LEVITON ®

VerifEye™ EMH+ Integrated Meter & Hub

DESCRIPTION

The VerifEye™ EMH+ Integrated Meter and Hub 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 VerifEye EMH+ uses an Ethernet (LAN) connection allowing end users to pull data via HTTP, XML, FTP or any custom protocol by utilizing the EMH+ Module to build their own applications.

The VerifEye EMH+ 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 VerifEye EMH+ 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 VerifEye EMH+ 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

VerifEye™ EMH+ Integrated Meter & Hub

PRODUCT DATA

METER 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 3.0* 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
- Seamlessly integrates with BMS and BAS systems
- Five year warranty

  *VerifEye BMO 3.0 Base Module software is available at no cost with the purchase of a VerifEye data acquisition hub
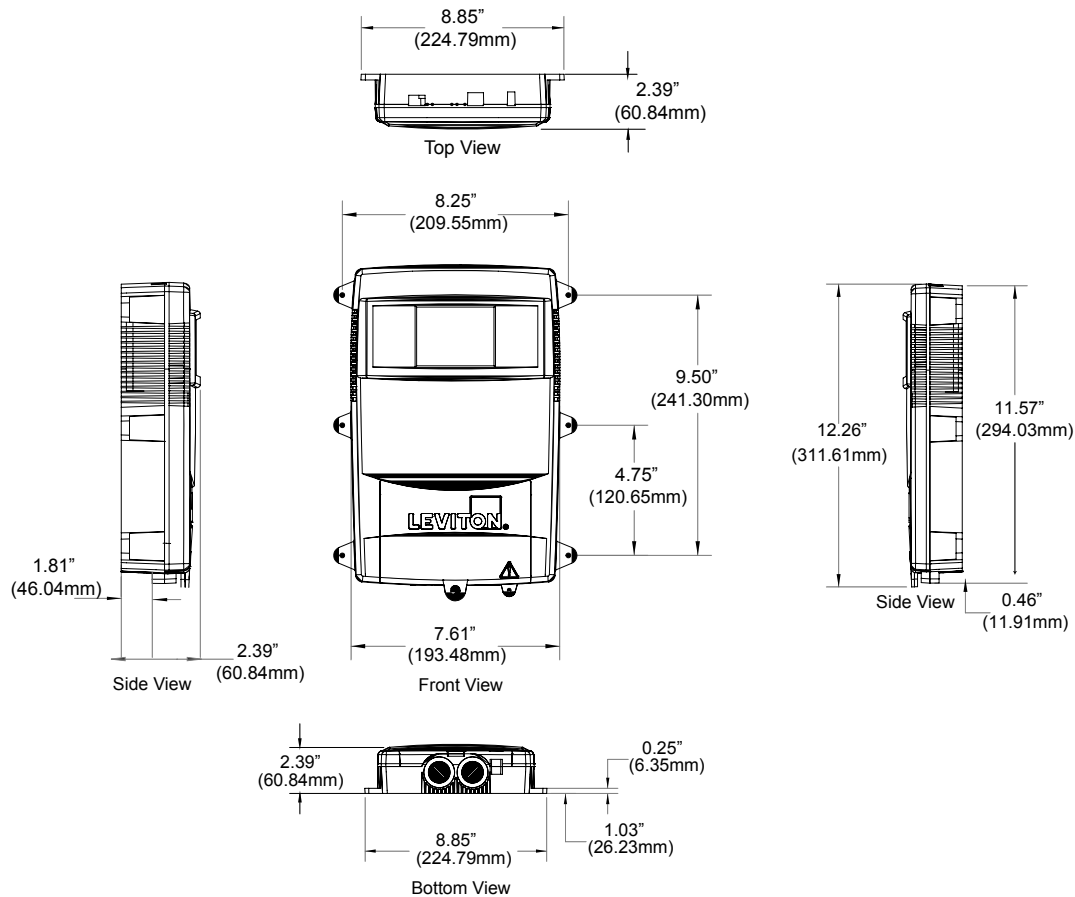
LCD TOUCH SCREEN FEATURES
- Similar SmartPhone layout
- System set up from touch screen
- Set communication modules from the full color touch screen
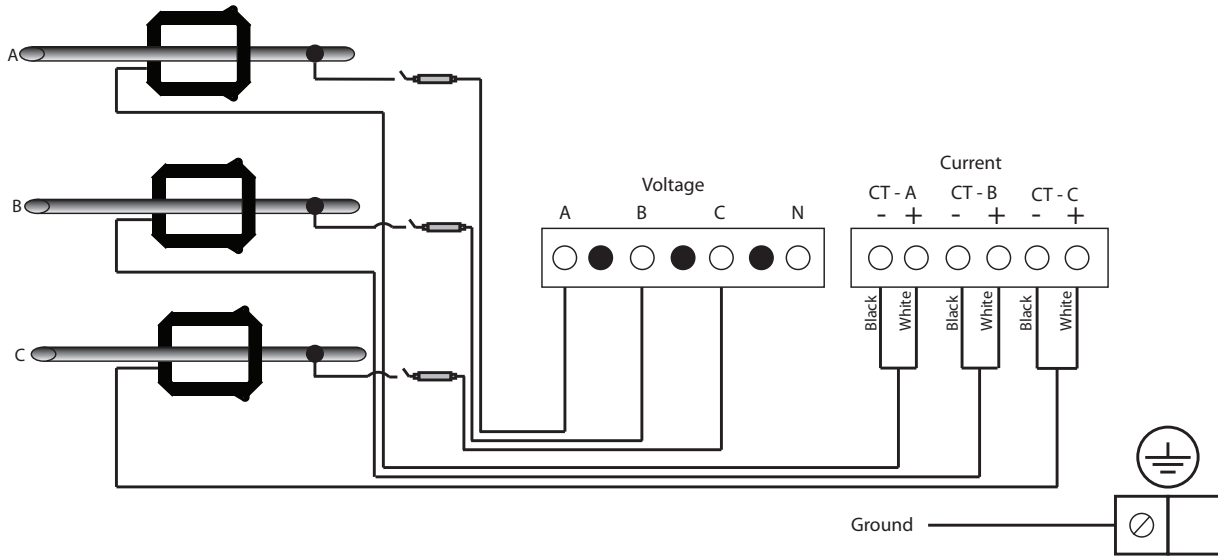
MEASURED PARAMETERS
- Meter Totals
  - kWh net, total delivered, received
  - kVARh delivered, received
  - kW instantaneous, block demand
  - kVAR, kVA instantaneous
  - Voltage L-L, L-N
  - Current
  - Power factor
  - Frequency
- Per Phase
  - Voltage L-L, L-N
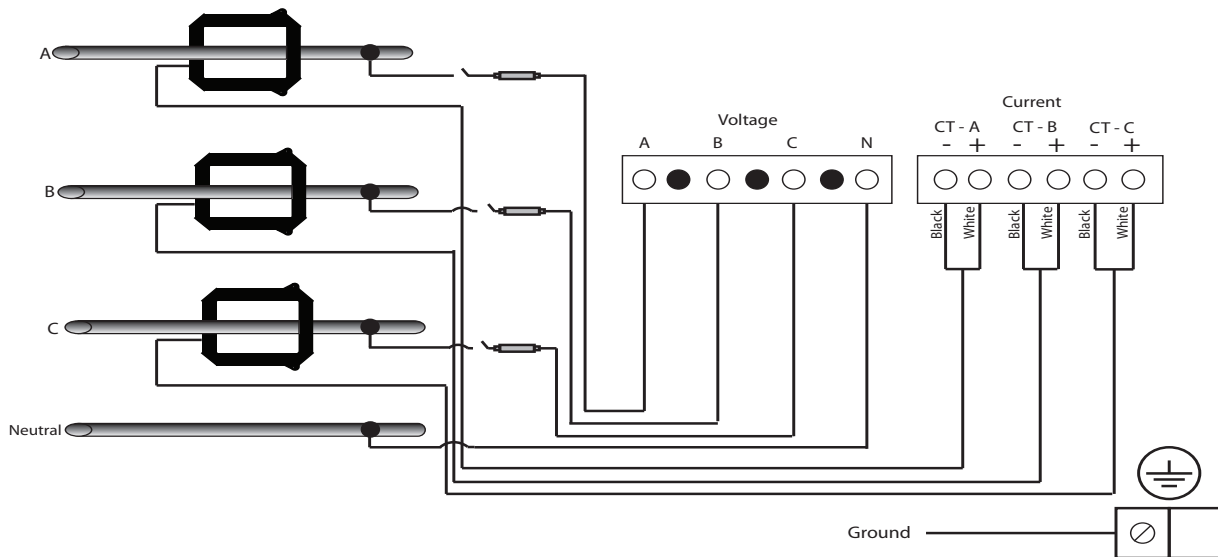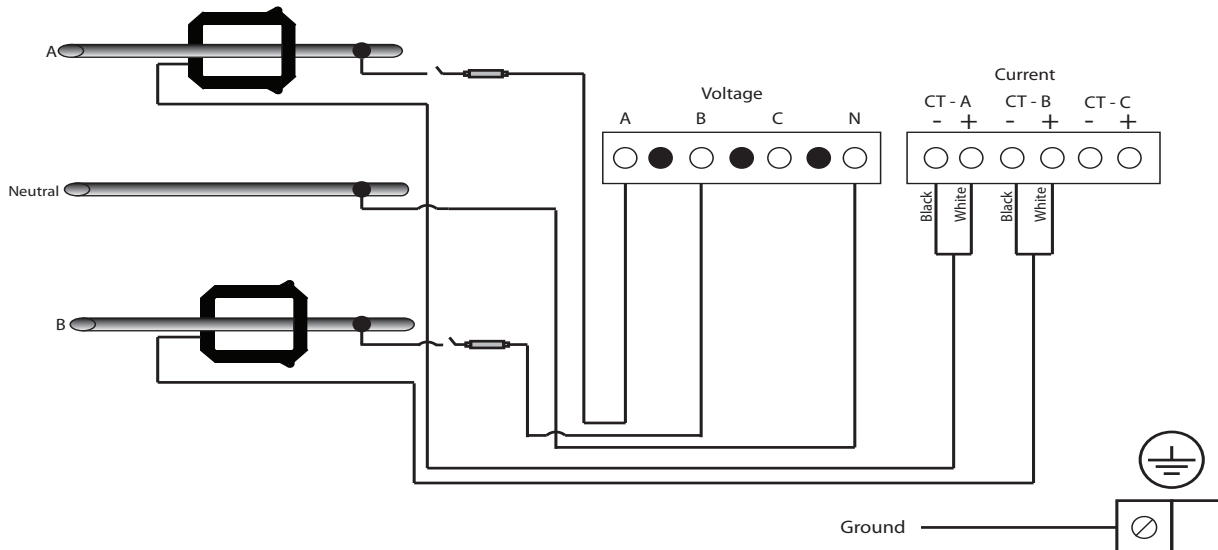 - Current
  - Power
  - Power factor

DIMENSIONS

8.85" (224.79mm) — 2.39" (60.84mm)
Top View

8.25" (209.55mm)
9.50" (241.30mm)
4.75" (120.65mm)
7.61" (193.48mm)
Front View

1.81" (46.04mm)
2.39" (60.84mm)
Side View

12.26" (311.61mm)
11.57" (294.03mm)
0.46" (11.91mm)
Side View

2.39" (60.84mm)
0.25" (6.35mm)
8.85" (224.79mm)
1.03" (26.23mm)
Bottom View

WIRING DIAGRAMS
208/480VAC, 3 PHASE, 3 WIRE DELTA (WITHOUT NEUTRAL) INSTALLATION

A

B

C

Voltage
A   B   C   N

Current
CT - A   CT - B   CT - C
−   +   −   +   −   +

Black White Black White Black White

Ground

208/480VAC, 3 PHASE, 4 WIRE WYE (WITH NEUTRAL) INSTALLATION

A

B

C

Neutral

Voltage
A   B   C   N

Current
CT - A   CT - B   CT - C
−   +   −   +   −   +

Black White Black White Black White

Ground

240VAC, SINGLE PHASE, 2 WIRE (WITH NEUTRAL) INSTALLATION

A

Neutral

B

Voltage
A   B   C   N

Current
CT - A   CT - B   CT - C
−   +   −   +   −   +

Black White Black White

Ground

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SPECIFICATIONS

DEVICE	
Processor	ARM9 embedded CPU, ARM7 meter board
Operating System	Linux 2.6
Memory	32 MB RAM
Flash ROM	16 MB NOR Flash
Interval Recording	1 to 60 minutes, user selectable (default 15 minutes)
LEDs	Ethernet, ModBus TX/RX, power, alarm
Console	TFT touch screen
Isolation	RJ45 Ethernet and RS485 port are isolated
Serial Port	Supports up to 32 external devices (expandable)
INPUTS	
Input Voltage	208-480VAC three phase, 50/60 Hz; 120,240,277VAC single phase, 50/60 Hz
Input Current	.333V and 1V (current transformer)
Power Consumption	8W Max
Current Transformers (CTs)	100A, 200A, 300A, 400A, 600A, 800A, 1,600A, 3,000A, 5,000A
Serial Port	RS-485 ModBus
ACCURACY	
Meter Accuracy	Meets or exceeds ANSI C12.1 (class 1% meter), from 2% to 100% of full scale
COMMUNICATION	
Protocols	ModBus/RTU, ModBus/TCP, TCP/IP, PPP, HTTP/HTML, FTP, NTP, XML, SNMP-Trap, opptional BacNet/IP
LAN	RJ45 10/100 Ethernet, full half duplex, auto polarity
Baud Rate	9600, 19200, 38400, 57600, 115200
ENVIRONMENT	
North America	-22 to 122°F (-30 to 50°C), 95% RH, non-condensing
SAFETY	
UL	UL 61010-1 listed
CE	IEC 61010-1
EMC	
FCC	CFR 47 Part 15, Class A
CE	EN 61000, EN 61326

ORDERING INFORMATION

CAT. NO.	DESCRIPTION
A8814-1S3	EMH+ Data Acquisition Server with 3 Phase Meter, includes 100A split core CTs.
A8814-2S3	EMH+ Data Acquisition Server with 3 Phase Meter, includes 200A split core CTs.
A8814-3S3	EMH+ Data Acquisition Server with 3 Phase Meter, includes 300A split core CTs.
A8814-4S3	EMH+ Data Acquisition Server with 3 Phase Meter, includes 400A split core CTs.
A8814-6S3	EMH+ Data Acquisition Server with 3 Phase Meter, includes 600A split core CTs.
A8814-8S3	EMH+ Data Acquisition Server with 3 Phase Meter, includes 800A split core CTs.
A8814-163	EMH+ Data Acquisition Server with 3 Phase Meter, includes 1,600A split core CTs.
A8814-303	EMH+ Data Acquisition Server with 3 Phase Meter, includes 3,000A split core CTs.
A8814-503	EMH+ Data Acquisition Server with 3 Phase Meter, includes 5,000A split core CTs.

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