

Enhanced Power and Energy Meter, Built-in Integrator and Power Supply

Versatile Monitoring Solution When Used With U018 Rope Style CTs (sold separately)



U018 Series
(sold separately)



DESCRIPTION

The E5xxxA Series DIN Rail Meter combines exceptional metering performance with a built-in integrator and power supply to deliver a cost-effective, easily installed solution for power monitoring applications. Multiple communication protocol options offer added flexibility for system integration.

E5xxxA devices work exclusively with Veris U018 series rope CTs for fast connection. The rope style CTs allow convenient installation in tight spaces.

The data logging capability (E5xC3A and E5xx5A) protects data in the event of a power failure. Different devices in the series offer serial communication, pulse output, and phase alarms to suit a wide variety of applications.

The E51xxA models add a bi-directional monitoring feature designed expressly for renewable energy applications, allowing measurement of power imported from the utility grid as well as power exported from the renewable energy source.

APPLICATIONS

- Energy monitoring in building automation systems
- Renewable energy
- Energy management
- Commercial submetering
- Industrial monitoring
- Cost allocation

FEATURES

- Integrator and power supply for the CTs are built into the meter...fewer devices to purchase and faster installation
- Revenue Grade measurements
- ANSI C12.20 0.5% accuracy, IEC 62053-22 Class 0.5S on E50xxA or ANSI C12.20 0.2% accuracy, IEC 62053-22 Class 0.2S on E51xxA...great for cost allocation
- DIN rail or screw mounting options...easy installation
- Real energy output and phase loss alarm output on E50BxA and E5xCxA models...one device serves multiple applications
- 90-600VAC...application versatility with fewer models to stock
- Data logging capability (E5xC3A and E5xx5A)... ensures long term data retrieval and safeguards during power failures
- Designed to work exclusively with U018 Series rope CTs, 20 to 5000A range... easy connection
- User-enabled password protection...protect from tampering
- System integration via Modbus (E5xCxA), BACnet MS/TP (E5xHxA), or Lonmark-certified LON FT (E50FxA)...convenient compatibility with existing systems
- Native BACnet MS/TP support (no gateway) with serial rates up to 115.2 kbaud (E5xHxA)
- E51 models: Bi-directional metering (4-quadrant), an essential solution for solar and other renewable energy applications, measures Import, Export and net energy transfer
- CSI approved...eases submission process for California Solar Initiative
- E51CxA includes SunSpec compliant common and meter register blocks

SPECIFICATIONS



Inputs:

Control Power, AC	50/60 Hz; 5VA max.; 90V min.; UL Maximums: 600V _{L-L} (347V _{L-N}); CE Maximums: 300V _{L-N}
Control Power, DC	3W max.; UL and CE: 125 to 300VDC (external DC current limiting required)
Voltage Input	UL: 90V _{L-N} to 600V _{L-L} ; CE: 90V _{L-N} to 300V _{L-N}
Current Input	
Scaling	20A to 5000A
Input Range	U018 series rope style CTs only (CTs must be rated for connection to Class 1 voltage inputs)
Pulse Inputs (E5xHxA and E50FxA only)	Contact inputs to pulse accumulators (one set with E5xH2A and E50F2A; two sets with E5xH5A and E51F5A)

Accuracy:

Real Power and Energy	E50xxA: 0.5% (ANSI C12.20, IEC 62053-22 Class 0.5S); E51xxA: 0.2% (ANSI C12.20, IEC 62053-22 Class 0.2S)
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Outputs:

All Models (except E5xHxA and E50FxA)	Real Energy Pulse: N.O. static; Alarm contacts: N.C. static
E50BxA	Reactive energy pulse 30VAC/DC
E5xCxA	RS-485 2-wire Modbus RTU (1200 baud to 38.4 kbaud)
E5xHxA	RS-485 2-wire BACnet MS/TP (9600 baud to 115.2 kbaud)
E50FxA	2-wire LON FT

Mechanical:

Mounting	DIN Rail or 3-point screw mount
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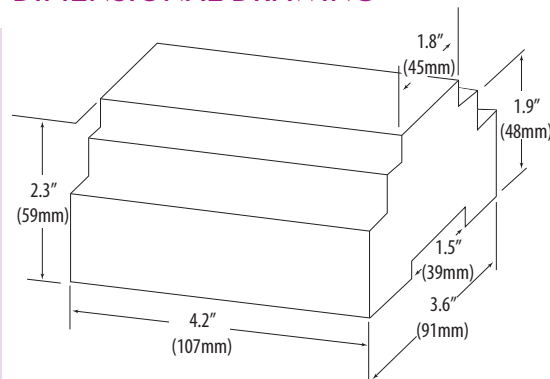
Environmental:

Operating Temperature Range	-30° to 70°C (-22° to 158°F)
Storage Temperature Range	-40° to 85°C (-40° to 185°F)
Humidity Range	<95% RH noncondensing
Agency Approvals	UL508, EN61010, California CSI Solar, ANSI C12.20

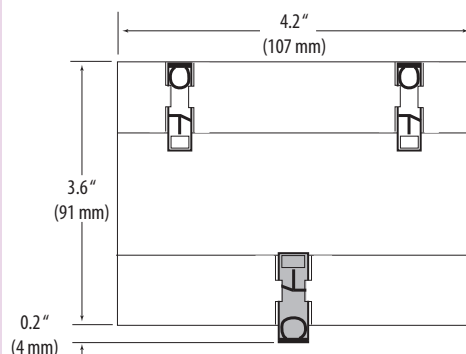
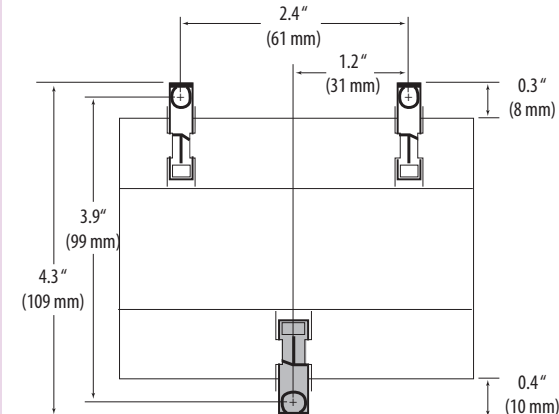
ORDERING INFORMATION



DIMENSIONAL DRAWING



MOUNTING DIAGRAMS

DIN Mount ConfigurationScrew Mount Configuration

	E50B1A	E50C2A	E50C3A	E50F2A	E50F5A	E50H2A	E50H5A	E51C2A	E51C3A	E51H2A	E51H5A
				COMING SOON				COMING SOON			COMING SOON
MEASUREMENT CAPABILITY - FULL DATA SET											
Bi-directional Energy Measurements											
Power (3-phase total and per phase): Real (kW) Reactive (kVAR), and Apparent (kVA)											
Power Factor: 3-phase average and per phase											
Present Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)											
Import and Export totals of Present Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)											
Peak Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)											
Current (3-phase average and per phase)											
Voltage: Line-Line and Line-Neutral (3-phase average and per phase)											
Frequency											
ANSI C12.20 0.5% accuracy, IEC 62053-22 Class 0.5S											
ANSI C12.20 0.2% accuracy, IEC 62053-22 Class 0.2S											
Accumulated Net Energy: Real (kWh), Reactive (kVARh), and Apparent (kVAh)											
Accumulated Real Energy by phase (kWh)											
Import and Export Accumulators of Real and Apparent Energy											
Reactive Energy Accumulators by Quadrant (3-phase total and per phase)											
Demand Interval Configuration: Fixed or Rolling Block											
Demand Interval Configuration: External Sync to Comms											
DATA LOGGING:											
Data Logging: 10 16-Bit Configurable (can include Date/Time) Data Buffers											
Data Logging: 3 Timestamped 32-Bit Configurable Data Buffers											
Store up to 60 days of readings at 15-minute intervals											
OUTPUTS:											
Alarm Output (N.C.)											
1 Pulse Output (N.O.)											
2 Pulse Outputs (N.O.)											
RS-485 Serial (Modbus RTU Protocol)											
RS-485 Serial (BACnet MS/TP Protocol)											
Lon FT Serial (LonTalk Protocol)											
INPUTS:											
2 Pulse Contact Accumulator Inputs											
1 Pulse Contact Accumulator Input											

REQUIRED CTs

MODEL	DESCRIPTION
U018-0001	CT, Rope, 12 in, 5000A
U018-0002	CT, Rope, 18 in, 5000A
U018-0003	CT, Rope, 24 in, 5000A
U018-0004	CT, Rope, 36 in, 5000A

ACCESSORIES

NEMA 4X enclosure (AE012)

Fuse Kits with hi-interrupt capability AC Fuses (AH02, AH03, AH04)

DIN Rail (AV01), DIN Rail Stop Clips (AV02)

Modbus TCP Gateway (U013-0012)

BACnet IP Router (U013-0013)



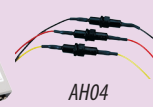
U018 Series



U013-0013



U013-0012



AH04



AE012

AV01/AV02
(clip styles may vary)