LIEBERT® AC8™
Product Specification/Installation Guide

VERTIV

Liebert AC8™

The Liebert AC8 coordinates control of systems with redundant equipment, such as multiple thermal-management units or pumps. The AC8 can control stand-by functions and unit rotation, perform testing on stand-by devices, stage operation based on sensor-reading levels, and monitor alarm status of connected devices. The Liebert AC8 interfaces with any device that closes an electrical contact.

The AC8 tracks data in alarm, event, and trend logs. System configuration and data monitoring is accessible using a local, LCD interface. The AC8 also interfaces with Liebert SiteScan™ Web monitoring product.

FEATURES

- Custom configuration for specific applications
- Alarm, Event and Trend logs with time-and-date stamp
- Battery back-up to ensure alarm notification
- Back-up and download configuration files
- User interface via RS232
- On-board audible alarm
- Configuration data and operating program permanently stored in nonvolatile Electrically Erasable Programmable Read Only Memory (EEPROM) for protection against power loss

- Real-time clock
- Status LEDs for verification and diagnostics

AC8 Enclosure

The AC8 enclosure includes a key lock for added security, is made of metal to protect from environmental exposure, and includes top and bottom access slots for cables and wiring.

Controller Input and Output

The controller supports the following connections:

- 8 devices with 1 digital input and 1 digital output per device
- 4 zones with staging for each zone
- 4 analog inputs, 4-20 mA, one sensor per zone
- 2 programmable, digital-relay outputs
- 2 common-alarm outputs
- 1 EPOP inout

Digital inputs are dry contacts. Analog inputs are 4-20 mA. Digital outputs, programmable-relay outputs, and common-alarm outputs are Form C contact relays. The common-alarm output is one output with two sets of contacts. Point terminations on the control board are made using removable terminal blocks. The board includes RS232 and IGM 422 ports/connections.
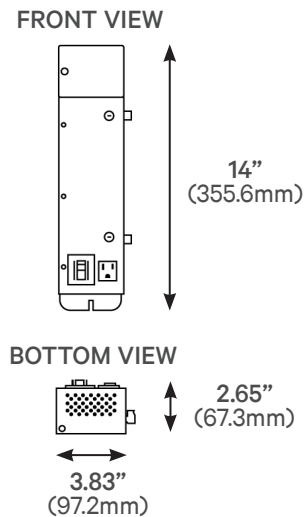
Keypad Display

The AC8 user interface is a password-protected LCD display with a keypad providing stand-alone configuration and monitoring from the controller.

DIMENSIONS - FRONT, TOP/BOTTOM

ENCLOSURE
FRONT VIEW

18"
(457.2mm)

TOP/BOTTOM VIEW

2.85"
(72.39mm)

18"
(457.2mm)
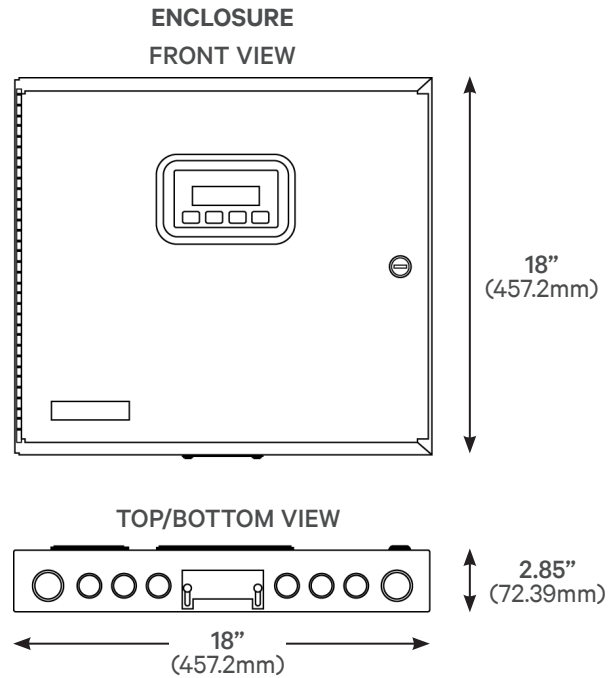
115-V and 230-V
TRANSFORMER MODULE
FRONT VIEW

14"
(355.6mm)

BOTTOM VIEW

2.65"
(67.3mm)

3.83"
(97.2mm)

WIRING SPECIFICATIONS

CONNECTION	MAXIMUM LENGTH, ft (m)	RATING	SUPPORTED TYPE
Digital Input/ EPOP	750 (225)	Dry-contact, 24 VDC, 10 mA	18 – 22 AWG stranded, unshielded (18 AWG recommended) Non-plenum: Belden 9740 Plenum: Belden 89740
Analog Input 2-wire transducer	750 (225)	4-20 mA signal input, selectable power source, 12/24 VDC	
Digital Output/ Control Relay	**8 AWG** @3 A: 50 (15), @2 A: 100 (30), @1 A: 200 **20 AWG** @3 A: 40 (12), @2 A: 60 (18), @1 A: 100 (30) **22 AWG** @3 A: 25 (7), @2 A: 35 (10), @1 A: 74 (23)	24 VAC @ 3 A	
Common Alarm Output			
Analog Input 4-wire transducer	750 (225)	4-20 mA signal input, selectable power source, 12/24 VDC	18 – 22 AWG stranded, unshielded (18 AWG recommended) Non-plenum: Belden 8489 Plenum: Belden 88489
Communication IGM422 SiteScan	1,000 (300)	N/A	18 – 22 AWG stranded, unshielded (18 AWG recommended) Non-plenum: Belden 9461 Plenum: Belden 88761
Communication EIA485	3,000 (900)	N/A	
Communication RS232	50 (15)	N/A	Null modem cable
24-VAC Power (TB7)	150 (45)	N/A	18 – 22 AWG stranded, unshielded (18 AWG recommended) Non-plenum: Belden 8770 Plenum: Belden 88770

TRANSFORMER MODULE WIRING SPECIFICATIONS

115 VAC Power	150 (45)	115 VAC @ 5 A	14 AWG stranded, unshielded Non-plenum: Belden 5101UE
230 VAC Power	150 (45)	230 VAC @ 0.5 A	

INPUT AND OUTPUT

(Quantity in parentheses)	115-VAC TRANSFORMER/UML11500 / 230-VAC TRANSFORMER/UML23000
Digital Inputs	(8) dry-contact closures, 24 VDC, 10 mA
Analog Inputs	(4) 4-20 mA signal with selectable power source of 12 VDC or 24 VDC
Digital Outputs	(8) 24-VAC, 3-A
Common Alarm Outputs	(2) 24-VAC, 3-A

SPECIFICATIONS

	115-VAC TRANSFORMER/UML11500	230-VAC TRANSFORMER/UML23000
Power Requirements	115 VAC ±10% of nominal, 60 Hz, 4 A, 4600 VA	230 VAC ±10% of nominal, 50 Hz, 0.5 A, 115 VA
Dimensions, W x D x H	18 x 2-34 x 18 in. (457.2 x 69.85 x 457.2 m)	
Weight (assembled)	20.56 lb (9.33 kg)	
Enclosure Type	NEMA 1	
Liquid-crystal Display	4-line, 20-character, backlit	
Mounting Surface	Building wall or structural member	
Ambient Operating Environment	32 to 104°F (0 to 40°C) / 0% to 95% RH, non-condensing	

PROCESSOR

Model	Motorola XC68HC812A4
Clock Speed	16 MHz
Total RAM	256 Kb
Total FLASH	4 M
Total EEPROM	4 K
A/D Resolution (Analog IN)	12 bit
Type Embedded	14.4 K bps
Clock Type	Real-time
Clock Battery back-up type	Lithium (non-replaceable)
Clock Battery life	7 years, constant, no power
Battery back-up type	Nickel Cadmium (replaceable)
Battery life	10 minutes at full load

COMMUNICATION

Local	EIA232
SiteScan Web	IGM protocol, EIA422

AGENCY LISTINGS

	115-VAC	230-VAC
UL	TM115 Transformer: UL 1012	TM230 Transformer: UL 1585
CSA	C22.2 No. 66 and C22.2 No 107.1	
CE	Yes	
FCC Compliance	Yes	