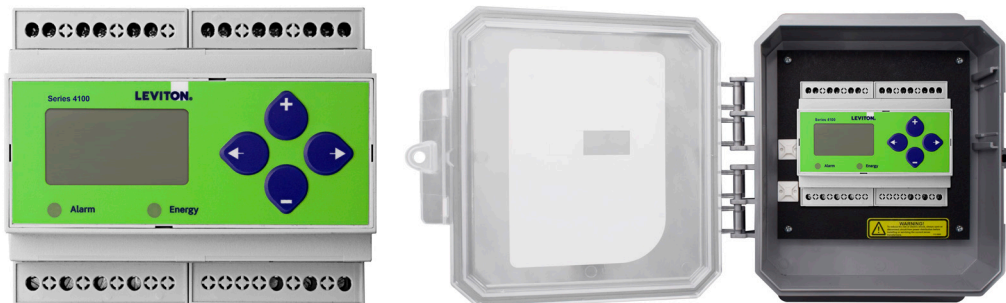


VerifEye™ Series 4100 Bidirectional Meters— ModBus RTU or BACnet MS/TP



Description

The VerifEye™ Series 4100 Meters feature bidirectional monitoring specifically designed for renewable energy applications. The Series 4100 Meters measure power imported from the utility grid and power exported from renewable energy sources like photovoltaic systems. This allows facility managers to properly track energy received and delivered.

The Series 4100 Bidirectional Meters meet ANSI C12.20 .2% accuracy requirements. The device combines exceptional performance and easy installation for a cost-effective energy monitoring solution. The Series 4100 Bidirectional Meters are available in standalone DIN rail mount or NEMA 4X enclosure. The 3-phase, advanced communication meter kits come with either split core or flexible ropestyle Rogowski Current Transformers (CTs) for demanding installations.

Applications

Use the VerifEye Series 4100 Bidirectional Meters in commercial, institutional, industrial and government applications for:

- Energy monitoring for AMR/BAS/BMS/EMS systems
- Industrial energy monitoring
- Renewable energy applications such as photovoltaic systems and wind farms
- Tenant energy cost allocation
- Energy conservation and cost reduction
- Green building initiatives and government mandates
- Measurement and verification
- Load profiling and benchmarking

Measured Parameters

- Bidirectional energy measurements
- kW
- kVA and kVAR
- Power factor: 3 phase average and per phase
- Import and export present power demand: Real (kW), reactive (kVAR) and apparent (kVA)
- Current (3-phase average and per phase)
- Voltage L-L and L-N
- Frequency

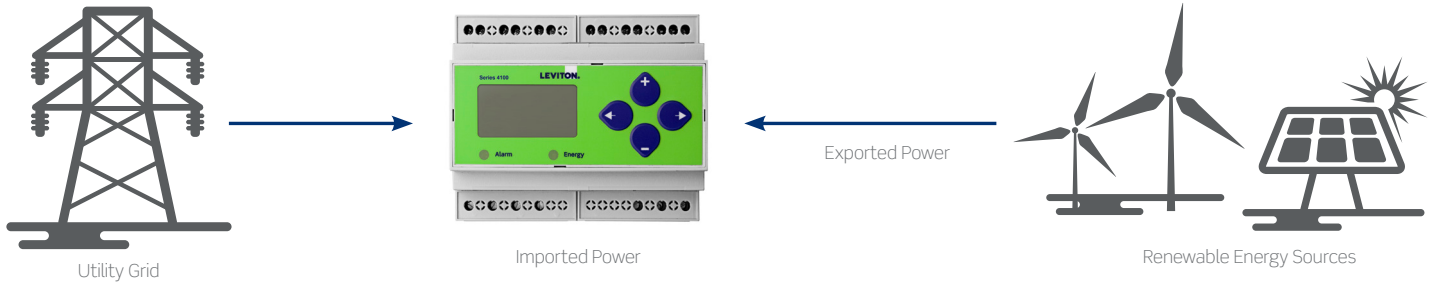
Measured Parameters, cont'd

- Accumulated net energy: Real (kWh), reactive (kVARh) and apparent (kVAh)
- Accumulated real energy by phase (kWh)
- Demand interval configuration: fixed or rolling block, external sync to communication

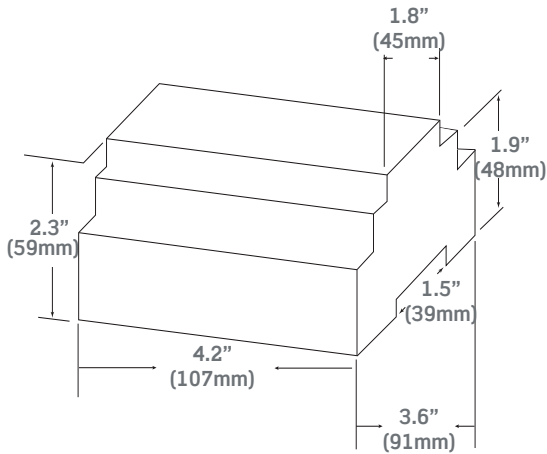
Features

- Bi-directional monitoring
- Communication options available:
 - ModBus RTU with phase loss alarm and real energy pulse output
 - Or BACnet MS/TP with phase loss alarm and pulse input channel
- Industrial temperature range: -22 to 158°F (-30 to 70°C)
- 50/60 Hz
- Versatile input voltage: 90-600VAC including 347VAC (L-N) and 600VAC (L-L)
- Rogowski CT Options (50-5,000A)
- DIN rail mount or NEMA 4X enclosure
- Five year warranty
- DIN rail mount for easy installation
- Optional outdoor NEMA 4X enclosure
- Options for 100, 200, 400 and 800A split core CTs and 12", 18" and 24" Rogowski CTs (50-5,000A)
- ANSI 12.20 0.2% accuracy, IEC 62053-22 Class 0.2S
- Versatile input voltage with fewer models to stock: 90-600VAC including 347VAC (L-N) and 600VAC (L-L)
- User-enabled password protection to protect meter from tampering
- Bright, backlit LCD for installation in dark areas and viewing real time data
- System integration options available:
 - ModBus RTU with phase loss alarm and pulse output
 - Or BACnet MS/TP with phase loss alarm and pulse input
- CSI approval for California Solar Initiative
- cULus rated
- CE compliant
- BTL certified

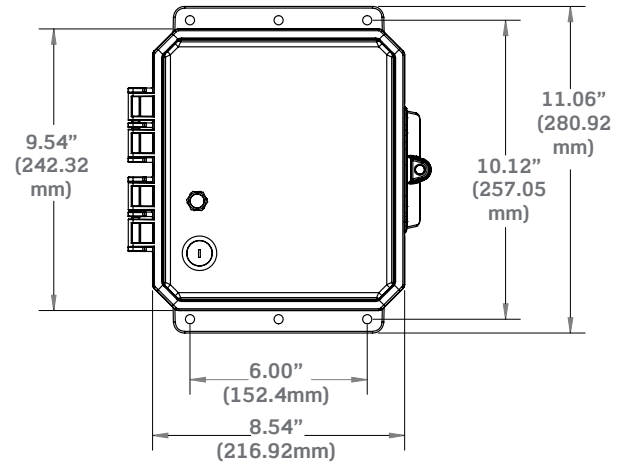
Application Diagram



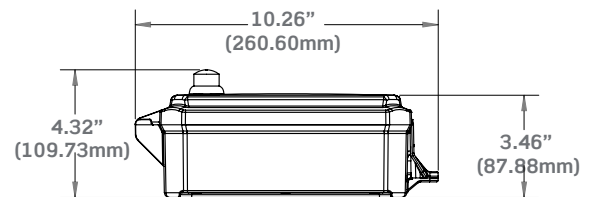
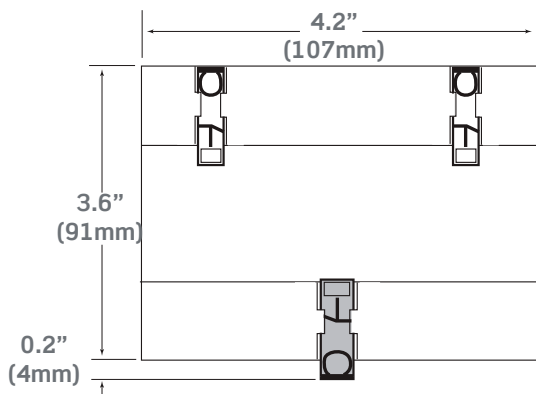
Dimensions - DIN Rail



Dimensions - Outdoor Enclosure



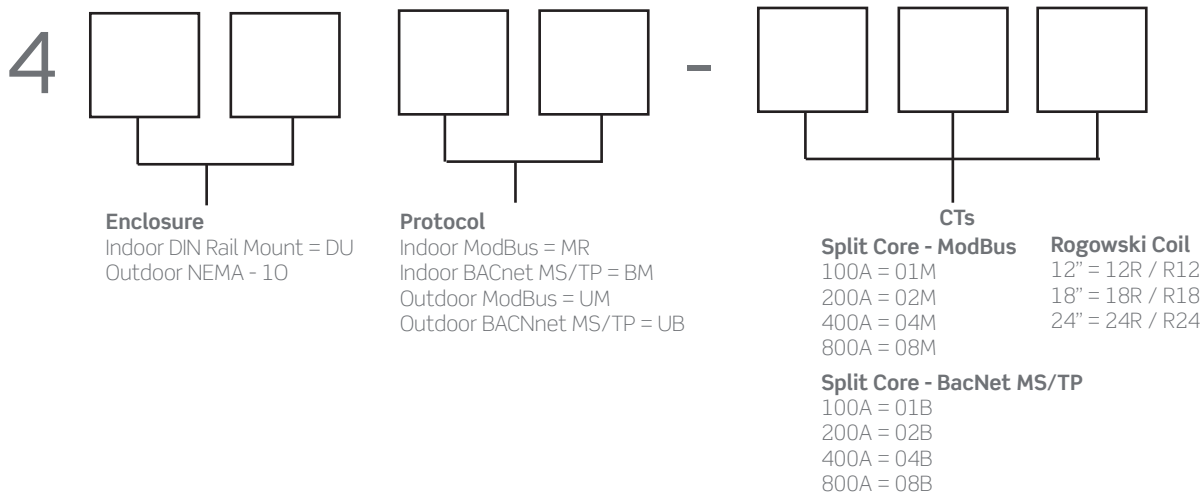
Mounting Diagram



Specifications

Inputs	
Pulse Inputs	10K ohms VAC/DC to 4 to 10 VDC
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)
Input Voltage	UL: 90V L-N to 600V L-L CE: 90V L-N to 300V L-N
Input Current Scaling	Up to 32,000A
Input Range	0 to 0.333V or 0 to 1V (selectable) CTs must be rated for use with Class 1 voltage inputs Split Core CTs: 100, 200, 400, 800A Rogowski CTs: (50-5000A) 12", 18" and 24" lengths available
Outputs	
Real Energy Pulse	N.O. static, 30V AC/DC 100mA max
Alarm Contacts	
Serial Ports	RS-485 2-wire ModBus RTU (1200 baud to 38.4 kbaud), or BACnet MS/TP
Mechanical	
Mounting	DIN rail or NEMA 4X outdoor enclosures
Environmental	
Altitude	9843ft (3000m) maximum
Operating Temperature	-22 to 158°F (-30 to 70°C)
Storage Temperature	-40 to 185°F (-40 to 85°C)
Operating Humidity	<95% RH non-condensing
Pollution	Degree 2
Codes & Standards	
Safety	UL508 (Open Type Device), cUL, EN61010-1
Accuracy	ANSI/C12.20 0.2 Class
Listings	CE compliant, CSI approval for California Solar Initiative, cULus rated

Ordering Key



Ordering Information

DIN Rail Mount ModBus Meter Kits			
Voltage	Amps	CTs Included	Cat. No.
Universal 3PH 3W/4W ModBus	100	Split Core CTs	4DUMR-01M
	200		4DUMR-02M
	400		4DUMR-04M
	800		4DUMR-08M
	20-5,000	12" Rogowski Coil CTs	4DUMR-12R
	20-5,000	18" Rogowski Coil CTs	4DUMR-18R
	20-5,000	24" Rogowski Coil CTs	4DUMR-24R
DIN Rail BACnet MS/TP Meter Kits			
Universal 3PH 3W/4W BACnet MS/TP	100	Split Core CTs	4DUBM-01B
	200		4DUBM-02B
	400		4DUBM-04B
	800		4DUBM-08B
	20-5,000	12" Rogowski Coil CTs	4DUBM-12R
	20-5,000	18" Rogowski Coil CTs	4DUBM-18R
	20-5,000	24" Rogowski Coil CTs	4DUBM-24R
Outdoor NEMA Enclosure ModBus Meter Kits			
Universal 3PH 3W/4W ModBus	100	Split Core CTs	41OUM-01M
	200		41OUM-02M
	400		41OUM-04M
	800		41OUM-08M
	20-5,000	12" Rogowski Coil CTs	41OUM-R12
	20-5,000	18" Rogowski Coil CTs	41OUM-R18
	20-5,000	24" Rogowski Coil CTs	41OUM-R24
Outdoor NEMA Enclosure BACnet MS/TP Meter Kits			
Universal 3PH 3W/4W BACnet/MS/TP	100	Split Core CTs	41OUB-01B
	200		41OUB-02B
	400		41OUB-04B
	800		41OUB-08B
	20-5,000	12" Rogowski Coil CTs	41OUB-12R
	20-5,000	18" Rogowski Coil CTs	41OUB-18R
	20-5,000	24" Rogowski Coil CTs	41OUB-24R

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