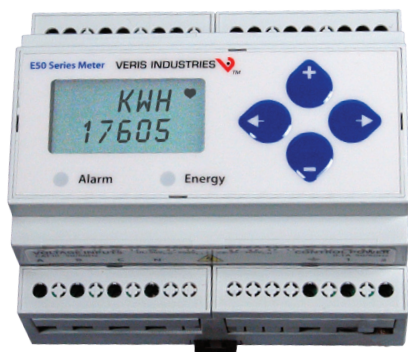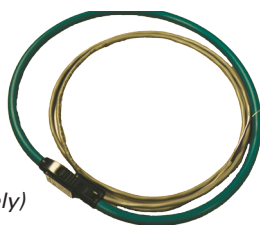# Enhanced Power and Energy Meter, Built-in CT Integrator and Power Supply

E5xxxA Series

E50xxxA/E51xxxA

U018 Series
(sold separately)

Cost Saving, Versatile Monitoring Solution with Associated U018 Rope Style CTs (sold separately)

FEATURES

- Integrator and power supply for the CTs are built into the meter...fewer devices to purchase and faster installation
- Designed to work exclusively with U018 Series rope CTs, 20 to 5000A range...eliminate site walks, saving time and money
- Versatile Rope CTs allow convenient installation in tight spaces
- 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
- 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

5 Year Warranty

Agency Approvals	UL508, EN61010, California CSI Solar, ANSI C12.20
INPUTS	
Control Power, AC	50/60 Hz; 5VA max.; 90V min.; UL Maximums: 600V L-L (347V L-N); CE Maximum: 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 Input Range*	20A to 5000A U018 series rope style CTs only (CTs must be rated for connection to Class 1 voltage inputs)
Pulse Inputs (E5xHxA & E50FxA only)	Contact inputs to pulse accumulators (one set with E5xH2A & E50F2A; two sets with E5xH5A & E51F5A)
ACCURACY	
Real Power & Energy *E50xxA* *E51xxA*	0.5% (ANSI C12.20, IEC 62053-22 Class 0.5S); 0.2% (ANSI C12.20, IEC 62053-22 Class 0.2S)
OUTPUTS	
All Models (except E5xHxA & 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
ENVIRONMENTAL	
Operating Temp Range	-30° to 70°C (-22° to 158°F)
Storage Temp Range	-40° to 85°C (-40° to 185°F)
Humidity Range	<95% RH noncondensing

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 easy 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.
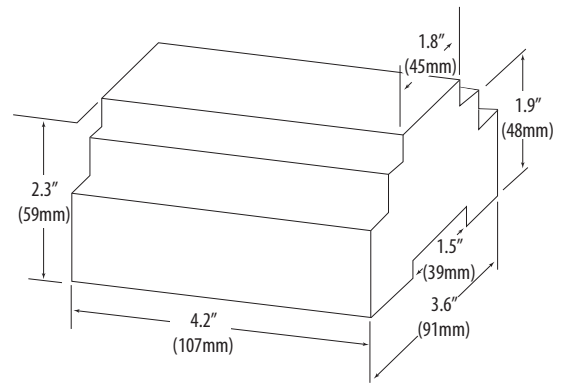
APPLICATIONS

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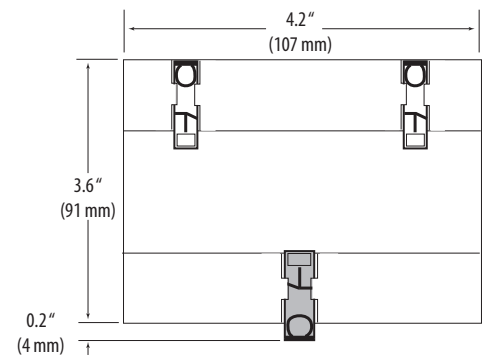- Industrial monitoring
- Cost allocation

ORDERING INFORMATION

CE c(UL)us LISTED RoHS Compliant SunSpec alliance S LONMARK 3.4

E51CxA only　　*E50FxA only*

MEASUREMENT CAPABILITY - FULL DATA SET	E50B1A	E50C2A	E50C3A	E50F2A	E50F5A	E50H2A	E50H5A	E51C2A	E51C3A	E51H2A	E51H5A
Bi-directional Energy Measurements								●	●	●	●
Power (3-phase total and per phase): Real (kW)Reactive (kVAR), & Apparent (kVA)	●	●	●	●	●	●	●	●	●	●	●
Power Factor: 3-phase average & per phase	●	●	●	●	●	●	●	●	●	●	●
Present Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)	●	●	●	●	●	●	●	●	●	●	●
Import & Export totals of Present Power Demand: Real (kW), Reactive (kVAR), & 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				●			●			●	

DIMENSIONAL DRAWING

1.8" (45mm) 1.9" (48mm) 2.3" (59mm) 1.5" (39mm) 3.6" (91mm) 4.2" (107mm)

MOUNTING DIAGRAMS

DIN Mount Configuration

4.2" (107 mm) 3.6" (91 mm) 0.2" (4 mm)

Screw Mount Configuration

2.4" (61 mm) 1.2" (31 mm) 0.3" (8 mm) 3.9" (99 mm) 4.3" (109 mm) 0.4" (10 mm)
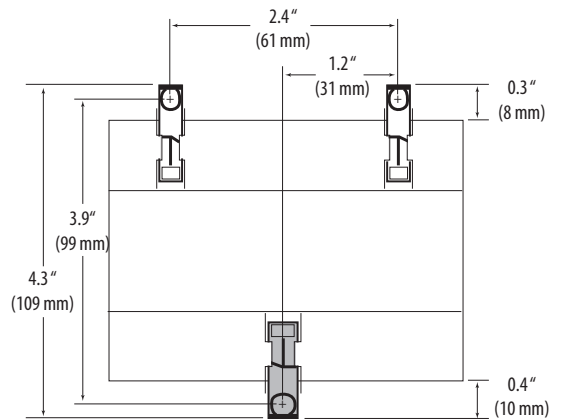
REQUIRED CTs

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

NEMA4 enclosure (AE010) and locking mechanism (AE011)
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)