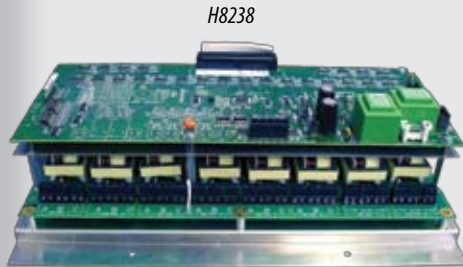


MODBUS® RTU



Monitors electrical services that share a common voltage source

Multi-Circuit Monitor

The H8238 Multi-Circuit Monitor power monitoring system provides a convenient solution for monitoring multiple electrical services which 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 the ideal power monitoring solution for OEM, tenant submetering applications, and load management of power distribution units commonly used in internet data centers. The H8238 is a UL508 open type device without enclosure.

APPLICATIONS

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

Monitor power parameters from up to 8 services with one device

- 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
- Eliminates the need to install multiple transducers – fewer components to install...saves time and space
- Easy connection to up to 24 industry standard five-amp CTs

Modbus communications 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

SPECIFICATIONS

Input Power:

Power Source	+10/-25 % (90-132VAC); (180-264VAC for H8238E)
Frequency	50/60Hz
Electrical Services	Up to eight 3Ø circuits. All circuits must share a common line voltage source
Sample Rate	1280Hz
Operating Temperature Range	0° to 60°C (32° to 140°F) (<95%RH, non-condensing)
Storage Temperature Range	-40° to 70°C (-40° to 158°F)
Accuracy	±1% (exclusive of user-supplied CTs)*
Variable Update Rate	200msec for voltages, 1.6secs for all other
Terminations	Cage-clamp terminal block (max wire size 12 AWG)

Measured Voltage Inputs:

Number of Channels	Dependent on application (phase A, B, C, plus neutral. Average of phases used for L-N values if no neutral present)
Maximum Voltage	480VAC+10% = 528VAC
Frequency	60Hz

Measured Current Inputs:

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 of eight meters independently configurable from 1A:5A to 9999A:5A

Network Communications:

Type	Modbus RTU
Connection	DIP-switch selectable 2-wire or 4-wire
Address	DIP-switch selectable base address (1 to 233 in steps of 8)
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

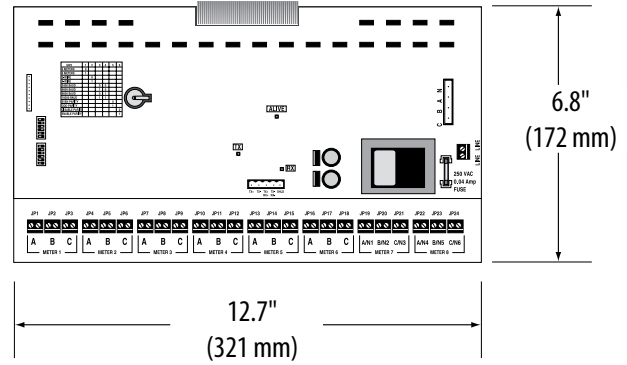
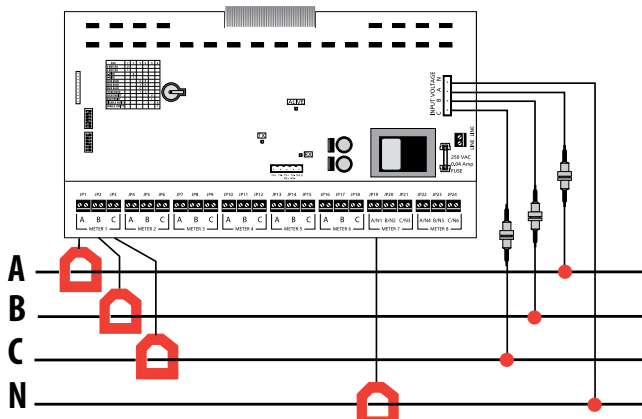
*Accuracy specification valid only when amperage is greater than 10% of CT maximum



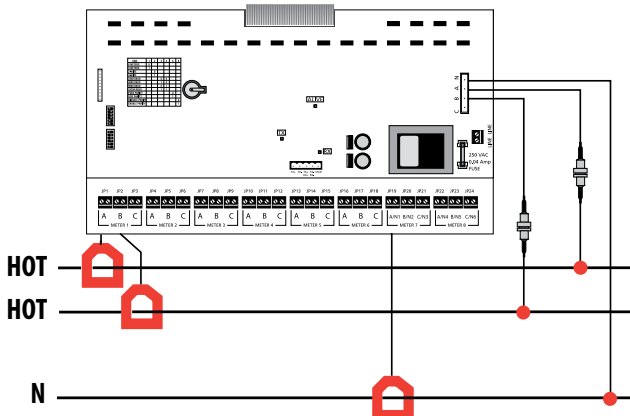
APPLICATION/WIRING EXAMPLES

DIMENSIONAL DRAWINGS

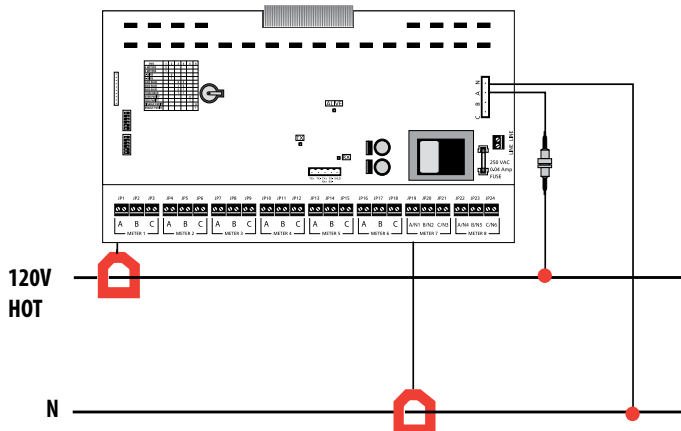
3-Phase 4-Wire Installation



1-Phase 3-Wire Installation



1-Phase 2-Wire Installation



DATA OUTPUT SPECIFICATIONS


- | | |
|------------------------------------|------------------------|
| kWh Energy Consumption | <u>Modbus® Alarms:</u> |
| kW Real Power | Over Voltage |
| kVAR Reactive Power | Under Voltage |
| kVA Apparent Power | Over Current |
| Power Factor Total | Under Current |
| Voltage, L-L, avg. of 3 phases | Over kVA |
| Voltage, L-N, avg. of 3 phases | Under kVA |
| Current, average of 3 phases | Phase Loss A |
| kW Real Power, phase A | Phase Loss B |
| kW Real Power, phase B | Phase Loss C |
| kW Real Power, phase C | |
| Power Factor, phase A | |
| Power Factor, phase B | |
| Power Factor, phase C | |
| Line to Line Voltage, phase A-B | |
| Line to Line Voltage, phase B-C | |
| Line to Line Voltage, phase A-C | |
| Line to Neutral Voltage, phase A-N | |
| Line to Neutral Voltage, phase B-N | |
| Line to Neutral Voltage, phase C-N | |
| Current, phase A | |
| Current, phase B | |
| Current, phase C | |
| kW Average | |
| kW Minimum | |
| Frequency (measured from phase A) | |

ORDERING INFORMATION



MODEL	DESCRIPTION
H8238	Multi-Circuit Monitor

*For 240VAC 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.

ACCESSORIES

AL, BL, CL 5AAC Solid Core Current Transformers, H681X-5A Split-Core Current Transformers... see page 128