4963_<SeeDnldMap>	RD	Units: deg C
Cell Temperature	Analog_Value	34907	4963_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Value	Analog_Value	14908	5443_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance Value	Analog_Value	14909	5444_<SeeDnldMap>	RD	Units: microOhm
Cell Entity 360 Threshold settings for a Cell 1					
Cell Voltage Low Threshold	Analog_Value	14920	4971_<SeeDnldMap>	RD	Units: VDC
Cell Voltage High Threshold	Analog_Value	14921	4972_<SeeDnldMap>	RD	Units: VDC
Cell Temperature Low Threshold	Analog_Value	14922	4973_<SeeDnldMap>	RD	Units: deg C
Cell Temperature Low Threshold	Analog_Value	34922	4973_<SeeDnldMap>_deg_F	RD	Units: deg F
Cell Temperature High Threshold	Analog_Value	14923	4974_<SeeDnldMap>	RD	Units: deg C
Cell Temperature High Threshold	Analog_Value	34923	4974_<SeeDnldMap>_deg_F	RD	Units: deg F
Internal Resistance Low Threshold	Analog_Value	14924	4975_<SeeDnldMap>	RD	Units: microOhm
Internal Resistance High Threshold	Analog_Value	14925	4976_<SeeDnldMap>	RD	Units: microOhm
Intercell Resistance High Threshold	Analog_Value	14926	4977_<SeeDnldMap>	RD	Units: microOhm
UXCM Device					
System Date and Time	Analog_Value	14937	4293_<SeeDnldMap>	RD	—

Table 4-77 Alber® BDSU™—Multistate Data

Data Label	Object Type	Instance	Object Name	Access	Notes
Battery Measurement and Control					
System Status	MultiState_Value	1	4123_<SeeDnldMap>	RD	1 = Normal Operation 2 = StartUp 3 = Normal with Warning 4 = Normal with Alarm 5 = Abnormal Operation
String Entity 1 String Entity instances are assigned and configured to specific Battery Entity instances in a given BDSU device. Thus, their hierarchy mapping information is not known until the Liebert IS-UNITY-DP card connects with the device, discovers its populated modules, maps its data points to Instance numbers and generates a BACnetDataMap.txt file that can be downloaded from the Liebert IS-UNITY-DP card. The data points whose hierarchy mapping is determined at runtime have an Object Name that includes <*SeeDnldMap*>, which means the data point's hierarchy information is identified in the downloadable BACnetDataMap.txt file.					
Battery String Alarm Reset or Acknowledge	MultiState_Value	12	5435_<SeeDnldMap>	WO	1 = Reset 2 = Acknowledge
String Entity 1 String Startup Information 1					
Battery String Commissioned Status	MultiState_Value	23	5441_<SeeDnldMap>	RD	1 = Not Commissioned 2 = Commissioned
String Entity 2					
Battery String Alarm Reset or Acknowledge	MultiState_Value	34	5435_<SeeDnldMap>	WO	1 = Reset 2 = Acknowledge
String Entity 2 String Startup Information 1					
Battery String Commissioned Status	MultiState_Value	45	5441_<SeeDnldMap>	RD	1 = Not Commissioned 2 = Commissioned
String Entity 32					
Battery String Alarm Reset or Acknowledge	MultiState_Value	694	5435_<SeeDnldMap>	WO	1 = Reset 2 = Acknowledge
String Entity 32 String Startup Information 1					
Battery String Commissioned Status	MultiState_Value	705	5441_<SeeDnldMap>	RD	1 = Not Commissioned 2 = Commissioned

Table 4-78 Alber® BDSU™—Glossary

Data Label	Data Description
Amp-Hours Remaining in Battery String	Capacity (Amp-Hours) remaining in battery string.
Battery Discharge Time	The time on battery operation for this discharge
Battery Discharging	The battery is discharging
Battery Rating	Total rating of all parallel strings in the battery.
Battery String Alarm Reset or Acknowledge	Initiates a reset/clear or acknowledgement of all alarms on a battery-string and its associated cells.
Battery String Commissioned Status	Current commissioned status of battery string.
Battery String Current High Threshold	If the battery string current is above this value a high string current event is triggered.
Battery String Discharge Detected	The system has detected a battery string discharge condition.
Battery String Discharge Time	Total time the battery string is in discharge.
Battery String Equalize	The system has detected a battery string equalize condition.
Battery String Float Current High Threshold	If the battery string float current is above this value a high float current event is triggered.
Battery String Float Current Low Threshold	If the battery string float current is below this value a low float current event is triggered.
Battery String Offline	The system has detected the battery string is offline.
Battery String Overall Voltage High Threshold	If the battery string overall voltage is above this value a high overall voltage event is triggered.
Battery String Overall Voltage Low Threshold	If the battery string overall voltage is below this value a low overall voltage event is triggered
Battery String Ripple Current High Threshold	If the battery string ripple current is above this value a high ripple current event is triggered.
Battery String Time-To-Go	Time remaining (time-to-go) of battery string during a discharge.
Battery Time Remaining	The calculated available time on battery
Cell Temperature High Global Threshold	If the cell temperature is above this global threshold a high cell temperature event is triggered.
Cell Temperature High Threshold	If the cell temperature is above this value a high cell temperature event is triggered.
Cell Temperature Low Global Threshold	If the cell temperature is below this global threshold a low cell temperature event is triggered.
Cell Temperature Low Threshold	If the cell temperature is below this value a low cell temperature event is triggered.
Cell Temperature	Temperature reading of a Cell within a BAM device.
Cell to Ambient Temperature Deviation Threshold	If the cell to ambient temperature difference is above this value an excessive cell to ambient temperature deviation event is triggered
Cell to Cell Temperature Deviation Threshold	If the cell to cell temperature difference is above this value an excessive cell to cell temperature deviation event is triggered.
Cell Voltage High Global Threshold	If the cell voltage is above this global threshold a high cell voltage event is triggered.
Cell Voltage High Threshold	If the cell voltage is above this value a high cell voltage event is triggered
Cell Voltage Low Global Threshold	If the cell voltage is below this global threshold a low cell voltage event is triggered.
Cell Voltage Low Threshold	If the cell voltage is below this value a low cell voltage event is triggered
Cell Voltage	Voltage reading of a Cell within a BAM device.
Cell/Monobloc Rating	Name plate capacity rating of the Cell/Monobloc.
Discharge Battery String Current High Threshold	If the battery string current is above this value during a discharge a high battery string current during discharge event is triggered.
Discharge High Battery String Current	The system has detected a high battery string current condition during a discharge.

Table 4-78 Alber® BDSU™—Glossary (continued)

Data Label	Data Description (continued)
Discharge Low Cell Voltage Threshold	If the cell voltage is below this value during a discharge a low cell voltage during discharge event is triggered.
Discharge Low Cell Voltage	The system has detected a low cell voltage condition during a discharge.
Discharge Low Overall Voltage Threshold	If the battery string overall voltage is below this value during a discharge a low battery string overall voltage during discharge event is triggered.
Discharge Low Overall Voltage	The system has detected a low battery string overall voltage condition during a discharge.
Discharge Maximum Time	If the battery string is in discharge for a time greater than this value an excessive discharge time event is triggered.
Excessive Cell to Ambient Temperature Deviation	The system has detected an excessive cell to ambient temperature deviation condition.
Excessive Cell to Cell Temperature Deviation	The system has detected an excessive cell to cell temperature deviation condition.
Float Current	The current drawn by a battery string that is being float charged.
Ground Fault Detected	The system has detected a ground fault on a Battery-String.
High Ambient Temperature Global Threshold	If the battery string ambient temperature is above this global threshold a high ambient temperature event is triggered
High Ambient Temperature Probe Two	The system has detected a high ambient temperature condition on temperature probe 2.
High Ambient Temperature	The system has detected a high ambient temperature condition.
High Battery String Current	The system has detected a high battery string current condition.
High Battery String Float Current	The system has detected a high battery string float current condition.
High Battery String Ripple Current	The system has detected a high battery string ripple current condition.
High Cell Temperature	The system has detected a high cell temperature condition.
High Cell Voltage	The system has detected a high cell voltage condition.
High Intercell Resistance	The system has detected a high intercell resistance condition.
High Internal Resistance	The system has detected a high internal resistance condition.
High Overall Voltage	The system has detected a high battery string overall voltage condition.
Installation Date	Installation date of battery string
Intercell Resistance High Global Threshold	If the intercell resistance is above this global threshold a high intercell resistance event is triggered.
Intercell Resistance High Threshold	If the intercell resistance is above this value a high intercell resistance event is triggered.
Intercell Resistance Value	The total resistance of the connection between the terminals of two cells that are electrically connected to each other.
Internal Resistance High Global Threshold	If the internal cell resistance is above this global threshold a high internal cell resistance event is triggered.
Internal Resistance High Threshold	If the internal cell resistance is above this value a high internal cell resistance event is triggered.
Internal Resistance Low Global Threshold	If the internal cell resistance is below this global threshold a low internal cell resistance event is triggered.
Internal Resistance Low Threshold	If the internal cell resistance is below this value a low internal cell resistance event is triggered.
Internal Resistance Value	The measured internal resistance of a cell.
Intertier Resistance High Global Threshold	If the intertier resistance is above this global threshold a high intertier resistance event is triggered.
Intertier Resistance High	The system has detected a high intertier resistance condition.
Low Ambient Temperature Global Threshold	If the battery string ambient temperature is below this global threshold a low ambient temperature event is triggered.

Table 4-78 Alber® BDSU™—Glossary (continued)

Data Label	Data Description (continued)
Low Ambient Temperature Probe Two	The system has detected a low ambient temperature condition on temperature probe 2.
Low Ambient Temperature	The system has detected a low ambient temperature condition.
Low Battery String Float Current	The system has detected a low battery string float current condition.
Low Cell Temperature	The system has detected a low cell temperature condition.
Low Cell Voltage	The system has detected a low cell voltage condition.
Low Internal Resistance	The system has detected a low internal resistance condition.
Low Overall Voltage	The system has detected a low battery string overall voltage condition.
Maximum Discharge Time Exceeded	The system has detected an excessive discharge time condition.
Ripple Current	Ripple current on a string.
Startup Date	Startup date of monitoring system for this battery string.
String Ambient Temperature	Ambient temperature reading(s) for the battery string.
String Current	Discharge(-) or charge(+) current of a battery string.
String Overall Voltage	Overall voltage of a battery string.
System Date and Time	The system date and time
System Status	The operating status for the system
Thermal Runaway Cell to Ambient Temperature Event	The delta temperature between a cell temperature and the ambient temperature has exceeded the thermal runaway cell to ambient temperature threshold.
Thermal Runaway Cell to Cell Temperature Event	The delta temperature between two cells has exceeded the thermal runaway cell to cell temperature threshold.
Thermal Runaway Charger Current Level One Event	The Battery-String charger current has exceeded the thermal runaway charger current level one threshold.
Thermal Runaway Charger Current Level Two Event	The Battery-String charger current has exceeded the thermal runaway charger current level two threshold.
Thermal Runaway Detected	The system has detected a thermal runaway condition.
Total Active Alarms on a Battery String	The number of active alarms (maintenance or critical) on a battery string.

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