verifEye™ Submetering Solutions Product Guide*

LEVITON

Complete Utility Submetering Solution.

What we measure can be improved. Track actual energy usage with Leviton VerifEye Submetering Solutions. Combine VerifEye with Leviton Lighting Controls for a packaged solution to show reward of information and *return on investment (ROI)* for current and future energy conservation efforts.

Exellence Comes Standard

- Open architecture design provides easy integration with BMS platform
- Meets ANSI C12.20 0.5% Standard for Revenue Billing
- Installer friendly, reverse phase LED indicator arrow and power and load indicators provide visual installation diagnostics by visually confirming that the product is properly installed and functioning
- Leviton Series 1000 and 2000 meters are available in an indoor steel or outdoor NEMA 4X enclosure at the same low price; Series 4000 and 4100 meters available as DIN rail and NEMA 4X
- Offering includes wide range of meters to meet the needs of any application and automated data collection solutions and energy reporting and analysis software to easily and intelligently manage energy consumption

www.leviton.com/verifeye

VERIFEYE™ METERS

Mini Meter MMU

Mini Meter Flush Mount

Mini Meter Kit with AMR

Mini Meter Outdoor

Series 8000

Series 7000 and 7100

Series 1000 Indoor

Series 1000 Outdoor

Series 2000 Indoor

Series 2000 Outdoor

Series 3500 Indoor

Series 3500 Outdoor

Series 4000 and 4100 Indoor

Series 4000 and 4100 Outdoor

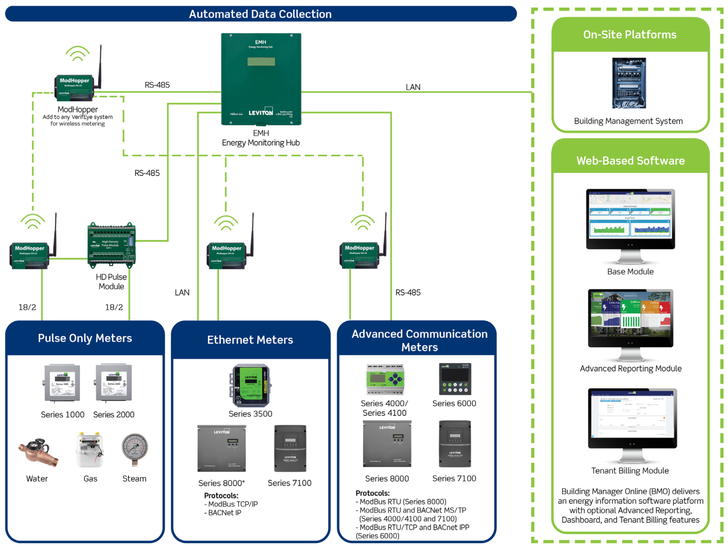
Series 6000

	Multi-Family Residential		Residential / Commercial		Commercial			Commercial and Industrial			Panel/PQ
Specifications	**Mini Meter™Kits**	**Mini Meter™ Kits with AMR**	**Series 8000 High Density Multi-Circuit Meter**	**Series 7000 and 7100 Advanced Branch Circuit Monitor**	**Series 1000 Single Phase Meter Kits**	**Series 2000 Three Phase Meter Kits**	**Series 3500 Multi-Function Ethernet Meter Kits**	**Series 4000 Industrial ModBus Meter Kits**	**Series 4100 Industrial ModBus RTU Bidirectional Meter Kits**	**Series 6000 Industrial Panel Mount Meter**
	kWh Meter		kWh Meter		kWh Meter with Demand		Advanced kWh Meter with Communication			Advanced kWh Meter with Communication
Phase/Wiring	1PH/3W and Split Phase	1PH/3W and Split Phase	1PH 2W 1PH 3W WYE 3PH 3W Delta 3PH 4W WYE	1P/2W 2P/3W 3P/4W 3P/3W Delta	1PH 2W	1PH 3W 1PH 2W 1PH 3W WYE 3PH 4W WYE	1PH 2W 1PH 3W WYE 3PH 3W Delta 3PH 4W Wye	3PH 3W/4W	3PH 3W/4W	Universal 3PH 3W/4W
Voltage Configurations	120/208/240	120/208/240	120/208 120/240 277/480 480*	90-346 Volts AC Line-to-Neutral, 600V Line-to-Line	120 277	120/208 120/240 277/480 120/208 277/480	Max L-N Voltage 277VAC	Universal Voltage (90-600) L-N Voltage 347VAC	Universal Voltage (90-600) L-N Voltage 347VAC	50-300V L-N 87-520V L-L
Amperages	100-200A	200A	100-5000A	50-4000A	100-800A	100-1200A	100-5000A	Split Core: 100, 200, 400, 800A Rogowski: 50-5000A	Split Core: 100, 200, 400, 800A Rogowski: 50-5000A	Split Core: 0.5A-720A Rogowski: 12-7200A
Measuring Parameters	kWh	kWh	kWh Delivered and Received kVarh Delivered and Received VAR PF Peak Demand Present Demand Volts Amps Watts	Volts, Amps, kW, kVAR, kVA, aPF, dPF, kW demand, kVA demand, Import (Received), kWh, Export (Delivered), kWh, Net kWh, Import (Received) kVAh, Export (Delivered) kVAh, Net KVAh, Import (Received), kVARh, Export (Delivered), kVARh, Net kVARh, THD Theta, Frequency	kWh	kWh kW (standard on Series 2000 Indoor models only)	kWh kW (peak demand reset) Meter Totals: kVAR, kVA, Power Factor & kW By Phase: Volts, Watts, Amps, Power Factor, Interval Data	kVARh, kW, kVAR, kVA, Voltage L-L, L-N, Current, Power Factor, Frequency	kW, kVA and kVAR Power factor: 3 phase average & per phase Present power demand: Real (kW), reactive (kVAR) and apparent (kVA) Parameters are both delivered and received for the Series 4100 Meter	kWh, kvarh, kVAh Powers: P1, P2, P3, P, Q1, Q2, Q3, Q, S1, S2, S3, ΣS Predictive powers: ΣP, ΣQ, ΣS Power factor: PF1, PF2, PF3, ΣPF, Cos ϕ & tangent ϕ
Communications Protocol (Standard)	Isolated Pulse Output	Embedded Wireless Transmitter	ModBus TCP ModBus RTU (RS-485) BACnet IP Ethernet	ModBus RTU ModBus TCP BACnet MS/TP BACnet IP	Isolated Pulse Output, 10WH or 1000WH pulse	Isolated Pulse Output, 10WH or 1000WH pulse	ModBus TCP/IP Isolated Pulse Output BACnet IP	ModBus RTU Isolated Pulse Output	ModBus RTU w/Pulse Output or BACNet MS/TP with Pulse Input	Modbus RTU Modbus TCP BACnet IPP
Current Transformers Options	Split Core Solid Core	Solid Core	Split Core Solid Core	Split Core Solid Core Rogowski Coil	Split Core Solid Core	Split Core Solid Core	Split Core Solid Core	Split Core .333V secondary output only, Rogowski Coil lengths available in 12, 18, 24"	Split Core .333V secondary output only, Rogowski Coil lengths available in 12, 18, 24"	Series 6000 Split Core CT Series 6000 Rogowski CT
Enclosure Options	**OEM Module** **Indoor** Plastic Flush Mount NEMA 1 **Outdoor** NEMA 4X **MMU** NEMA 4X	**Indoor** Flush Mount **Indoor** Surface Mount	**Indoor** JIC Steel NEMA 1	**Indoor** Plastic NEMA 1 Panel Mount — no enclosure	**Indoor** JIC Steel NEMA 1 **Outdoor** NEMA 4X	**Indoor** JIC Steel NEMA 1 **Outdoor** NEMA 4X	**Indoor** JIC Steel NEMA 1 **Outdoor** NEMA 4X	**Indoor** DIN Rail Mount **Outdoor** NEMA 4X	**Indoor** DIN Rail Mount **Outdoor** NEMA 4X	Panel Mounted Enclosure with 92mm square cut-out
Display Type	LCD + Mechanical Counter	LCD	Local LCD, Scroll	Local LCD, Scroll Buttons	Local LCD	Local LCD	Local LCD, Scroll Buttons	LCD, Scroll Buttons	LCD, Scroll Buttons	LCD, 10 button touch screen interfa
Accuracy	C12.10 +/- 0.5% with paired CTs	C12.20 / 0.5% with paired CTs	C12.20 +/- 0.5%	C12.20 / 0.2%	C12.10 and C12.20 +/- 0.5%	C12.10 and C12.20 +/- 0.5%	C12.10 +/- 0.5%	C12.20 / 0.2%	C12.20 / 0.2%	Meter: 0.2 Class
Multiple Meter Unit (MMU) Configurations	Medium, 2-4 Meters Large, 5-8 Meters Extra-Large, 9-19 Meters	—	3PH: 8x3 1PH 3W: 12x2, 9x2, 6x2, 3x2 1PH: 24x1	48 Inputs Configurable: 1PH/2W-48 x 1 3PH/4W-16 x 3 12 Inputs Configurable: 1PH/2W-12 x 1 3PH/4W-4 x 3	—	—	—	—	—	—
Data Storage	Last Reading - Cumulative	Last Reading - Cumulative	Last Reading - Cumulative Data in 15 min Intervals	Last Reading - User Selectable	Last Reading Peak Demand and Instantaneous Demand (optional)	Last Reading Peak Demand and Instantaneous Demand (standard on Series 2000 Indoor Kits)	Last Reading - Cumulative Peak Demand with Key Reset Data in 15 min Intervals	Last Reading - Present and Peak Demand for kW and kVAR	Last Reading - Present and Peak Demand for kW and kVAR	Energy - 1 year Power monitoring - 2 months

* Reference Product Selection Guide and Data Sheets for complete information.
** Requires Potential Transformer Cabinet - consult factory for availability.

verifEye™ Submetering Solutions Product Guide*

VerifEye™ System Architecture



*Note: ModBus TCP/IP Only

VERIFEYE™ SOFTWARE

BUILDING MANAGER ONLINE (BMO)

Energy information and management is the key to smart energy usage and cost control. Building owners can benefit significantly from a seamless solution that enables smart metering, code compliance requirements, and simplifies the complexities of allocating energy costs and billing tenants. BMO gives decision makers the tools to implement smart, informed strategies to achieve their unique energy goals, reduce energy waste, optimize operating costs, and increase their bottom line.

- Flexible, intuitive and easy to use online
- Affordable options provide top industry value
- Full energy management and tenant billing capabilities

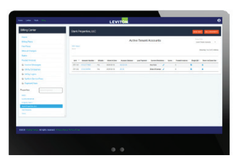
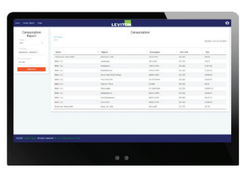
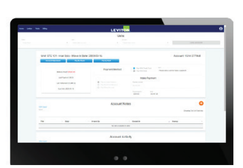
Download Our Energy Code Apps, go to:
www.leviton.com/energycodes

* Reference Product Selection Guide and Data Sheets for complete information.

VERIFEYE™ COMMUNICATIONS PRODUCTS

Submetering Communication Systems transmit data from meters to end systems to create a data network between Leviton submeters and stakeholders (BAS, Building Manager Online (BMO), third party billing, etc.). Easily share data through open protocols such as ModBus and IP-based data transfer. This enables facilities to create submetering systems that can accommodate future expansion with data made accessible from any internal or external location.

VERIFEYE™ COMMUNICATION PRODUCTS							
	Energy Monitoring Hub (EMH)	EMB Hub	EMB Hub	EMB HubLite	High Density Pulse Module	Flex I/O Module	ModHopper
	Data Acquisition Hubs				Input/Output Module	Input/Output Module	Wireless Modbus/Pulse Transceiver
	A8812	EMHXD	A8810	A7810	A8911	A8332	R9120
SPECIFICATIONS	Energy Monitoring Hub (EMH)	EMB Hub	EMB Hub	EMB HubLite	High Density Pulse Module	Flex I/O Module	ModHopper
Protocols	ModBus RTU ModBus TCP TCP/IP PPP HTTP/HTML FTP / NTP / XML SNMP-Trap BACnet IP	ModBus RTU ModBus TCP TCP/IP PPP HTTP/HTML FTP / NTP / XML SNMP-Trap	ModBus RTU ModBus TCP TCP/IP PPP HTTP/HTML FTP / NTP / XML SNMP-Trap BACnet IP	ModBus TCP TCP/IP PPP HTTP/HTML FTP / NTP / XML SNMP-Trap BACnet IP	ModBus RTU	ModBus RTU	ModBus RTU
Applications	Use with an Ethernet (LAN) connection to push-or-pull data via HTTP, XML or FTP. Connect to web-based (IP-based) software dashboards, energy information management systems and demand response systems.				Use with EMH to take advantage of plug-and-play communication. Use with ModHopper for wireless communication. Push-or-pull meter data to VerifEye kiosks and software applications.		Designed specifically for wireless submetering. Collect meter data from multiple buildings over long distances. Self-healing mesh network using frequency agile technology.

	Base Energy Management	Energy Management with Advanced Reporting	Tenant Billing
	Web-Based Software		
Primary Functions	Provides a summary of energy profiles to help identify high and low consumption as well as energy usage patterns for user defined intervals. Populates reports based on user configured preferences. Assists end users in meeting the growing requirements of local and national energy codes such as IECC, ASHRAE 90.1, Title 24, Seattle Energy Code, and New York Local Law 88.	Includes all the functionality of the Base Module with the addition of enhanced reporting and dashboarding features. Adds support for Daily and Hourly Heat Maps, Drift Analysis reporting and Kiosk display. Provides custom report design features.	Monitor individual units to create invoices and tenant billing reports. Supports an online portal for tenants to log in and monitor their usage and billing information. Includes all the features of both the Base and Advanced Reporting Modules.
	 VerifEye™ Building Manager Online	 Public Kiosk Display	 View Tenant Accounts
	 Consumption Report	 Daily Heat Map	 Create Tailored Billing Plans

Contact your Leviton representative for additional smart energy saving solutions to expand and upgrade your system.

Leviton Manufacturing Co., Inc.
Global Headquarters
201 North Service Road, Melville, NY 11747
tel 800-323-8920 fax 800-832-9538
tech line (8:30AM-7:30PM ET Monday-Friday) 800-824-3005

Leviton Manufacturing Co., Inc.
Lighting & Controls
1303S SW Avery St., Tualatin, OR 97062
tel 800-736-6682
tech line (6:00AM-4:00PM PT Monday-Friday) 800-954-6004

Visit our Website at: www.Leviton.com/verifeye

© 2022 Leviton Manufacturing Co., Inc. All rights reserved. Subject to change without notice.

G-9057D/122-mm
REV DEC 2022

SERVICE AND SUPPORT DURING EVERY STEP OF THE PROCESS.

Only Leviton has the service and support to help you create a submetering system that does exactly what you want it to do. Partner with Leviton to measure, monitor, and manage energy usage with VerifEye—the complete utility submetering solution.

EXCLUSIVE WEALTH OF RESOURCES:

- **Submetering specialists** at your disposal
- **Field service engineers** for top-level support
- **Factory commissioning service**
- **Dedicated technical support and tech line for data sheets** at 800-959-6004

verifEye™
Submetering Solutions

See What's Watt

The complete utility submetering solution

VerifEye™ products accurately capture energy consumption. Revenue grade real-time reporting through leading edge hardware and software - the submetering solution for every application. **Leviton.com/verifeye**