

*Liebert® IntelliSlot® Modbus RTU, Modbus TCP, BACnet MSTP and
BACnet IP
Reference Guide*

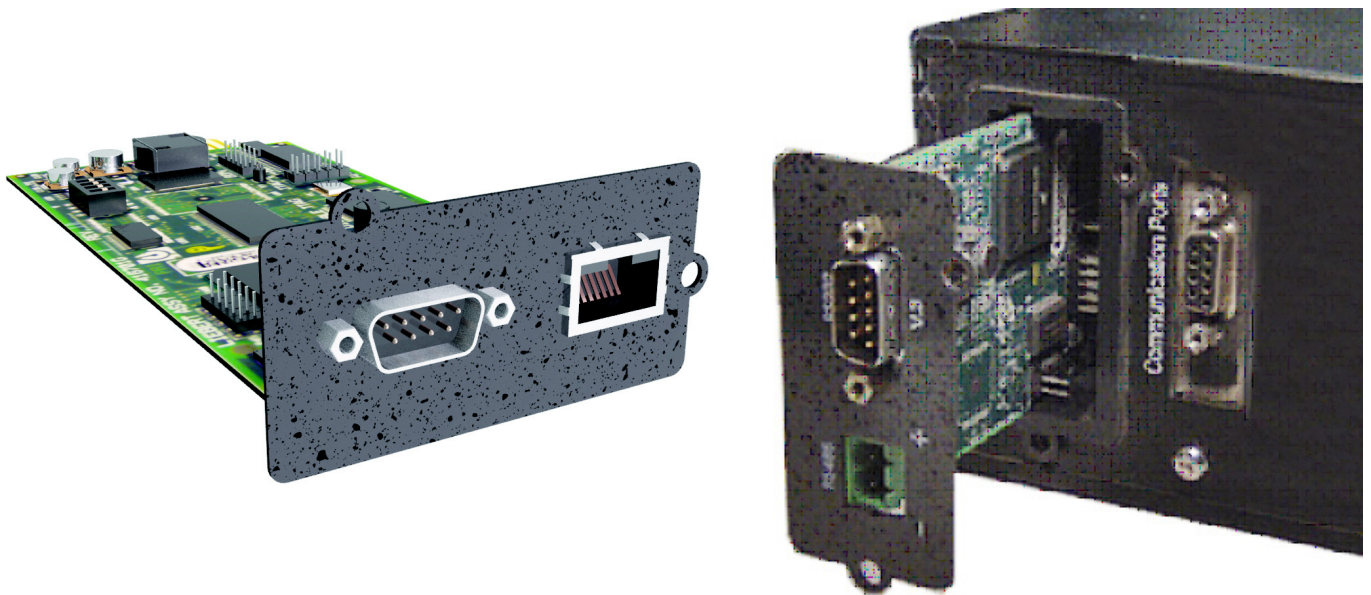


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1.0 LIEBERT EQUIPMENT COMPATIBILITY

1.1 What's New in This Manual

Emerson Network Power® has introduced a new Liebert IntelliSlot® card platform—the Liebert IntelliSlot Unity™ card. This platform combines the Modbus RTU, Modbus TCP, BACnet MSTP and BACnet IP outputs of existing cards into a common, unified platform. The Liebert IS-UNITY-DP card allows selecting two of the available protocols.

The Liebert IS-UNITY-DP card is interchangeable with the IS-485L, IS-485X, IS-IPBML, IS-IPBMX, IS-WEBL and IS-WEBX cards for the protocols offered. The information output by the Liebert Unity card is the same as the output of the IS-485L, IS-485X, IS-IPBML and IS-IPBMX cards. The card offers Modbus RTU/TCP and BACnet MSTP/IP.

The Liebert NX™ 225-600kVA UPS is also supported with the Chloride ManageUPS Net Adapter +B communication card so the Modbus mapping supported with this configuration has been included.

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.

1.2.1 How to Use This Manual

Table 1 shows the type of Liebert IntelliSlot card required for selected Liebert products. Find the product first and the Reference Table, the three 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.

1.3 Compatibility with Liebert Equipment

Table 1 Liebert Equipment and Compatible Liebert IntelliSlot Cards

| Product Supported | Refer to Tables: | Controller / Protocol | Compatible Card Part Number | | |
|--|------------------|-----------------------|-------------------------------------|---|--------------------------------|
| | | | Liebert IntelliSlot Modbus RTU Card | Liebert IntelliSlot Web / Modbus RTU Card | Modbus TCP / BACnet IP |
| MODBUS RTU & MODBUS TCP PROTOCOLS | | | | | |
| • Thermal Management Products | | | | | |
| Liebert Challenger 3000™ | 6-10 | Liebert iCOM® v4 | IS-485L IS-UNITY-DP | — | IS-IPBML IS-UNITY-DP |
| Liebert Challenger ITR™ | 6-10 | | | | |
| Liebert CRV™ | 11-13 | | | | |
| Liebert CW™ | 6-10 | | | | |
| Liebert DCP™ | 20-22 | | | | |
| Liebert Deluxe System/3™ | 6-10 | | | | |
| Liebert DS™ | 6-10 | | | | |
| Liebert DSE™ | 6-10 | | | | |
| Liebert HPC™ (Chiller) | 14-17 | | | | |
| Liebert HPM™ | 6-10 | | | | |
| Liebert PeX™ | 6-10 | | | | |
| Liebert PCW/PDX | 6-10 | | | | |
| Liebert XDC™ | 18-19 | | | | |
| Liebert XDP™ | 20-22 | | | | |
| Liebert DS | 23-24 | Liebert iCOM v3 | OC485-LBDS | — | — |
| Liebert PeX | 23-24 | | | | |
| Liebert XDF™ | 25-26 | | | | |
| Liebert Challenger 3000 | 27 | LAM | OC485-ADPT | IS-WEBADPT | — |
| Liebert Deluxe System/3 | 27 | | | | |
| Liebert Himod™ | 27 | | | | |
| Liebert ICS™ | 27 | | | | |
| Liebert DataMate™ | 28 | L0B | OC485-ADPT | IS-WEBADPT | — |
| Liebert Mini-Mate Plus™ | 28 | | | | |
| Liebert Mini-Mate2™ | 28 | | | | |
| Liebert DataMate™ | 29 | MM2 | OC485-ADPT | IS-WEBADPT | IS-WEBADPT (BACnet IP Only) |
| Liebert Mini-Mate2 | 29 | | | | |
| Liebert Mini-Mate2 8 Ton | 30 | L8T | OC485-ADPT | IS-WEBADPT | IS-WEBADPT (BACnet IP Only) |
| Liebert Atlas Air™ | 31 | C10 2-step | OC485-ADPT | IS-WEBADPT | — |
| Liebert Atlas PEC™ | 31 | | | | |
| Liebert LECS 15™ | 31 | | | | |
| Liebert Atlas Air | 32 | C100 4-step | OC485-ADPT | IS-WEBADPT | — |
| Liebert Atlas PEC | 32 | | | | |
| Liebert CEMS 100™ | 32 | | | | |

Table 1 Liebert Equipment and Compatible Liebert IntelliSlot Cards (continued)

| Product Supported | Refer to Tables: | Controller / Protocol | Compatible Card Part Number | | |
|--|------------------|-----------------------|-------------------------------------|---|------------------------------|
| | | | Liebert IntelliSlot Modbus RTU Card | Liebert IntelliSlot Web / Modbus RTU Card | Modbus TCP / BACnet IP |
| • Power Distribution & Power Conditioning Products | | | | | |
| Liebert EXC™ | 37, 38, 41 | LDMF | IS-485S | — | IS-485S (Modbus TCP only) |
| Liebert FDC™ | 37-41 | LDMF, CPM | | | |
| Liebert FPC™ | 35-41 | VPMP, LDMF, CPM | | | |
| Liebert PPC™ | 35-41 | | | | |
| Liebert RDC™ | 37-41 | LDMF, CPM | | | |
| Liebert RX™ | 39-41 | LDMF | | | |
| Liebert FPC | 33 | PMP2 | OC485-ADPT | IS-WEBADPT | — |
| Liebert PPC | 33 | | | | — |
| Liebert Datawave™ | 34 | PMP | OC485-ADPT | IS-WEBADPT | — |
| Liebert FPC | 34 | | | | — |
| Liebert PPC | 34 | | | | — |
| Liebert STS™ | 42 | STS | OC485-ADPT | IS-WEBADPT | — |
| Liebert STS/PDU™ | 42 | | | | — |
| Liebert STS2™ | 37-43 | STS2 | OC485-ADPT | IS-WEBADPT | — |
| Liebert STS2/PDU™ | 43 | | | | — |
| | | 37, 38, 41, 43 | STS2 with LDMF | | |
| • UPS Systems | | | | | |
| Liebert APM™ | 44-46 | — | IS-485L IS-UNITY-DP | — | IS-IPBML IS-UNITY-DP |
| Liebert APS™ | 47-49 | — | IS-UNITY-DP | — | IS-UNITY-DP |
| Liebert GXT2™ | 50-51 | — | OC-485 | — | — |
| Liebert GXT3™ | 50-51 | — | OC-485 | — | — |
| Liebert HiNet™ | 52-53 | — | OC-485 | — | — |
| Liebert Nfinity™ | 54-55 | — | OC-485 | — | — |
| Liebert NX™ | 56-57 | — | OC-485 | — | — |
| Liebert NXC™ | 44-46 | — | IS-485L IS-UNITY IS-UNITY-DP | — | IS-IPBML IS-UNITY-DP |
| Liebert NXR™ | 44-46 | — | IS-485L IS-UNITY-DP | — | IS-IPBML IS-UNITY-DP |
| Liebert NXL™ - 60 Hz, UL version (Model 40—SA, SR, SN, MM, CD) | 59-61 | — | IS-485X IS-UNITY-DP | — | IS-IPBMX IS-UNITY-DP |
| Liebert NXL™ - 50 Hz, CE version (Model 48 and 49—SA, SR, SN, MM, CD) | 62-64 | — | IS-UNITY-DP | — | IS-UNITY-DP |
| Liebert PowerSure Interactive™ | 65-66 | — | OC-485 | — | — |
| Liebert PowerSure Interactive 2™ | 67-68 | — | OC-485 | — | — |
| Liebert Series 300™ UPS | 69-70 | — | OC485-ADPT | IS-WEBADPT | — |
| Liebert Series 600™ UPS | 71-72 | — | OC485-ADPT | IS-WEBADPT | — |
| Liebert Series 610™ SCC UPS | 73-74 | — | OC485-ADPT | IS-WEBADPT | — |
| Liebert HiPulse™ | 75 | SMM/SSM | OC485-ADPT | IS-WEBADPT | — |
| Liebert SICE 7200™ | 75 | | | | |
| Liebert SICE 7200™ | 76 | SSC | OC485-ADPT | IS-WEBADPT | — |
| Liebert Npower™ | 77 | IMP | OC485-ADPT | IS-WEBADPT | — |

Table 1 Liebert Equipment and Compatible Liebert IntelliSlot Cards (continued)

| Product Supported | Refer to Tables: | Controller / Protocol | Compatible Card Part Number | | |
|--|------------------|-----------------------|-------------------------------------|---|-----------------------------|
| | | | Liebert IntelliSlot Modbus RTU Card | Liebert IntelliSlot Web / Modbus RTU Card | Modbus TCP / BACnet IP |
| • Battery Monitoring Products | | | | | |
| Alber BDSU™ | 78-79 | — | IS-485X | — | IS-IPBMX (Modbus TCP only) |
| BACNET MSTP and BACNET IP PROTOCOLS | | | | | |
| • Thermal Management Products | | | | | |
| Liebert Challenger 3000™ | 80-86 | Liebert iCOM v4 | — | — | IS-IPBML IS-UNITY-DP |
| Liebert Challenger ITR™ | 80-86 | | | | |
| Liebert CRV™ | 87-90 | | | | |
| Liebert CW™ | 80-86 | | | | |
| Liebert DCP™ | 96-99 | | | | |
| Liebert Deluxe System/3 | 80-86 | | | | |
| Liebert DS™ | 80-86 | | | | |
| Liebert DSE™ | 80-86 | | | | |
| Liebert HPC™ | 91-95 | | | | |
| Liebert HPM™ | 80-86 | | | | |
| Liebert PeX™ | 80-86 | | | | |
| Liebert PCW/PDX | 80-86 | | | | |
| Liebert XDC™ | 96-99 | | | | |
| Liebert XDP™ | 96-99 | | | | |
| Liebert DataMate™ | 100 | MM2 | — | — | IS-WEBADPT (BACnet IP only) |
| Liebert Mini-Mate2 | 100 | | | | |
| Liebert Mini-Mate2™ 8 Ton | 101 | L8T | — | — | |
| • Power Protection Products | | | | | |
| Liebert APM | 102-105 | — | IS-UNITY-DP | — | IS-UNITY-DP |
| Liebert APS | 106-109 | — | IS-UNITY-DP | — | IS-UNITY-DP |
| Liebert NXC™ | 102-105 | — | IS-UNITY-DP | — | IS-UNITY-DP |
| Liebert NXR™ | 102-105 | — | IS-UNITY-DP | — | IS-UNITY-DP |
| Liebert NXL- 60Hz, UL version (Model 40) | 110-113 | — | IS-UNITY-DP | — | IS-UNITY-DP |
| Liebert NXL™ - 50Hz, CE version (Models 48 and 49) | 114-117 | — | 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** below.

Table 2 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 3 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.

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.

2.4 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 4 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 5 Response sample

| Slave Address | Function Code | Count: Bytes of Data | Register | | | | | | CRC16 | |
|---------------|---------------|----------------------|------------|----|------------|----|------------|----|---------|---------|
| | | | 40051 Data | | 40052 Data | | 40053 Data | | Hi Byte | Lo Byte |
| | | | Hi | Lo | Hi | Lo | Hi | Lo | | |
| 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)

3.0 MODBUS RTU AND MODBUS TCP PROTOCOLS

3.1 Thermal Management Products

Table 6 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Status and Coil

| Controller | | Liebert iCOM® v4 | | | |
|---|---------------------------|------------------|--|-----------------------------|---------------------------|
| Liebert Products | Units with Liebert iCOM®: | | Units with Liebert iCOM Firmware PA1.04.033.STD or later: | | |
| | Liebert HPM | | 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 |
| Ext Reheat Lockout | 10009 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Humidifier Lockout | 10010 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Minimum Chilled Water Temp Set Point Enable | 10013 | 13 | 1 | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Sensor Event Control | 10019 | 19 | 1 | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Event Control | 10020 | 20 | 1 | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Compressor Lockout | 10021 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System On/Off Control | — | 25 | 1 | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan State | 10025 | — | 1 | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Cooling State | 10026 | — | 1 | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling State | 10027 | — | 1 | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Hot Water / Hot Gas State | 10028 | — | 1 | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheat State | 10029 | — | 1 | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier State | 10030 | — | 1 | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier State | 10031 | — | 1 | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Main Fan Overload | 10034 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Loss of Air Flow | 10035 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Loss of Flow | 10036 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Head Pressure | 10037 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Suction Pressure | 10038 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Thermal Overload | 10039 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Pump Down Issue | 10040 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Head Pressure 2 | 10041 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Suction Pressure 2 | 10042 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 6 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Status and Coil (continued)

| Controller | | Liebert iCOM® v4 | | | |
|------------------------------------|---------------------------|------------------|--|-----------------|---------------------------|
| Liebert Products | Units with Liebert iCOM®: | | Units with Liebert iCOM Firmware PA1.04.033.STD or later: | | |
| | Liebert HPM | | 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 |
| Compressor Thermal Overload 2 | 10043 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Pump Down Issue 2 | 10044 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Over Temp 1 | 10045 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Over Temp 2 | 10046 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Smoke Detected | 10047 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Water Under Floor | 10048 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Issue | 10049 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Standby Glycol Pump On | 10050 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Standby Unit On | 10051 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Condenser Pump High Water | 10052 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Sensor Issue | 10053 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Loss of Air Blower | 10055 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Low Water | 10058 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Over Current | 10059 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Over Temperature | 10060 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Shutdown - Loss Of Power | 10061 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Chilled Water Over Temp | 10065 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Over Temperature | 10067 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Under Temperature | 10068 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| High Return Humidity | 10069 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Low Return Humidity | 10070 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Over Temperature | 10071 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Under Temperature | 10072 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A High Humidity | 10073 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Low Humidity | 10074 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Chilled Water Loss of Flow | 10075 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Clogged Air Filter | 10076 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Sensor Issue | 10077 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Temp Sensor Issue | 10078 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Issue | 10079 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Hours Exceeded | 10080 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Hours Exceeded 1 | 10081 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Hours Exceeded 2 | 10082 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 6 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - 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 |
| Free Cooling Valve Hours Exceeded | 10083 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Exceeded 1 | 10084 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Exceeded 2 | 10085 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Exceeded 3 | 10086 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Hot Water / Hot Gas Valve Hours Exceeded | 10087 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Hours Exceeded | 10088 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier Hours Exceeded | 10089 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Communication Lost | 10091 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Master Unit Communication Lost | 10092 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Code Missing | 10094 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Service Required | 10098 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Control Board Not Detected | 10099 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 1 | 10104 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 2 | 10105 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 3 | 10106 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 4 | 10107 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Discharge Temp Sensor Issue 1 | 10108 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Discharge Temp Sensor Issue 2 | 10109 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Over Temperature | 10209 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Under Temperature | 10210 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ambient Air Sensor Issue | 10211 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Short Cycle 1 | 10212 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Short Cycle 2 | 10213 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Free Cooling Lockout | 10214 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheater Over Temperature | 10215 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Cylinder Worn | 10216 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Under Current | 10217 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Issue | 10218 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser TVSS Issue | 10219 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser VFD Issue | 10220 | — | 1 | Active on Alarm | 1, 2, 3, 5, 6, 7, 8 |
| Condenser Issue 1 | 10221 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser Issue 2 | 10222 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| BMS Communications Timeout | 10223 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 6 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - 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 |
| Digital Output Board Not Detected 1 | 10224 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Digital Output Board Not Detected 2 | 10225 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Digital Output Board Not Detected 3 | 10226 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| RAM Battery Issue | 10227 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Water Leakage Detector Sensor Issue | 10228 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| External Fire Detected | 10229 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Chilled Water Control Valve Failure 1 | 10230 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Chilled Water Control Valve Failure 2 | 10231 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Off | 10232 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit On | 10233 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Partial Shutdown | 10234 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Shutdown | 10235 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| High Power Shutdown | 10236 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Standby | 10237 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Maintenance Due | 10238 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Maintenance Completed | 10239 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Pressure Transducer Issue 1 | 10240 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Pressure Transducer Issue 2 | 10241 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Pressure Transducer Issue 1 | 10242 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Pressure Transducer Issue 2 | 10243 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Capacity Reduced | 10244 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dew Point Over Temperature | 10345 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Dew Point Under Temperature | 10346 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Dew Point Over Temperature | 10347 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Dew Point Under Temperature | 10348 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Superheat Over Threshold 1 | 10349 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Superheat Over Threshold 2 | 10350 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Unspecified General Event | 10351 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Average Over Temperature | 10352 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Average Under Temperature | 10353 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Average Over Temperature | 10354 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Average Under Temperature | 10355 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 6 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - 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 |
| Remote Sensor Over Temperature 1 | 10356 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 2 | 10357 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 3 | 10358 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 4 | 10359 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 5 | 10360 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 6 | 10361 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 7 | 10362 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 8 | 10363 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 9 | 10364 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temperature 10 | 10365 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 1 | 10366 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 2 | 10367 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 3 | 10368 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 4 | 10369 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 5 | 10370 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 6 | 10371 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 7 | 10372 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 8 | 10373 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 9 | 10374 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature 10 | 10375 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 1 | 10376 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 2 | 10377 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 3 | 10378 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 4 | 10379 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 5 | 10380 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 6 | 10381 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 7 | 10382 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 8 | 10383 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 9 | 10384 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue 10 | 10385 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Economizer Emergency Override | 10386 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Economizer Reduced Airflow | 10387 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Temperature Control Sensor Issue | 10388 | — | 1 | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 6 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - 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 |
| EEV Unspecified General Event | 10488 | — | 1 | Active on Alarm | 6, 7, 8, 9 |
| Static Pressure Sensor Issue | 10489 | — | 1 | Active on Alarm | 3, 4, 5, 7, 8, 9 |
| High Static Pressure | 10490 | — | 1 | Active on Alarm | 3, 4, 5, 7, 8, 9 |
| Low Static Pressure | 10491 | — | 1 | Active on Alarm | 3, 4, 5, 7, 8, 9 |
| Pump Unspecified General Event | 10492 | — | 1 | Active on Alarm | 6, 7, 8, 9 |
| Condenser Unit Unspecified General Event | 10493 | — | 1 | Active on Alarm | 3, 4, 5, 6, 7, 8, 9 |
| Condenser Circuit Unspecified General Event | 10494 | — | 1 | Active on Alarm | 3, 4, 5, 6, 7, 8, 9 |
| Input Undervoltage 1 | 10500 | — | 1 | Active on Alarm | 5 |
| Input Undervoltage 2 | 10501 | — | 1 | Active on Alarm | 5 |
| Input Undervoltage 3 | 10502 | — | 1 | Active on Alarm | 5 |
| Input Undervoltage 4 | 10503 | — | 1 | Active on Alarm | 5 |
| Input Undervoltage 5 | 10504 | — | 1 | Active on Alarm | 5 |
| Input Undervoltage 6 | 10505 | — | 1 | Active on Alarm | 5 |
| Return Humidity Sensor Issue | 10600 | — | 1 | Active on Alarm | 4, 5, 7, 8, 9 |
| Compressor Low Differential Pressure Lockout 1 | 10601 | — | 1 | Active on Alarm | 7, 8, 9 |
| Compressor Low Differential Pressure Lockout 2 | 10602 | — | 1 | Active on Alarm | 7, 8, 9 |
| Airflow Sensor Issue | 10603 | — | 1 | Active on Alarm | 4, 5, 7, 8, 9 |
| Ext Air Damper Position Issue | 10604 | — | 1 | Active on Alarm | 4, 5, 7, 8, 9 |
| Ext Power Source A Failure | 10605 | — | 1 | Active on Alarm | 4, 5, 7, 8, 9 |
| Ext Power Source B Failure | 10606 | — | 1 | Active on Alarm | 4, 5, 7, 8, 9 |
| Static Pressure Sensor Out of Range | 10607 | — | 1 | Active on Alarm | 4, 5, 7, 8, 9 |
| Fluid Temperature Sensor Issue 1 | 10608 | — | 1 | Active on Alarm | 5 |
| Fluid Temperature Sensor Issue 2 | 10609 | — | 1 | Active on Alarm | 5 |
| Fluid Flow Sensor Issue 1 | 10610 | — | 1 | Active on Alarm | 5 |
| Fluid Flow Sensor Issue 2 | 10611 | — | 1 | Active on Alarm | 5 |
| Mixed Mode Lockout | 10620 | — | 1 | Active on Alarm | 7, 8, 9 |
| Aux Air Temp Device Communication Lost | 10630 | — | 1 | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost 1 | 10640 | — | 1 | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost 2 | 10641 | — | 1 | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost 3 | 10642 | — | 1 | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost 4 | 10643 | — | 1 | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost 5 | 10644 | — | 1 | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost 6 | 10645 | — | 1 | Active on Alarm | 5 |

Table 6 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - 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 |
| External Condenser TVSS Issue | 10655 | — | 1 | Active on Alarm | 4, 9 |
| External Condenser VFD Issue | 10656 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Outside Air Temp Out of Operating Range 1 | 10677 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Outside Air Temp Out of Operating Range 2 | 10678 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Control Board Issue 1 | 10679 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Control Board Issue 2 | 10680 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Outside Air Temp Sensor Issue 1 | 10681 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Outside Air Temp Sensor Issue 2 | 10682 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Communication Lost 1 | 10683 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Communication Lost 2 | 10684 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Remote Shutdown 1 | 10685 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Remote Shutdown 2 | 10686 | — | 1 | Active on Alarm | 4, 9 |
| Condenser TVSS Issue 1 | 10687 | — | 1 | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser TVSS Issue 2 | 10688 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Sensor Issue 1 | 10699 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Sensor Issue 2 | 10700 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Under Threshold 1 | 10701 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Under Threshold 2 | 10702 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Over Threshold 1 | 10703 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Over Threshold 2 | 10704 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Temp Sensor Issue 1 | 10705 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Temp Sensor Issue 2 | 10706 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Under Temp 1 | 10707 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Under Temp 2 | 10708 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Over Temp 1 | 10709 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Over Temp 2 | 10710 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Max Fan Speed Override 1 | 10711 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Max Fan Speed Override 2 | 10712 | — | 1 | Active on Alarm | 4, 9 |

Table 6 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - 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 |
| Condenser Fan Issue 1 | 10723 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Fan Issue 2 | 10724 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Fan Issue 3 | 10725 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Fan Issue 4 | 10726 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Fan Issue 5 | 10727 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Fan Issue 6 | 10728 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Fan Issue 7 | 10729 | — | 1 | Active on Alarm | 4, 9 |
| Condenser Fan Issue 8 | 10730 | — | 1 | Active on Alarm | 4, 9 |

Table 7 Extra notes key to Table 6

| 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 2.01.29.03R |
| 4 | This point is supported on: iCOM controller version 2.01.29.06R |
| 5 | This point is supported on: iCOM controller version 2.01.40R |
| 6 | This point is supported on: iCOM controller version 2.02.21R |
| 7 | This point is supported on: iCOM controller version 2.03.27.06R |
| 8 | This point is supported on: iCOM controller version 2.03.32R |
| 9 | This point is supported on: iCOM controller version 2.03.33R |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding

| Controller | | Liebert iCOM v4 | | | | |
|--|----------------|------------------|-----------|-------|--|------------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Free Cooling Internal Control Mode | 30017 | 40017 | 1 | — | 0 = Disabled 1 = Contact 2 = Value | 1 |
| Humidity Proportional Control Type | 30018 | 40018 | 1 | — | 0 = Relative 1 = Compensated 2 = Predictive | 1 |
| Fan Speed Maximum Set Point | 30019 | 40019 | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Temperature Set Point | 30020 | 40020 | 1 | — | deg C | 1 |
| Supply Air Temperature Set Point | 30733 | 40733 | 1 | — | deg F | 1 |
| Free Cooling Internal Temperature Delta | 30021 | 40021 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Internal Temperature Delta | 30734 | 40734 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Minimum Chilled Water Temp Set Point | 30022 | 40022 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Minimum Chilled Water Temp Set Point | 30735 | 40735 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Set Point | 30023 | 40023 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Set Point | 30736 | 40736 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Proportional Band | 30024 | 40024 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Proportional Band | 30737 | 40737 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Dead Band | 30025 | 40025 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Dead Band | 30738 | 40738 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Control Integration Time | 30026 | 40026 | 1 | 10 | min | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Set Point | 30027 | 40027 | 1 | — | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Proportional Band | 30028 | 40028 | 1 | — | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Proportional Control Integration Time | 30029 | 40029 | 1 | 10 | min | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Dead Band | 30030 | 40030 | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Auto Restart Delay | 30031 | 40031 | 1 | — | sec | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Control Type | 30033 | 40033 | 1 | — | 0 = Proportional 1 = Prop+Integral 3 = Intelligent | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| BMS Timeout Period | 30045 | 40045 | 1 | — | min | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Over Temp Threshold | 30050 | 40050 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|---|----------------|------------------|-----------|-------|---|---------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Return Air Over Temp Threshold | 30739 | 40739 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Under Temp Threshold | 30051 | 40051 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Under Temp Threshold | 30740 | 40740 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Over Temp Threshold | 30052 | 40052 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Over Temp Threshold | 30741 | 40741 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Under Temp Threshold | 30053 | 40053 | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Under Temp Threshold | 30742 | 40742 | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| High Return Humidity Threshold | 30054 | 40054 | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Low Return Humidity Threshold | 30055 | 40055 | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A High Humidity Threshold | 30056 | 40056 | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Low Humidity Threshold | 30057 | 40057 | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Hours Threshold | 30070 | 40070 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Hours Threshold 1 | 30071 | 40071 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Hours Threshold 2 | 30072 | 40072 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Hours Threshold | 30073 | 40073 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier Hours Threshold | 30074 | 40074 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Valve Hours Threshold | 30075 | 40075 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Threshold 1 | 30076 | 40076 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Threshold 2 | 30077 | 40077 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Threshold 3 | 30078 | 40078 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Hot Water / Hot Gas Valve Hours Threshold | 30079 | 40079 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System Operating State | 30100 | — | 1 | — | 0 = off 1 = on 2 = standby | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|----------------------------------|----------------|------------------|-----------|-------|-------------------------------------|---------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Fan Speed | 30103 | — | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Utilization | 30104 | — | 1 | — | % | 1 |
| Free Cooling Valve Open Position | 30105 | — | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheat Utilization | 30106 | — | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Utilization | 30107 | — | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier Utilization | 30108 | — | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Status | 30109 | — | 1 | — | 0 = off 2 = on 3 = No Support | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Temperature | 30110 | — | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Temperature | 30743 | — | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Temperature | 30112 | — | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Temperature | 30744 | — | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Temperature Set Point | 30113 | — | 1 | — | deg C | 1 |
| Supply Air Temperature Set Point | 30745 | — | 1 | — | deg F | 1 |
| Free Cooling Fluid Temperature | 30115 | — | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Fluid Temperature | 30746 | — | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Temperature | 30116 | — | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Temperature | 30747 | — | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor B Temperature | 30117 | — | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor B Temperature | 30748 | — | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor C Temperature | 30118 | — | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor C Temperature | 30749 | — | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Discharge Temp 1 | 30119 | — | 1 | — | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Discharge Temp 1 | 30750 | — | 1 | — | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Discharge Temp 2 | 30120 | — | 1 | — | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Discharge Temp 2 | 30751 | — | 1 | — | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|-----------------------------------|----------------|------------------|-----------|-------|--|---------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Return Humidity | 30130 | — | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Humidity | 30132 | — | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor B Humidity | 30133 | — | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor C Humidity | 30134 | — | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Hours | 30141 | 40141 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Hours 1 | 30142 | 40142 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Hours 2 | 30143 | 40143 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Hours | 30144 | 40144 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier Hours | 30145 | 40145 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Valve Hours | 30146 | 40146 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours 1 | 30147 | 40147 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours 2 | 30148 | 40148 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours 3 | 30149 | 40149 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Hot Water / Hot Gas Valve Hours | 30150 | 40150 | 1 | — | hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's High Air Temperature | 30151 | — | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's High Air Temperature | 30752 | — | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's Low Air Temperature | 30153 | — | 1 | 10 | deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's Low Air Temperature | 30753 | — | 1 | 10 | deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's High Humidity | 30155 | — | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's Low Humidity | 30157 | — | 1 | 10 | % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Server Class | 30257 | — | 1 | — | 1 = UPS 2 = AIR 3 = PMP 4 = PDU | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's High Air Temperature Time | 30258 | — | 2 | — | Seconds since Midnight | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's Low Air Temperature Time | 30260 | — | 2 | — | Seconds since Midnight | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|---|----------------|------------------|-----------|-------|--|------------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Supply Air Temperature Sensor Control | 30262 | 40262 | 1 | — | 0 = Disabled 1 = Limit 2 = Control 3 = Temp Only | 1 |
| Return Air Temperature Set Point | 30263 | 40263 | 1 | — | deg C | 1 |
| Return Air Temperature Set Point | 30754 | 40754 | 1 | — | deg F | 1 |
| Return Humidity Set Point | 30264 | 40264 | 1 | — | % RH | 1 |
| Today's High Humidity Time | 30265 | — | 2 | — | Seconds since Midnight | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's Low Humidity Time | 30267 | — | 2 | — | Seconds since Midnight | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fixed Compressor State 1 | 30269 | — | 1 | — | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fixed Compressor State 2 | 30270 | — | 1 | — | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Capacity Control State 1 | 30271 | — | 1 | — | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Capacity Control State 2 | 30272 | — | 1 | — | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Infrared Humidifier Flush Rate | 30273 | 40273 | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Control Mode | 30274 | 40274 | 1 | — | 0 = Auto 1 = Manual 2 = Economy 4 = Delta | 1 |
| Analog Input Reading 1 | 30275 | — | 1 | 100 | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Analog Input Reading 2 | 30276 | — | 1 | 100 | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Analog Input Reading 3 | 30277 | — | 1 | 100 | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Analog Input Reading 4 | 30278 | — | 1 | 100 | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System Control Mode | 30280 | — | 1 | — | 0 = Internal (Auto) 1 = External (Manual) | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System 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 |
| Maintenance Ramp | 30282 | — | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Calculated Next Maintenance Month | 30283 | — | 1 | — | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Calculated Next Maintenance Year | 30284 | — | 1 | — | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Hot Water / Hot Gas Valve Open Position | 30285 | — | 1 | — | % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|---|----------------|------------------|-----------|-------|---|------------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Maintenance Tracking State | 30286 | — | 1 | — | 0 = off 1 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 1 - Event Control | 30287 | 40287 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 1 - Event Type | 30288 | 40288 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 2 - Event Control | 30289 | 40289 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 2 - Event Type | 30290 | 40290 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 3 - Event Control | 30291 | 40291 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 3 - Event Type | 30292 | 40292 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 4 - Event Control | 30293 | 40293 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 4 - Event Type | 30294 | 40294 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Free Cooling Lockout - Event Control | 30295 | 40295 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Free Cooling Lockout - Event Type | 30296 | 40296 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Condenser Pump High Water - Event Control | 30297 | 40297 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Standby Glycol Pump On - Event Control | 30299 | 40299 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Standby Unit On - Event Control | 30301 | 40301 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Standby Unit On - Event Type | 30302 | 40302 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Humidifier Lockout - Event Control | 30303 | 40303 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Humidifier Lockout - Event Type | 30304 | 40304 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Loss of Flow - Event Control | 30305 | 40305 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|--|----------------|------------------|-----------|-------|---|------------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Ext Loss of Flow - Event Type | 30306 | 40306 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Over Temperature - Event Control | 30307 | 40307 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Over Temperature - Event Type | 30308 | 40308 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Reheat Lockout - Event Control | 30309 | 40309 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Reheat Lockout - Event Type | 30310 | 40310 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| High Power Shutdown - Event Control | 30311 | 40311 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| High Power Shutdown - Event Type | 30312 | 40312 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Issue - Event Control | 30313 | 40313 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Issue - Event Type | 30314 | 40314 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Master Unit Communication Lost - Event Control | 30315 | 40315 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Master Unit Communication Lost - Event Type | 30316 | 40316 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Service Required - Event Control | 30317 | 40317 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Service Required - Event Type | 30318 | 40318 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Shutdown - Loss Of Power - Event Control | 30319 | 40319 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Shutdown - Loss Of Power - Event Type | 30320 | 40320 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Smoke Detected - Event Control | 30321 | 40321 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Smoke Detected - Event Type | 30322 | 40322 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Water Under Floor - Event Control | 30323 | 40323 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Water Under Floor - Event Type | 30324 | 40324 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Compressor Lockout - Event Control | 30325 | 40325 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|---|----------------|------------------|-----------|-------|---|------------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Ext Compressor Lockout - Event Type | 30326 | 40326 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Clogged Air Filter - Event Control | 30327 | 40327 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Clogged Air Filter - Event Type | 30328 | 40328 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Loss of Air Blower - Event Control | 30329 | 40329 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Compressor High Head Pressure - Event Control 1 | 30331 | 40331 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Head Pressure - Event Control 2 | 30332 | 40332 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| Compressor Low Suction Pressure - Event Control 1 | 30335 | 40335 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Suction Pressure - Event Control 2 | 30336 | 40336 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| Compressor Pump Down Issue - Event Control 1 | 30339 | 40339 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Pump Down Issue - Event Control 2 | 30340 | 40340 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| Compressor Short Cycle - Event Control 1 | 30343 | 40343 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Short Cycle - Event Control 2 | 30344 | 40344 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Short Cycle - Event Type 1 | 30345 | 40345 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|--|----------------|------------------|-----------|-------|---|------------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Compressor Short Cycle - Event Type 2 | 30346 | 40346 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Thermal Overload - Event Control 1 | 30347 | 40347 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Thermal Overload - Event Control 2 | 30348 | 40348 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Thermal Overload - Event Type 1 | 30349 | 40349 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Thermal Overload - Event Type 2 | 30350 | 40350 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |
| 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 |
| Ext Air Sensor A High Humidity - Event Control | 30355 | 40355 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Air Sensor A Low Humidity - Event Control | 30357 | 40357 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Air Sensor A Over Temp - Event Control | 30359 | 40359 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Air Sensor A Under Temp - Event Control | 30361 | 40361 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| High Return Humidity - Event Control | 30363 | 40363 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| High Return Humidity - Event Type | 30364 | 40364 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Low Return Humidity - Event Control | 30365 | 40365 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|---------------------------------------|----------------|------------------|-----------|-------|---|------------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Low Return Humidity - Event Type | 30366 | 40366 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Over Temp - Event Control | 30367 | 40367 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Over Temp - Event Type | 30368 | 40368 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Under Temp - Event Control | 30369 | 40369 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Under Temp - Event Type | 30370 | 40370 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Hours Exceeded - Event Control | 30371 | 40371 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Hours Exceeded - Event Type | 30372 | 40372 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Issue - Event Control | 30373 | 40373 | 1 | — | 0 = disabled 1 = enabled | 1 |
| Fan Issue - Event Type | 30374 | 40374 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1 |
| Main Fan Overload - Event Control | 30375 | 40375 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Main Fan Overload - Event Type | 30376 | 40376 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser Issue - Event Control 1 | 30377 | 40377 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser Issue - Event Control 2 | 30378 | 40378 | 1 | — | 0 = disabled 1 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser Issue - Event Type 1 | 30379 | 40379 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser Issue - Event Type 2 | 30380 | 40380 | 1 | — | 0 = Message 1 = Warning 2 = Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System Event Acknowledge/Reset | — | 40381 | 1 | — | 2 = Reset 4 = Acknowledge | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Control Sensor | 30481 | 40481 | 1 | — | 0 = Supply 1 = Remote 2 = Return | 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Over Temp Threshold | 30482 | 40482 | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Over Temp Threshold | 30755 | 40755 | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Under Temp Threshold | 30483 | 40483 | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Under Temp Threshold | 30756 | 40756 | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|------------------------------------|----------------|------------------|-----------|-------|--|------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Outside Air Temperature | 30484 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Outside Air Temperature | 30757 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Proportional Control Type | 30485 | 40485 | 1 | — | 0 = Relative 1 = Compensated 2 = Predictive 3 = Dew Point | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Dew Point Temp | 30486 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor A Dew Point Temp | 30758 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Dew Point Over Temp Threshold | 30487 | 40487 | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Dew Point Over Temp Threshold | 30759 | 40759 | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Dew Point Under Temp Threshold | 30488 | 40488 | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Dew Point Under Temp Threshold | 30760 | 40760 | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Lockout | 30489 | 40489 | 1 | — | 0 = disabled 1 = enabled | 2, 3, 4, 5, 6, 7, 8, 9 |
| Main Chilled Water Valve | 30491 | 40491 | 1 | — | 0 = Valve 1 1 = Valve 2 | 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheater Lockout | 30492 | 40492 | 1 | — | 0 = disabled 1 = enabled | 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Lockout | 30493 | 40493 | 1 | — | 0 = disabled 1 = enabled | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Control Sensor | 30494 | 40494 | 1 | — | 0 = Supply 1 = Remote 2 = Return 3 = Manual | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Minimum Set Point | 30495 | 40495 | 1 | — | % | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Temperature Set Point | 30497 | 40497 | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Temperature Set Point | 30761 | 40761 | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Standby Units | 30498 | 40498 | 1 | — | | 2, 3, 4, 5, 6, 7, 8, 9 |
| Adjusted Humidity | 30499 | — | 1 | 10 | % RH | 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Dew Point | 30500 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Dew Point | 30762 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Actual Air Temperature Set Point | 30501 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Actual Air Temperature Set Point | 30763 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|---|----------------|------------------|-----------|-------|-----------------------------|------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Actual Humidity Set Point | 30502 | — | 1 | — | % RH | 2, 3, 4, 5, 6, 7, 8, 9 |
| Dew Point Set Point | 30503 | 40503 | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Dew Point Set Point | 30764 | 40764 | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Over/Under Temperature - Event Control | 30504 | 40504 | 1 | — | 0 = disabled 1 = enabled | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temp Threshold | 30505 | 40505 | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temp Threshold | 30765 | 40765 | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temp Threshold | 30506 | 40506 | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temp Threshold | 30766 | 40766 | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Average Temperature | 30507 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Average Temperature | 30767 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Maximum Temperature | 30508 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Maximum Temperature | 30768 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Average Temperature | 30509 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Average Temperature | 30769 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Maximum Temperature | 30510 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Maximum Temperature | 30770 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 1 | 30551 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 1 | 30771 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 2 | 30552 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 2 | 30772 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 3 | 30553 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 3 | 30773 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 4 | 30554 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 4 | 30774 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|-------------------------------------|----------------|------------------|-----------|-------|---|------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Remote Sensor Temperature 5 | 30555 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 5 | 30775 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 6 | 30556 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 6 | 30776 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 7 | 30557 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 7 | 30777 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 8 | 30558 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 8 | 30778 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 9 | 30559 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 9 | 30779 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 10 | 30560 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature 10 | 30780 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Economizer Availability | 30561 | — | 1 | — | 0 = Not Available 1 = Available | 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Economizer Control Source | 30562 | 40562 | 1 | — | 0 = disabled 1 = internal 2 = external | 2, 3, 4, 5, 6, 7, 8, 9 |
| Chilled Water Valve Hours | 30563 | 40563 | 1 | — | hr | 2, 3, 4, 5, 6, 7, 8, 9 |
| Cooling Capacity | 30564 | — | 1 | — | % | 2, 3, 4, 5, 6, 7, 8, 9 |
| Cooling Control Temperature | 30565 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Cooling Control Temperature | 30781 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Control Temperature | 30566 | — | 1 | 10 | deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Control Temperature | 30782 | — | 1 | 10 | deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Internal Control Mode | 30567 | 40567 | 1 | — | 0 = Disabled 1 = Contact 2 = Temperature 3 = Set Point | 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Control Sensor | 30667 | 40667 | 1 | — | 0 = Supply 1 = Remote 2 = Return | 3, 4, 5, 6, 7, 8, 9 |
| Digital Scroll Compressor Loading 1 | 30668 | — | 1 | — | % | 3, 4, 5, 6, 7, 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|---|----------------|------------------|-----------|-------|---|---------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Digital Scroll Compressor Loading 2 | 30669 | — | 1 | — | % | 3, 4, 5, 6, 7, 8, 9 |
| Static Pressure Set Point | 30672 | 40672 | 1 | 10 | Pa | 3, 4, 5, 9 |
| Unit Static Pressure | 30673 | — | 1 | 10 | Pa | 3, 4, 5, 9 |
| System Static Pressure | 30674 | — | 1 | 10 | Pa | 3, 4, 5, 9 |
| Condenser Low Noise Mode State | 30675 | — | 1 | — | 0 = Inactive 1 = Active (Interval) 2 = Active (Full Day) | 3, 4, 5, 6, 7, 8, 9 |
| Condenser Low Noise Mode Schedule Control | 30676 | 40676 | 1 | — | 0 = disabled 1 = enabled | 3, 4, 5, 6, 7, 8, 9 |
| Condenser Low Noise Mode Max Fan Speed | 30677 | 40677 | 1 | — | % | 3, 4, 5, 6, 7, 8, 9 |
| Condenser Normal Mode Max Fan Speed | 30678 | 40678 | 1 | — | % | 3, 4, 5, 6, 7, 8, 9 |
| 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, 9 |
| 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, 9 |
| Condenser Low Noise Mode Start Time | 30681 | 40681 | 2 | — | Seconds since Midnight | 3, 4, 5, 6, 7, 8, 9 |
| Condenser Low Noise Mode Stop Time | 30683 | 40683 | 2 | — | Seconds since Midnight | 3, 4, 5, 6, 7, 8, 9 |
| Pump Hours 1 | 30685 | 40685 | 2 | — | hr | 7, 8, 9 |
| Pump Hours 2 | 30687 | 40687 | 2 | — | hr | 7, 8, 9 |
| System Input RMS A-N 1 | 30800 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-N 2 | 30801 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-N 3 | 30802 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-N 4 | 30803 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-N 5 | 30804 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-N 6 | 30805 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-N 1 | 30810 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-N 2 | 30811 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-N 3 | 30812 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-N 4 | 30813 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-N 5 | 30814 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-N 6 | 30815 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-N 1 | 30820 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-N 2 | 30821 | — | 1 | 10 | VAC | 5 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|------------------------------------|----------------|------------------|-----------|-------|---------------|-------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| System Input RMS C-N 3 | 30822 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-N 4 | 30823 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-N 5 | 30824 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-N 6 | 30825 | — | 1 | 10 | VAC | 5 |
| System Input RMS Current Phase A 1 | 30830 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase A 2 | 30831 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase A 3 | 30832 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase A 4 | 30833 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase A 5 | 30834 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase A 6 | 30835 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase B 1 | 30840 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase B 2 | 30841 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase B 3 | 30842 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase B 4 | 30843 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase B 5 | 30844 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase B 6 | 30845 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase C 1 | 30850 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase C 2 | 30851 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase C 3 | 30852 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase C 4 | 30853 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase C 5 | 30854 | — | 1 | 10 | A AC | 5 |
| System Input RMS Current Phase C 6 | 30855 | — | 1 | 10 | A AC | 5 |
| Energy Consumption 1 | 30870 | 40870 | 2 | — | kWH | 5 |
| Energy Consumption 2 | 30872 | 40872 | 2 | — | kWH | 5 |
| Energy Consumption 3 | 30874 | 40874 | 2 | — | kWH | 5 |
| Energy Consumption 4 | 30876 | 40876 | 2 | — | kWH | 5 |
| Energy Consumption 5 | 30878 | 40878 | 2 | — | kWH | 5 |
| Energy Consumption 6 | 30880 | 40880 | 2 | — | kWH | 5 |
| Fluid Input Temperature 1 | 30900 | — | 1 | 10 | deg C | 5 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|----------------------------------|----------------|------------------|-----------|-------|-------------------|-------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Fluid Input Temperature 2 | 30901 | — | 1 | 10 | deg C | 5 |
| Fluid Input Temperature 1 | 30902 | — | 1 | 10 | deg F | 5 |
| Fluid Input Temperature 2 | 30903 | — | 1 | 10 | deg F | 5 |
| Fluid Output Temperature 1 | 30904 | — | 1 | 10 | deg C | 5 |
| Fluid Output Temperature 2 | 30905 | — | 1 | 10 | deg C | 5 |
| Fluid Output Temperature 1 | 30906 | — | 1 | 10 | deg F | 5 |
| Fluid Output Temperature 2 | 30907 | — | 1 | 10 | deg F | 5 |
| Fluid Flow Rate 1 | 30908 | — | 2 | 10 | l/min | 5 |
| Fluid Flow Rate 2 | 30910 | — | 2 | 10 | l/min | 5 |
| Unit Cooling Load | 31001 | — | 2 | 10 | kW | 5 |
| Circuit Cooling Load 1 | 31003 | — | 2 | 10 | kW | 5 |
| Circuit Cooling Load 2 | 31005 | — | 2 | 10 | kW | 5 |
| Instantaneous Power 1 | 31010 | — | 2 | — | W | 5 |
| Instantaneous Power 2 | 31012 | — | 2 | — | W | 5 |
| Instantaneous Power 3 | 31014 | — | 2 | — | W | 5 |
| Instantaneous Power 4 | 31016 | — | 2 | — | W | 5 |
| Instantaneous Power 5 | 31018 | — | 2 | — | W | 5 |
| Instantaneous Power 6 | 31020 | — | 2 | — | W | 5 |
| Raw Auxiliary Air Temperature | 31050 | 41050 | 1 | 10 | deg C | 5 |
| Raw Auxiliary Air Temperature | 31051 | 41051 | 1 | 10 | deg F | 5 |
| Actual Auxiliary Air Temperature | 31052 | — | 1 | 10 | deg C | 5 |
| Actual Auxiliary Air Temperature | 31053 | — | 1 | 10 | deg F | 5 |
| System Input RMS A-B 1 | 31060 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-B 2 | 31061 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-B 3 | 31062 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-B 4 | 31063 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-B 5 | 31064 | — | 1 | 10 | VAC | 5 |
| System Input RMS A-B 6 | 31065 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-C 1 | 31070 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-C 2 | 31071 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-C 3 | 31072 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-C 4 | 31073 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-C 5 | 31074 | — | 1 | 10 | VAC | 5 |
| System Input RMS B-C 6 | 31075 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-A 1 | 31080 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-A 2 | 31081 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-A 3 | 31082 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-A 4 | 31083 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-A 5 | 31084 | — | 1 | 10 | VAC | 5 |
| System Input RMS C-A 6 | 31085 | — | 1 | 10 | VAC | 5 |
| Pump State 1 | 31100 | — | 1 | — | 0 = off 1 = on | 8, 9 |

Table 8 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Input and Holding (continued)

| Controller | | Liebert iCOM v4 | | | | |
|--|----------------|------------------|-----------|-------|-----------------------------------|------------------------------|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units | Extra Notes |
| Pump State 2 | 31110 | — | 1 | — | 0 = off 1 = on | 8, 9 |
| Expected Condenser Unit Count | 31130 | — | 1 | — | | 4, 9 |
| Condenser Refrigerant Type | 31131 | — | 1 | — | 0 = R22 1 = R407C 2 = R410A | 4, 9 |
| Condenser Fan Reversal Requested 1 | 31142 | — | 1 | — | 0 = false 1 = true | 4, 9 |
| Condenser Fan Reversal Requested 2 | 31143 | — | 1 | — | 0 = false 1 = true | 4, 9 |
| Condenser Outside Air Temperature 1 | 31144 | — | 1 | 10 | deg C | 4, 9 |
| Condenser Outside Air Temperature 2 | 31145 | — | 1 | 10 | deg F | 4, 9 |
| Condenser Outside Air Temperature 2 | 31146 | — | 1 | 10 | deg C | 4, 9 |
| Condenser Outside Air Temperature 2 | 31147 | — | 1 | 10 | deg F | 4, 9 |
| Condenser Refrigerant Pressure 1 | 31158 | — | 1 | 10 | bar | 4, 9 |
| Condenser Refrigerant Pressure 2 | 31159 | — | 1 | 10 | bar | 4, 9 |
| Condenser Supply Refrigerant Temperature 1 | 31160 | — | 1 | 10 | deg C | 4, 9 |
| Condenser Supply Refrigerant Temperature 1 | 31161 | — | 1 | 10 | deg F | 4, 9 |
| Condenser Supply Refrigerant Temperature 2 | 31162 | — | 1 | 10 | deg C | 4, 9 |
| Condenser Supply Refrigerant Temperature 2 | 31163 | — | 1 | 10 | deg F | 4, 9 |
| Condenser Fan Speed 1 | 31174 | — | 1 | — | % | 4, 9 |
| Condenser Fan Speed 2 | 31175 | — | 1 | — | % | 4, 9 |
| Condenser Fan Speed 3 | 31176 | — | 1 | — | % | 4, 9 |
| Condenser Fan Speed 4 | 31177 | — | 1 | — | % | 4, 9 |
| Condenser Fan Speed 5 | 31178 | — | 1 | — | % | 4, 9 |
| Condenser Fan Speed 6 | 31179 | — | 1 | — | % | 4, 9 |
| Condenser Fan Speed 7 | 31180 | — | 1 | — | % | 4, 9 |
| Condenser Fan Speed 8 | 31181 | — | 1 | — | % | 4, 9 |
| Condenser Fan Power 1 | 31182 | — | 1 | 10 | kW | 4, 9 |
| Condenser Fan Power 2 | 31183 | — | 1 | 10 | kW | 4, 9 |
| Condenser Fan Power 3 | 31184 | — | 1 | 10 | kW | 4, 9 |
| Condenser Fan Power 4 | 31185 | — | 1 | 10 | kW | 4, 9 |
| Condenser Fan Power 5 | 31186 | — | 1 | 10 | kW | 4, 9 |
| Condenser Fan Power 6 | 31187 | — | 1 | 10 | kW | 4, 9 |
| Condenser Fan Power 7 | 31188 | — | 1 | 10 | kW | 4, 9 |
| Condenser Fan Power 8 | 31189 | — | 1 | 10 | kW | 4, 9 |
| System Date and Time | 39998 | 49998 | 2 | — | — | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 9 Extra notes key to Table 8

| 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 2.01.29.03R |
| 4 | This point is supported on: iCOM controller version 2.01.29.06R |
| 5 | This point is supported on: iCOM controller version 2.01.40R |
| 6 | This point is supported on: iCOM controller version 2.02.21R |
| 7 | This point is supported on: iCOM controller version 2.03.27.06R |
| 8 | This point is supported on: iCOM controller version 2.03.32R |
| 9 | This point is supported on: iCOM controller version 2.03.33R |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary

| Controller | Liebert iCOM® v4 |
|--|---|
| 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 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. |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | | Liebert iCOM® v4 |
|--|--|------------------|
| Data Label | Data Description | |
| 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]. | |
| Chilled Water Control Valve Failure | Chilled water valve out of position. Chilled water control valve position does not match expected value. | |
| Chilled Water Valve Hours | Operating hours for chilled water valve since last reset of this value. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual value. | |
| 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 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 Temperature Calculation Method | Algorithm used to calculate a single cold aisle temperature value from multiple temperature measurements. | |
| 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. | |
| 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. | |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | | Liebert iCOM® v4 |
|---|--|------------------|
| Data Label | Data Description | |
| 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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 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 Issue | Condenser fan is not operating within its operational parameters. | |
| Condenser Fan Power | Condenser fan's measured input power. | |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|---|--|
| 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 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 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (*continued*)

| Controller | | Liebert iCOM® v4 |
|--|---|------------------|
| 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual value. | |
| Dehumidifier State | Dehumidifier operational state. | |
| Dehumidifier Utilization | Present dehumidifier utilization expressed as a percentage of the maximum rated capacity. | |
| Dew Point Over Temperature | Dew point temperature reading has exceeded the upper threshold. | |
| 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 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|--|---|
| 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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. |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (*continued*)

| Controller | Liebert iCOM® v4 |
|---|---|
| Data Label | Data Description |
| 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 condenser, 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. |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | | Liebert iCOM® v4 |
|--|---|------------------|
| Data Label | Data Description | |
| 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. | |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|------------------------------------|---|
| Data Label | Data Description |
| 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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. |
| Fixed Compressor State | Fixed compressor 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 |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | | Liebert iCOM® v4 |
|---|---|------------------|
| Data Label | Data Description | |
| 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 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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. | |
| 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 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. | |
| 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual value. | |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | | Liebert iCOM® v4 |
|--|--|------------------|
| Data Label | Data Description | |
| 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 Sensor | Sensor from which humidity measurements will be used for humidification and dehumidification control. | |
| 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]. | |
| Humidity Proportional Control Integration Time | Time value used to add an integral term to proportional humidity control. If set to 0, time will not be a factor in the proportional control algorithm. | |
| Humidity Proportional Control Type | Type of algorithm to use for proportional control of output humidity. | |
| Humidity Proportional Control Type | Type of algorithm to use for proportional control of output humidity. | |
| 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. | |
| Loss of Air Flow | No air flow through the unit due to failure of all fans. | |
| 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. | |
| 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. | |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | | Liebert iCOM® v4 |
|--|--|------------------|
| Data Label | Data Description | |
| 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. | |
| Pump Hours | Operating hours for pump since last reset of this value. | |
| 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]. | |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|--|---|
| Data Label | Data Description |
| 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 Temp Threshold | Threshold value used in 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 Temp Threshold | Threshold value used in the [Return Air Under Temperature] event. |
| Return Air Under Temperature | [Return Air Temperature] has dropped below [Return Air Under Temp Threshold]. |
| 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. |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|---|---|
| Data Label | Data Description |
| 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. |
| 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 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 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 | Chilled water temperature is too high, as indicated by an external input signal. |
| 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. |

Table 10 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™ - Glossary (continued)

| Controller | | Liebert iCOM® v4 |
|-------------------------------------|--|------------------|
| Data Label | Data Description | |
| System Operating State | Current operating state of the system. | |
| System Static Pressure | Static pressure measurement among a group of interconnected units in a single system. | |
| System Status | The operating status for the system | |
| Temperature Control Sensor Issue | The air sensor selected for cooling control is disconnected or the signal is out of range. | |
| 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. | |
| 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 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 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 11 Liebert CRV™ - Status and Coil

| Data Label | Controller Liebert iCOM® v4 | | | | |
|---|-----------------------------|------|----------------|-------|-----------------|
| | Status | Coil | Number of Bits | Scale | Notes / Units |
| 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 |
| 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 |
| 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 Sensor Issue Module Index 1 | 10021 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 2 | 10022 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 3 | 10023 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 4 | 10024 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 5 | 10025 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 6 | 10026 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 7 | 10027 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 8 | 10028 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 9 | 10029 | — | 1 | — | Active on Alarm |
| Remote Sensor Issue Module Index 10 | 10030 | — | 1 | — | Active on Alarm |
| Compressor 1 High Head Pressure | 10031 | — | 1 | — | Active on Alarm |
| Compressor 1 Low Suction Pressure | 10032 | — | 1 | — | Active on Alarm |
| 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 |
| Reheater Over Temperature | 10041 | — | 1 | — | Active on Alarm |
| Electric Reheater 1 Hours Exceeded | 10042 | — | 1 | — | Active on Alarm |
| Ext Reheat Lockout | 10043 | — | 1 | — | Active on Alarm |
| Condenser 1 Issue | 10044 | — | 1 | — | Active on Alarm |
| Condenser VFD Issue | 10045 | — | 1 | — | Active on Alarm |
| Condenser TVSS Issue | 10046 | — | 1 | — | Active on Alarm |

Table 11 Liebert CRV™ - Status and Coil (continued)

| Data Label | Controller | | | | |
|---|-------------|------|----------------|-------|-----------------|
| | Status | Coil | Number of Bits | Scale | Notes / Units |
| Supply Chilled Water Over Temp | 10047 | — | 1 | — | Active on Alarm |
| Chilled Water Control Valve Position | 10048 | — | 1 | — | Active on Alarm |
| Supply Chilled Water Loss of Flow | 10049 | — | 1 | — | Active on Alarm |
| 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 |
| 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 |
| Return Air Sensor Issue | 10077 | — | 1 | — | Active on Alarm |
| 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 | 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 Fan Issue 1 - 4 | 10088-10091 | — | 1 | — | Active on Alarm |
| Unspecified General Event | 10100 | — | 1 | — | Active on Alarm |
| Condenser Unit Unspecified General Event | 10101 | — | 1 | — | Active on Alarm |
| Condenser Circuit Unspecified General Event | 10102 | — | 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 12 Liebert CRV™ - Input and Holding

| Data Label | Controller | | Liebert iCOM® v4 | | | Notes / Units |
|--|----------------|------------------|------------------|-------|-------|---------------|
| | Input Register | Holding Register | # of Reg. | Scale | | |
| Supply Air Temperature | 30385 | — | 1 | 10 | deg C | |
| Supply Air Temperature | 30386 | — | 1 | 10 | deg F | |
| Return Air Temperature | 30387 | — | 1 | 10 | deg C | |
| Return Air Temperature | 30388 | — | 1 | 10 | deg F | |
| Return Dew Point | 30389 | — | 1 | 10 | deg C | |
| Return Dew Point | 30390 | — | 1 | 10 | deg F | |
| Remote Sensor Minimum Temperature | 30391 | — | 1 | 10 | deg C | |
| Remote Sensor Minimum Temperature | 30392 | — | 1 | 10 | deg F | |
| Remote Sensor Maximum Temperature | 30393 | — | 1 | 10 | deg C | |
| Remote Sensor Maximum Temperature | 30394 | — | 1 | 10 | deg F | |
| Remote Sensor Average Temperature | 30395 | — | 1 | 10 | deg C | |
| Remote Sensor Average Temperature | 30396 | — | 1 | 10 | deg F | |
| Air Temperature Set Point | 30397 | 40397 | 1 | 10 | deg C | |
| Air Temperature Set Point | 30398 | 40398 | 1 | 10 | deg F | |
| Cooling Proportional Band | 30399 | 40399 | 1 | 10 | deg C | |
| Cooling Proportional Band | 30400 | 40400 | 1 | 10 | deg F | |
| Heating Proportional Band | 30401 | 40401 | 1 | 10 | deg C | |
| Heating Proportional Band | 30402 | 40402 | 1 | 10 | deg F | |
| Air Temperature Dead Band | 30403 | 40403 | 1 | 10 | deg C | |
| Air Temperature Dead Band | 30404 | 40404 | 1 | 10 | deg F | |
| Supply Air Over Temp Threshold | 30405 | 40405 | 1 | 10 | deg C | |
| Supply Air Over Temp Threshold | 30406 | 40406 | 1 | 10 | deg F | |
| Supply Air Under Temp Threshold | 30407 | 40407 | 1 | 10 | deg C | |
| Supply Air Under Temp Threshold | 30408 | 40408 | 1 | 10 | deg F | |
| Return Air Over Temp Threshold | 30409 | 40409 | 1 | 10 | deg C | |
| Return Air Over Temp Threshold | 30410 | 40410 | 1 | 10 | deg F | |
| Supply Humidity | 30411 | — | 1 | 10 | % RH | |
| Return Humidity | 30412 | — | 1 | 10 | % RH | |
| Humidity Set Point | 30413 | 40413 | 1 | — | % RH | |
| Humidification Proportional Band | 30414 | 40414 | 1 | — | % RH | |
| Dehumidification Proportional Band | 30415 | 40415 | 1 | — | % RH | |
| Humidity Dead Band | 30416 | 40416 | 1 | — | % RH | |
| High Return Humidity Threshold | 30417 | 40417 | 1 | 10 | % RH | |
| Low Return Humidity Threshold | 30418 | 40418 | 1 | 10 | % RH | |
| Fan Speed Proportional Band | 30419 | 40419 | 1 | 10 | deg C | |
| Fan Speed Proportional Band | 30420 | 40420 | 1 | 10 | deg F | |
| Fan Speed Manual Set Point | 30421 | 40421 | 1 | — | % | |
| Fan Speed Maximum Set Point | 30422 | 40422 | 1 | — | % | |
| Fan Speed Minimum Set Point | 30423 | 40423 | 1 | — | % | |
| Remote Sensor Temperature Module Index 1 | 30424 | — | 1 | 10 | deg C | |
| Remote Sensor Temperature Module Index 2 | 30425 | — | 1 | 10 | deg C | |
| Remote Sensor Temperature Module Index 3 | 30426 | — | 1 | 10 | deg C | |

Table 12 Liebert CRV™ - Input and Holding (continued)

| Data Label | Controller | | | | |
|---|----------------|------------------|-----------|-------|--|
| | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
| Remote Sensor Temperature Module Index 4 | 30427 | — | 1 | 10 | deg C |
| Remote Sensor Temperature Module Index 5 | 30428 | — | 1 | 10 | deg C |
| Remote Sensor Temperature Module Index 6 | 30429 | — | 1 | 10 | deg C |
| Remote Sensor Temperature Module Index 7 | 30430 | — | 1 | 10 | deg C |
| Remote Sensor Temperature Module Index 8 | 30431 | — | 1 | 10 | deg C |
| Remote Sensor Temperature Module Index 9 | 30432 | — | 1 | 10 | deg C |
| Remote Sensor Temperature Module Index 10 | 30433 | — | 1 | 10 | deg C |
| Remote Sensor Temperature Module Index 1 | 30434 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 2 | 30435 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 3 | 30436 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 4 | 30437 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 5 | 30438 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 6 | 30439 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 7 | 30440 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 8 | 30441 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 9 | 30442 | — | 1 | 10 | deg F |
| Remote Sensor Temperature Module Index 10 | 30443 | — | 1 | 10 | deg F |
| Supply Chilled Water Temperature | 30444 | — | 1 | 10 | deg C |
| Supply Chilled Water Temperature | 30445 | — | 1 | 10 | deg F |
| Supply Chilled Water Over Temp Threshold | 30446 | 40446 | 1 | 10 | deg C |
| Supply Chilled Water Over Temp Threshold | 30447 | 40447 | 1 | 10 | deg F |
| BMS Timeout Period | 30448 | 40448 | 1 | — | min |
| Auto Restart Delay | 30449 | 40449 | 1 | — | sec |
| Operating Efficiency | 30450 | — | 1 | — | % |
| Fan Speed | 30451 | — | 1 | — | % |
| Compressor Utilization | 30452 | — | 1 | — | % |
| Dehumidifier Utilization | 30453 | — | 1 | — | % |
| Reheat Utilization | 30454 | — | 1 | — | % |
| Humidifier Utilization | 30455 | — | 1 | — | % |
| Calculated Next Maintenance Month | 30456 | — | 1 | — | — |
| Calculated Next Maintenance Year | 30457 | — | 1 | — | — |
| Maintenance Ramp | 30458 | — | 1 | — | % |
| Server Class | 30459 | — | 1 | — | 1 = UPS 2 = AIR 3 = PMP 4 = PDU |
| Air Temperature Control Sensor | 30460 | 40460 | 1 | — | 0 = Supply 1 = Remote 2 = Return |
| Remote Sensor Temperature Calculation | 30461 | 40461 | 1 | — | 0 = Average 1 = Maximum |
| Fan Control Mode | 30462 | 40462 | 1 | — | 0 = Internal (Auto) 1 = External (Manual) |

Table 12 Liebert CRV™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|----------------|------------------|-----------|-------|--|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
| Fan Control Sensor | 30463 | 40463 | 1 | — | 0 = Supply 1 = Remote 2 = Return |
| Remote Sensor Function Module Index 1 | 30464 | 40464 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 2 | 30465 | 40465 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 3 | 30466 | 40466 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 4 | 30467 | 40467 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 5 | 30468 | 40468 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 6 | 30469 | 40469 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 7 | 30470 | 40470 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 8 | 30471 | 40471 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 9 | 30472 | 40472 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| Remote Sensor Function Module Index 10 | 30473 | 40473 | 1 | — | 0 = Disable 1 = Reference 2 = Control |
| 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 |
| System On/Off Control | 30478 | 40478 | 1 | — | 0 = Off / 1 = On |
| Condenser Low Noise Mode State | 30490 | — | 1 | — | 0 = Inactive 1 = Active (Interval) 2 = Active (Full Day) |

Table 12 Liebert CRV™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|---|----------------|------------------|-----------|-------|---|
| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
| Condenser Low Noise Mode Schedule Control | 30491 | 40491 | 1 | — | 0 = disabled 1 = enabled |
| Condenser Low Noise Mode Max Fan Speed | 30492 | 40492 | 1 | — | % |
| Condenser Normal Mode Max Fan | 30493 | 40493 | 1 | — | % |
| 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 | — | Seconds since Midnight |
| Condenser Low Noise Mode Stop Time | 30498 | 40498 | 2 | — | Seconds since Midnight |
| System Event Acknowledge/Reset | — | 40500 | 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 13 Liebert CRV™ - Glossary

| Controller | Liebert iCOM® v4 |
|---|---|
| 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 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. |
| 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 Control Board Issue | The condenser control board is reporting an issue. |
| Condenser Fan Issue | Condenser fan 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. |

Table 13 Liebert CRV™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|--|---|
| Data Label | Data Description |
| 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 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 Under Temp | Condenser supply refrigerant temperature has dropped below a specified threshold. |
| Condenser TVSS Issue | The condenser Transient Voltage Surge Suppressor 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 (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 | Customer Input 1. |
| Customer Input 2 | Customer input 2. |
| Customer Input 3 | Customer input 3. |
| 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. |
| Electric Reheater Hours Exceeded | Operating hours for electric reheater have exceeded the threshold. |
| 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 | The humidifier is shut down and disabled by an external input signal. |
| Ext Loss of Flow | Loss of flow is detected, as indicated by an external input signal. |
| Ext Over Temperature | A temperature has exceeded its threshold, as indicated by an external input signal. |
| 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 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 13 Liebert CRV™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|---------------------------------------|---|
| 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. |
| 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. |
| 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. |
| Operating Efficiency | The ratio of cooling energy provided to the amount of total energy being used. |
| 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. |
| Reheater Over Temperature | The temperature of the reheater has exceeded its threshold. |
| 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. |

Table 13 Liebert CRV™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|--|--|
| Data Label | Data Description |
| 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. |
| Server Class | The general classification for this system |
| 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. This event remains active for 90 minutes. |
| Smoke Detected | Smoke detected. |
| 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 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 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 | Water under the floor is detected. |

Table 14 Liebert HPC™ (Chiller) - Status and Coil

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------|------------------|----------------|-----------------|-------------|--|
| Data Label | Status | Coil | Number of Bits | Notes | Extra Notes | |
| Compressors | | | | | | |
| Compressor Not Stopping | 10001 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Superheat Over Threshold | 10002 | — | 1 | Active on Alarm | 2 | |
| Compressor 1 | | | | | | |
| Compressor Hours Exceeded | 10012 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor High Head Pressure | 10013 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Low Suction Pressure | 10014 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Thermal Overload | 10015 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Low Oil Pressure | 10016 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Loss of Differential Pressure | 10018 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Capacity Reduced | 10019 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Capacity Normal | 10020 | — | 1 | Active on Alarm | 2 | |
| Compressor Contactor Issue | 10021 | — | 1 | Active on Alarm | 2 | |
| Compressor 2 | | | | | | |
| Compressor Hours Exceeded | 10029 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor High Head Pressure | 10030 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Low Suction Pressure | 10031 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Thermal Overload | 10032 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Low Suction Pressure | 10033 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Loss of Differential Pressure | 10035 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Capacity Reduced | 10036 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Capacity Normal | 10037 | — | 1 | Active on Alarm | 2 | |
| Compressor Contactor Issue | 10038 | — | 1 | Active on Alarm | 2 | |
| Compressor 4 | | | | | | |
| Compressor Hours Exceeded | 10230 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor High Head Pressure | 10231 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Low Suction Pressure | 10232 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Thermal Overload | 10233 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Low Suction Pressure | 10234 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Loss of Differential Pressure | 10236 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Capacity Reduced | 10237 | — | 1 | Active on Alarm | 1, 2 | |
| Compressor Capacity Normal | 10238 | — | 1 | Active on Alarm | 2 | |
| Compressor Contactor Issue | 10239 | — | 1 | Active on Alarm | 2 | |
| Condensers 1 | | | | | | |
| Condenser Fan Issue | 10046 | — | 1 | Active on Alarm | 1, 2 | |
| Low Condenser Refrigerant Pressure | 10047 | — | 1 | Active on Alarm | 1, 2 | |
| Condenser Max Fan Speed Override | 10048 | — | 1 | Active on Alarm | 1, 2 | |
| Condensers 2 | | | | | | |
| Condenser Fan Issue | 10058 | — | 1 | Active on Alarm | 1, 2 | |
| Low Condenser Refrigerant Pressure | 10059 | — | 1 | Active on Alarm | 1, 2 | |
| Condenser Max Fan Speed Override | 10060 | — | 1 | Active on Alarm | 1, 2 | |
| Condensers 4 | | | | | | |
| Condenser Fan Issue | 10066 | — | 1 | Active on Alarm | 1, 2 | |
| Low Condenser Refrigerant Pressure | 10067 | — | 1 | Active on Alarm | 1, 2 | |
| Condenser Max Fan Speed Override | 10068 | — | 1 | Active on Alarm | 1, 2 | |

Table 14 Liebert HPC™ (Chiller) - Status and Coil (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------|------------------|----------------|-----------------|-------------|--|
| Data Label | Status | Coil | Number of Bits | Notes | Extra Notes | |
| Fluid | | | | | | |
| Low Fluid Pressure | 10070 | — | 1 | Active on Alarm | 1, 2 | |
| Supply (Outlet) Fluid | | — | | | | |
| Supply Fluid Over Temp | 10081 | — | 1 | Active on Alarm | 1, 2 | |
| Supply Fluid Under Temp | 10082 | — | 1 | Active on Alarm | 1, 2 | |
| Supply Fluid Temp Sensor Issue | 10083 | — | 1 | Active on Alarm | 1, 2 | |
| Pumps | | | | | | |
| All Pumps Loss of Flow | 10107 | — | 1 | Active on Alarm | 1, 2 | |
| Pump 1 Loss of Flow | 10108 | — | 1 | Active on Alarm | 1, 2 | |
| Pump 2 Loss of Flow | 10109 | — | 1 | Active on Alarm | 1, 2 | |
| Pump 1 | | | | | | |
| Pump Hours Exceeded | 10120 | — | 1 | Active on Alarm | 1, 2 | |
| Pump 2 | | | | | | |
| Pump Hours Exceeded | 10131 | — | 1 | Active on Alarm | 1, 2 | |
| Free Cooling | | | | | | |
| Free Cooling Valve Hours Exceeded | 10142 | — | 1 | Active on Alarm | 1, 2 | |
| Ambient Air Temperature Sensor Issue | 10143 | — | 1 | Active on Alarm | 1, 2 | |
| Evaporators | | | | | | |
| Evaporator Inlet Temp Sensor Issue | 10154 | — | 1 | Active on Alarm | 1, 2 | |
| Evaporator Return Fluid Over Temp | 10155 | — | 1 | Active on Alarm | 1, 2 | |
| Evaporator Return Fluid Under Temp | 10156 | — | 1 | Active on Alarm | 1, 2 | |
| Evaporator 1 | | — | | | | |
| Evaporator Fluid Freeze - Auto Reset | 10165 | — | 1 | Active on Alarm | 1, 2 | |
| Evaporator Fluid Freeze - Manual Reset Required | 10166 | — | 1 | Active on Alarm | 1, 2 | |
| Supply Refrigerant Temp Sensor Issue | 10167 | — | 1 | Active on Alarm | 1, 2 | |
| Evaporator 2 | | | | | | |
| Evaporator Fluid Freeze - Auto Reset | 10178 | — | 1 | Active on Alarm | 1, 2 | |
| Evaporator Fluid Freeze - Manual Reset Required | 10179 | — | 1 | Active on Alarm | 1, 2 | |
| Supply Refrigerant Temp Sensor Issue | 10180 | — | 1 | Active on Alarm | 1, 2 | |
| System Events | | | | | | |
| Customer Input 1 | 10191 | — | 1 | Active on Alarm | 1, 2 | |
| Customer Input 2 | 10192 | — | 1 | Active on Alarm | 1, 2 | |
| Customer Input 3 | 10251 | — | 1 | Active on Alarm | 2 | |
| Customer Input 4 | 10252 | — | 1 | Active on Alarm | 2 | |
| Unit On | 10193 | — | 1 | Active on Alarm | 1, 2 | |
| Unit Off | 10194 | — | 1 | Active on Alarm | 1, 2 | |
| Master Unit Communication Lost | 10195 | — | 1 | Active on Alarm | 1, 2 | |
| Subgroup Event Occurred During Communication Loss | 10196 | — | 1 | Active on Alarm | 1, 2 | |
| Humidifier Control Board Not Detected | 10197 | — | 1 | Active on Alarm | 1, 2 | |
| RAM Battery Issue | 10198 | — | 1 | Active on Alarm | 1, 2 | |
| Unit Code Missing | 10199 | — | 1 | Active on Alarm | 1, 2 | |
| Unspecified General Event | 10200 | — | 1 | Active on Alarm | 2 | |
| Unit Shutdown Unspecified General Event | 10250 | — | 1 | Active on Alarm | 2 | |
| EEV | | | | | | |
| EEV Unspecified General Event | 10270 | — | 1 | Active on Alarm | 2 | |

Table 15 Liebert HPC™ (Chiller) - Input and Holding

| Controller | | Liebert iCOM® v4 | | | | |
|---|-------|------------------|----------|-------|--|-------------|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units | Extra Notes |
| Protocol | | | | | | |
| Server Class | 30385 | — | 1 | — | 1 = UPS 2 = AIR 3 = PMP 4 = PDU | 1, 2 |
| Compressors | | | | | | |
| Compressor Shut Down - Ambient Air Low Temp Limit | 30389 | 40389 | 1 | — | Units: deg C Int16 | 1, 2 |
| Compressor Shut Down - Ambient Air Low Temp Limit | 30390 | 40390 | 1 | — | Units: deg F Int16 | 1, 2 |
| Compressor 1 | | | | | | |
| Compressor State | 30394 | — | 1 | — | 0 = off 1 = on | 1, 2 |
| Compressor Capacity Control State | 30395 | — | 1 | — | 0 = off 1 = on | 1, 2 |
| Compressor Head Pressure | 30396 | — | 1 | 10 | Units: bar UInt16 | 1, 2 |
| Compressor Hours | 30397 | 40397 | 1 | — | Units: hr UInt16 | 1, 2 |
| Compressor Hours Threshold | 30398 | 40398 | 1 | — | Units: hr UInt16 | 1, 2 |
| Compressor 2 | | | | | | |
| Compressor State | 30402 | — | 1 | — | 0 = off 1 = on | 1, 2 |
| Compressor Capacity Control State | 30403 | — | 1 | — | 0 = off 1 = on | 1, 2 |
| Compressor Head Pressure | 30404 | — | 1 | 10 | Units: bar UInt16 | 1, 2 |
| Compressor Hours | 30405 | 40405 | 1 | — | Units: hr UInt16 | 1, 2 |
| Compressor Hours Threshold | 30406 | 40406 | 1 | — | Units: hr UInt16 | 1, 2 |
| Compressor 4 | | | | | | |
| Compressor State | 30550 | — | 1 | — | 0 = off 1 = on | 1, 2 |
| Compressor Capacity Control State | 30551 | — | 1 | — | 0 = off 1 = on | 1, 2 |
| Compressor Head Pressure | 30552 | — | 1 | 10 | Units: bar UInt16 | 1, 2 |
| Compressor Hours | 30553 | 40553 | 1 | — | Units: hr UInt16 | 1, 2 |
| Compressor Hours Threshold | 30554 | 40554 | 1 | — | Units: hr UInt16 | 1, 2 |
| Condensers 1 | | | | | | |
| Condenser Fan Speed | 30410 | — | 1 | — | Units: % UInt16 | 1, 2 |
| Condensers 2 | | | | | | |
| Condenser Fan Speed | 30414 | — | 1 | — | Units: % UInt16 | 1, 2 |

Table 15 Liebert HPC™ (Chiller) - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|---|-------|------------------|----------|-------|-------------------------------------|-------------|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units | Extra Notes |
| Condensers 4 | | | | | | |
| Condenser Fan Speed | 30417 | — | 1 | — | Units: % Uint16 | 1, 2 |
| Fluid | | | | | | |
| Fluid Pressure | 30418 | — | 1 | 10 | Units: bar Int16 | 1, 2 |
| Fluid Cooling Proportional Band | 30419 | 40419 | 1 | 10 | Units: deg C Uint16 | 1, 2 |
| Fluid Cooling Proportional Band | 30420 | 40420 | 1 | 10 | Units: deg F Uint16 | 1, 2 |
| Supply (Outlet) Fluid | | | | | | |
| Supply Fluid Temp Set Point 1 | 30424 | 40424 | 1 | 10 | Units: deg C Int16 | 1, 2 |
| Supply Fluid Temp Set Point 1 | 30425 | 40425 | 1 | 10 | Units: deg F Int16 | 1, 2 |
| Supply Fluid Temp Set Point 2 | 30426 | 40426 | 1 | — | Units: deg C Int16 | 1, 2 |
| Supply Fluid Temp Set Point 2 | 30427 | 40427 | 1 | — | Units: deg F Int16 | 1, 2 |
| Supply Fluid Over Temp Alarm Threshold | 30430 | 40430 | 1 | — | Units: deg C Int16 | 1, 2 |
| Supply Fluid Over Temp Alarm Threshold | 30431 | 40431 | 1 | — | Units: deg F Int16 | 1, 2 |
| Supply Fluid Under Temp Alarm Threshold | 30434 | 40434 | 1 | — | Units: deg C Int16 | 1, 2 |
| Supply Fluid Under Temp Alarm Threshold | 30435 | 40435 | 1 | — | Units: deg F Int16 | 1, 2 |
| Pump 1 | | | | | | |
| Pump Hours | 30450 | 40450 | 1 | — | Units: hr Uint16 | 1, 2 |
| Pump Hours Threshold | 30451 | 40451 | 1 | — | Units: hr Uint16 | 1, 2 |
| Pump 2 | | | | | | |
| Pump Hours | 30455 | 40455 | 1 | — | Units: hr Uint16 | 1, 2 |
| Pump Hours Threshold | 30456 | 40456 | 1 | — | Units: hr Uint16 | 1, 2 |
| Free Cooling | | | | | | |
| Free Cooling External Temperature Delta | 30460 | 40460 | 1 | — | Units: deg C Uint16 | 1, 2 |
| Free Cooling External Temperature Delta | 30461 | 40461 | 1 | — | Units: deg F Uint16 | 1, 2 |
| Free Cooling Status | 30462 | — | 1 | — | 0 = off 2 = on 3 = No Support | 1, 2 |
| Free Cooling Valve Open Position | 30463 | — | 1 | — | Units: % Uint16 | 1, 2 |
| Free Cooling Valve Hours | 30464 | 40464 | 1 | — | Units: hr Uint16 | 1, 2 |
| Free Cooling Valve Hours Threshold | 30465 | 40465 | 1 | — | Units: hr Uint16 | 1, 2 |

Table 15 Liebert HPC™ (Chiller) - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | | | Extra Notes |
|--|-------|------------------|----------|-------|--|-------------|-------------|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units | Extra Notes | |
| Evaporators | | | | | | | |
| Evaporator Return Fluid Temperature | 30469 | — | 1 | 10 | Units: deg C Int16 | 1, 2 | |
| Evaporator Return Fluid Temperature | 30470 | — | 1 | 10 | Units: deg F Int16 | 1, 2 | |
| Evaporator Return Fluid Over Temp Alarm Threshold | 30615 | 40615 | 1 | — | Units: deg C Int16 | 1, 2 | |
| Evaporator Return Fluid Over Temp Alarm Threshold | 30616 | 40616 | 1 | — | Units: deg F Int16 | 1, 2 | |
| Evaporator Return Fluid Over Temp Warning Threshold | 30617 | 40617 | 1 | — | Units: deg C Int16 | 1, 2 | |
| Evaporator Return Fluid Over Temp Warning Threshold | 30618 | 40618 | 1 | — | Units: deg F Int16 | 1, 2 | |
| Evaporator Return Fluid Under Temp Warning Threshold | 30619 | 40619 | 1 | — | Units: deg C Int16 | 1, 2 | |
| Evaporator Return Fluid Under Temp Warning Threshold | 30620 | 40620 | 1 | — | Units: deg F Int16 | 1, 2 | |
| Evaporator Return Fluid Under Temp Alarm Threshold | 30621 | 40621 | 1 | — | Units: deg C Int16 | 1, 2 | |
| Evaporator Return Fluid Under Temp Alarm Threshold | 30622 | 40622 | 1 | — | Units: deg F Int16 | 1, 2 | |
| Brine | | | | | | | |
| Supply Brine Temp Set Point | 30474 | 40474 | 1 | — | Units: deg C Int16 | 1, 2 | |
| Supply Brine Temp Set Point | 30475 | 40475 | 1 | — | Units: deg F Int16 | 1, 2 | |
| Standby Units | | | | | | | |
| Standby Units | 30479 | 40479 | 1 | — | UInt16 | 1, 2 | |
| System Info | | | | | | | |
| System Status | 30483 | — | 1 | — | 1 = Normal Operation 2 = StartUp 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation | 1, 2 | |
| System Operating State | 30484 | — | 1 | — | 0 = off 1 = on 2 = standby | 1, 2 | |
| System Control Mode | 30485 | — | 1 | — | 0 = Internal (Auto) 1 = External (Manual) | 1, 2 | |
| 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 | 1, 2 | |
| System On/Off Control | 30487 | 40487 | 1 | — | 0 = off 1 = on | 1, 2 | |

Table 15 Liebert HPC™ (Chiller) - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|---|-------|------------------|----------|-------|------------------------------|-------------|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units | Extra Notes |
| System Operations | | | | | | |
| Return Fluid Temperature | 30491 | — | 1 | 10 | Units: deg C Int16 | 1, 2 |
| Return Fluid Temperature | 30492 | — | 1 | 10 | Units: deg F Int16 | 1, 2 |
| Supply Fluid Temperature | 30493 | — | 1 | 10 | Units: deg C Int16 | 1, 2 |
| Supply Fluid Temperature | 30494 | — | 1 | 10 | Units: deg F Int16 | 1, 2 |
| Actual Supply Fluid Temp Set Point | 30495 | — | 1 | 10 | Units: deg C Int16 | 1, 2 |
| Actual Supply Fluid Temp Set Point | 30496 | — | 1 | 10 | Units: deg F Int16 | 1, 2 |
| Condenser Inlet Water Temperature | 30497 | — | 1 | 10 | Units: deg C Int16 | 1, 2 |
| Condenser Inlet Water Temperature | 30498 | — | 1 | 10 | Units: deg F Int16 | 1, 2 |
| Condenser Outlet Water Temperature | 30499 | — | 1 | 10 | Units: deg C Int16 | 1, 2 |
| Condenser Outlet Water Temperature | 30500 | — | 1 | 10 | Units: deg F Int16 | 1, 2 |
| Supply Heated Water Temp Set Point | 30501 | 40501 | 1 | — | Units: deg C Int16 | 1, 2 |
| Supply Heated Water Temp Set Point | 30502 | 40502 | 1 | — | Units: deg F Int16 | 1, 2 |
| Free Cooling Utilization | 30503 | — | 1 | — | Units: % UInt16 | 1, 2 |
| Reheat Utilization | 30504 | — | 1 | — | Units: % UInt16 | 1, 2 |
| Compressor Utilization | 30505 | — | 1 | — | Units: % UInt16 | 1, 2 |
| Ambient Air Temperature | 30506 | — | 1 | 10 | Units: deg C Int16 | 1, 2 |
| Ambient Air Temperature | 30507 | — | 1 | 10 | Units: deg F Int16 | 1, 2 |
| Compressor Economizer Utilization | 30508 | — | 1 | — | Units: % UInt16 | 1, 2 |
| Condenser Adiabatic Cooling Utilization | 30509 | — | 1 | — | Units: % UInt16 | 1, 2 |
| Pump 1 State | 30510 | — | 1 | — | 0 = off 1 = on | 1, 2 |
| Pump 2 State | 30511 | — | 1 | — | 0 = off 1 = on | 1, 2 |
| System Events | | | | | | |
| System Event Acknowledge/Reset | — | 40515 | 1 | — | 2 = Reset 4 = Acknowledge | 1, 2 |
| Time | | | | | | |
| System Date and Time | 39998 | 49998 | 2 | — | Secs since Epoch (UTC) | 1, 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 16 Extra notes key to Table 15

| 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 17 Liebert HPC™ (Chiller) - Glossary

| Controller | Liebert iCOM® v4 |
|---|--|
| 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 Reduced | Compressor capacity has been reduced. |
| Compressor Economizer Utilization | Present compressor economizer utilization expressed as a percentage of the maximum. |
| Compressor Head Pressure Over Threshold | Compressor head pressure has exceeded an upper threshold. |
| 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 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. |

Table 17 Liebert HPC™ (Chiller) - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|--|---|
| 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. |
| 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. |
| 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. |

Table 17 Liebert HPC™ (Chiller) - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|---|---|
| Data Label | Data Description |
| Reheat Utilization | Present reheating utilization expressed as a percentage of the maximum rated capacity. |
| Return Fluid Over Temp Alarm Threshold | Threshold value used to generate a [Return Fluid Over Temp] alarm. |
| Return Fluid Over Temp Warning Threshold | Threshold value used to generate a [Return Fluid Over Temp] warning. |
| Return Fluid Over Temp | [Return Fluid Temperature] has exceeded a specified threshold. |
| 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. |
| Return Fluid Under Temp Alarm Threshold | Threshold value used to generate a [Return Fluid Under Temp] alarm. |
| Return Fluid Under Temp Warning Threshold | Threshold value used to generate a [Return Fluid Under Temp] warning. |
| Return Fluid Under Temp | [Return Fluid Temperature] has dropped below a specified threshold. |
| 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 refrigerant 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 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. |
| Unspecified General Event | One or more unspecified events active. See local unit display for further details. |

Table 18 Liebert XDC™ - Status and Coil

| Data Description | Controller | | | | |
|--------------------------------------|------------------|------|----------------|-------|-----------------|
| | Liebert iCOM® v4 | | | | |
| | 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 |

Table 19 Liebert XDC™ - Input and Holding

| Data Description | Controller Liebert iCOM® v4 | | | | |
|------------------------------------|-----------------------------|------------------|-----------|-------|---------------------------------|
| | 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 | — | — |

Table 19 Liebert XDC™ - Input and Holding (*continued*)

| Controller | | Liebert iCOM® v4 | | | |
|--------------------------------|----------------|------------------|-----------|-------|---|
| Data Description | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
| System Status | 30422 | — | 1 | — | 1 = Normal Operation 2 = Startup 8 = Normal with Warning 16 = Normal with Alarm 32 = Abnormal Operation |
| 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 20 Liebert XDP™ - Status and Coil

| Data Label | Controller | Liebert iCOM® v4 | | | Notes |
|--|------------|------------------|------|----------------|-----------------|
| | | Status | Coil | Number of Bits | |
| 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 20 Liebert XDP™ - Status and Coil (continued)

| Data Label | Controller | Liebert iCOM® v4 | | |
|----------------------------------|------------|------------------|----------------|-----------------|
| | 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 21 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 |
| Ext Air Sensor B Dew Point Temp | 30401 | — | 1 | 10 | Units : deg C |

Table 21 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 | 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 |
| Ext Remote Shutdown - Event Control | 30457 | 40457 | 1 | — | 0 = disabled 1 = enabled |

Table 21 Liebert XDP™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |
| 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 |

Table 21 Liebert XDP™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |
| XD System 1 Temperature Sensor 2 | | | | | |
| Remote Sensor Temperature | 31011 | — | 1 | 10 | Units : deg C |
| Remote Sensor Temperature | 31012 | — | 1 | 10 | Units : deg F |

Table 21 Liebert XDP™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|---|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |
| XD System 4 Temperature Sensor 2 | | | | | |
| Remote Sensor Temperature | 31116 | — | 1 | 10 | Units : deg C |
| Remote Sensor Temperature | 31117 | — | 1 | 10 | Units : deg F |

Table 21 Liebert XDP™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|---|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |
| XD System 7 Temperature Sensor 2 | | | | | |
| Remote Sensor Temperature | 31221 | — | 1 | 10 | Units : deg C |
| Remote Sensor Temperature | 31222 | — | 1 | 10 | Units : deg F |

Table 21 Liebert XDP™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |
| XD System 10 Temperature Sensor 2 | | | | | |
| Remote Sensor Temperature | 31326 | — | 1 | 10 | Units : deg C |
| Remote Sensor Temperature | 31327 | — | 1 | 10 | Units : deg F |

Table 21 Liebert XDP™ - Input and Holding (*continued*)

| Controller | | Liebert iCOM® v4 | | | |
|--|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |
| XD System 13 Temperature Sensor 2 | | | | | |
| Remote Sensor Temperature | 31431 | — | 1 | 10 | Units : deg C |
| Remote Sensor Temperature | 31432 | — | 1 | 10 | Units : deg F |

Table 21 Liebert XDP™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |
| XD System 16 Temperature Sensor 2 | | | | | |
| Remote Sensor Temperature | 31536 | — | 1 | 10 | Units : deg C |
| Remote Sensor Temperature | 31537 | — | 1 | 10 | Units : deg F |

Table 21 Liebert XDP™ - Input and Holding (*continued*)

| Controller | | Liebert iCOM® v4 | | | |
|--|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |
| XD System 19 Temperature Sensor 2 | | | | | |
| Remote Sensor Temperature | 31641 | — | 1 | 10 | Units : deg C |
| Remote Sensor Temperature | 31642 | — | 1 | 10 | Units : deg F |

Table 21 Liebert XDP™ - Input and Holding (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|-------|------------------|----------|-------|---|
| Data Label | Input | Holding | # of Reg | Scale | Notes/Units |
| 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 |

Table 22 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. |

Table 22 Liebert XDP™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|--|---|
| Data Label | Data Description |
| 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. |
| 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. |

Table 22 Liebert XDP™ - Glossary (continued)

| Controller | Liebert iCOM® v4 |
|--|---|
| Data Label | Data Description |
| 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. |
| 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 refrigerant 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 23 Liebert DS™ and Liebert PeX™ - Status and Coil

| Data Description | Controller Liebert iCOM™ v3 | | | | |
|-------------------------------------|-----------------------------|------|----------------|-------|---------------|
| | 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 | — | — |
| Comp 1 High Pressure | 10037 | — | 1 | — | — |
| Comp 1 Low Pressure | 10038 | — | 1 | — | — |

Table 23 Liebert DS™ and Liebert PeX™ - Status and Coil (continued)

| Data Description | Controller | | | | |
|--|------------------|------|----------------|-------|---------------|
| | Liebert iCOM™ v3 | | | | |
| | Status | Coil | Number of Bits | Scale | Notes / Units |
| 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 | — | — |
| FC Hrs Exceeded | 10083 | — | 1 | — | — |
| EI Heat1 Hrs Exceeded | 10084 | — | 1 | — | — |
| EI Heat2 Hrs Exceeded | 10085 | — | 1 | — | — |
| EI Heat3 Hrs Exceeded | 10086 | — | 1 | — | — |

Table 23 Liebert DS™ and Liebert PeX™ - Status and Coil (continued)

| Data Description | Controller | Liebert iCOM™ v3 | | | | |
|---|------------|------------------|----------------|-------|---------------|--|
| | Status | Coil | Number of Bits | Scale | Notes / Units | |
| 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 | — | — | — | — | |
| 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 24 Liebert DS™ and Liebert PeX™ - Input and Holding

| Data Description | Controller | | | | |
|--|------------------|------------------|-----------|-------|---------------|
| | Liebert iCOM® v3 | | | | |
| | 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 |

Table 24 Liebert DS™ and Liebert PeX™ - Input and Holding (continued)

| Data Description | Controller | | | | |
|--|------------------|------------------|-----------|-------|---------------|
| | Liebert iCOM® v3 | | | | |
| | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
| 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 |
| 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 |

Table 24 Liebert DS™ and Liebert PeX™ - Input and Holding (continued)

| Data Description | Controller | Liebert iCOM® v3 | | | |
|---------------------|----------------|------------------|-----------|-------|---------------|
| | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
| Daily Low Temp Time | 30154 | — | — | — | Hh:mm |
| Daily High Humidity | 30155 | — | — | — | %RH |
| Daily High Hum Time | 30156 | — | — | — | Hh:mm |
| Daily Low Humidity | 30157 | — | — | — | %RH |
| 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 25 Liebert XDF™ - Status and Coil

| Data Description | Controller Liebert iCOM® v3 | | | | |
|---|-----------------------------|------|----------------|-------|---------------|
| | 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 | — | — | — | — |
| Device Load | 10146 | — | — | — | — |
| Alarm Status | 10147 | — | — | — | — |

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 26 Liebert XDF™ - Input and Holding

| Data Description | Controller | | Liebert iCOM® v3 | | |
|---|----------------|------------------|------------------|-------|---------------|
| | 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 |
| 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 27 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 (R/W) |
| 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 | | | | | 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 |

**Table 27 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 |
| Inverter on Bypass | — | 40291 | 1 | — | Bit 3 |
| 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 28 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 29 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 | — | — |

Table 29 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 (R/W) |
| 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 30 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 |
| Local Alarm 4 | — | 40291 | 1 | — | Bit 10 |

Table 30 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 |
| 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 (R/W) |
| 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 31 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 |

Table 31 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 32 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 |

Table 32 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 |
| 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 |
| 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 33 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 | — | — |

Table 33 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 34 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 |
| 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 35 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 |
| Panel Neutral Overcurrent | 10087 | — | 1 | — | Active on Alarm |
| Panel Ground Overcurrent | 10088 | — | 1 | — | Active on Alarm |

Table 35 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 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 |
| 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 |

Table 35 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 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 |
| 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 36 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 | — | |

Table 36 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 | |

Table 36 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 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 |
| 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 |

Table 36 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 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 | — |
| Panel Main Current Iy Crest Factor | 30582 | — | 1 | 10 | — |
| Panel Main Current Iz Crest Factor | 30583 | — | 1 | 10 | — |

Table 36 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 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 | — | % |
| 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 | — | % |

Table 36 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 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 | — | % |
| 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 | — | % |

Table 36 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 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 | - | % |
| 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 | — | % |

Table 36 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 | — | |

Table 36 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 37 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 | |

Table 37 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 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 | |
| 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 | |

Table 37 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 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 | |

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 38 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 | |
| Panel Main Current Ix | 30502 | — | 1 | — | A AC | |

Table 38 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 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 | — |
| Panel Main Output Percent Load | 30574 | — | 1 | - | % |
| Panel Main Voltage Vx THD | 30575 | — | 1 | 10 | % THD |

Table 38 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 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 | — | % |

Table 38 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 | — | % | |

Table 38 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 | - | % | |

Table 38 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 | - | % | |
| Subfeed Current Ix THD | 34650 | — | 1 | 10 | % | |

Table 38 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 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 39 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 40 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 |
| 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 | — |

Table 40 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 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 | — |
| 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 41 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) |

Table 41 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™ - Glossary (continued)

| Data Label | Data Description |
|------------------------------------|---|
| 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. |
| 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. |

Table 41 Liebert EXC™, Liebert FDC™, Liebert FPC™, Liebert PPC™, Liebert RDC™, Liebert RX™, Liebert STS2/PDU™ - Glossary (continued)

| Data Label | Data Description |
|---------------------------------------|--|
| 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. |
| 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 42 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 |

Table 42 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 |
| Source 2 Overload | — | 40290 | 1 | — | Bit 3 |
| Power Supply 2 Fault | — | 40290 | 1 | — | Bit 4 |
| 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 43 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 |

Table 43 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 |
| LoadKVA % | — | 40026 | 1 | — | % |
| Source 1 Volts A-N | — | 40027 | 1 | — | V (4 Pole only) |
| 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 |

Table 43 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 |
| 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 |
| 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 |

Table 43 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 |
| 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 |
| 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 44 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 |

Table 44 Liebert APM™, Liebert NXC™, Liebert NXR™ - Status and Coil (continued)

| Data Label | Status | Coil | Number of Bits | Scale | Notes / Units |
|------------------------------|--------|------|----------------|-------|-----------------|
| User Operation Invalid | 10050 | — | 1 | — | Active on Alarm |
| Power Sub Module Fault | 10051 | — | 1 | — | Active on Alarm |
| 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 |

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 45 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 |

Table 45 Liebert APM™, Liebert NXC™, Liebert NXR™ - Input and Holding (continued)

| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|-----------------------------------|----------------|------------------|-----------|-------|---|
| 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 | — | % |
| 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 46 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. |

Table 46 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. |
| 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 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 46 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 |
| 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 47 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 |

Table 47 Liebert APS™ - Status and Coil (continued)

| Data Label | Status | Coil | Number of Bits | Notes |
|--|--------|------|----------------|-----------------|
| 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 | — | | 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 |
| 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 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 48 Liebert APS™ - Input and Holding

| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|--------------------------------|----------------|------------------|-----------|-------|---|
| Protocol | | | | | |
| Server Class | 30385 | — | — | — | 1 = UPS 2 = AIR 3 = PMP 4 = PDU |
| Input | | | | | |
| System Input RMS L1-N | 30396 | — | 1 | 10 | Units : VAC Uint 16 |
| System Input RMS L2-N | 30397 | — | 1 | 10 | Units : VAC Uint 16 |
| System Input RMS L3-N | 30398 | — | 1 | 10 | Units : VAC Uint 16 |
| System Input RMS L1-L2 | 30399 | — | 1 | 10 | Units : VAC Uint 16 |
| System Input RMS L2-L3 | 30400 | — | 1 | 10 | Units : VAC Uint 16 |
| System Input RMS L3-L1 | 30401 | — | 1 | 10 | Units : VAC Uint 16 |
| System Input RMS Current L1 | 30402 | — | 1 | 10 | Units : A AC Uint 16 |
| System Input RMS Current L2 | 30403 | — | 1 | 10 | Units : A AC Uint 16 |
| System Input RMS Current L3 | 30404 | — | 1 | 10 | Units : A AC Uint 16 |
| System Input Frequency | 30405 | — | 1 | 100 | Units : Hz Uint 16 |
| System Input Power Factor L1 | 30406 | — | 1 | 100 | Uint 16 |
| System Input Power Factor L2 | 30407 | — | 1 | 100 | Uint 16 |
| System Input Power Factor L3 | 30408 | — | 1 | 100 | Uint 16 |
| System Input Brown Out Count | 30409 | — | 1 | — | Uint 16 |
| System Input Black Out Count | 30410 | — | 1 | — | Uint 16 |
| Bypass | | | | | |
| Bypass Input Voltage RMS L1-N | 30421 | — | 1 | 10 | Units : VAC Uint 16 |
| Bypass Input Voltage RMS L2-N | 30422 | — | 1 | 10 | Units : VAC Uint 16 |
| Bypass Input Voltage RMS L1-L2 | 30423 | — | 1 | 10 | Units : VAC Uint 16 |
| Bypass Input Frequency | 30424 | — | 1 | 100 | Units : Hz Uint 16 |
| Number Of Transfers To Bypass | 30425 | — | 1 | — | Uint 16 |
| Bypass Qualification Status | 30426 | — | 1 | — | 0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High |

Table 48 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 Uint 16 |
| Battery Volts for Cabinet | 30438 | — | 1 | 10 | Units : VDC Uint 16 |
| DC Bus Current | 30439 | — | 1 | 100 | Units : A DC Uint 16 |
| 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 : degF Int16 |
| Number of Discharge Cycles | 30445 | — | 1 | — | Uint 16 |
| Accumulated Discharge Time | 30446 | — | 1 | 10 | Units : hr Uint 16 |
| Time Until Next Auto Battery Test | 30447 | — | 2 | — | Units : min Uint32 |
| Number of EBC Installed | 30449 | — | 1 | — | Uint 16 |
| Low Battery Warning Time | 30450 | 40450 | 1 | — | Units : min Uint 16 |
| 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 Uint 16 |
| System Output Voltage RMS L2-N | 30465 | — | 1 | 10 | Units : VAC Uint 16 |
| System Output Voltage RMS L1-L2 | 30466 | — | 1 | 10 | Units : VAC Uint 16 |
| System Output RMS Current L1 | 30467 | — | 1 | 10 | Units : A AC Uint 16 |
| System Output RMS Current L2 | 30468 | — | 1 | 10 | Units : A AC Uint16 |
| System Output Frequency | 30469 | — | 1 | 100 | Units : Hz Uint 16 |
| System Output Power Factor L1 | 30470 | — | 1 | 100 | Uint 16 |
| System Output Power Factor L2 | 30471 | — | 1 | 100 | Uint 16 |
| System Output Apparent Power | 30472 | — | 1 | 100 | Units : kVA Uint 16 |

Table 48 Liebert APS™ - Input and Holding (continued)

| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|---|----------------|------------------|-----------|-------|---|
| System Output Apparent Power L1 | 30473 | — | 1 | 100 | Units : kVA Uint 16 |
| System Output Apparent Power L2 | 30474 | — | 1 | 100 | Units : kVA Uint 16 |
| System Output Power | 30475 | — | 1 | 100 | Units : kW Uint 16 |
| System Output Power L1 | 30476 | — | 1 | 100 | Units : kW Uint 16 |
| System Output Power L2 | 30477 | — | 1 | 100 | Units : kW Uint 16 |
| System Output Pct Power L1 | 30478 | — | 1 | 10 | Units : % Uint 16 |
| System Output Pct Power L2 | 30479 | — | 1 | 10 | Units : % Uint 16 |
| 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 Uint 16 |
| Reboot After Delay | 30483 | 40483 | 1 | — | Units : sec Uint 16 |
| Output On Delay | 30484 | 40484 | 1 | — | Units : sec Uint 16 |
| 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 Capacity | 30507 | — | 1 | 1000 | Units : kVA Uint 16 |
| Frame Capacity | 30508 | — | 1 | 1000 | Units : kVA Uint 16 |
| Number of Installed Power Modules | 30509 | — | 1 | — | Uint 16 |
| Number Of Active Power Modules | 30510 | — | 1 | — | Uint 16 |
| Number Of Power Modules With Warnings | 30511 | — | 1 | — | Uint 16 |
| Number Of Failed Power Modules | 30512 | — | 1 | — | Uint 16 |
| Number of Installed Battery Strings | 30513 | — | 1 | — | Uint 16 |
| Number of Active Battery Strings | 30514 | — | 1 | — | Uint 16 |
| Number of Battery Strings With Warnings | 30515 | — | 1 | — | Uint 16 |
| Number of Failed Battery Strings | 30516 | — | 1 | — | Uint 16 |
| 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 |

Table 48 Liebert APS™ - Input and Holding (continued)

| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|--------------------------------------|----------------|------------------|-----------|-------|---|
| Auto Restart | — | — | 40519 | 1 | 0 = disabled 1 = enabled |
| Auto Restart Delay | — | — | 40520 | 1 | Units : sec Uint 16 |
| Auto Restart Minimum Battery Setting | — | — | 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 Uint 16 |
| 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 |
| 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 |
| BatteryModule 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 : degF Int16 |
| Number of Discharge Cycles | 30658 | — | 1 | — | Uint 16 |
| Accumulated Discharge Time | 30659 | — | 1 | 10 | Units : hr Uint 16 |

Table 48 Liebert APS™ - Input and Holding (continued)

| Data Label | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|-----------------------------|----------------|------------------|-----------|-------|--|
| BatteryModule 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 : degF Int16 |
| Number of Discharge Cycles | 30674 | — | 1 | — | Uint 16 |
| Accumulated Discharge Time | 30675 | — | 1 | 10 | Units : hr Uint 16 |
| 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 : degF Int16 |
| Number of Discharge Cycles | 31922 | — | 1 | — | Uint 16 |
| Accumulated Discharge Time | 31923 | — | 1 | 10 | Units : hr Uint 16 |
| 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 | — | Secs since Epoch(UTC) |
| SystemConfiguration | | | | | |
| 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 49 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 49 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. |
| 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. |
| Output Overload | An overload exists on the output. |

Table 49 Liebert APS™ - Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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 |
| System Output Power Factor L2 | The system output power factor of Line 2 |
| System Output Power L1 | The system output power on Line 1. |

Table 49 Liebert APS™ - Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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 50 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 | — | — |
| 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 51 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 |

Table 51 Liebert GXT2™ and Liebert GXT3™ - Input and Holding (continued)

| Data Description | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|---------------------------|----------------|------------------|-----------|-------|---------------|
| 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 52 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 53 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 54 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 55 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 |
| 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 56 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 | — | — | — | — |

Table 56 Liebert NX™ - Status and Coil (continued)

| Data Description | Status | Coil | Number of Bits | Scale | Notes / Units |
|---|--------|------|----------------|-------|---------------|
| DC Bus Balancer Fault | 10240 | — | — | — | — |
| DC Bus 1 Power Supply Fail | 10251 | — | — | — | — |
| 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 57 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 |

Table 57 Liebert NX™ - Input and Holding (continued)

| Data Description | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|--------------------------------|----------------|------------------|-----------|-------|---------------|
| Input Current L1 | 30154 | — | 1 | — | A |
| Input Power Factor L1 | 30155 | — | 1 | 100 | — |
| 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 58 Liebert NX 225-600kVA UPS - Input and Holding³

| 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 | — | 10HXXXXXX 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 | — | 10HXXXXXX 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 |

Table 58 Liebert NX 225-600kVA UPS - 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 |
| General Fault | — | 40089 | 1 | — | Bit 2 |

Table 58 Liebert NX 225-600kVA UPS - Input and Holding³ (continued)

| Data Description | Input | Holding Register | # of Reg | Scale | Notes/Units |
|--------------------------------|-------|------------------|----------|-------|--|
| 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 59 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 |
| 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 |
| Battery - External Monitor 2 | 10349 | — | 1 | Active on Alarm | N+1, 1+N, 1+1, SMS |

Table 59 Liebert NXL™ - 60Hz, UL version (Model 40) - Status and Coil (continued)

| Data Label | Status | Coil | # of Bits | Notes | NXL Type |
|-----------------------------------|--------|------|-----------|-------------------|-------------------------|
| 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 |
| LBS Inhibited | 10396 | — | 1 | Active on Alarm | SCC, 1+N, 1+1, SMS |

Table 59 Liebert NXL™ - 60Hz, UL version (Model 40) - Status and Coil (continued)

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

Table 60 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 |
| System Output RMS Current Phs A | 30164 | — | 1 | — | A AC | N+1, 1+N, 1+1, SMS |

Table 60 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 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 |
| Bypass Qualification Status | 30315 | — | 1 | — | 0 = Fail 1 = Marginal Low 2 = Normal 3 = Marginal High | SCC, 1+N, 1+1, SMS |

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

| Data Label | Input Register | Holding Register | # of Regs | Scale | Units / Notes | NXL Types |
|--------------------------------------|----------------|------------------|-----------|-------|--|-------------------------|
| 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 |
| 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 |

Table 60 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 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 |
| 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 |

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

| Data Label | Input Register | Holding Register | # of Regs | Scale | Units / Notes | NXL Types |
|-----------------------------------|----------------|------------------|-----------|-------|--|-------------------------|
| 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 |
| 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 |

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

| Data Label | Input Register | Holding Register | # of Regs | Scale | Units / Notes | NXL Types |
|-------------------------------------|----------------|------------------|-----------|-------|--|-------------------------------|
| 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 |
| 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 |

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

| Data Label | Input Register | Holding Register | # of Regs | Scale | Units / Notes | NXL Types |
|--|----------------|------------------|-----------|-------|--|-------------------------------|
| 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 |
| 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 |

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

| Data Label | Input Register | Holding Register | # of Regs | Scale | Units / Notes | NXL Types |
|--|----------------|------------------|-----------|-------|--|-----------|
| 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 |
| 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 |

Table 60 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 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, |
| 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 |

Table 60 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 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 |
| 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 |

Table 60 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 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 |
| 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 |

Table 60 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 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 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 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 |

Table 61 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|-----------------------------------|---|
| 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 |
| 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 Extrl | 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 |

Table 61 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|--------------------------------------|---|
| 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 |
| 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) |

Table 61 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|----------------------------------|---|
| 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 |
| 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 |

Table 61 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|----------------------------------|---|
| 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 |
| 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 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 62 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 62 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Status and Coil

| Data Description | Status | Coil | Number of Bits | Notes / Units |
|--|--------|------|----------------|-----------------|
| 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 |
| System | | | | |
| System Fan Failure - Redundant | 10174 | — | 1 | Active on Alarm |
| Multiple Fan Failure | 10175 | — | 1 | Active on Alarm |

Table 62 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Status and Coil

| Data Description | Status | Coil | Number of Bits | Notes / Units |
|-----------------------------------|--------|------|----------------|-----------------|
| 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 |
| 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 63 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 |
| 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 |

Table 63 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 |

Table 63 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 |

Table 63 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) |

Table 63 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 |

Table 63 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 |

Table 63 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 |

Table 63 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 |

Table 63 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 |

Table 63 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 |

Table 63 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 |

Table 64 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 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 |

Table 64 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Glossary

| Data Label | Data Description |
|---------------------------------------|---|
| 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 |
| 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 |

Table 64 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Glossary

| Data Label | Data Description |
|--|--|
| 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. |
| 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 |

Table 64 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Glossary

| Data Label | Data Description |
|--|---|
| 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 |
| 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 |

Table 64 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Glossary

| Data Label | Data Description |
|--|--|
| 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 |
| 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. |

Table 64 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Glossary

| Data Label | Data Description |
|--|--|
| 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. |
| 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 |

Table 64 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Glossary

| Data Label | Data Description |
|--|---|
| 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 |
| 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 |

Table 64 Liebert NXL™ - 50Hz, CE version (Models 48 and 49) - Glossary

| Data Label | Data Description |
|--|--|
| 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 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 65 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 66 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 67 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 | — | — |
| 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 68 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 |
| 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 69 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 70 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 |

Table 70 Liebert Series 300™ UPS - Input and Holding (continued)

| Data Description | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|---------------------------|----------------|------------------|-----------|-------|---|
| 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 |
| 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 71 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 72 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 73 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 74 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 75 Liebert HiPulse™, 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 |
| By 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 |

Table 75 Liebert HiPulse™, 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 Block | — | 40290 | 1 | — | Bit 7 |
| Rectifier Current Limit | — | 40290 | 1 | — | Bit 8 |
| 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 |
| Contactors 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 76 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 |

Table 76 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 |
| Output Undervoltage | — | 40290 | 1 | — | Bit 7 |
| Output Waveform Error | — | 40290 | 1 | — | Bit 8 |
| Transfer Count Block | — | 40290 | 1 | — | Bit 9 |
| 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 |
| Inverter 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 77 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 |
| Inverter Over Current Transfer | — | 40289 | 1 | — | Bit 15 |

Table 77 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 |
| 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 |
| Battery 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 78 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 |

Table 78 Alber® BDSU™ - Status and Coil

| Data Description | Status | Coil | Number of Bits | Notes / Units |
|---|-------------|------|----------------|-----------------|
| Thermal Runaway Charger Current Level One Event String 1 - 32 | 13297-13328 | — | 1 | Active on Alarm |
| 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 79 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 |

Table 79 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 | 33042-33073 | — | 1 | — | Units : deg C |
| 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 |

Table 79 Alber® BDSU™ - Input and Holding (continued)

| Data Description | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|---|----------------|------------------|-----------|------------------------|--|
| 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 |
| 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 |

Table 79 Alber® BDSU™ - Input and Holding (continued)

| Data Description | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|--|----------------|------------------|-----------|------------------|------------------|
| 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 | — | — |
| 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 |

Table 79 Alber® BDSU™ - Input and Holding (continued)

| Data Description | Input Register | Holding Register | # of Reg. | Scale | Notes / Units |
|---|----------------|------------------|-----------|------------------------|--|
| 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 |
| 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.

4.0 BACNET COMMUNICATIONS

4.1 BACnet Protocol Implementation Conformance Statement

The Liebert IntelliSlot Web IS-IPBML, IS-WEBADPT and the IS-UNITY-DP™ cards provide BACnet IP to Emerson Network Power® devices via the BACnet protocol. The IS-UNITY-DP card also supports the BACnet MSTP protocol. The IS-UNITY-DP card also supports the BACnet MSTP protocol. Data points of the managed device are mapped to BACnet objects that are automatically created in the card when the device is discovered. The connection is a 10/100BaseT Ethernet port that supports device data access using BACnet IP and supports card configuration and administration through HTTP and Telnet. A DB-9 RS-232 port provides Service Terminal access for card configuration and administration.

The BACnet implementation does not include a BACnet Broadcast Management Device (BBMD).

The IS-IPBML and IS-UNITY-DP 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.

Following is a listing of Services and Objects supported in this BACnet implementation.

4.1.1 Segmentation Capability

Not supported.

4.1.2 Supported Services

| Service | Originate | Respond |
|--|-----------|--------------------------------|
| 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 | — | — |
| 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 Supported

| 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 | — |

4.1.4 Object Properties

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: <ul style="list-style-type: none"> • 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) |

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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data

| Controller | | Liebert iCOM® v4 | | | | |
|------------------------------------|--------------|------------------|-------------|--------|-----------------|---------------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| 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 |
| Supply Air Under Temperature | Binary_Value | 2 | 5019_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Sensor Issue | Binary_Value | 3 | 5026_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Return Air Under Temperature | Binary_Value | 15 | 5335_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Sensor Issue | Binary_Value | 16 | 5147_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| Ext Air Sensor A Issue | Binary_Value | 29 | 4618_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ambient Air Sensor Issue | Binary_Value | 30 | 5573_1_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity | | | | | | |
| High Return Humidity | Binary_Value | 41 | 5034_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Low Return Humidity | Binary_Value | 42 | 5036_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dew Point Over Temperature | Binary_Value | 43 | 5578_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Dew Point Under Temperature | Binary_Value | 44 | 5579_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Humidity Sensor Issue | Binary_Value | 45 | 5902_1 | RD | Active on Alarm | 4, 5, 7, 8, 9 |
| 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 |
| 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 |
| Ext Dew Point Over Temperature | Binary_Value | 55 | 4615_1_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Dew Point Under Temperature | Binary_Value | 56 | 5577_1_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressors | | | | | | |
| Ext Compressor Lockout | Binary_Value | 65 | 5067_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Capacity Reduced | Binary_Value | 66 | 5513_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressors - Compressor 1 | | | | | | |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|-------------|--------|-----------------|---------------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Compressor Hours Exceeded | Binary_Value | 77 | 5269_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Head Pressure | Binary_Value | 78 | 5270_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Suction Pressure | Binary_Value | 79 | 5271_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Short Cycle | Binary_Value | 80 | 5352_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Pump Down Issue | Binary_Value | 81 | 5146_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Thermal Overload | Binary_Value | 82 | 5272_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Dig Scroll Comp Over Temp | Binary_Value | 84 | 5355_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Pressure Transducer Issue | Binary_Value | 85 | 5514_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Pressure Transducer Issue | Binary_Value | 86 | 5148_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Superheat Over Threshold | Binary_Value | 87 | 5604_1_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Differential Pressure Lockout | Binary_Value | 88 | 5903_1_1 | RD | Active on Alarm | 7, 8, 9 |
| Compressors - Compressor 2 | | | | | | |
| Compressor Hours Exceeded | Binary_Value | 97 | 5269_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Head Pressure | Binary_Value | 98 | 5270_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Suction Pressure | Binary_Value | 99 | 5271_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Short Cycle | Binary_Value | 100 | 5352_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Pump Down Issue | Binary_Value | 101 | 5146_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Thermal Overload | Binary_Value | 102 | 5272_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Dig Scroll Comp Over Temp | Binary_Value | 104 | 5355_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Pressure Transducer Issue | Binary_Value | 105 | 5514_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor High Pressure Transducer Issue | Binary_Value | 106 | 5148_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Superheat Over Threshold | Binary_Value | 107 | 5604_1_2 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Low Differential Pressure Lockout | Binary_Value | 108 | 5903_1_2 | RD | Active on Alarm | 7, 8, 9 |
| Free Cooling / Chilled Water | | | | | | |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|-------------|--------|-----------------|---------------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Free Cooling Valve Hours Exceeded | Binary_Value | 117 | 5306_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Free Cooling Lockout | Binary_Value | 118 | 5361_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Temp Sensor Issue | Binary_Value | 119 | 5362_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Reheater Over Temperature | Binary_Value | 131 | 5068_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Reheat Lockout | Binary_Value | 132 | 5070_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheat - 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 |
| Reheat - 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 |
| Reheat - 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 |
| Humidifier | | | | | | |
| Humidifier Hours Exceeded | Binary_Value | 176 | 5037_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Humidifier Lockout | Binary_Value | 177 | 5044_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Control Board Not Detected | Binary_Value | 178 | 5045_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Cylinder Worn | Binary_Value | 179 | 5042_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Issue | Binary_Value | 180 | 5043_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Low Water | Binary_Value | 181 | 5041_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Over Current | Binary_Value | 182 | 5040_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Under Current | Binary_Value | 183 | 5039_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier | | | | | | |
| Dehumidifier Hours Exceeded | Binary_Value | 194 | 5038_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|---------------------------------|--------------|------------------|-------------|--------|-----------------|---------------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Fan | | | | | | |
| Fan Hours Exceeded | Binary_Value | 205 | 5054_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Main Fan Overload | Binary_Value | 206 | 5376_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Issue | Binary_Value | 207 | 4729_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condensers | | | | | | |
| Condenser VFD Issue | Binary_Value | 219 | 5072_1 | RD | Active on Alarm | 1, 2, 3, 5, 6, 7, 8 |
| Ext Condenser Pump High Water | Binary_Value | 220 | 5106_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| External Condenser TVSS Issue | Binary_Value | 1060 | 6105_1 | RD | Active on Alarm | 4, 9 |
| External Condenser VFD Issue | Binary_Value | 1061 | 6106_1 | RD | Active on Alarm | 4, 9 |
| Condensers - Condenser 1 | | | | | | |
| Condenser Issue | Binary_Value | 231 | 5377_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condensers - Condenser 2 | | | | | | |
| Condenser Issue | Binary_Value | 242 | 5377_1_2 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System Events | | | | | | |
| Customer Input 1 | Binary_Value | 253 | 4270_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 2 | Binary_Value | 254 | 4271_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 3 | Binary_Value | 255 | 4272_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Customer Input 4 | Binary_Value | 256 | 4273_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Loss of Air Blower | Binary_Value | 257 | 5415_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Loss of Flow | Binary_Value | 258 | 5105_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Standby Glycol Pump On | Binary_Value | 259 | 5107_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| BMS Communications Timeout | Binary_Value | 260 | 5115_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Standby Unit On | Binary_Value | 261 | 5416_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Clogged Air Filter | Binary_Value | 262 | 5118_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Loss of Air Flow | Binary_Value | 263 | 5053_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Service Required | Binary_Value | 264 | 4726_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Master Unit Communication Lost | Binary_Value | 265 | 5120_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| RAM Battery Issue | Binary_Value | 266 | 5119_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Shutdown - Loss Of Power | Binary_Value | 267 | 4714_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|-------------|--------|-----------------|---------------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| High Power Shutdown | Binary_Value | 268 | 5121_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Smoke Detected | Binary_Value | 269 | 4720_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Chilled Water Loss of Flow | Binary_Value | 270 | 4980_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Chilled Water Over Temp | Binary_Value | 271 | 4626_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Code Missing | Binary_Value | 272 | 5418_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Communication Lost | Binary_Value | 273 | 5419_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Water Leakage Detector Sensor Issue | Binary_Value | 274 | 5114_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Water Under Floor | Binary_Value | 275 | 4723_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Over Temperature | Binary_Value | 276 | 5104_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| External Fire Detected | Binary_Value | 277 | 5108_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unspecified General Event | Binary_Value | 278 | 5588_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Temperature Control Sensor Issue | Binary_Value | 279 | 5617_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Airflow Sensor Issue | Binary_Value | 280 | 5906_1 | RD | Active on Alarm | 4, 5, 7, 8, 9 |
| Ext Air Damper Position Issue | Binary_Value | 281 | 5907_1 | RD | Active on Alarm | 4, 5, 7, 8, 9 |
| Ext Power Source A Failure | Binary_Value | 282 | 5908_1 | RD | Active on Alarm | 4, 5, 7, 8, 9 |
| Ext Power Source B Failure | Binary_Value | 283 | 5909_1 | RD | Active on Alarm | 4, 5, 7, 8, 9 |
| Mixed Mode Lockout | Binary_Value | 284 | 5924_1 | RD | Active on Alarm | 7, 8, 9 |
| System 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, 9 |
| System 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, 9 |
| System Events - Messages | | | | | | |
| Unit Off | Binary_Value | 310 | 5110_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit On | Binary_Value | 311 | 5109_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Partial Shutdown | Binary_Value | 312 | 5112_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Shutdown | Binary_Value | 313 | 5113_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Standby | Binary_Value | 314 | 5111_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Maintenance Due | Binary_Value | 315 | 5116_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Maintenance Completed | Binary_Value | 316 | 5117_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|-------------|--------|-----------------|---------------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| System 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 |
| System 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 |
| System 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 |
| Remote Sensors | | | | | | |
| Remote Sensor Average Over Temperature | Binary_Value | 361 | 5593_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Average Under Temperature | Binary_Value | 362 | 5594_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Average Over Temperature | Binary_Value | 363 | 5595_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Average Under Temperature | Binary_Value | 364 | 5596_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 1 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 376 | 5597_1_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 377 | 5598_1_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 378 | 5060_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 2 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 390 | 5597_1_2 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 391 | 5598_1_2 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 392 | 5060_1_2 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 3 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 404 | 5597_1_3 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 405 | 5598_1_3 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 406 | 5060_1_3 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 4 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 418 | 5597_1_4 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 419 | 5598_1_4 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 420 | 5060_1_4 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|-------------|--------|-----------------|------------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Remote Sensors - Remote Sensor 5 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 432 | 5597_1_5 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 433 | 5598_1_5 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 434 | 5060_1_5 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 6 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 446 | 5597_1_6 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 447 | 5598_1_6 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 448 | 5060_1_6 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 7 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 460 | 5597_1_7 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 461 | 5598_1_7 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 462 | 5060_1_7 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 8 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 474 | 5597_1_8 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 475 | 5598_1_8 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 476 | 5060_1_8 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 9 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 488 | 5597_1_9 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 489 | 5598_1_9 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 490 | 5060_1_9 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 10 | | | | | | |
| Remote Sensor Over Temperature | Binary_Value | 502 | 5597_1_10 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temperature | Binary_Value | 503 | 5598_1_10 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Issue | Binary_Value | 504 | 5060_1_10 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Economizer | | | | | | |
| Air Economizer Emergency Override | Binary_Value | 516 | 5600_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Economizer Reduced Airflow | Binary_Value | 517 | 5601_1 | RD | Active on Alarm | 2, 3, 4, 5, 6, 7, 8, 9 |
| Electronic Expansion Valves | | | | | | |
| EEV Unspecified General Event | Binary_Value | 540 | 5625_1 | RD | Active on Alarm | 6, 7, 8, 9 |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|-------------|--------|-----------------|------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Static Pressure | | | | | | |
| Static Pressure Sensor Issue | Binary_Value | 563 | 5629_1 | RD | Active on Alarm | 3, 4, 5, 7, 8, 9 |
| High Static Pressure | Binary_Value | 564 | 5630_1 | RD | Active on Alarm | 3, 4, 5, 7, 8, 9 |
| Low Static Pressure | Binary_Value | 565 | 5631_1 | RD | Active on Alarm | 3, 4, 5, 7, 8, 9 |
| Static Pressure Sensor Out of Range | Binary_Value | 566 | 5910_1 | RD | Active on Alarm | 4, 5, 7, 8, 9 |
| EconoPhase | | | | | | |
| Pump Unspecified General Event | Binary_Value | 623 | 5636_1 | RD | Active on Alarm | 6, 7, 8, 9 |
| Power Measurement 1 | | | | | | |
| Input Undervoltage | Binary_Value | 1001 | 5568_1 | RD | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost | Binary_Value | 1040 | 5967_1 | RD | Active on Alarm | 5 |
| Power Measurement 2 | | | | | | |
| Input Undervoltage | Binary_Value | 1002 | 5568_2 | RD | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost | Binary_Value | 1041 | 5967_2 | RD | Active on Alarm | 5 |
| Power Measurement 3 | | | | | | |
| Input Undervoltage | Binary_Value | 1003 | 5568_3 | RD | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost | Binary_Value | 1042 | 5967_3 | RD | Active on Alarm | 5 |
| Power Measurement 4 | | | | | | |
| Input Undervoltage | Binary_Value | 1004 | 5568_4 | RD | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost | Binary_Value | 1043 | 5967_4 | RD | Active on Alarm | 5 |
| Power Measurement 5 | | | | | | |
| Input Undervoltage | Binary_Value | 1005 | 5568_5 | RD | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost | Binary_Value | 1044 | 5967_5 | RD | Active on Alarm | 5 |
| Power Measurement 6 | | | | | | |
| Input Undervoltage | Binary_Value | 1006 | 5568_6 | RD | Active on Alarm | 5 |
| Modbus Power Meter Communication Lost | Binary_Value | 1045 | 5967_6 | RD | Active on Alarm | 5 |
| Fluid 1 | | | | | | |
| Fluid Temperature Sensor Issue | Binary_Value | 1021 | 5911_1 | RD | Active on Alarm | 5 |
| Fluid Flow Sensor Issue | Binary_Value | 1022 | 5912_1 | RD | Active on Alarm | 5 |
| Fluid 2 | | | | | | |
| Fluid Temperature Sensor Issue | Binary_Value | 1031 | 5911_2 | RD | Active on Alarm | 5 |
| Fluid Flow Sensor Issue | Binary_Value | 1032 | 5912_2 | RD | Active on Alarm | 5 |
| Auxiliary Air | | | | | | |
| Aux Air Temp Device Communication Lost | Binary_Value | 1050 | 5966_1 | RD | Active on Alarm | 5 |
| Auxiliary Air | | | | | | |
| Aux Air Temp Device Communication Lost | Binary_Value | 1050 | 5966_1 | RD | Active on Alarm | 5 |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------|------------------|-------------|--------|-----------------|---------------------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Liebert Condensers (Previously called Global Condensers) | | | | | | |
| Condenser Unit Unspecified General Event | Binary_Value | 643 | 5637_1 | RD | Active on Alarm | 3, 4, 5, 6, 7, 8, 9 |
| Liebert Condensers - Condenser 1 | | | | | | |
| Condenser Outside Air Temp Out of Operating Range | Binary_Value | 1082 | 5536_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Control Board Issue | Binary_Value | 1084 | 5537_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Outside Air Temp Sensor Issue | Binary_Value | 1086 | 5535_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Communication Lost | Binary_Value | 1088 | 5531_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Remote Shutdown | Binary_Value | 1090 | 6100_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser TVSS Issue | Binary_Value | 218 | 5073_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Condenser TVSS Issue | Binary_Value | 1092 | 5073_1_1 | RD | Active on Alarm | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Liebert Condensers - Condenser 2 | | | | | | |
| Condenser Outside Air Temp Out of Operating Range | Binary_Value | 1083 | 5536_1_2 | RD | Active on Alarm | 4, 9 |
| Condenser Control Board Issue | Binary_Value | 1085 | 5537_1_2 | RD | Active on Alarm | 4, 9 |
| Condenser Outside Air Temp Sensor Issue | Binary_Value | 1087 | 5535_1_2 | RD | Active on Alarm | 4, 9 |
| Condenser Communication Lost | Binary_Value | 1089 | 5531_1_2 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Circuit 1 | | | | | | |
| Condenser Circuit Unspecified General Event | Binary_Value | 644 | 5638_1_1 | RD | Active on Alarm | 3, 4, 5, 6, 7, 8, 9 |
| Condenser Refrigerant Pressure Sensor Issue | Binary_Value | 1104 | 5541_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Under Threshold | Binary_Value | 1106 | 5540_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Over Threshold | Binary_Value | 1108 | 5539_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Temp Sensor Issue | Binary_Value | 1110 | 5544_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Under Temp | Binary_Value | 1112 | 5543_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Over Temp | Binary_Value | 1114 | 5542_1_1 | RD | Active on Alarm | 4, 9 |
| Condenser Max Fan Speed Override | Binary_Value | 1116 | 5545_1_1 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Circuit | | | | | | |
| 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 | 4, 9 |
| Condenser Refrigerant Pressure Under Threshold | Binary_Value | 1107 | 5540_1_2 | RD | Active on Alarm | 4, 9 |
| Condenser Refrigerant Pressure Over Threshold | Binary_Value | 1109 | 5539_1_2 | RD | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Temp Sensor Issue | Binary_Value | 1111 | 5544_1_2 | RD | Active on Alarm | 4, 9 |

Table 80 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------|------------------|-------------|--------|-----------------|-------------|
| Data Description | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Condenser Supply Refrigerant Under Temp | Binary_Value | 1113 | 5543_1_2 | RD | Active on Alarm | 4, 9 |
| Condenser Supply Refrigerant Over Temp | Binary_Value | 1115 | 5542_1_2 | RD | Active on Alarm | 4, 9 |
| Condenser Max Fan Speed Override | Binary_Value | 1117 | 5545_1_2 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Condenser 1 Fan 1 | | | | | | |
| Condenser Fan Issue | Binary_Value | 1128 | 5277_1_1_1 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Condenser 1 Fan 2 | | | | | | |
| Condenser Fan Issue | Binary_Value | 1129 | 5277_1_1_2 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Condenser 1 Fan 3 | | | | | | |
| Condenser Fan Issue | Binary_Value | 1130 | 5277_1_1_3 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Condenser 1 Fan 4 | | | | | | |
| Condenser Fan Issue | Binary_Value | 1131 | 5277_1_1_4 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Condenser 2 Fan 1 | | | | | | |
| Condenser Fan Issue | Binary_Value | 1132 | 5277_1_2_1 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Condenser 2 Fan 2 | | | | | | |
| Condenser Fan Issue | Binary_Value | 1133 | 5277_1_2_2 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Condenser 2 Fan 3 | | | | | | |
| Condenser Fan Issue | Binary_Value | 1134 | 5277_1_2_3 | RD | Active on Alarm | 4, 9 |
| Liebert Condensers - Condenser 2 Fan 4 | | | | | | |
| Condenser Fan Issue | Binary_Value | 1135 | 5277_1_2_4 | RD | Active on Alarm | 4, 9 |
| PDX | | | | | | |
| Compressor 1B Thermal Overload | Binary_Value | 1146 | 6092_1 | RD | Active on Alarm | — |
| Compressor 2B Thermal Overload | Binary_Value | 1147 | 6093_1 | RD | Active on Alarm | — |
| Compressor 1B Hours Exceeded | Binary_Value | 1148 | 6094_1 | RD | Active on Alarm | — |
| Compressor 2B Hours Exceeded | Binary_Value | 1149 | 6095_1 | RD | Active on Alarm | — |

Table 81 Extra Notes to Table 80

| 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 2.01.29.03R |
| 4 | This point is supported on: iCOM controller version 2.01.29.06R |
| 5 | This point is supported on: iCOM controller version 2.01.40R |
| 6 | This point is supported on: iCOM controller version 2.02.21R |
| 7 | This point is supported on: iCOM controller version 2.03.27.06R |
| 8 | This point is supported on: iCOM controller version 2.03.32R |
| 9 | This point is supported on: iCOM controller version 2.03.33R |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|----------------|--------|-------------------------------|---------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Air | | | | | | |
| Air Temperature Set Point | Analog_Value | 1 | 5008_1 | RW | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Set Point | Analog_Value | 10001 | 5008_1_deg_F | RW | Units: deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Proportional Band | Analog_Value | 2 | 5325_1 | RW | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Proportional Band | Analog_Value | 10002 | 5325_1_deg_F | RW | Units: deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Dead Band | Analog_Value | 3 | 5011_1 | RW | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Dead Band | Analog_Value | 10003 | 5011_1_deg_F | RW | Units: deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Temperature Control Integration Time | Analog_Value | 4 | 5326_1 | RW | Units: min | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's High Air Temperature | Analog_Value | 5 | 5327_1 | RD | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| Today's Low Air Temperature | Analog_Value | 7 | 5329_1 | RD | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |
| Supply Air Temperature | Analog_Value | 10019 | 5002_1_1_deg_F | RD | Units: deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Temperature Set Point | Analog_Value | 20 | 5331_1_1 | RW | Units: deg C | 1 |
| Supply Air Temperature Set Point | Analog_Value | 10020 | 5331_1_1_deg_F | RW | Units: deg F | 1 |
| Supply Air Over Temp Threshold | Analog_Value | 21 | 5014_1_1 | RW | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Over Temp Threshold | Analog_Value | 10021 | 5014_1_1_deg_F | RW | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Under Temp Threshold | Analog_Value | 22 | 5018_1_1 | RW | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Supply Air Under Temp Threshold | Analog_Value | 10022 | 5018_1_1_deg_F | RW | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|---------------------------------------|--------------|------------------|----------------|--------|--------------|---------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Air - Return Air | | | | | | |
| Return Air Temperature | Analog_Value | 31 | 4291_1_1 | RD | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Temperature | Analog_Value | 10031 | 4291_1_1_deg_F | RD | Units: deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Temperature Set Point | Analog_Value | 32 | 5333_1_1 | RW | Units: deg C | 1 |
| Return Air Temperature Set Point | Analog_Value | 10032 | 5333_1_1_deg_F | RW | Units: deg F | 1 |
| Return Air Over Temp Threshold | Analog_Value | 33 | 5022_1_1 | RW | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Over Temp Threshold | Analog_Value | 10033 | 5022_1_1_deg_F | RW | Units: deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Under Temp Threshold | Analog_Value | 34 | 5334_1_1 | RW | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Air Under Temp Threshold | Analog_Value | 10034 | 5334_1_1_deg_F | RW | Units: deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| Ext Air Sensor B Temperature | Analog_Value | 46 | 4597_1_1 | RD | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Air Sensor C Temperature | Analog_Value | 47 | 5336_1_1 | RD | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| Outside Air Temperature | Analog_Value | 50 | 5574_1_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Outside Air Temperature | Analog_Value | 10050 | 5574_1_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|----------------|--------|-------------------------------|---------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Humidity | | | | | | |
| Return Humidity | Analog_Value | 60 | 5028_1 | RD | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Set Point | Analog_Value | 61 | 5029_1 | RW | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Humidity Set Point | Analog_Value | 62 | 5339_1 | RW | Units: % RH | 1 |
| Humidity Proportional Band | Analog_Value | 63 | 5341_1 | RW | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Dead Band | Analog_Value | 64 | 5032_1 | RW | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Proportional Control Integration Time | Analog_Value | 65 | 5342_1 | RW | Units: min | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| High Return Humidity Threshold | Analog_Value | 66 | 5033_1 | RW | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Low Return Humidity Threshold | Analog_Value | 67 | 5035_1 | RW | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's High Humidity | Analog_Value | 68 | 5343_1 | RD | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's High Humidity Time | Analog_Value | 69 | 5344_1 | RD | Units: Seconds since Midnight | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's Low Humidity | Analog_Value | 70 | 5345_1 | RD | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Today's Low Humidity Time | Analog_Value | 71 | 5346_1 | RD | Units: Seconds since Midnight | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Air Sensor B Humidity | Analog_Value | 83 | 4598_1_1 | RD | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Ext Air Sensor C Humidity | Analog_Value | 84 | 5347_1_1 | RD | Units: % RH | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| Ext Air Sensor A Dew Point Temp | Analog_Value | 87 | 4596_1_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| 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, 9 |
| Ext Dew Point Over Temp Threshold | Analog_Value | 88 | 4614_1_1 | RW | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| 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, 9 |
| Ext Dew Point Under Temp Threshold | Analog_Value | 89 | 5576_1_1 | RW | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| 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, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------|------------------|----------------|--------|--------------|---------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Compressors - Compressor 1 | | | | | | |
| Compressor Hours | Analog_Value | 97 | 5267_1_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Hours Threshold | Analog_Value | 98 | 5268_1_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Discharge Temp | Analog_Value | 99 | 5353_1_1 | RD | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Digital Scroll Compressor Loading | Analog_Value | 100 | 5619_1_1 | RD | Units: % | 3, 4, 5, 6, 7, 8, 9 |
| Compressors - Compressor 2 | | | | | | |
| Compressor Hours | Analog_Value | 110 | 5267_1_2 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Hours Threshold | Analog_Value | 111 | 5268_1_2 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dig Scroll Comp Discharge Temp | Analog_Value | 112 | 5353_1_2 | RD | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Digital Scroll Compressor Loading | Analog_Value | 113 | 5619_1_2 | RD | Units: % | 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| Free Cooling Fluid Temperature | Analog_Value | 124 | 5358_1 | RD | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Fluid Temperature | Analog_Value | 10124 | 5358_1_deg_F | RD | Units: deg F | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Minimum Chilled Water Temp Set Point | Analog_Value | 125 | 5360_1 | RW | Units: deg C | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Free Cooling Valve Hours | Analog_Value | 126 | 5304_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling Valve Hours Threshold | Analog_Value | 127 | 5305_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Chilled Water Valve Hours | Analog_Value | 128 | 5614_1 | RW | Units: hr | 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheat | | | | | | |
| Hot Water / Hot Gas Valve Hours | Analog_Value | 138 | 5363_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Hot Water / Hot Gas Valve Hours Threshold | Analog_Value | 139 | 5364_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|-------------------------------------|--------------|------------------|--------------|--------|--------------|---------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Reheat - Electric Reheater 1 | | | | | | |
| Electric Reheater Hours | Analog_Value | 150 | 5366_1_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Threshold | Analog_Value | 151 | 5367_1_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheat - Electric Reheater 2 | | | | | | |
| Electric Reheater Hours | Analog_Value | 162 | 5366_1_2 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Threshold | Analog_Value | 163 | 5367_1_2 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheat - Electric Reheater 3 | | | | | | |
| Electric Reheater Hours | Analog_Value | 174 | 5366_1_3 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheater Hours Threshold | Analog_Value | 175 | 5367_1_3 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier | | | | | | |
| Humidifier Hours | Analog_Value | 186 | 5369_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Hours Threshold | Analog_Value | 187 | 5370_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Infrared Humidifier Flush Rate | Analog_Value | 188 | 5445_1 | RW | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier | | | | | | |
| Dehumidifier Hours | Analog_Value | 199 | 5371_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier Hours Threshold | Analog_Value | 200 | 5372_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan | | | | | | |
| Fan Speed Maximum Set Point | Analog_Value | 211 | 5050_1 | RW | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Hours | Analog_Value | 212 | 5374_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Hours Threshold | Analog_Value | 213 | 5375_1 | RW | Units: hr | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Minimum Set Point | Analog_Value | 214 | 5051_1 | RW | Units: % | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Temperature Set Point | Analog_Value | 215 | 5585_1 | RW | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Temperature Set Point | Analog_Value | 10215 | 5585_1_deg_F | RW | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Analog Inputs 1 | | | | | | |
| Analog Input Reading | Analog_Value | 224 | 5378_1 | RD | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Analog Inputs 2 | | | | | | |
| Analog Input Reading | Analog_Value | 235 | 5378_2 | RD | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------|------------------|--------------|--------|--------------|---------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Analog Inputs 3 | | | | | | |
| Analog Input Reading | Analog_Value | 246 | 5378_3 | RD | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Analog Inputs 4 | | | | | | |
| Analog Input Reading | Analog_Value | 257 | 5378_4 | RD | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System Info | | | | | | |
| BMS Timeout Period | Analog_Value | 268 | 5075_1 | RW | Units: min | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Auto Restart Delay | Analog_Value | 269 | 4710_1 | RW | Units: sec | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Standby Units | Analog_Value | 270 | 5314_1 | RW | | 2, 3, 4, 5, 6, 7, 8, 9 |
| System Operations | | | | | | |
| Fan Speed | Analog_Value | 280 | 5077_1 | RD | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Utilization | Analog_Value | 281 | 5078_1 | RD | Units: % | 1 |
| Free Cooling Valve Open Position | Analog_Value | 282 | 5379_1 | RD | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Maintenance Ramp | Analog_Value | 283 | 4870_1 | RD | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Calculated Next Maintenance Month | Analog_Value | 284 | 4868_1 | RD | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Calculated Next Maintenance Year | Analog_Value | 285 | 4869_1 | RD | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Hot Water / Hot Gas Valve Open Position | Analog_Value | 286 | 5380_1 | RD | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheat Utilization | Analog_Value | 287 | 5080_1 | RD | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier Utilization | Analog_Value | 288 | 5081_1 | RD | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier Utilization | Analog_Value | 289 | 5079_1 | RD | Units: % | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Cooling Capacity | Analog_Value | 290 | 5490_1 | RD | Units: % | 2, 3, 4, 5, 6, 7, 8, 9 |
| Adjusted Humidity | Analog_Value | 291 | 5606_1 | RD | Units: % RH | 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Dew Point | Analog_Value | 292 | 5004_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Return Dew Point | Analog_Value | 10292 | 5004_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Actual Air Temperature Set Point | Analog_Value | 293 | 5607_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Actual Air Temperature Set Point | Analog_Value | 10293 | 5607_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Actual Humidity Set Point | Analog_Value | 294 | 5608_1 | RD | Units: % RH | 2, 3, 4, 5, 6, 7, 8, 9 |
| Dew Point Set Point | Analog_Value | 295 | 5575_1 | RW | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|----------------|--------|--------------|---------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Dew Point Set Point | Analog_Value | 10295 | 5575_1_deg_F | RW | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Cooling Control Temperature | Analog_Value | 296 | 5615_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Cooling Control Temperature | Analog_Value | 10296 | 5615_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Control Temperature | Analog_Value | 297 | 5616_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Fan Speed Control Temperature | Analog_Value | 10297 | 5616_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Unit Cooling Load | Analog_Value | 298 | 5904_1 | RD | Units: kW | 5 |
| Time | | | | | | |
| System Date and Time | Analog_Value | 300 | 4293_1 | RW | | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors | | | | | | |
| Remote Sensor Over Temp Threshold | Analog_Value | 312 | 5589_1 | RW | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Over Temp Threshold | Analog_Value | 10312 | 5589_1_deg_F | RW | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temp Threshold | Analog_Value | 313 | 5590_1 | RW | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Under Temp Threshold | Analog_Value | 10313 | 5590_1_deg_F | RW | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Average Temperature | Analog_Value | 314 | 5007_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Average Temperature | Analog_Value | 10314 | 5007_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Maximum Temperature | Analog_Value | 315 | 5006_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Maximum Temperature | Analog_Value | 10315 | 5006_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Average Temperature | Analog_Value | 316 | 5591_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Average Temperature | Analog_Value | 10316 | 5591_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Maximum Temperature | Analog_Value | 317 | 5592_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor System Maximum Temperature | Analog_Value | 10317 | 5592_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 1 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 329 | 5059_1_1 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10329 | 5059_1_1_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 2 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 341 | 5059_1_2 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10341 | 5059_1_2_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|-----------------|--------|--------------|------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Remote Sensors - Remote Sensor 3 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 353 | 5059_1_3 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10353 | 5059_1_3_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 4 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 365 | 5059_1_4 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10365 | 5059_1_4_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 5 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 377 | 5059_1_5 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10377 | 5059_1_5_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 6 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 389 | 5059_1_6 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10389 | 5059_1_6_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 7 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 401 | 5059_1_7 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10401 | 5059_1_7_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 8 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 413 | 5059_1_8 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10413 | 5059_1_8_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 9 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 425 | 5059_1_9 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10425 | 5059_1_9_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensors - Remote Sensor 10 | | | | | | |
| Remote Sensor Temperature | Analog_Value | 437 | 5059_1_10 | RD | Units: deg C | 2, 3, 4, 5, 6, 7, 8, 9 |
| Remote Sensor Temperature | Analog_Value | 10437 | 5059_1_10_deg_F | RD | Units: deg F | 2, 3, 4, 5, 6, 7, 8, 9 |
| Static Pressure | | | | | | |
| Static Pressure Set Point | Analog_Value | 461 | 5626_1 | RW | Units: Pa | 3, 4, 5, 9 |
| Unit Static Pressure | Analog_Value | 462 | 5627_1 | RD | Units: Pa | 3, 4, 5, 9 |
| System Static Pressure | Analog_Value | 463 | 5628_1 | RD | Units: Pa | 3, 4, 5, 9 |
| EconoPhase - Pump 1 | | | | | | |
| Pump Hours | Analog_Value | 523 | 5298_1_1 | RW | Units: hr | 7, 8, 9 |
| EconoPhase - Pump 2 | | | | | | |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|----------------------------------|--------------|------------------|-------------|--------|-------------|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Pump Hours | Analog_Value | 526 | 5298_1_2 | RW | Units: hr | 7, 8, 9 |
| Power Measurement 1 | | | | | | |
| System Input RMS A-N | Analog_Value | 810 | 4096_1 | RD | Units: VAC | 5 |
| System Input RMS B-N | Analog_Value | 811 | 4098_1 | RD | Units: VAC | 5 |
| System Input RMS C-N | Analog_Value | 812 | 4100_1 | RD | Units: VAC | 5 |
| System Input RMS Current Phase A | Analog_Value | 813 | 4113_1 | RD | Units: A AC | 5 |
| System Input RMS Current Phase B | Analog_Value | 814 | 4114_1 | RD | Units: A AC | 5 |
| System Input RMS Current Phase C | Analog_Value | 815 | 4115_1 | RD | Units: A AC | 5 |
| Instantaneous Power | Analog_Value | 816 | 5901_1 | RD | Units: W | 5 |
| Energy Consumption | Analog_Value | 817 | 5900_1 | RW | Units: kWh | 5 |
| System Input RMS A-B | Analog_Value | 1900 | 4097_1 | RD | Units: VAC | 5 |
| System Input RMS B-C | Analog_Value | 1901 | 4099_1 | RD | Units: VAC | 5 |
| System Input RMS C-A | Analog_Value | 1902 | 4101_1 | RD | Units: VAC | 5 |
| Power Measurement 2 | | | | | | |
| System Input RMS A-N | Analog_Value | 820 | 4096_2 | RD | Units: VAC | 5 |
| System Input RMS B-N | Analog_Value | 821 | 4098_2 | RD | Units: VAC | 5 |
| System Input RMS C-N | Analog_Value | 822 | 4100_2 | RD | Units: VAC | 5 |
| System Input RMS Current Phase A | Analog_Value | 823 | 4113_2 | RD | Units: A AC | 5 |
| System Input RMS Current Phase B | Analog_Value | 824 | 4114_2 | RD | Units: A AC | 5 |
| System Input RMS Current Phase C | Analog_Value | 825 | 4115_2 | RD | Units: A AC | 5 |
| Instantaneous Power | Analog_Value | 826 | 5901_2 | RD | Units: W | 5 |
| Energy Consumption | Analog_Value | 827 | 5900_2 | RW | Units: kWh | 5 |
| System Input RMS A-B | Analog_Value | 1911 | 4097_2 | RD | Units: VAC | 5 |
| System Input RMS B-C | Analog_Value | 1912 | 4099_2 | RD | Units: VAC | 5 |
| System Input RMS C-A | Analog_Value | 1913 | 4101_2 | RD | Units: VAC | 5 |
| Power Measurement 3 | | | | | | |
| System Input RMS A-N | Analog_Value | 830 | 4096_3 | RD | Units: VAC | 5 |
| System Input RMS B-N | Analog_Value | 831 | 4098_3 | RD | Units: VAC | 5 |
| System Input RMS C-N | Analog_Value | 832 | 4100_3 | RD | Units: VAC | 5 |
| System Input RMS Current Phase A | Analog_Value | 833 | 4113_3 | RD | Units: A AC | 5 |
| System Input RMS Current Phase B | Analog_Value | 834 | 4114_3 | RD | Units: A AC | 5 |
| System Input RMS Current Phase C | Analog_Value | 835 | 4115_3 | RD | Units: A AC | 5 |
| Instantaneous Power | Analog_Value | 836 | 5901_3 | RD | Units: W | 5 |
| Energy Consumption | Analog_Value | 837 | 5900_3 | RW | Units: kWh | 5 |
| System Input RMS A-B | Analog_Value | 1921 | 4097_3 | RD | Units: VAC | 5 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|----------------------------------|--------------|------------------|-------------|--------|-------------|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| System Input RMS B-C | Analog_Value | 1922 | 4099_3 | RD | Units: VAC | 5 |
| System Input RMS C-A | Analog_Value | 1923 | 4101_3 | RD | Units: VAC | 5 |
| Power Measurement 4 | | | | | | |
| System Input RMS A-N | Analog_Value | 840 | 4096_4 | RD | Units: VAC | 5 |
| System Input RMS B-N | Analog_Value | 841 | 4098_4 | RD | Units: VAC | 5 |
| System Input RMS C-N | Analog_Value | 842 | 4100_4 | RD | Units: VAC | 5 |
| System Input RMS Current Phase A | Analog_Value | 843 | 4113_4 | RD | Units: A AC | 5 |
| System Input RMS Current Phase B | Analog_Value | 844 | 4114_4 | RD | Units: A AC | 5 |
| System Input RMS Current Phase C | Analog_Value | 845 | 4115_4 | RD | Units: A AC | 5 |
| Instantaneous Power | Analog_Value | 846 | 5901_4 | RD | Units: W | 5 |
| Energy Consumption | Analog_Value | 847 | 5900_4 | RW | Units: kWh | 5 |
| System Input RMS A-B | Analog_Value | 1931 | 4097_4 | RD | Units: VAC | 5 |
| System Input RMS B-C | Analog_Value | 1932 | 4099_4 | RD | Units: VAC | 5 |
| System Input RMS C-A | Analog_Value | 1933 | 4101_4 | RD | Units: VAC | 5 |
| Power Measurement 5 | | | | | | |
| System Input RMS A-N | Analog_Value | 850 | 4096_5 | RD | Units: VAC | 5 |
| System Input RMS B-N | Analog_Value | 851 | 4098_5 | RD | Units: VAC | 5 |
| System Input RMS C-N | Analog_Value | 852 | 4100_5 | RD | Units: VAC | 5 |
| System Input RMS Current Phase A | Analog_Value | 853 | 4113_5 | RD | Units: A AC | 5 |
| System Input RMS Current Phase B | Analog_Value | 854 | 4114_5 | RD | Units: A AC | 5 |
| System Input RMS Current Phase C | Analog_Value | 855 | 4115_5 | RD | Units: A AC | 5 |
| Instantaneous Power | Analog_Value | 856 | 5901_5 | RD | Units: W | 5 |
| Energy Consumption | Analog_Value | 857 | 5900_5 | RW | Units: kWh | 5 |
| System Input RMS A-B | Analog_Value | 1941 | 4097_5 | RD | Units: VAC | 5 |
| System Input RMS B-C | Analog_Value | 1942 | 4099_5 | RD | Units: VAC | 5 |
| System Input RMS C-A | Analog_Value | 1943 | 4101_5 | RD | Units: VAC | 5 |
| Power Measurement 6 | | | | | | |
| System Input RMS B-N | Analog_Value | 861 | 4098_6 | RD | Units: VAC | 5 |
| System Input RMS C-N | Analog_Value | 862 | 4100_6 | RD | Units: VAC | 5 |
| System Input RMS Current Phase A | Analog_Value | 863 | 4113_6 | RD | Units: A AC | 5 |
| System Input RMS Current Phase B | Analog_Value | 864 | 4114_6 | RD | Units: A AC | 5 |
| System Input RMS Current Phase C | Analog_Value | 865 | 4115_6 | RD | Units: A AC | 5 |
| Instantaneous Power | Analog_Value | 866 | 5901_6 | RD | Units: W | 5 |
| Energy Consumption | Analog_Value | 867 | 5900_6 | RW | Units: kWh | 5 |
| System Input RMS A-B | Analog_Value | 1951 | 4097_6 | RD | Units: VAC | 5 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------------|------------------|--------------------|---------------|---|---------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| System Input RMS B-C | Analog_Value | 1952 | 4099_6 | RD | Units: VAC | 5 |
| System Input RMS C-A | Analog_Value | 1953 | 4101_6 | RD | Units: VAC | 5 |
| Fluid 1 | | | | | | |
| Fluid Input Temperature | Analog_Value | 871 | 5897_1 | RD | Units: deg C | 5 |
| Fluid Input Temperature | Analog_Value | 10871 | 5897_1_deg_F | RD | Units: deg F | 5 |
| Fluid Output Temperature | Analog_Value | 872 | 5898_1 | RD | Units: deg C | 5 |
| Fluid Output Temperature | Analog_Value | 10872 | 5898_1_deg_F | RD | Units: deg F | 5 |
| Fluid 2 | | | | | | |
| Fluid Input Temperature | Analog_Value | 1871 | 5897_2 | RD | Units: deg C | 5 |
| Fluid Input Temperature | Analog_Value | 11871 | 5897_2_deg_F | RD | Units: deg F | 5 |
| Fluid Output Temperature | Analog_Value | 1872 | 5898_2 | RD | Units: deg C | 5 |
| Fluid Output Temperature | Analog_Value | 11872 | 5898_2_deg_F | RD | Units: deg F | 5 |
| Circuit | | | | | | |
| Fluid Flow Rate | Analog_Value | 881 | 5899_1 | RD | Units: l/min | 5 |
| Circuit 2 | | | | | | |
| Fluid Flow Rate | Analog_Value | 891 | 5899_2 | RD | Units: l/min | 5 |
| System Operations - Cooling Load 1 | | | | | | |
| Circuit Cooling Load | Analog_Value | 901 | 5905_1_1 | RD | Units: kW | 5 |
| System Operations - Cooling Load 2 | | | | | | |
| Circuit Cooling Load | Analog_Value | 911 | 5905_1_2 | RD | Units: kW | 5 |
| Auxiliary Air | | | | | | |
| Raw Auxiliary Air Temperature | Analog_Value | 1960 | 5964_1 | RW | Units: deg C | 5 |
| Raw Auxiliary Air Temperature | Analog_Value | 11960 | 5964_1_deg_F | RW | Units: deg F | 5 |
| Actual Auxiliary Air Temperature | Analog_Value | 1961 | 5965_1 | RD | Units: deg C | 5 |
| Actual Auxiliary Air Temperature | Analog_Value | 11961 | 5965_1_deg_F | RD | Units: deg F | 5 |
| Liebert Condensers (Previously called Global Condensers) | | | | | | |
| Expected Condenser Unit Count | Analog_Value | 1981 | 6101_1 | RD | | 4, 9 |
| 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, 9 |
| Condenser Normal Mode Max Fan Speed | Analog_Value | 530 | 5549_1_1 | RW | Units: % | 3, 4, 5, 6, 7, 8, 9 |
| Condenser Low Noise Mode Start Time | Analog_Value | 531 | 5552_1_1 | RW | Units: Seconds since Midnight | 3, 4, 5, 6, 7, 8, 9 |
| Condenser Low Noise Mode Stop Time | Analog_Value | 532 | 5553_1_1 | RW | Units: Seconds since Midnight | 3, 4, 5, 6, 7, 8, 9 |
| 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, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------|------------------|----------------|--------|---|------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| 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, 9 |
| Liebert Condensers - Condenser 1 | | | | | | |
| Condenser Outside Air Temperature | Analog_Value | 1992 | 5534_1_1 | RD | Units: deg C | 4, 9 |
| Condenser Outside Air Temperature | Analog_Value | 11992 | 5534_1_1_deg_F | RD | Units: deg F | 4, 9 |
| Liebert Condensers - Condenser 2 | | | | | | |
| Condenser Outside Air Temperature | Analog_Value | 1993 | 5534_1_2 | RD | Units: deg C | 4, 9 |
| Condenser Outside Air Temperature | Analog_Value | 11993 | 5534_1_2_deg_F | RD | Units: deg F | 4, 9 |
| Liebert Condensers - Circuit 1 | | | | | | |
| Condenser Refrigerant Pressure | Analog_Value | 2004 | 6103_1_1 | RD | Units: bar | 4, 9 |
| Condenser Supply Refrigerant Temperature | Analog_Value | 2006 | 6102_1_1 | RD | Units: deg C | 4, 9 |
| Condenser Supply Refrigerant Temperature | Analog_Value | 12006 | 6102_1_1_deg_F | RD | Units: deg F | 4, 9 |
| Liebert Condensers - Circuit 2 | | | | | | |
| Condenser Refrigerant Pressure | Analog_Value | 2005 | 6103_1_2 | RD | Units: bar | 4, 9 |
| Condenser Supply Refrigerant Temperature | Analog_Value | 2007 | 6102_1_2 | RD | Units: deg C | 4, 9 |
| Condenser Supply Refrigerant Temperature | Analog_Value | 12007 | 6102_1_2_deg_F | RD | Units: deg F | 4, 9 |
| Liebert Condensers - Condenser 1 Fan 1 | | | | | | |
| Condenser Fan Speed | Analog_Value | 2018 | 5276_1_1_1 | RD | Units: % | 4, 9 |
| Condenser Fan Power | Analog_Value | 2026 | 5538_1_1_1 | RD | Units: kW | 4, 9 |
| Liebert Condensers - Condenser 1 Fan 2 | | | | | | |
| Condenser Fan Speed | Analog_Value | 2019 | 5276_1_1_2 | RD | Units: % | 4, 9 |
| Condenser Fan Power | Analog_Value | 2027 | 5538_1_1_2 | RD | Units: kW | 4, 9 |
| Liebert Condensers - Condenser 1 Fan 3 | | | | | | |
| Condenser Fan Speed | Analog_Value | 2020 | 5276_1_1_3 | RD | Units: % | 4, 9 |
| Condenser Fan Power | Analog_Value | 2028 | 5538_1_1_3 | RD | Units: kW | 4, 9 |
| Liebert Condensers - Condenser 1 Fan 4 | | | | | | |
| Condenser Fan Speed | Analog_Value | 2021 | 5276_1_1_4 | RD | Units: % | 4, 9 |
| Condenser Fan Power | Analog_Value | 2029 | 5538_1_1_4 | RD | Units: kW | 4, 9 |
| Liebert Condensers - Condenser 2 Fan 1 | | | | | | |
| Condenser Fan Speed | Analog_Value | 2022 | 5276_1_2_1 | RD | Units: % | 4, 9 |
| Condenser Fan Power | Analog_Value | 2030 | 5538_1_2_1 | RD | Units: kW | 4, 9 |

Table 82 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------|------------------|--------------|--------|--------------|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Liebert Condensers - Condenser 2 Fan 2 | | | | | | |
| Condenser Fan Speed | Analog_Value | 2023 | 5276_1_2_2 | RD | Units: % | 4, 9 |
| Condenser Fan Power | Analog_Value | 2031 | 5538_1_2_2 | RD | Units: kW | 4, 9 |
| Liebert Condensers - Condenser 2 Fan 3 | | | | | | |
| Condenser Fan Speed | Analog_Value | 2024 | 5276_1_2_3 | RD | Units: % | 4, 9 |
| Condenser Fan Power | Analog_Value | 2032 | 5538_1_2_3 | RD | Units: kW | 4, 9 |
| Liebert Condensers - Condenser 2 Fan | | | | | | |
| Condenser Fan Speed | Analog_Value | 2025 | 5276_1_2_4 | RD | Units: % | 4, 9 |
| Condenser Fan Power | Analog_Value | 2033 | 5538_1_2_4 | RD | Units: kW | 4, 9 |
| PDX | | | | | | |
| Actual Cold Aisle Humidity | Analog_Value | 2044 | 6085_1 | RD | Units: % RH | — |
| Actual Cold Aisle Temperature | Analog_Value | 2045 | 6086_1 | RD | Units: deg C | — |
| Actual Cold Aisle Temperature | Analog_Value | 12045 | 6086_1_deg_F | RD | Units: deg F | — |
| Cold Aisle Cascade Fan Speed Max Set Point | Analog_Value | 2046 | 6087_1 | RD | Units: % | — |
| Cold Aisle Fan Speed Min Set Point | Analog_Value | 2047 | 6088_1 | RD | Units: % | — |
| Cold Aisle Fan Speed Max Set Point | Analog_Value | 2048 | 6089_1 | RD | Units: % | — |
| Humidification Fan Speed Min Set Point | Analog_Value | 2049 | 6096_1 | RD | Units: % | — |
| Heating Fan Speed Min Set Point | Analog_Value | 2050 | 6097_1 | RD | Units: % | — |
| Dehumidification Fan Speed Min Set Point | Analog_Value | 2051 | 6098_1 | RD | Units: % | — |
| Back Draft Control Fan Speed | Analog_Value | 2052 | 6099_1 | RD | Units: % | — |

Table 83 Extra Notes to Table 82

| 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 2.01.29.03R |
| 4 | This point is supported on: iCOM controller version 2.01.29.06R |
| 5 | This point is supported on: iCOM controller version 2.01.40R |
| 6 | This point is supported on: iCOM controller version 2.02.21R |
| 7 | This point is supported on: iCOM controller version 2.03.27.06R |
| 8 | This point is supported on: iCOM controller version 2.03.32R |
| 9 | This point is supported on: iCOM controller version 2.03.33R |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|------------------|------------------|-------------|--------|--|------------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Protocol | | | | | | |
| Server Class | MultiState_Value | 1 | 4553_1 | RD | 1 = UPS 2 = AIR 3 = PMP 4 = PDU | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Air Temperature Control Sensor | MultiState_Value | 13 | 5012_1 | RW | 1 = Supply 2 = Remote 3 = Return | 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Humidity | | | | | | |
| Humidity Proportional Control Type | MultiState_Value | 34 | 5340_1 | RW | 1 = Relative 2 = Compensated 3 = Predictive | 1 |
| Humidity Proportional Control Type | MultiState_Value | 35 | 5603_1 | RW | 1 = Relative 2 = Compensated 3 = Predictive 4 = Dew Point | 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidity Control Sensor | MultiState_Value | 36 | 5618_1 | RW | 1 = Supply 2 = Remote 3 = Return | 3, 4, 5, 6, 7, 8, 9 |
| Compressors - Compressor 1 | | | | | | |
| Fixed Compressor State | MultiState_Value | 45 | 5264_1_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Capacity Control State | MultiState_Value | 46 | 5265_1_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressors - Compressor 2 | | | | | | |
| Fixed Compressor State | MultiState_Value | 57 | 5264_1_2 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressor Capacity Control State | MultiState_Value | 58 | 5265_1_2 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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, 9 |
| 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 |
| Main Chilled Water Valve | MultiState_Value | 72 | 5605_1 | RW | 1 = Valve 1 2 = Valve 2 | 2, 3, 4, 5, 6, 7, 8, 9 |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|-------------------------------|------------------|------------------|-------------|--------|--|------------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Fan | | | | | | |
| Fan Control Mode | MultiState_Value | 82 | 5373_1 | RW | 1 = Auto 2 = Manual 3 = Economy 4 = Delta | 1 |
| Fan Control Sensor | MultiState_Value | 83 | 5586_1 | RW | 1 = Supply 2 = Remote 3 = Return 4 = Manual | 2, 3, 4, 5, 6, 7, 8, 9 |
| System Info | | | | | | |
| 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 |
| System Operating State | MultiState_Value | 94 | 4706_1 | RD | 1 = off 2 = on 3 = standby | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System Control Mode | MultiState_Value | 95 | 4707_1 | RD | 1 = Internal (Auto) 2 = External (Manual) | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System 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 |
| System Operations | | | | | | |
| Fan State | MultiState_Value | 107 | 5381_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Cooling State | MultiState_Value | 108 | 5382_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Free Cooling State | MultiState_Value | 109 | 5383_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Maintenance Tracking State | MultiState_Value | 110 | 5384_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Hot Water / Hot Gas State | MultiState_Value | 111 | 5385_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Electric Reheat State | MultiState_Value | 112 | 5386_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Dehumidifier State | MultiState_Value | 113 | 5387_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier State | MultiState_Value | 114 | 5388_1 | RD | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| System On/Off Control | MultiState_Value | 115 | 5143_1 | RW | 1 = off 2 = on | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|------------------|------------------|-------------|--------|---|------------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| 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 |
| 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 |
| Customer Input 2 - Event Control | MultiState_Value | 128 | 5098_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Customer Input 3 - Event Control | MultiState_Value | 130 | 5100_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Customer Input 4 - Event Control | MultiState_Value | 132 | 5102_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| Ext Humidifier Lockout - Event Control | MultiState_Value | 142 | 5086_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|------------------|------------------|-------------|--------|---|------------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Ext Over Temperature - Event Control | MultiState_Value | 146 | 5090_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Reheat Lockout - Event Control | MultiState_Value | 148 | 5084_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| High Power Shutdown - Event Control | MultiState_Value | 150 | 5141_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Humidifier Issue - Event Control | MultiState_Value | 152 | 5131_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |
| Service Required - Event Control | MultiState_Value | 156 | 4727_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |
| Smoke Detected - Event Control | MultiState_Value | 160 | 4721_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Water Under Floor - Event Control | MultiState_Value | 162 | 4724_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| Ext Compressor Lockout - Event Control | MultiState_Value | 164 | 5088_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|------------------|------------------|-------------|--------|---|------------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Clogged Air Filter - Event Control | MultiState_Value | 166 | 5135_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|------------------|------------------|-------------|--------|---|------------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| Return Air Sensor Event Control | MultiState_Value | 225 | 5402_1_1 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|------------------|------------------|-------------|--------|---|------------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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, 9 |
| 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 |
| 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 |
| Fan Issue - Event Control | MultiState_Value | 254 | 4730_1_1 | RW | 1 = disabled 2 = enabled | 1 |
| Fan Issue - Event Type | MultiState_Value | 255 | 4731_1_1 | RW | 1 = Message 2 = Warning 3 = Alarm | 1 |
| 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 |
| 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 |
| 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 |
| 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 |
| System Event Configuration - Condenser | | | | | | |
| Condenser Issue - Event Control | MultiState_Value | 280 | 5413_1_2 | RW | 1 = disabled 2 = enabled | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| 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 |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|------------------|------------------|-------------|--------|--|------------------------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| System Events | | | | | | |
| System Event Acknowledge/Reset | MultiState_Value | 292 | 4717_1 | WO | 1 = Reset 2 = Acknowledge | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| Compressors | | | | | | |
| Compressor Lockout | MultiState_Value | 304 | 5580_1 | RW | 1 = disabled 2 = enabled | 2, 3, 4, 5, 6, 7, 8, 9 |
| Reheat | | | | | | |
| Reheater Lockout | MultiState_Value | 316 | 5582_1 | RW | 1 = disabled 2 = enabled | 2, 3, 4, 5, 6, 7, 8, 9 |
| Humidifier | | | | | | |
| Humidifier Lockout | MultiState_Value | 328 | 5583_1 | RW | 1 = disabled 2 = enabled | 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Economizer | | | | | | |
| Air Economizer Availability | MultiState_Value | 340 | 5599_1 | RD | 1 = Not Available 2 = Available | 2, 3, 4, 5, 6, 7, 8, 9 |
| Air Economizer Control Source | MultiState_Value | 341 | 5602_1 | RW | 1 = disabled 2 = internal 3 = external | 2, 3, 4, 5, 6, 7, 8, 9 |
| EconoPhase - Pump 1 | | | | | | |
| Pump State | MultiState_Value | 364 | 5633_1_1 | RD | 1 = off 2 = on | 8, 9 |
| EconoPhase - Pump 2 | | | | | | |
| Pump State | MultiState_Value | 369 | 5633_1_2 | RD | 1 = off 2 = on | 8, 9 |
| Liebert Condensers (Previously called Global Condensers) | | | | | | |
| Condenser Refrigerant Type | MultiState_Value | 395 | 5533_1 | RD | 1 = R22 2 = R407C 3 = R410A | 4, 9 |
| 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, 9 |
| Condenser Low Noise Mode Schedule Control | MultiState_Value | 375 | 5547_1_1 | RW | 1 = disabled 2 = enabled | 3, 4, 5, 6, 7, 8, 9 |
| Liebert Condensers - Condenser 1 | | | | | | |
| Condenser Fan Reversal Requested | MultiState_Value | 406 | 6104_1_1 | RD | 1 = false 2 = true | 4, 9 |
| Liebert Condensers - Condenser 2 | | | | | | |
| Condenser Fan Reversal Requested | MultiState_Value | 407 | 6104_1_2 | RD | 1 = false 2 = true | 4, 9 |
| PDX | | | | | | |
| Cold Aisle Humidity Calculation Method | MultiState_Value | 438 | 6081_1 | RD | 1 = Highest 2 = Average | — |
| Cold Aisle Temperature Calculation Method | MultiState_Value | 439 | 6082_1 | RD | 1 = Highest 2 = Average | — |
| Cold Aisle Control Enable | MultiState_Value | 440 | 6083_1 | RD | 1 = disabled 2 = enabled | — |

Table 84 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|------------------|------------------|-------------|--------|-----------------------------|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Cold Aisle Force Max Fan/ Cooling - Ext Control | MultiState_Value | 441 | 6084_1 | RD | 1 = disabled 2 = enabled | — |
| 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 | — |

Table 85 Extra Notes to Table 84

| 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 2.01.29.03R |
| 4 | This point is supported on: iCOM controller version 2.01.29.06R |
| 5 | This point is supported on: iCOM controller version 2.01.40R |
| 6 | This point is supported on: iCOM controller version 2.02.21R |
| 7 | This point is supported on: iCOM controller version 2.03.27.06R |
| 8 | This point is supported on: iCOM controller version 2.03.32R |
| 9 | This point is supported on: iCOM controller version 2.03.33R |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - 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 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 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - 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 Valve Hours | Operating hours for chilled water valve since last reset of this value. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual value. |
| 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 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 Temperature Calculation Method | Algorithm used to calculate a single cold aisle temperature value from multiple temperature measurements. |
| 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. |
| 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. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|---|--|
| Compressor Hours | Operating hours for compressor since last reset of this value. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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 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 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. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|---|---|
| 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 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual value. |
| Dehumidifier State | Dehumidifier operational state. |
| Dehumidifier Utilization | Present dehumidifier utilization expressed as a percentage of the maximum rated capacity. |
| Dew Point Over Temperature | Dew point temperature reading has exceeded the upper threshold. |
| 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. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|---|---|
| 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 condenser, 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. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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. |
| 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual value. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|---|--|
| 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. |
| Fixed Compressor State | Fixed compressor 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 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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. |
| 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. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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. |
| 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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. If operating hours exceeds 32,000, this client will continue to display 32,000, but the iCOM display will show the actual 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 Sensor | Sensor from which humidity measurements will be used for humidification and dehumidification control. |
| 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]. |
| Humidity Proportional Control Integration Time | Time value used to add an integral term to proportional humidity control. If set to 0, time will not be a factor in the proportional control algorithm. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|--|--|
| Humidity Proportional Control Type | Type of algorithm to use for proportional control of output humidity. |
| Humidity Proportional Control Type | Type of algorithm to use for proportional control of output humidity. |
| 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. |
| Loss of Air Flow | No air flow through the unit due to failure of all fans. |
| 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. |
| 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. |
| Pump Hours | Operating hours for pump since last reset of this value. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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. |
| 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 Temp Threshold | Threshold value used in 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 |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|---|---|
| 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 Temp Threshold | Threshold value used in the [Return Air Under Temperature] event. |
| Return Air Under Temperature | [Return Air Temperature] has dropped below [Return Air Under Temp Threshold]. |
| 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 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. |
| 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 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. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|-----------------------------------|--|
| 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 | Chilled water temperature is too high, as indicated by an external input signal. |
| 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 Static Pressure | Static pressure measurement among a group of interconnected units in a single system. |
| System Status | The operating status for the system |
| Temperature Control Sensor Issue | The air sensor selected for cooling control is disconnected or the signal is out of range. |
| 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. |
| 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 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. |

Table 86 Liebert Challenger 3000™, Liebert Challenger ITR™, Liebert CW™, Liebert Deluxe System/3™, Liebert DS™, Liebert DSE™, Liebert HPM™, Liebert PeX™, Liebert PDX™ - Glossary (continued)

| Data Label | Data Description |
|-------------------------------------|--|
| 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 87 Liebert CRV™ - Binary Data

| Controller | | Liebert iCOM® v4 | | | |
|--|--------------|------------------|-------------|--------|-----------------|
| 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 |
| 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 1 | | | | | |
| Remote Sensor Issue | Binary_Value | 52 | 5060_1 | RD | Active on Alarm |
| Remote Sensors 2 | | | | | |
| Remote Sensor Issue | Binary_Value | 63 | 5060_2 | RD | Active on Alarm |
| Remote Sensors 3 | | | | | |
| Remote Sensor Issue | Binary_Value | 74 | 5060_3 | RD | — |
| Remote Sensors 4 | | | | | |
| Remote Sensor Issue | Binary_Value | 85 | 5060_4 | RD | Active on Alarm |
| Remote Sensors 5 | | | | | |
| Remote Sensor Issue | Binary_Value | 96 | 5060_5 | RD | Active on Alarm |
| Remote Sensors 6 | | | | | |
| Remote Sensor Issue | Binary_Value | 107 | 5060_6 | RD | Active on Alarm |
| Remote Sensors 7 | | | | | |
| Remote Sensor Issue | Binary_Value | 118 | 5060_7 | RD | Active on Alarm |
| Remote Sensors 8 | | | | | |
| Remote Sensor Issue | Binary_Value | 129 | 5060_8 | RD | Active on Alarm |
| Remote Sensors 9 | | | | | |
| Remote Sensor Issue | Binary_Value | 140 | 5060_9 | RD | Active on Alarm |

Table 87 Liebert CRV™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|---|--------------|------------------|-------------|--------|-----------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| Remote Sensors 10 | | | | | |
| Remote Sensor Issue | Binary_Value | 151 | 5060_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 |
| Reheater | | | | | |
| Reheater Over Temperature | Binary_Value | 182 | 5068_1 | RD | Active on Alarm |
| Electric Reheater Hours Exceeded | Binary_Value | 183 | 5069_1 | RD | Active on Alarm |
| Ext Reheat Lockout | Binary_Value | 184 | 5070_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 |
| Chilled Water | | | | | |
| Supply Chilled Water Over Temp | Binary_Value | 208 | 4626_1 | RD | Active on Alarm |
| Chilled Water Control Valve Position | 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 |

Table 87 Liebert CRV™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|---|--------------|------------------|-------------|--------|-----------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |
| GlobalCondenser | | | | | |
| 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 |
| GlobalCondenser - GC Fan 1 | | | | | |
| Condenser Fan Issue | Binary_Value | 280 | 5277_1_1 | RD | Active on Alarm |
| GlobalCondenser - GC Fan 2 | | | | | |
| Condenser Fan Issue | Binary_Value | 292 | 5277_1_2 | RD | Active on Alarm |

Table 88 Liebert CRV™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | |
|------------------------------------|--------------|------------------|--------------|--------|--------------|
| 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 |
| 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 |
| 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 |
| 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: % |

Table 88 Liebert CRV™ - Analog Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|--------------|------------------|---------------|--------|--------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| Remote Sensors 1 | | | | | |
| Remote Sensor Temperature | Analog_Value | 56 | 5059_1 | RD | Units: deg C |
| Remote Sensor Temperature | Analog_Value | 10056 | 5059_1_deg_F | RD | Units: deg F |
| Remote Sensors 2 | | | | | |
| Remote Sensor Temperature | Analog_Value | 67 | 5059_2 | RD | Units: deg C |
| Remote Sensor Temperature | Analog_Value | 10067 | 5059_2_deg_F | RD | Units: deg F |
| Remote Sensor Temperature | Analog_Value | 155 | 5059_10 | RD | Units: deg C |
| Remote Sensor Temperature | Analog_Value | 10155 | 5059_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: % |
| 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 | — |
| GlobalCondenser | | | | | |
| Condenser Outside Air Temperature | Analog_Value | 221 | 5534_1 | RD | — |
| Condenser Outside Air Temperature | Analog_Value | 10221 | 5534_1_deg_F | RD | — |
| GlobalCondenser - GC 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 |
| GlobalCondenser - GC 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 |
| GlobalCondenser - LowNoiseMode | | | | | |
| 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: % |

Table 88 Liebert CRV™ - Analog Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|--------------|------------------|-------------|--------|---|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |

Table 89 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 |
| 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 |
| 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 1 | | | | | |
| Remote Sensor Function | MultiState_Value | 36 | 5058_1 | RW | 1 = Disable 2 = Reference 3 = Control |
| Remote Sensors 1 | | | | | |
| Remote Sensor Function | MultiState_Value | 47 | 5058_2 | RW | 1 = Disable 2 = Reference 3 = Control |
| Remote Sensors 10 | | | | | |
| Remote Sensor Function | MultiState_Value | 135 | 5058_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) |
| 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 |

Table 89 Liebert CRV™ - Multistate Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|------------------|------------------|-------------|--------|---|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |
| 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 |

Table 89 Liebert CRV™ - Multistate Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|---|------------------|------------------|-------------|--------|--|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |
| GlobalCondenser | | | | | |
| Condenser Refrigerant Type | MultiState_Value | 215 | 5533_1 | RD | 1 = R22 2 = R407C 3 = R410A |
| GlobalCondenser - LowNoiseMode | | | | | |
| 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 = enable |

Table 90 Liebert CRV™ - 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 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. |
| 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 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. |
| 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. |

Table 90 Liebert CRV™ - Glossary (continued)

| Data Label | Data Description |
|---|--|
| 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 Type | Condenser refrigerant type. |
| 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 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 Issue] event (Transient Voltage Surge Suppressor). 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 Issue] event (Transient Voltage Surge Suppressor). |
| Condenser TVSS Issue | The condenser Transient Voltage Surge Suppressor 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. |
| 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. |

Table 90 Liebert CRV™ - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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. |
| Electric Reheater Hours Exceeded | Operating hours for electric reheater have exceeded the threshold. |
| 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 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. |

Table 90 Liebert CRV™ - Glossary (continued)

| Data Label | Data Description |
|---------------------------------------|---|
| 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. |
| 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. |
| 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. |
| Operating Efficiency | The ratio of cooling energy provided to the amount of total energy being used. |
| 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. |
| Reheater Over Temperature | The temperature of the reheater has exceeded its threshold. |
| 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. |

Table 90 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. |
| 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. |
| 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. |
| 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 On/Off Control | Turn system functionality on or off. |
| System Operating State Reason | The reason the system is in the current operating state. |

Table 90 Liebert CRV™ - Glossary (continued)

| Data Label | Data Description |
|-------------------------------------|--|
| 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 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 91 Liebert HPC™ - Binary Data

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|-------------|--------|-----------------|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Compressors | | | | | | |
| Compressor Not Stopping | Binary_Value | 1 | 5263_1 | RD | Active on Alarm | 1, 2 |
| Compressor Superheat Over Threshold | Binary_Value | 2 | 5604_1 | RD | Active on Alarm | 2 |
| Compressors - Compressor 1 | | | | | | |
| Compressor Hours Exceeded | Binary_Value | 12 | 5269_1_1 | RD | Active on Alarm | 1, 2 |
| Compressor High Head Pressure | Binary_Value | 13 | 5270_1_1 | RD | Active on Alarm | 1, 2 |
| Compressor Low Suction Pressure | Binary_Value | 14 | 5271_1_1 | RD | Active on Alarm | 1, 2 |
| Compressor Thermal Overload | Binary_Value | 15 | 5272_1_1 | RD | Active on Alarm | 1, 2 |
| Compressor Low Oil Pressure | Binary_Value | 16 | 5273_1_1 | RD | Active on Alarm | 1, 2 |
| Compressor Loss of Differential Pressure | Binary_Value | 17 | 5275_1_1 | RD | Active on Alarm | 1, 2 |
| Compressor Capacity Reduced | Binary_Value | 18 | 5513_1_1 | RD | Active on Alarm | 1, 2 |
| Compressor Capacity Normal | Binary_Value | 19 | 5773_1_1 | RD | Active on Alarm | 2 |
| Compressor Contactor Issue | Binary_Value | 20 | 5774_1_1 | RD | Active on Alarm | 2 |
| Compressors - Compressor 2 | | | | | | |
| Compressor Hours Exceeded | Binary_Value | 29 | 5269_1_2 | RD | Active on Alarm | 1, 2 |
| Compressor High Head Pressure | Binary_Value | 30 | 5270_1_2 | RD | Active on Alarm | 1, 2 |
| Compressor Low Suction Pressure | Binary_Value | 31 | 5271_1_2 | RD | Active on Alarm | 1, 2 |
| Compressor Thermal Overload | Binary_Value | 32 | 5272_1_2 | RD | Active on Alarm | 1, 2 |
| Compressor Low Oil Pressure | Binary_Value | 33 | 5273_1_2 | RD | Active on Alarm | 1, 2 |
| Compressor Loss of Differential Pressure | Binary_Value | 34 | 5275_1_2 | RD | Active on Alarm | 1, 2 |
| Compressor Capacity Reduced | Binary_Value | 35 | 5513_1_2 | RD | Active on Alarm | 1, 2 |
| Compressor Capacity Normal | Binary_Value | 36 | 5773_1_2 | RD | Active on Alarm | 2 |
| Compressor Contactor Issue | Binary_Value | 37 | 5774_1_2 | RD | Active on Alarm | 2 |
| Compressors - Compressor 4 | | | | | | |
| Compressor Hours Exceeded | Binary_Value | 263 | 5269_1_4 | RD | Active on Alarm | 2 |
| Compressor High Head Pressure | Binary_Value | 264 | 5270_1_4 | RD | Active on Alarm | 2 |
| Compressor Low Suction Pressure | Binary_Value | 265 | 5271_1_4 | RD | Active on Alarm | 2 |
| Compressor Thermal Overload | Binary_Value | 266 | 5272_1_4 | RD | Active on Alarm | 2 |
| Compressor Low Oil Pressure | Binary_Value | 267 | 5273_1_4 | RD | Active on Alarm | 2 |
| Compressor Loss of Differential Pressure | Binary_Value | 268 | 5275_1_4 | RD | Active on Alarm | 2 |
| Compressor Capacity Reduced | Binary_Value | 269 | 5513_1_4 | RD | Active on Alarm | 2 |
| Compressor Capacity Normal | Binary_Value | 270 | 5773_1_4 | RD | Active on Alarm | 2 |
| Compressor Contactor Issue | Binary_Value | 271 | 5774_1_4 | RD | Active on Alarm | 2 |
| Condenser 1 | | | | | | |
| Condenser Fan Issue | Binary_Value | 46 | 5277_1 | RD | Active on Alarm | 1, 2 |
| Low Condenser Refrigerant Pressure | Binary_Value | 47 | 5278_1 | RD | Active on Alarm | 1, 2 |
| Condenser Max Fan Speed Override | Binary_Value | 48 | 5545_1 | RD | Active on Alarm | 1, 2 |
| Condenser 2 | | | | | | |
| Condenser Fan Issue | Binary_Value | 59 | 5277_2 | RD | Active on Alarm | 1, 2 |
| Low Condenser Refrigerant Pressure | Binary_Value | 60 | 5278_2 | RD | Active on Alarm | 1, 2 |
| Condenser Max Fan Speed Override | Binary_Value | 61 | 5545_2 | RD | Active on Alarm | 1, 2 |
| Condenser 4 | | | | | | |
| Condenser Fan Issue | Binary_Value | 67 | 5277_4 | RD | Active on Alarm | 2 |
| Low Condenser Refrigerant Pressure | Binary_Value | 68 | 5278_4 | RD | Active on Alarm | 2 |
| Fluid | | | | | | |
| Low Fluid Pressure | Binary_Value | 72 | 5280_1 | RD | Active on Alarm | 1, 2 |
| Return Fluid Temp Sensor Issue | Binary_Value | 73 | 5295_1 | RD | Active on Alarm | 1, 2 |

Table 91 Liebert HPC™ - Binary Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------|------------------|-------------|--------|-----------------|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Fluid - Supply (Outlet) Fluid | | | | | | |
| Supply Fluid Over Temp | Binary_Value | 84 | 4645_1_1 | RD | Active on Alarm | 1, 2 |
| Supply Fluid Under Temp | Binary_Value | 85 | 4648_1_1 | RD | Active on Alarm | 1, 2 |
| Supply Fluid Temp Sensor Issue | Binary_Value | 86 | 4651_1_1 | RD | Active on Alarm | 1, 2 |
| Pumps | | | | | | |
| All Pumps Loss of Flow | Binary_Value | 97 | 5297_1 | RD | Active on Alarm | 1, 2 |
| Pump 1 Loss of Flow | Binary_Value | 98 | 4656_1 | RD | Active on Alarm | 1, 2 |
| Pump 2 Loss of Flow | Binary_Value | 99 | 4659_1 | RD | Active on Alarm | 1, 2 |
| Pumps - Pump 1 | | | | | | |
| Pump Hours Exceeded | Binary_Value | 110 | 5300_1_1 | RD | Active on Alarm | 1, 2 |
| Pumps - Pump 2 | | | | | | |
| Pump Hours Exceeded | Binary_Value | 121 | 5300_1_2 | RD | Active on Alarm | 1, 2 |
| Free Cooling | | | | | | |
| Free Cooling Valve Hours Exceeded | Binary_Value | 132 | 5306_1 | RD | Active on Alarm | 1, 2 |
| Ambient Air Temperature Sensor Issue | Binary_Value | 133 | 4618_1 | RD | Active on Alarm | 1, 2 |
| Evaporators | | | | | | |
| Evaporator Inlet Temp Sensor Issue | Binary_Value | 144 | 5308_1 | RD | Active on Alarm | 1, 2 |
| Evaporator Return Fluid Over Temp | Binary_Value | 145 | 5559_1 | RD | Active on Alarm | 1, 2 |
| Evaporator Return Fluid Under Temp | Binary_Value | 146 | 5560_1 | RD | Active on Alarm | 1, 2 |
| Evaporators - Evaporator 1 | | | | | | |
| Evaporator Fluid Freeze - Auto Reset | Binary_Value | 157 | 5310_1_1 | RD | Active on Alarm | 1, 2 |
| Evaporator Fluid Freeze - Manual Reset Required | Binary_Value | 158 | 5311_1_1 | RD | Active on Alarm | 1, 2 |
| Supply Refrigerant Temp Sensor Issue | Binary_Value | 159 | 4640_1_1 | RD | Active on Alarm | 1, 2 |
| Evaporators - Evaporator 2 | | | | | | |
| Evaporator Fluid Freeze - Auto Reset | Binary_Value | 170 | 5310_1_2 | RD | Active on Alarm | 1, 2 |
| Evaporator Fluid Freeze - Manual Reset Required | Binary_Value | 171 | 5311_1_2 | RD | Active on Alarm | 1, 2 |
| Supply Refrigerant Temp Sensor Issue | Binary_Value | 172 | 4640_1_2 | RD | Active on Alarm | 1, 2 |
| System Events | | | | | | |
| Customer Input 1 | Binary_Value | 183 | 4270_1 | RD | Active on Alarm | 1, 2 |
| Customer Input 2 | Binary_Value | 184 | 4271_1 | RD | Active on Alarm | 1, 2 |
| Customer Input 3 | Binary_Value | 194 | 4272_1 | RD | Active on Alarm | 2 |
| Customer Input 4 | Binary_Value | 195 | 4273_1 | RD | Active on Alarm | 2 |
| Unit On | Binary_Value | 185 | 5109_1 | RD | Active on Alarm | 1, 2 |
| Unit Off | Binary_Value | 186 | 5110_1 | RD | Active on Alarm | 1, 2 |
| Master Unit Communication Lost | Binary_Value | 187 | 5120_1 | RD | Active on Alarm | 1, 2 |
| Subgroup Event Occurred During Communication Loss | Binary_Value | 188 | 5315_1 | RD | Active on Alarm | 1, 2 |
| Humidifier Control Board Not Detected | Binary_Value | 189 | 5045_1 | RD | Active on Alarm | 1, 2 |
| RAM Battery Issue | Binary_Value | 190 | 5119_1 | RD | Active on Alarm | 1, 2 |
| Unit Code Missing | Binary_Value | 191 | 5418_1 | RD | Active on Alarm | 1, 2 |
| Unspecified General Event | Binary_Value | 192 | 5588_1 | RD | Active on Alarm | 2 |
| Unit Shutdown Unspecified General Event | Binary_Value | 193 | 5775_1 | RD | Active on Alarm | 2 |
| EEV 1 | | | | | | |
| EEV Unspecified General Event | Binary_Value | 200 | 5625_1 | RD | Active on Alarm | 2 |

Table 92 Liebert HPC™ - Analog Data

| Controller | | Liebert iCOM® v4 | | | | |
|---|--------------|------------------|----------------|--------|--------------|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Compressors | | | | | | |
| Compressor Shut Down - Ambient Air Low Temp Limit | Analog_Value | 1 | 5262_1 | RW | Units: deg C | 1, 2 |
| Compressor Shut Down - Ambient Air Low Temp Limit | Analog_Value | 10001 | 5262_1_deg_F | RW | Units: deg F | 1, 2 |
| Compressors - Compressor 1 | | | | | | |
| Compressor Head Pressure | Analog_Value | 12 | 5266_1_1 | RD | Units: bar | 1, 2 |
| Compressor Hours | Analog_Value | 13 | 5267_1_1 | RW | Units: hr | 1, 2 |
| Compressor Hours Threshold | Analog_Value | 14 | 5268_1_1 | RW | Units: hr | 1, 2 |
| Compressors - Compressor 2 | | | | | | |
| Compressor Head Pressure | Analog_Value | 25 | 5266_1_2 | RD | Units: bar | 1, 2 |
| Compressor Hours | Analog_Value | 26 | 5267_1_2 | RW | Units: hr | 1, 2 |
| Compressor Hours Threshold | Analog_Value | 27 | 5268_1_2 | RW | Units: hr | 1, 2 |
| Compressors - Compressor 4 | | | | | | |
| Compressor Head Pressure | Analog_Value | 215 | 5266_1_4 | RD | Units: bar | 2 |
| Compressor Hours | Analog_Value | 216 | 5267_1_4 | RW | Units: hr | 2 |
| Compressor Hours Threshold | Analog_Value | 217 | 5268_1_4 | RW | Units: hr | 2 |
| Condenser 1 | | | | | | |
| Condenser Fan Speed | Analog_Value | 38 | 5276_1 | RD | Units: % | 1, 2 |
| Condenser 2 | | | | | | |
| Condenser Fan Speed | Analog_Value | 49 | 5276_2 | RD | Units: % | 1, 2 |
| Condenser 4 | | | | | | |
| Condenser Fan Speed | Analog_Value | 55 | 5276_4 | RD | Units: % | 2 |
| Fluid | | | | | | |
| Fluid Pressure | Analog_Value | 60 | 5279_1 | RD | Units: bar | 1, 2 |
| Fluid Cooling Proportional Band | Analog_Value | 61 | 5281_1 | RW | Units: deg C | 1, 2 |
| Fluid Cooling Proportional Band | Analog_Value | 10061 | 5281_1_deg_F | RW | Units: deg F | 1, 2 |
| Fluid - Supply (Outlet) Fluid | | | | | | |
| Supply Fluid Temp Set Point 1 | Analog_Value | 72 | 5283_1_1 | RW | Units: deg C | 1, 2 |
| Supply Fluid Temp Set Point 1 | Analog_Value | 10072 | 5283_1_1_deg_F | RW | Units: deg F | 1, 2 |
| Supply Fluid Temp Set Point 2 | Analog_Value | 73 | 5284_1_1 | RW | Units: deg C | 1, 2 |
| Supply Fluid Temp Set Point 2 | Analog_Value | 10073 | 5284_1_1_deg_F | RW | Units: deg F | 1, 2 |
| Supply Fluid Over Temp Alarm Threshold | Analog_Value | 74 | 5285_1_1 | RW | Units: deg C | 1, 2 |
| Supply Fluid Over Temp Alarm Threshold | Analog_Value | 10074 | 5285_1_1_deg_F | RW | Units: deg F | 1, 2 |
| Supply Fluid Over Temp Warning Threshold | Analog_Value | 75 | 4644_1_1 | RW | Units: deg C | 1, 2 |
| Supply Fluid Over Temp Warning Threshold | Analog_Value | 10075 | 4644_1_1_deg_F | RW | Units: deg F | 1, 2 |
| Supply Fluid Under Temp Warning Threshold | Analog_Value | 76 | 5286_1_1 | RW | Units: deg C | 1, 2 |
| Supply Fluid Under Temp Warning Threshold | Analog_Value | 10076 | 5286_1_1_deg_F | RW | Units: deg F | 1, 2 |
| Supply Fluid Under Temp Alarm Threshold | Analog_Value | 77 | 5287_1_1 | RW | Units: deg C | 1, 2 |
| Supply Fluid Under Temp Alarm Threshold | Analog_Value | 10077 | 5287_1_1_deg_F | RW | Units: deg F | 1, 2 |
| Pumps - Pump 1 | | | | | | |
| Pump Hours | Analog_Value | 88 | 5298_1_1 | RW | Units: hr | 1, 2 |
| Pump Hours Threshold | Analog_Value | 89 | 5299_1_1 | RW | Units: hr | 1, 2 |
| Pumps - Pump 2 | | | | | | |
| Pump Hours | Analog_Value | 100 | 5298_1_2 | RW | Units: hr | 1, 2 |
| Pump Hours Threshold | Analog_Value | 101 | 5299_1_2 | RW | Units: hr | 1, 2 |

Table 92 Liebert HPC™ - Analog Data (continued)

| Controller | | Liebert iCOM® v4 | | | | |
|--|--------------|------------------|--------------|--------|--------------|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Free Cooling | | | | | | |
| Free Cooling External Temperature Delta | Analog_Value | 112 | 5301_1 | RW | Units: deg C | 1, 2 |
| Free Cooling External Temperature Delta | Analog_Value | 10112 | 5301_1_deg_F | RW | Units: deg F | 1, 2 |
| Free Cooling Valve Open Position | Analog_Value | 113 | 5303_1 | RD | Units: % | 1, 2 |
| Free Cooling Valve Hours | Analog_Value | 114 | 5304_1 | RW | Units: hr | 1, 2 |
| Free Cooling Valve Hours Threshold | Analog_Value | 115 | 5305_1 | RW | Units: hr | 1, 2 |
| Evaporators | | | | | | |
| Evaporator Return Fluid Temperature | Analog_Value | 126 | 5307_1 | RD | Units: deg C | 1, 2 |
| Evaporator Return Fluid Temperature | Analog_Value | 10126 | 5307_1_deg_F | RD | Units: deg F | 1, 2 |
| Evaporator Return Fluid Over Temp Alarm Threshold | Analog_Value | 127 | 5555_1 | RW | Units: deg C | 1, 2 |
| Evaporator Return Fluid Over Temp Alarm Threshold | Analog_Value | 10127 | 5555_1_deg_F | RW | Units: deg F | 1, 2 |
| Evaporator Return Fluid Over Temp Warning Threshold | Analog_Value | 128 | 5556_1 | RW | Units: deg C | 1, 2 |
| Evaporator Return Fluid Over Temp Warning Threshold | Analog_Value | 10128 | 5556_1_deg_F | RW | Units: deg F | 1, 2 |
| Evaporator Return Fluid Under Temp Warning Threshold | Analog_Value | 129 | 5557_1 | RW | Units: deg C | 1, 2 |
| Evaporator Return Fluid Under Temp Warning Threshold | Analog_Value | 10129 | 5557_1_deg_F | RW | Units: deg F | 1, 2 |
| Evaporator Return Fluid Under Temp Alarm Threshold | Analog_Value | 130 | 5558_1 | RW | Units: deg C | 1, 2 |
| Evaporator Return Fluid Under Temp Alarm Threshold | Analog_Value | 10130 | 5558_1_deg_F | RW | Units: deg F | 1, 2 |
| Brine | | | | | | |
| Supply Brine Temp Set Point | Analog_Value | 141 | 5312_1 | RW | Units: deg C | 1, 2 |
| Supply Brine Temp Set Point | Analog_Value | 10141 | 5312_1_deg_F | RW | Units: deg F | 1, 2 |
| Standby Units | | | | | | |
| Standby Units | Analog_Value | 152 | 5314_1 | RW | | 1, 2 |
| System Operations | | | | | | |
| Return Fluid Temperature | Analog_Value | 163 | 5288_1 | RD | Units: deg C | 1, 2 |
| Return Fluid Temperature | Analog_Value | 10163 | 5288_1_deg_F | RD | Units: deg F | 1, 2 |
| Supply Fluid Temperature | Analog_Value | 164 | 4643_1 | RD | Units: deg C | 1, 2 |
| Supply Fluid Temperature | Analog_Value | 10164 | 4643_1_deg_F | RD | Units: deg F | 1, 2 |
| Actual Supply Fluid Temp Set Point | Analog_Value | 165 | 5282_1 | RD | Units: deg C | 1, 2 |
| Actual Supply Fluid Temp Set Point | Analog_Value | 10165 | 5282_1_deg_F | RD | Units: deg F | 1, 2 |
| Condenser Inlet Water Temperature | Analog_Value | 166 | 5517_1 | RD | Units: deg C | 1, 2 |
| Condenser Inlet Water Temperature | Analog_Value | 10166 | 5517_1_deg_F | RD | Units: deg F | 1, 2 |
| Condenser Outlet Water Temperature | Analog_Value | 167 | 5518_1 | RD | Units: deg C | 1, 2 |
| Condenser Outlet Water Temperature | Analog_Value | 10167 | 5518_1_deg_F | RD | Units: deg F | 1, 2 |
| Supply Heated Water Temp Set Point | Analog_Value | 168 | 5313_1 | RW | Units: deg C | 1, 2 |
| Supply Heated Water Temp Set Point | Analog_Value | 10168 | 5313_1_deg_F | RW | Units: deg F | 1, 2 |
| Free Cooling Utilization | Analog_Value | 169 | 5519_1 | RD | Units: % | 1, 2 |
| Reheat Utilization | Analog_Value | 170 | 5080_1 | RD | Units: % | 1, 2 |
| Compressor Utilization | Analog_Value | 171 | 5078_1 | RD | Units: % | 1, 2 |
| Ambient Air Temperature | Analog_Value | 172 | 4594_1 | RD | Units: deg C | 1, 2 |
| Ambient Air Temperature | Analog_Value | 10172 | 4594_1_deg_F | RD | Units: deg F | 1, 2 |
| Compressor Economizer Utilization | Analog_Value | 173 | 5520_1 | RD | Units: % | 1, 2 |
| Condenser Adiabatic Cooling Utilization | Analog_Value | 174 | 5521_1 | RD | Units: % | 1, 2 |
| Time | | | | | | |
| System Date and Time | Analog_Value | 185 | 4293_1 | RW | | 1, 2 |

Table 93 Liebert HPC™ - Multistate Data

| Controller | | Liebert iCOM® v4 | | | | |
|-----------------------------------|------------------|------------------|-------------|--------|--|-------------|
| Data Label | Object Type | Instance | Object Name | Access | Notes | Extra Notes |
| Protocol | | | | | | |
| Server Class | MultiState_Value | 1 | 4553_1 | RD | 1 = UPS 2 = AIR 3 = PMP 4 = PDU | 1, 2 |
| Compressors - Compressor 1 | | | | | | |
| Compressor State | MultiState_Value | 12 | 5264_1_1 | RD | 1 = off 2 = on | 1, 2 |
| Compressor Capacity Control State | MultiState_Value | 13 | 5265_1_1 | RD | 1 = off 2 = on | 1, 2 |
| Compressors - Compressor 2 | | | | | | |
| Compressor State | MultiState_Value | 24 | 5264_1_2 | RD | 1 = off 2 = on | 1, 2 |
| Compressor Capacity Control State | MultiState_Value | 25 | 5265_1_2 | RD | 1 = off 2 = on | 1, 2 |
| Compressors - Compressor 4 | | | | | | |
| Compressor State | MultiState_Value | 246 | 5264_1_4 | RD | 1 = off 2 = on | 2 |
| Compressor Capacity Control State | MultiState_Value | 247 | 5265_1_4 | RD | 1 = off 2 = on | 2 |
| Free Cooling | | | | | | |
| Free Cooling Status | MultiState_Value | 36 | 5302_1 | RD | 1 = off 2 = on 3 = No Support | 1, 2 |
| System Events | | | | | | |
| System Event Acknowledge/Reset | MultiState_Value | 47 | 4717_1 | WO | 1 = Reset 2 = Acknowledge | 1, 2 |
| 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 | 1, 2 |
| System Operating State | MultiState_Value | 59 | 4706_1 | RD | 1 = off 2 = on 3 = standby | 1, 2 |
| System Control Mode | MultiState_Value | 60 | 4707_1 | RD | 1 = Internal (Auto) 2 = External (Manual) | 1, 2 |
| 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 | 1, 2 |
| System On/Off Control | MultiState_Value | 62 | 5143_1 | RW | 1 = off 2 = on | 1, 2 |
| System Operations | | | | | | |
| Pump 1 State | MultiState_Value | 73 | 4654_1 | RD | 1 = off 2 = on | 1, 2 |
| Pump 2 State | MultiState_Value | 74 | 4655_1 | RD | 1 = off 2 = on | 1, 2 |

Table 94 Extra Notes

| Number | Description |
|--------|--|
| 1 | This point is supported on: FDM v32 iCOM Controller Version 2.02.xxx |
| 2 | This point is supported on: FDM v101 iCOM Controller Version 2.03.xxx |

Table 95 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. |

Table 95 Liebert HPC™ - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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. |
| 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. |
| 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. |
| 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]. |

Table 95 Liebert HPC™ - Glossary (continued)

| Data Label | Data Description |
|---|---|
| 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 refrigerant 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 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 96 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 96 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 97 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 | — |

Table 97 Liebert XDP™, Liebert XDC™ - Analog Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|--------------|------------------|-------------|--------|-------|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| XD System 1 Temperature Sensor 4 | | | | | |
| Remote Sensor Temperature | Analog_Value | 143 | 5059_1_4 | RD | — |
| 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 98 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 |
| Chilled Water Cntrl Valve Pos - Event Type | Multistate_Value | 30 | 4705_1 | RW | 1 = Message 2 = Warning 3 = Alarm |

Table 98 Liebert XDP™, Liebert XDC™ - Multistate Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|---|------------------|------------------|-------------|--------|---|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |
| Pump Short Cycle - Event Type | Multistate_Value | 80 | 4664_1 | RW | 1 = Message 2 = Warning 3 = Alarm |

Table 98 Liebert XDP™, Liebert XDC™ - Multistate Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|------------------|------------------|-------------|--------|---|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |
| 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 |

Table 98 Liebert XDP™, Liebert XDC™ - Multistate Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|------------------|------------------|-------------|--------|---|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |
| 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 |

Table 98 Liebert XDP™, Liebert XDC™ - Multistate Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|------------------|------------------|-------------|--------|---|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |
| 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 |

Table 98 Liebert XDP™, Liebert XDC™ - Multistate Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|--|------------------|------------------|-------------|--------|--|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 |
| 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 |

Table 98 Liebert XDP™, Liebert XDC™ - Multistate Data (continued)

| Controller | | Liebert iCOM® v4 | | | |
|-----------------------------------|------------------|------------------|-------------|--------|---|
| Data Label | Object Type | Instance | Object Name | Access | Notes |
| 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 99 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. |

Table 99 Liebert XDP™, Liebert XDC™ - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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. |
| 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. |

Table 99 Liebert XDP™, Liebert XDC™ - Glossary (continued)

| Data Label | Data Description |
|---|---|
| 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. |
| 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]. |

Table 99 Liebert XDP™, Liebert XDC™ - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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. |
| 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. |

Table 99 Liebert XDP™, Liebert XDC™ - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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. |
| 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. |

Table 99 Liebert XDP™, Liebert XDC™ - Glossary (continued)

| Data Label | Data Description |
|---|---|
| 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. |
| 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. |

Table 99 Liebert XDP™, Liebert XDC™ - Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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 refrigerant 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. |
| 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 100 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 101 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 102 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 |

Table 102 Liebert APM™, Liebert NXC™, Liebert NXR™ - Binary Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|------------------------------|--------------|----------|-------------|--------|-----------------|
| Power Sub Module Fault | Binary_Value | 51 | 5158_1 | RD | Active on Alarm |
| Battery Discharging | Binary_Value | 52 | 4168_1 | RD | Active on Alarm |
| 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 |

Table 103 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 |

Table 103 Liebert APM™, Liebert NXC™, Liebert NXR™ - Analog Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|-----------------------------------|--------------|----------|-------------|--------|-------------|
| 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 |
| 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 104 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 105 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 |
| 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 105 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 |

Table 105 Liebert APM™, Liebert NXC™, Liebert NXR™ - 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 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 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 106 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 106 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 107 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 |

Table 107 Liebert APS™ - Analog Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|---|--------------|----------|---------------|--------|--------------|
| System Output Apparent Power L2 | Analog_Value | 71 | 5869_1 | RD | Units: kVA |
| 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: kVA |
| Frame Capacity | Analog_Value | 92 | 5822_1 | RD | Units: kVA |
| 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 |
| 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 108 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 |
| 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 |

Table 108 Liebert APS™ - Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|--------------------------------------|------------------|----------|-------------|--------|--|
| 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 |
| 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 109 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. |

Table 109 Liebert APS™ - 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 |
| 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. |
| 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. |

Table 109 Liebert APS™ - Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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. |
| 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 |

Table 109 Liebert APS™ - Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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 |
| 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 110 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 |
| Battery Equalize | Binary_Value | 45 | 4170_1 | RD | Active on Alarm | SMS, 1+N, N+1 |

Table 110 Liebert NXL™ - 60Hz, UL version (Model 40) - Binary Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|----------------------------------|--------------|----------|-------------|--------|-----------------|--------------------|
| 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 |
| 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 |
| 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 |

Table 110 Liebert NXL™ - 60Hz, UL version (Model 40) - Binary Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|-----------------------------------|--------------|----------|-------------|--------|-----------------|--------------------|
| 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 |
| 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 |

Table 110 Liebert NXL™ - 60Hz, UL version (Model 40) - Binary Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|---------------------------------|--------------|----------|-------------|--------|-----------------|--------------------|
| 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 |
| 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 |

Table 110 Liebert NXL™ - 60Hz, UL version (Model 40) - Binary Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|---|--------------|----------|-------------|--------|-----------------|--------------------|
| 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 | | | | | | |
| 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 111 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 |
| 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 |
| Battery Volts for Cabinet 7 | Analog_Value | 44 | 4155_1_7 | RD | Units: VDC | SMS, 1+N, N+1 |

Table 111 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 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 |
| Total Number of Battery Discharges | Analog_Value | 61 | 5767_1 | RD | — | SMS, 1+N, N+1 |

Table 111 Liebert NXL™ - 60Hz, UL version (Model 40) - Analog Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|----------------------------------|--------------|----------|-------------|--------|-------------|--------------------|
| 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 |
| Inverter | | | | | | |
| Inverter Overload Time Remaining | Analog_Value | 115 | 4232_1 | RD | Units: sec | SMS, 1+N, N+1 |

Table 111 Liebert NXL™ - 60Hz, UL version (Model 40) - Analog Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|-----------------------------------|--------------|----------|--------------|--------|--------------|--------------------|
| 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 111 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 111 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 112 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 112 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 |
| 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 |

Table 112 Liebert NXL™ - 60Hz, UL version (Model 40) - Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|-------------------------------------|------------------|----------|-------------|--------|--|--------------------|
| 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 |
| 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 |

Table 112 Liebert NXL™ - 60Hz, UL version (Model 40) - Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|--|------------------|----------|-------------|--------|--|------------------|
| 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 |
| 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 |
| System Isolation Output Breaker (IOB) | MultiState_Value | 155 | 4854_1 | RD | 1 = Open 2 = Close 3 = Not Installed | SCC |

Table 112 Liebert NXL™ - 60Hz, UL version (Model 40) - Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes | Liebert NXL Type |
|----------------------------------|------------------|----------|-------------|--------|---|------------------|
| 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 |
| 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 |

Table 112 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 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 |
| 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 113 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 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 |

Table 113 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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 |
| 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. |

Table 113 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data 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 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 |
| 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. |

Table 113 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|---|--|
| 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) |
| 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 |

Table 113 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|---|--|
| 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 |
| 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 |

Table 113 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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 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 |

Table 113 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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 |
| 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 |

Table 113 Liebert NXL™ - 60Hz, UL version (Model 40) - Glossary (continued)

| Data Label | Data Description |
|------------------------------------|---|
| 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 |
| 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 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 114 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 |

Table 114 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 114 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 114 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 115 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 |
| 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 115 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 115 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 116 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 |
| 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 |

Table 116 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|---------------------------------|------------------|----------|-------------|--------|--|
| 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 116 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 |
| 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 |

Table 116 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|------------------------------------|------------------|----------|-------------|--------|--|
| 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 |
| 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 |

Table 116 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|---------------------------------------|------------------|----------|-------------|--------|---|
| 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 |
| 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 |

Table 116 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|--------------------------------------|------------------|----------|-------------|--------|---|
| 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 |
| 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 |

Table 116 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Multistate Data (continued)

| Data Label | Object Type | Instance | Object Name | Access | Notes |
|--------------------------------------|------------------|----------|-------------|--------|---|
| 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 |
| 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 117 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 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 |

Table 117 Liebert NXL™ - 50 Hz, 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. |

Table 117 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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. |
| 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 |

Table 117 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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 |
| 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 |

Table 117 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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 |
| 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. |

Table 117 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Glossary (continued)

| Data Label | Data Description |
|--|--|
| 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. |
| 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 |

Table 117 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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 |
| 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 |

Table 117 Liebert NXL™ - 50 Hz, CE version (Models 48 and 49)—Glossary (continued)

| Data Label | Data Description |
|--|---|
| 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 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. |

Technical Support / Service

Web Site

www.liebert.com

Monitoring

liebert.monitoring@emerson.com

800-222-5877

Outside North America: +00800 1155 4499

Single-Phase UPS & Server Cabinets

liebert.upstech@emerson.com

800-222-5877

Outside North America: +00800 1155 4499

Three-Phase UPS & Power Systems

800-543-2378

Outside North America: 614-841-6598

Environmental Systems

800-543-2778

Outside the United States: 614-888-0246

Locations

United States

1050 Dearborn Drive

P.O. Box 29186

Columbus, OH 43229

Europe

Via Leonardo Da Vinci 8

Zona Industriale Tognana

35028 Piove Di Sacco (PD) Italy

+39 049 9719 111

Fax: +39 049 5841 257

Asia

29/F, The Orient Square Building

F. Ortigas Jr. Road, Ortigas Center

Pasig City 1605

Philippines

+63 2 687 6615

Fax: +63 2 730 9572

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