



H8238 Series

**BACNET
CONNECTIVITY
VIA E8951 GATEWAY**



H8238

MONITOR EIGHT 3-PHASE CIRCUITS WITH ONE DEVICE

DESCRIPTION

The **H8238 Multi-Circuit Monitor** power monitoring system provides a convenient solution for monitoring multiple electrical services that share a common voltage source. It also reports diagnostic information such as power factor, volts, amps, and kVAR, over an RS-485 network using the industry standard Modbus communication protocol. To protect valuable equipment, it has built-in alarm registers for over- and under-voltage, current, and kVA.

The monitoring capabilities and open systems compatibility of the H8238 make it an ideal power monitoring solution for OEM, tenant submetering applications, & load management of power distribution units commonly used in internet data centers.

FEATURES

- Revenue Grade measurements
- Save labor and installation costs by monitoring up to eight 3Ø, (or six 3Ø plus neutral current) loads from a single service with common voltage connections
- Minimizes the need to install multiple transducers – fewer components to install...saves time and space
- Easily connect up to 24 industry standard 5A CTs (solid-core and/or split-core)
- Modbus communication for efficient data collection
- Improve monitoring system efficiencies by accessing 26 data points per circuit, plus alarms, with one RS-485 drop
- Daisy chain up to 30 units on a single drop...easy wiring
- Field-selectable address, baud rate, parity and wiring connections...simple configuration
- Use with E8951 gateway for BACnet connectivity... expanded system compatibility
- Use with U013-0012 serial to ethernet protocol converter... easy system integration

SPECIFICATIONS

| | |
|-----------------------|---|
| Agency Approvals | UL508, EN61010-1, Cat. III, pollution degree 2 |
| INPUTS: | |
| Control Power | (90 to 132 Vac); (180 to 264 Vac for H8238E), 50/60 Hz |
| VOLTAGE INPUT | |
| Maximum Voltage | 480 Vac +10% = 528 Vac |
| Frequency | 60 Hz |
| CURRENT INPUT | |
| Number of Channels | 24 (8 meters x 3 phases/meter), 6 meters if neutral monitored |
| CT Input Type | 5 Amp (customer supplied) |
| CT Range | Each 3-phase circuit is independently configurable from 1 to 9999 A (using 5 A output CTs) |
| ACCURACY | |
| Accuracy | ±1% when amperage is at 10% to 100% of range (exclusive of user-supplied CTs) |
| Sample Rate | 1280 Hz |
| Variable Update Rate | 200 msec for voltages, 1.6 secs for all other |
| OUTPUTS | |
| Type | RS-485 Modbus RTU |
| Connection | DIP-switch selectable 2-wire or 4-wire |
| Address | DIP-switch selectable base address (1 to 233 in steps of 8). Each H8238 has 8 Modbus addresses. |
| Baud Rate | DIP-switch selectable 2400, 4800, 9600, or 19200 |
| Parity | DIP-switch selectable NONE/ODD/EVEN |
| Communication Format | 8 data bits, 1 start bit, 1 stop bit |
| Termination | 5-position pluggable connector |
| ENVIRONMENTAL | |
| Altitude of Operation | 3000 m |
| Operating Temp Range | 0 to 60 °C (32 to 140 °F) |
| Storage Temp Range | -40 to 70 °C (-40 to 158 °F) |
| Humidity Range | 0 to 95% non-condensing |
| ENVIRONMENTAL | |
| Limited Warranty | 5 years |

APPLICATIONS

- Tenant submetering
- Real-time power monitoring
- Activity-based costing
- Managing loads

ACCESSORIES

AL, BL, CL 5AAC Solid-Core Current Transformers

H681x-5A Split-Core Current Transformers

Modbus-to-BACnet Converter (E8951)

Modbus TCP Gateway (U013-0012)



H681x-5A



AL BL CL

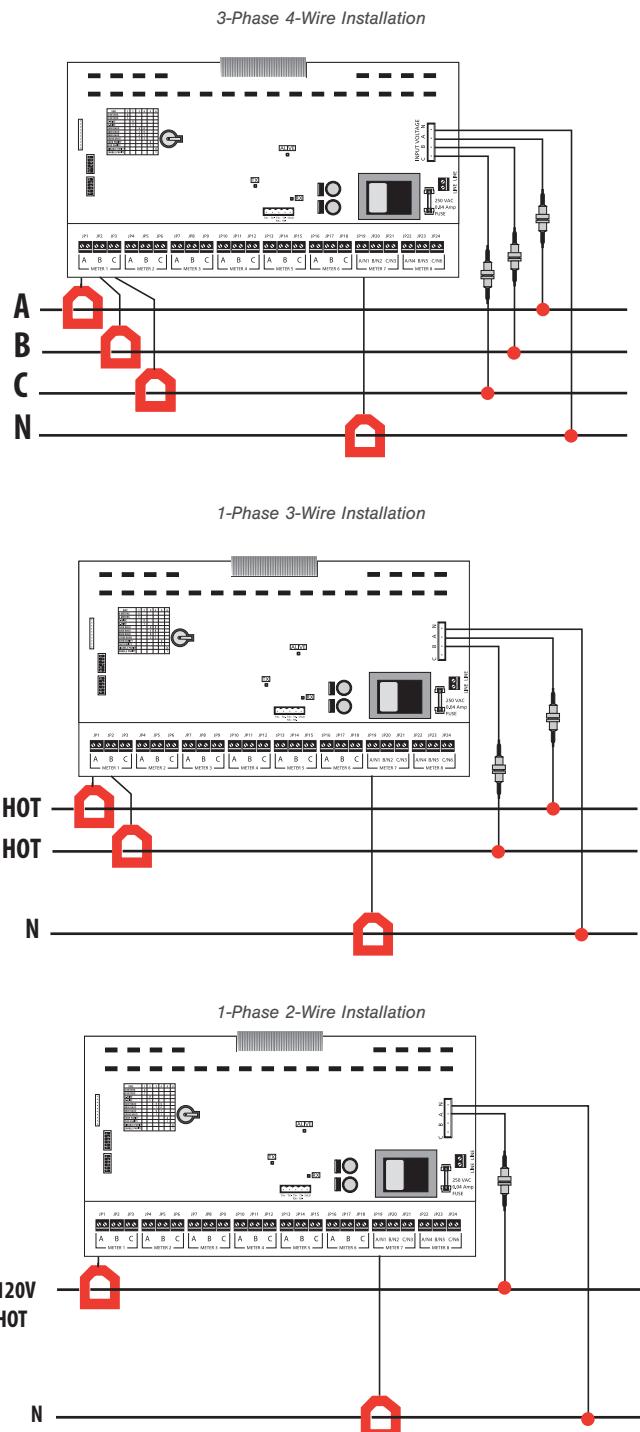


U013-0012



E8951

WIRING DIAGRAMS



ORDERING INFORMATION

| MODEL | DESCRIPTION |
|--------|---|
| H8238 | Multi-Circuit Monitor, 90 to 130 Vac supply voltage |
| H8238E | Multi-Circuit Monitor, 240 Vac supply voltage |

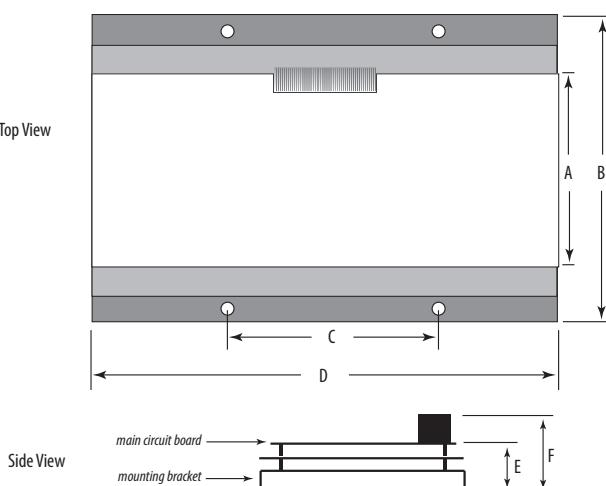
For 240 Vac supply voltage version, order H8238E.



H8238 Series transducers are sold as open devices. Observe handling precautions for static sensitive devices to avoid damage to the circuitry which would not be covered under the factory warranty.



DIMENSIONAL DRAWINGS



WIDTH:

A = 5.3" (135 mm)
B = 8.9" (226 mm) mounting bracket base

LENGTH:

C = 6.0" (153 mm)
D = 12.8" (325 mm)

HEIGHT:

E = 2.9" (74 mm)
F = 4.0" (101 mm)

DATA OUTPUTS

kWh Energy Consumption

Power Factor, phase C

kW Real Power

Line to Line Voltage, phase A-B

kVAR Reactive Power

Line to Line Voltage, phase B-C

kVA Apparent Power

Line to Line Voltage, phase A-C

Power Factor Total

Line to Neutral Voltage, phase A-N

Voltage, L-L, avg. of 3 phases

Line to Neutral Voltage, phase B-N

Voltage, L-N, avg. of 3 phases

Line to Neutral Voltage, phase C-N

Current, average of 3 phases

Current, phase A

kW Real Power, phase A

Current, phase B

kW Real Power, phase B

Current, phase C

kW Real Power, phase C

kW Average

Power Factor, phase A

kW Minimum

Power Factor, phase B

Frequency (measured from phase A)

Modbus® Alarms:

Over Voltage

Under Voltage

Over Current

Under Current

Over kVA

Under kVA

Phase Loss A

Phase Loss B

Phase Loss C