VerifEye™ EMX Integrated Meter & Hub

Description

The VerifEye™ EMX Integrated Meter combines an onboard revenue-grade power meter, a Leviton Data Acquisition HUB and web server in a flexible all-in-one package. This simple and effective energy solution can be used to meet energy codes and mandates and is ideal for new construction and commercial buildings. Installation is simple as the device draws power from the connected voltage sense lines - no external power supply required!

The panel uses an Ethernet (LAN) connection allowing end users to pull data via HTTP, XML, FTP.

The EMX monitors three phase loads and can be easily expanded to support water, gas and steam monitoring applications for a comprehensive snapshot of a facility's total energy usage.

The EMX reduces installation time and costs and eliminates the need for an external power supply. CT amperages are field configurable. No additional software is required.

Applications

Use the VerifEye EMX in commercial, institutional, industrial and government applications for:

- Load profiling and benchmarking
- AMR/BAS/EMS integration
- Use aggregation
- Tenant cost allocation
- Measurement and verification
- Energy conservation and cost reduction
- Green building initiatives and Government mandates

Features

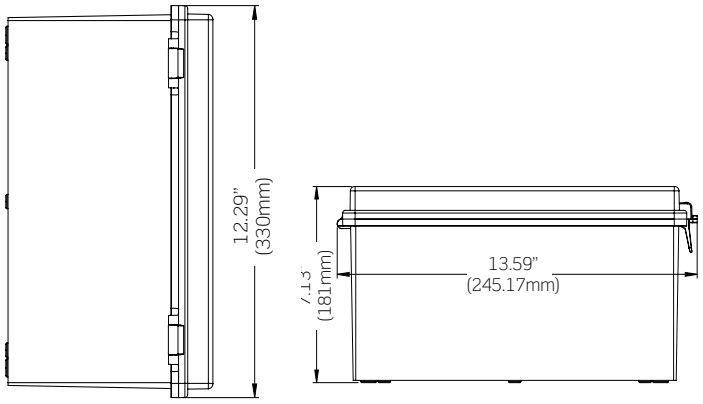
- Data Collection
  - Logs and collects data on user selected intervals
  - Non-volatile memory stores data until the next scheduled upload or manual download
- Compatible with VerifEye BMO allowing users to quickly access energy consumption information from a web-based platform
- Tracks real-time energy usage for demand response programs
- Meter data can be transferred to energy dashboards, kiosks and software applications
- Expandable via ModBus RTU and ModBus TCP
- Supports BACNet and other protocols on one device
- Five year warranty

Measured Parameters

- 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)
- Bidirectional energy measurements
- Current (3-phase average and per phase)
- Voltage L-L and L-N
- Frequency
- 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)
- Demand interval configuration: fixed or rolling block, external sync to communication

Leviton Manufacturing Co., Inc. Lighting & Controls
20497 SW Teton Avenue, Tualatin, OR 97062 **tel** 800-736-6682 **tech line** (6:00AM-4:00PM PT Mon-Fri) 800-959-6004

Dimension Diagrams



Specifications

EMB Hub	
Processor	ARM9 embedded CPU
Operating System	Linux 2.6
Memory	32 MB RAM
Flash ROM	16 MB NOR Flash (expandable with USB memory device)
Interval Recording	1 to 60 minutes, user selectable (default 15 minutes)
LEDs	Ethernet, ModBus TX/RX, power, alarm
Console	2 x 16 LCD character, two push buttons
Power	
Power Supply	24VDC, 500mA *This unit is to be sourced by a Class 2 power supply with the following output: 24VDC, 500mA min not to exceed 8A
Isolation	RJ45 Ethernet and RS-485 port are isolated to 1500VDC from the main board. (Power an d USB non-isolated)
Communication	
Protocols	ModBus/RTU, ModBus/TCP, TCP/IP, PPP, HTTP/HTML, FTP, NTP, XML, SNMP-Trap
LAN	RJ45 10/100 Ethernet, full half duplex, auto polarity
USB	USB expansion port
Inputs	
Serial Port	RS-485 ModBus, supports up to 32 external devices (expandable)
Environment	
North America	-22-158°F (-30-70°C), 95% RH, non-condensing
Altitude	2000M max
Pollution	Degree 2
Codes & Standards	
FCC CFR 47 Part 15, Class A, EN 61000, EN 61326, CE, UL61010 Recognized	

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Specifications

Series 4100 Meter	
Inputs	
Pulse Outputs	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.C. static, 30VAC
Alarm Contracts	N.O. static
Serial Port	RS-485 2-wire ModBus RTU (1200 baud to 38.4 kbaud)
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 Information

Enclosures	
Cat. No.	**Description**
A8810-41M	EMB A8810 with 4DUMR-00M 3-Phase ModBus Meter for Solid or Split Core CTs in a NEMA 4X enclosure
A8810-41R	EMB A8810 with 4DUMR-00R 3-Phase ModBus Meter for Rogowski Coil CTs in a NEMA 4X enclosure

Current Transformers (Sold Separately)		
Amps	**Description**	**Cat. No.**
100	Split Core CTs	CTV01-KD0
200		CTV02-KD0
400		CTV04-KD1
800		CTV08-KG1
50-5000	12" Rogowski Coil CTs	CRV50-K62
50-5000	18" Rogowski Coil CTs	CRV50-K93
50-5000	24" Rogowski Coil CTs	CRV50-KC2

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