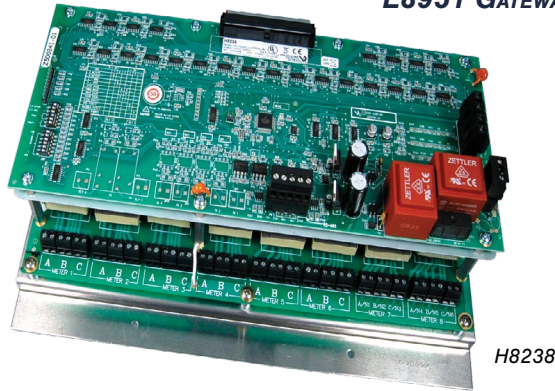




## Multi-circuit Monitor

### H8238 Series

**BACNET  
CONNECTIVITY  
VIA NEW  
E8951 GATEWAY**



**Monitor Eight 3-Phase Circuits  
with One Device**

#### 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

#### 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.

#### SPECIFICATIONS



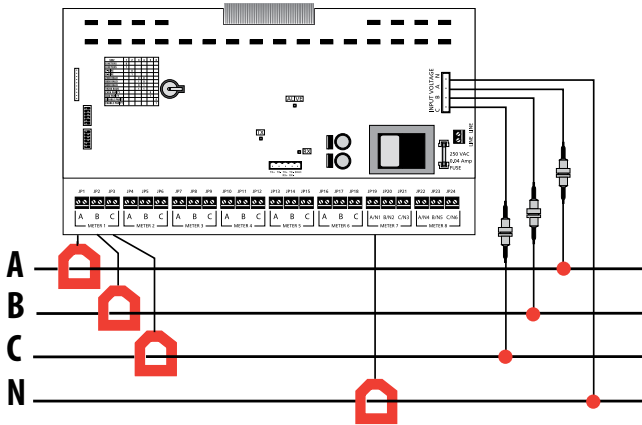
Agency Approvals	UL508, EN61010-1, Cat. III, pollution degree 2
<b>INPUTS:</b>	
Control Power	(90-132VAC); (180-264VAC for H8238E), 50/60 Hz
<b>VOLTAGE INPUT</b>	
Maximum Voltage	480VAC+10% = 528VAC
Frequency	60 Hz
<b>Current Input</b>	
Number of Channels	24 (8 meters x 3 phases/meter), 6 meters if neutral monitored
CT Input Type	5 Amp (customer supplied)
CT Range	Each 3-phase circuit is independently configurable from 1 A to 9999A (using 5A output CTs)
<b>ACCURACY</b>	
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
<b>OUTPUTS</b>	
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
<b>ENVIRONMENTAL</b>	
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	0-95% non-condensing

#### APPLICATIONS

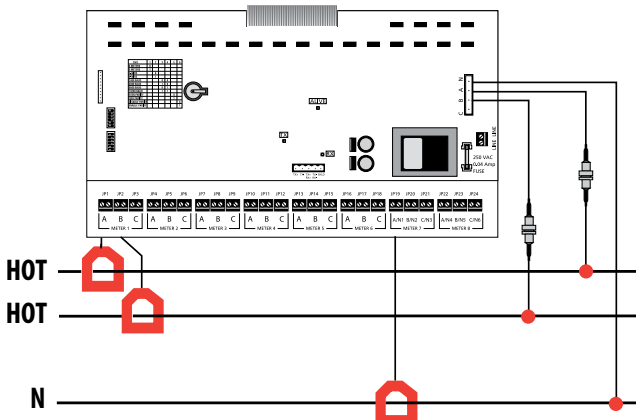
- Tenant submetering
- Real-time power monitoring
- Activity-based costing
- Managing loads

**WIRING DIAGRAMS**

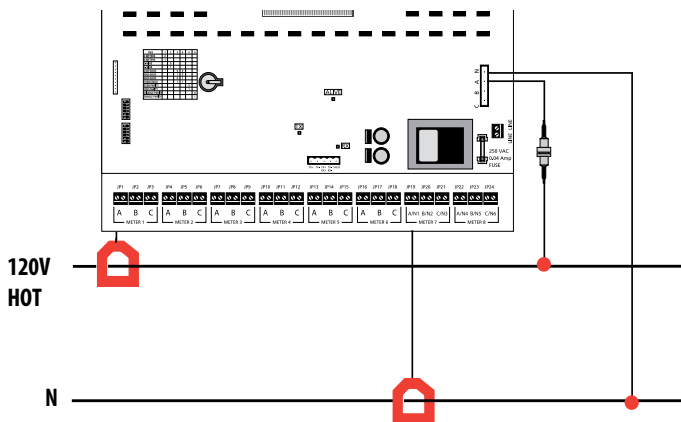
*3-Phase 4-Wire Installation*



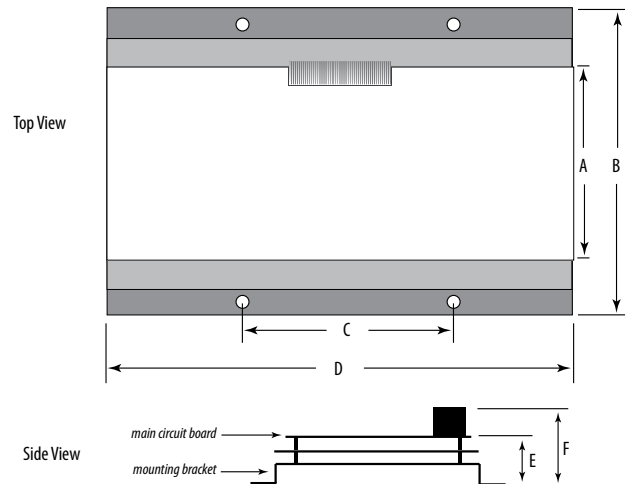
*1-Phase 3-Wire Installation*



*1-Phase 2-Wire Installation*



**DIMENSIONAL DRAWINGS**



**WIDTH:**

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

**LENGTH:**

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

**HEIGHT:**

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

**DATA OUTPUTS**

- kWh Energy Consumption
- kW Real Power
- kVAR Reactive Power
- kVA Apparent Power
- Power Factor Total
- Voltage, L-L, avg. of 3 phases
- Voltage, L-N, avg. of 3 phases
- Current, average of 3 phases
- kW Real Power, phase A
- kW Real Power, phase B
- 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)

**Modbus® Alarms:**

- Over Voltage
- Under Voltage
- Over Current
- Under Current
- Over kVA
- Under kVA
- Phase Loss A
- Phase Loss B
- Phase Loss C

**ORDERING INFORMATION**

MODEL	DESCRIPTION
H8238	Multi-Circuit Monitor, 90-130 VAC supply voltage
H8238E	Multi-Circuit Monitor, 240VAC supply voltage



For 240VAC supply voltage version, order H8238E

**ATTENTION**  
 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
- Modbus-to-BACnet Converter (E8951)
- Modbus TCP Gateway (U013-0012)

