



# VerifEye™ Submetering Solutions



# SMARTer Metering. SMARTer Control. REAL Savings.

## THE BENEFITS OF SUBMETERING

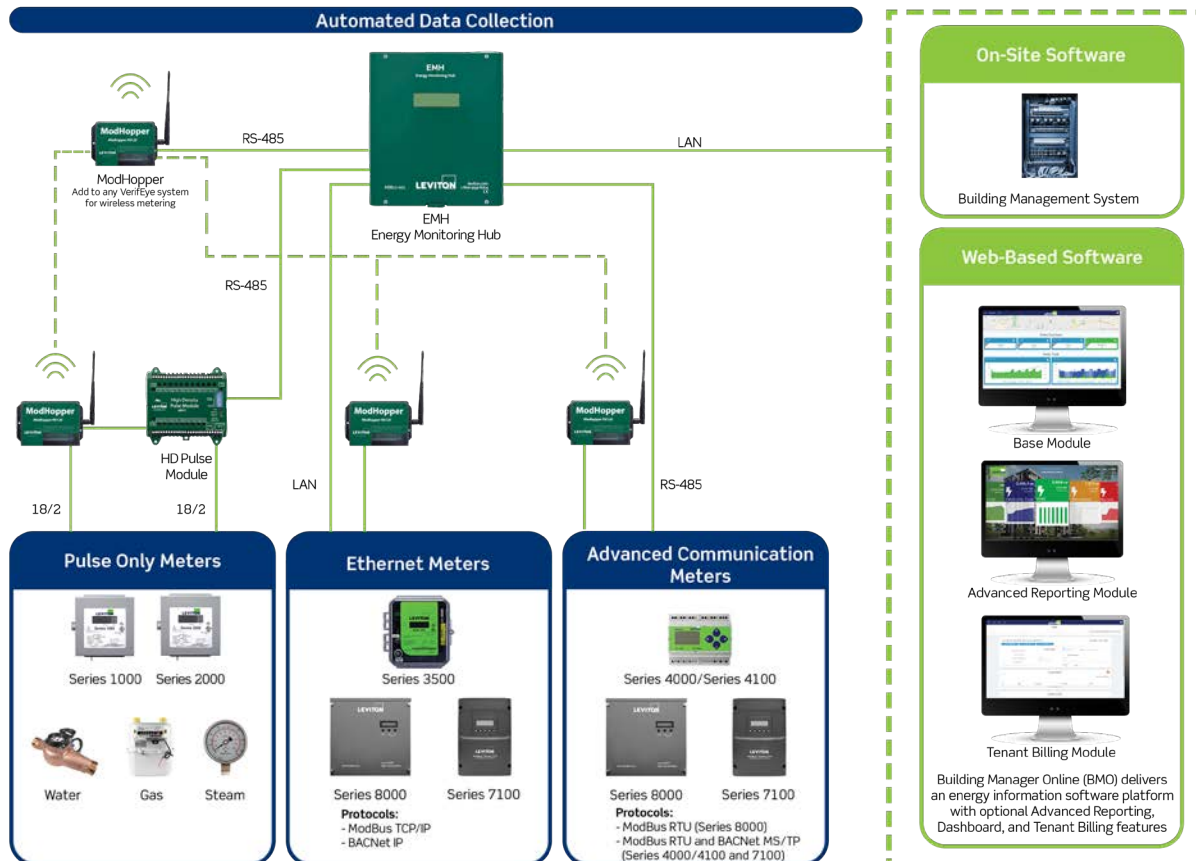
VerifEye™ delivers a comprehensive line of leading-edge submeters, communication products and software solutions as the key building blocks to help you better manage costs and conserve energy.

From tenant billing to energy measurement & verification (M&V) software solutions, VerifEye offers cost-effective scalability and integration to provide you with the solution you need today that can be expanded in the future. This seamless solution enables smart metering, meets code compliance requirements and simplifies the complexities of allocating energy costs and billing tenants. Building owners and managers can minimize usage of electric, water, gas and other utilities for long-term cost savings. Organizations that monitor and manage energy usage are better able to compete, to achieve real savings, and to meet code compliance and building efficiency standards such as LEED, California Title 24 and ASHRAE 90.1.

For additional energy savings, combine VerifEye with Leviton lighting controls for a complete energy management solution from a single source.

### VerifEye delivers accurate information for:

- Load profiling & benchmarking
- Tenant billing/cost allocation
- Measurement & verification (M&V)
- Energy conservation programs
- Building codes and standards compliance
- Green initiatives including LEED certification
- Federal government energy program compliance
- Building management systems (AMR/BMS/EMS) integration



# Contents

## VerifEye Submetering Applications

High-Rise Residential Multi MDUs).....	4
Residential Multi Dwelling Units .....	8
Commercial Offices/Mixed Use.....	12
Retail Malls.....	16
Educational and Professional Campuses.....	20
Industrial/Manufacturing Plants, Major Building Systems.....	24

## VerifEye Submetering Solutions

VerifEye Product Tables.....	28
Mini Meters .....	30
Mini Meter MMU Kits.....	31
Multiple Meter Units (MMUs).....	32
Series 8000 Multi-Point High Density Meters .....	33
Series 7000 and 7100 Advanced Branch Circuit Monitors.....	34
Series 1000 Single Phase Meters .....	35
Series 2000 Three Phase Meters .....	36
Series 3500 Multi-Function Ethernet Meters .....	37
Series 4000 Industrial ModBus Meter Kits.....	38
Series 4100 Bi-Directional ModBus RTU Meter Kits .....	39
Current Transformers.....	40
Water Meters.....	41
Gas Meters.....	42
VerifEye Communication Products.....	43
Metering Communication Systems.....	44
Input/Output Modules.....	45
ModHopper.....	46
VerifEye Software Products.....	47
Building Manager Online (BMO) Modules.....	48

# High-Rise Residential MDUs

## New Construction Projects

With a VerifEye submetering solution utilizing Series 8000 Multiple Point Meters, Leviton can be your single source for a complete

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ALL TOGETHER**

See pages 6-7



tenant metering solution designed specifically to suit high-density applications such as high-rise multiple dwelling units. A solution built around the Series 8000 is especially

cost-effective for new construction due to its capacity and flexibility. The Series 8000 submeter is easy to install and wire and allows complete flexibility to fit any project design and is configurable for any type of electrical service including:

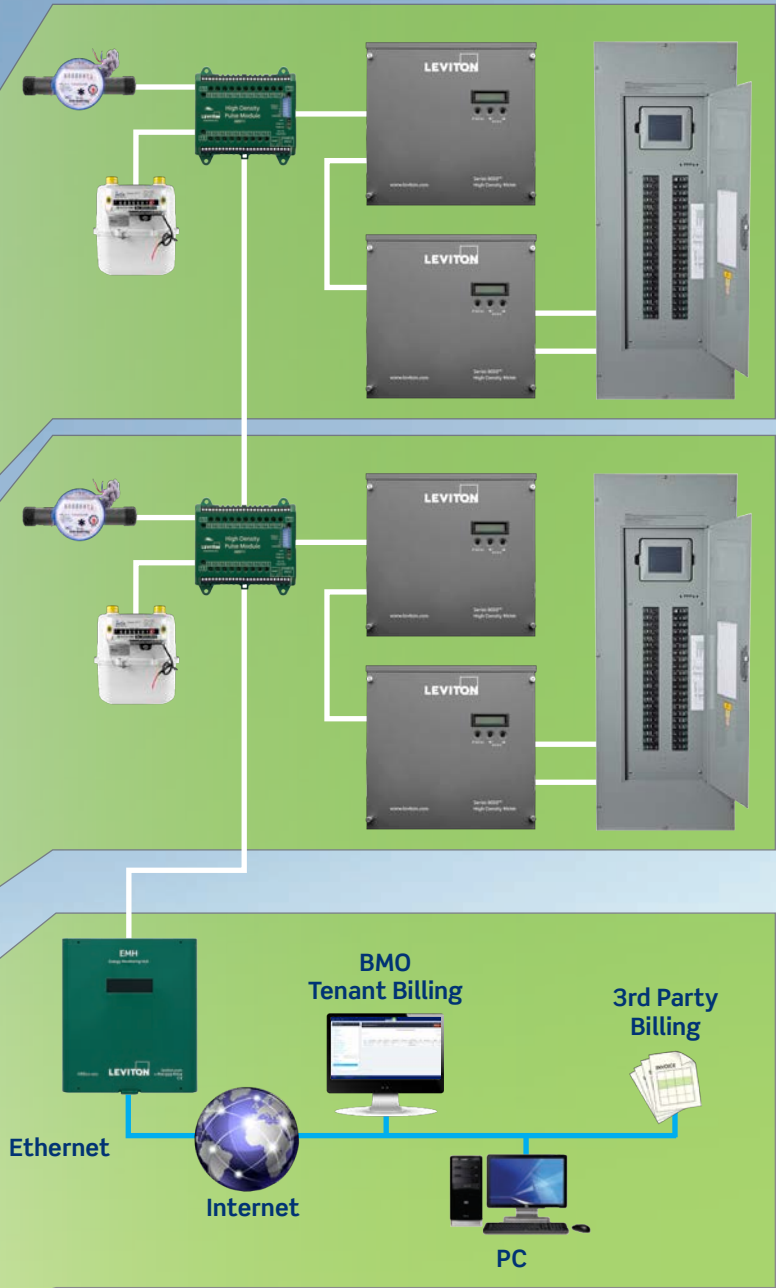
- 120/208V 1P3W (120/208V 3P4W service at the panel)
- 120/240V 1P3W
- 120/208V 3P4W

### The Leviton Advantage

- Minimal wall space needed in electrical closets and reduced construction costs as compared to traditional metering
- Unique wiring harness minimizes installation labor and material cost (virtually eliminates the need to extend current transformer wires)
- Color coded current transformers to facilitate proper wiring
- Allows interface for water, gas, BTU, etc. meters into single communication system
- Leviton factory technicians provide system startup, programming and training services
- Open architecture provides flexibility to use your choice of third-party billing company or optional VerifEye Building Manager Online Tenant Billing web-based software

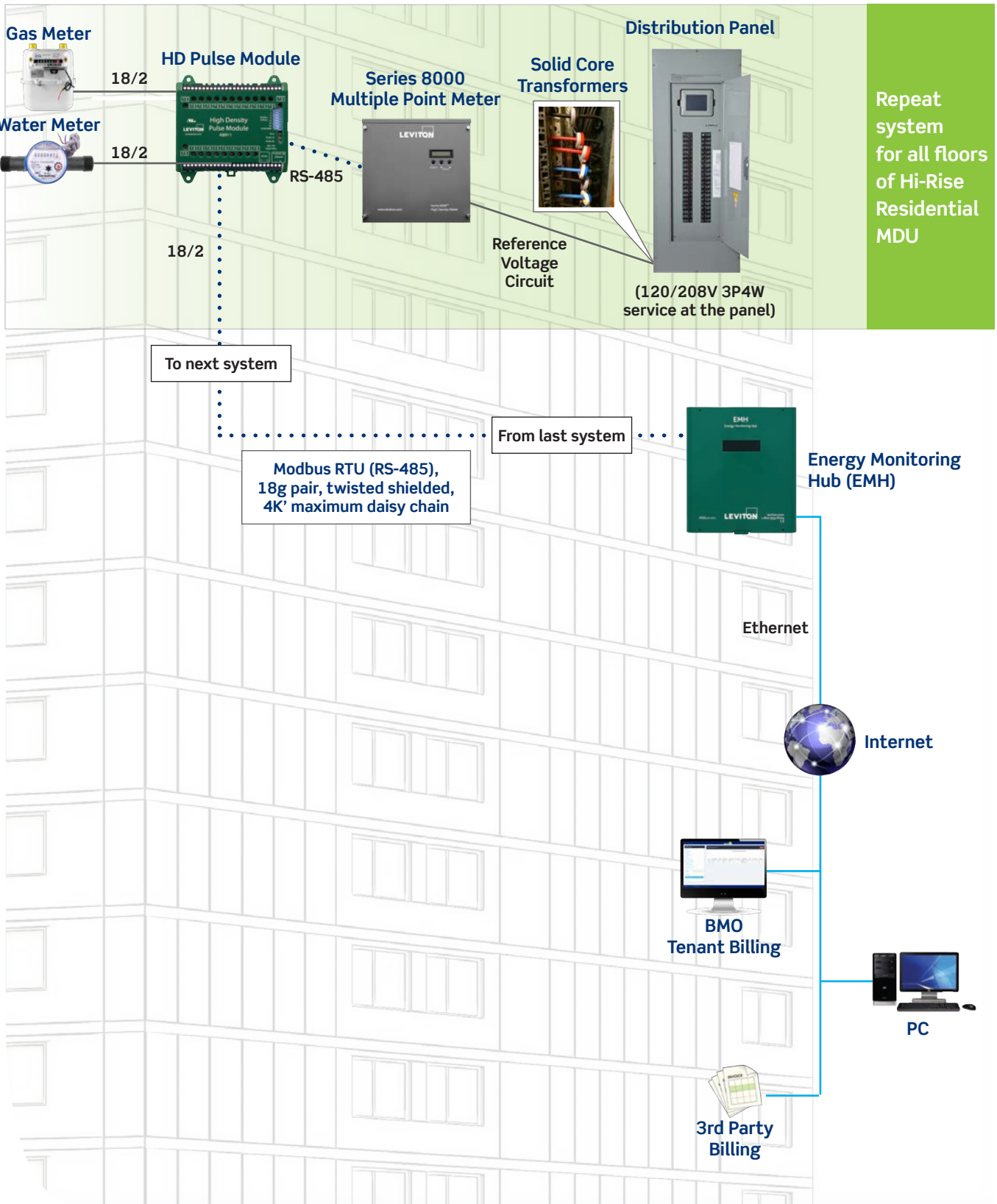


\*Typical configuration for each service panel location



**High-Rise Residential MDUs**  
New Construction Projects

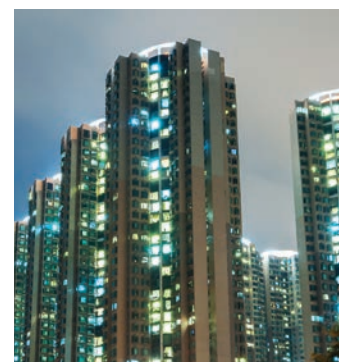
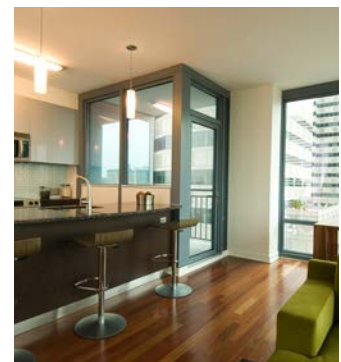
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# CORE LEVITON COMPONENTS

High Rise Residential MDUs			
Product	Voltage	Description	Cat. No.
HD Pulse Module	—	HD Pulse Module, 23 inputs	A8911-023
Series 8000 Multi-Point High Density Meter	120/208V	Phase Config 8x3 with Terminal Strips	S8UTS-241
		Phase Config 12x2 with Terminal Strips	
		Phase Config 24x1 with Terminal Strips	
		Phase Config 8x3 with Wiring Harness	S8UWH-241
		Phase Config 12x2 with Wiring Harness	
Phase Config 24x1 with Wiring Harness			
Energy Monitoring Hub	—	Energy Monitoring Hub	A8812-000
BMO Tenant Billing Module Software	—	See <a href="http://www.leviton.com/verifeye">www.leviton.com/verifeye</a> for full listing and details	BMOSW-BIL

Note: These are examples of applications but should not be considered limitations to product and solution capability. Please contact your local Leviton representative for design assistance.



# Residential Multi-Dwelling Units

## Master Metered Buildings (Retrofit)

Ratio-based billing for utilities leaves much to be desired. There's nothing fair about a single, traveling salesperson in a two-bedroom unit paying the same share of the utilities as a family of four living in the same size unit. It's also nearly impossible to stabilize building owner profits because although MDU utility bills rise, it can be difficult to retain tenants if rents are hiked annually.

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See pages 10-11



Leviton's VerifEye submetering solution provides the ability to lower utility costs by billing each apartment unit for what is actually

used. VerifEye offers a tenant metering solution with wireless communications that is ideally suited to retrofit MDU applications. The core of the system is a compact, flush-mount or surface mount Leviton Mini Meter that is installed in each unit along with a wireless transmitter.

This wireless system enables either staff or a third party billing company to generate accurate bills. The size of the components and minimal wiring required helps make this a relatively easy-to-install and cost-effective system, especially where risers feed multiple units. With a Leviton submetering solution, owners can allocate costs directly to the tenant and lower overall operating expenses. Get revenue grade accuracy for tenant billing applications in a compact, cost-effective solution.

### The Leviton Advantage

- Equitable unit/common-area cost allocation and accurate tenant billing eliminates burden of rising and unpredictable expenses
- Easy-to-retrofit and robust wireless communication system with small footprint
- Compact, flush mount or surface mount meter enclosure designed for installation in smaller apartments
- Allows for easy integration of water and gas meters as well
- Open architecture provides flexibility to use a third-party billing company
- Scalable, wireless repeater network can be used to accommodate large sites or added in the future for new tenants and building expansions



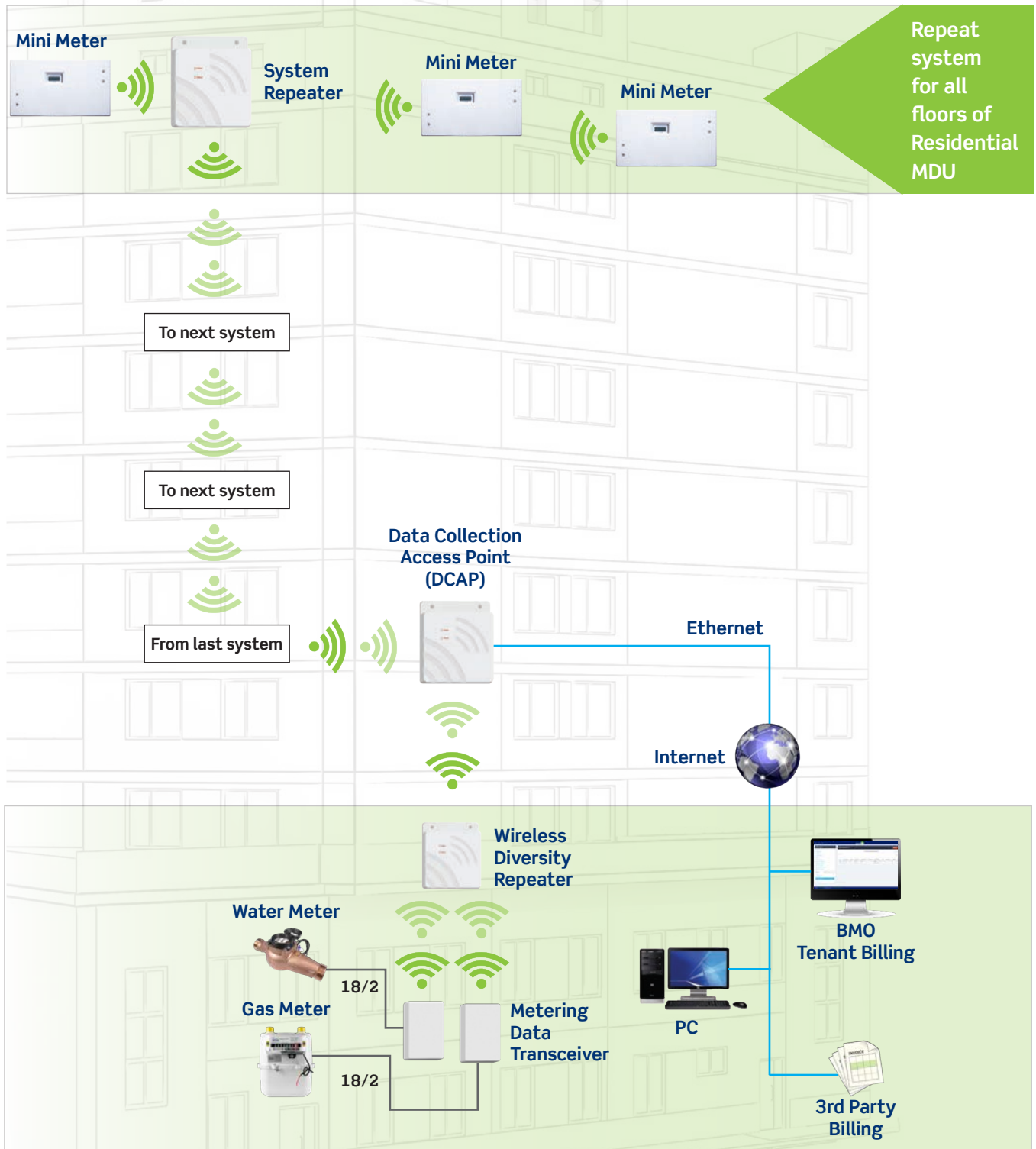




# Residential Multi-Dwelling Units

Master Metered Buildings (Retrofit)

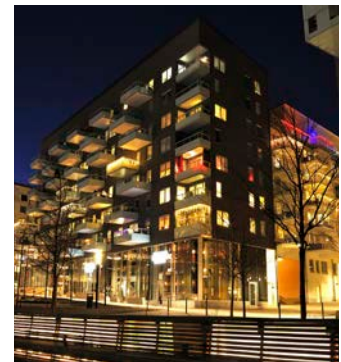
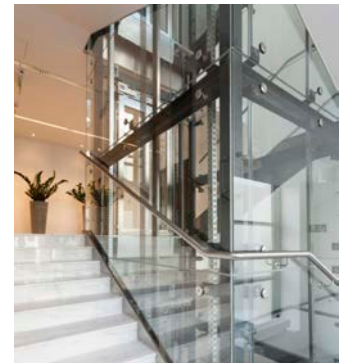
## PUTTING IT ALL TOGETHER



# CORE LEVITON COMPONENTS

Residential Multi-Dwelling Units				
Product	Voltage	Description	Amps	Cat. No.
Mini Meter with Metering Data Transceiver	120/208V 3W or 120/240V 1PH 3W (Split Phase)	Meter Data Transceiver (MDT), battery input model battery powered, daily reads only (No TOU)	200A	MDTFW-2SW
Wireless Diversity Repeater	—	Repeater, 5V, includes 5VDC 1A plug-in power supply and internal backup battery	—	T95RX-000
Data Concentrating Access Point* * All DCAPs and Gateways shipped with 6VDC, minimum 1.5 Amp power supply, Ethernet cable and USB cable	—	Data Concentrating Access Point (DCAP), Low Capacity (150 meter points max), built-in radio receiver	—	T25DX-151
		DCAP, High Capacity (1000 meter points max), built-in radio receiver	—	T25DX-102
BMO Tenant Billing Module Software	—	See <a href="http://www.leviton.com/verifeye">www.leviton.com/verifeye</a> for full listing and details	—	BMOSW-BIL

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# Commercial Offices/ Mixed Use

## New Construction & Retrofit Applications

The benefits of implementing a cost-effective means of recovering utility costs, saving energy and reducing the carbon footprint can be substantial; even game changing. Whether for a small, two-story office building, a sprawling commercial office complex or a new mixed use facility, Leviton has the right combination of components and expertise to deliver the optimal solution.

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See pages 14-15



There's no doubt that redirecting accountability for energy usage to tenants and streamlining accounting operations by installing

and implementing a Leviton submetering solution is a win-win in the commercial office/mixed use space. Precise monitoring of tenant utilities and building systems can identify opportunities for substantial cost savings. For a facility to be considered state of the art, it must incorporate technologies such as VerifEye submetering solutions. Leviton's energy management software can be used to push meter data to third party billing companies, energy monitoring software solutions, energy dashboards on kiosks or big screens displaying building energy conservation statistics and tenant awareness/sustainability messages.

### The Leviton Advantage

- Redirect responsibility for utility usage from property owners to tenants and encourage conservation
- Easy-to-install/retrofit metering system: minimally wired installation saves time and reduces labor costs
- Universal energy information system designed to meet or exceed all energy data project goals using open protocol system platform and interfaces
- Cost-effective and convenient method of monitoring usage for energy savings, code compliance and LEED measurement and verification
- Provides web-based access to real-time usage data and reports and accommodates third-party billing
- Set energy goals at the building or portfolio level with BMO Advanced Reporting Module
- Access the Advanced Reporting Module data remotely via the web-based software

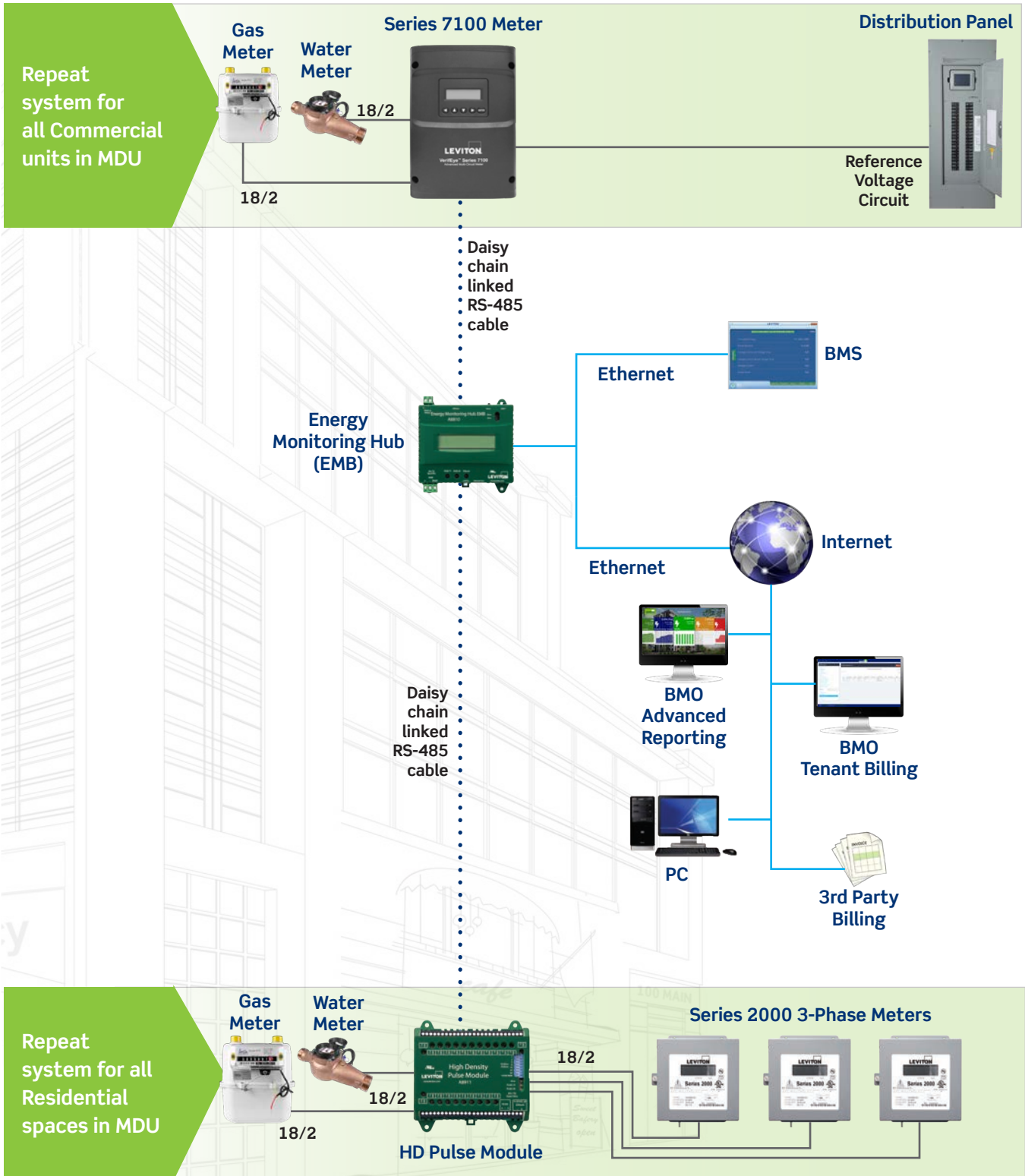




# Commercial Offices/Mixed Use

New Construction & Retrofit Applications

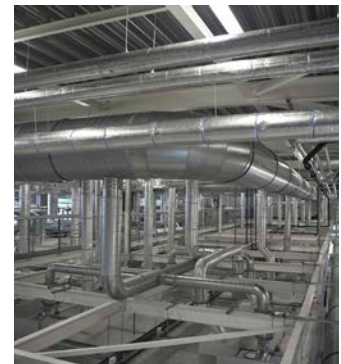
## PUTTING IT ALL TOGETHER



# CORE LEVITON COMPONENTS

Commercial Offices/Mixed Use				
Product	Voltage	Description	Amps	Cat. No.
HD Pulse Module	—	HD Pulse Module, 23 inputs	—	A8911-023
Series 7100 Meter	—	Series 7100 Dual Voltage, Branch Circuit Monitor, 48 inputs, LCD display, NEMA 1 enclosure	—	71D48-000
Energy Monitoring Hub EMB	—	Energy Monitoring Hub EMB ModBus/TCP/Ethernet	—	A8810-000
Series 2000 3-Phase Meter	—	See <a href="http://www.leviton.com/verifeye">www.leviton.com/verifeye</a> for full listing and details	—	2K208-xxx
BMO Tenant Billing Module Software	—	See <a href="http://www.leviton.com/verifeye">www.leviton.com/verifeye</a> for full listing and details	—	BMOSW-BIL
BMO Advanced Reporting Module Software	—	BMO Energy Management Software with Advanced Reporting (up to 50 data points)	—	BMOSW-EXE

Note: These are examples of applications but should not be considered limitations to product and solution capability. Please contact your local Leviton representative for design assistance.



# Retail Malls

## New Construction & Retrofit Applications

Billing tenants for actual, measured usage on a regular basis and taking the uncertainty out of the equation makes sense for all parties. It improves cash flow, avoids end-of-year reconciliations and, in general, places responsibility for consumption where it belongs. But VerifEye submetering is more than just a tenant billing solution. All of our meters are designed to provide granular data on usage within specific areas or by individual loads that can be used to lower long-term energy usage.

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See pages 18-19



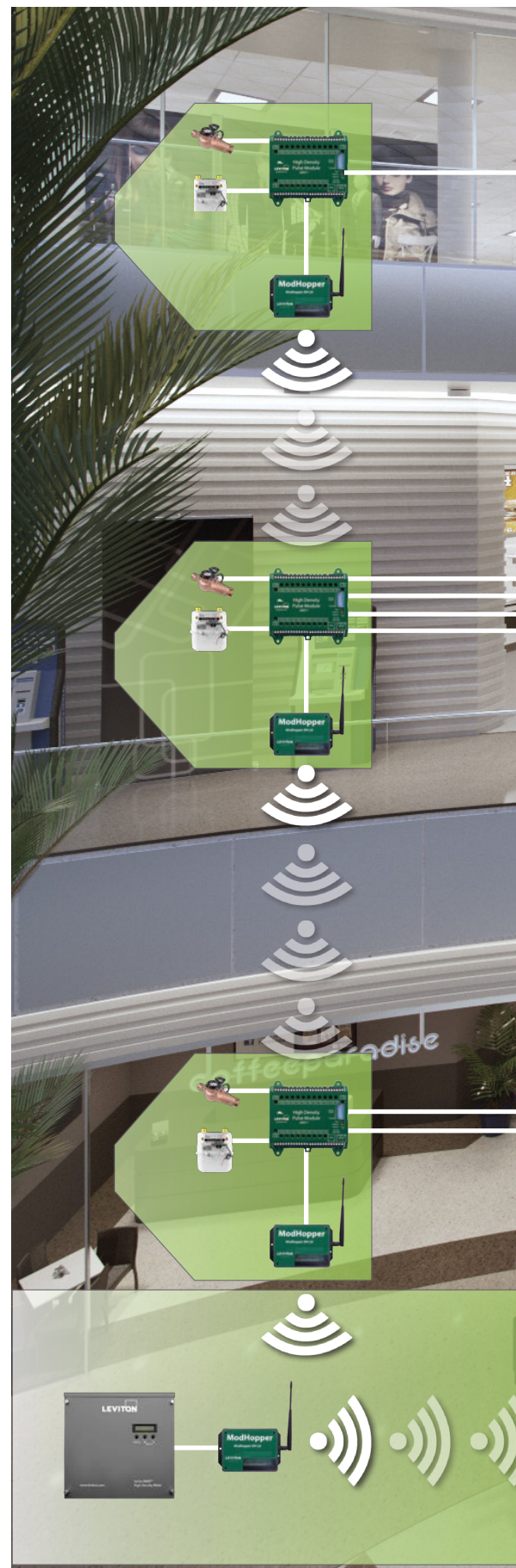
Submeters are a cost effective approach to tenant billing and energy management in a mall environment where space is

routinely reconfigured to accommodate tenant turnover and planned improvements. That's because it is a cost-effective option that minimizes rewiring and disruption of retail operations during typical ongoing tenants' improvements.

Leviton VerifEye submetering features a range of devices that incorporate standard protocols, wireless options and split core CT technologies, making retrofits relatively easy and inexpensive. VerifEye submeters facilitate accurate tenant billing of electric, water, gas and other utility usage — and chargebacks for common area utilities.

### The Leviton Advantage

- Redirect responsibility for utility usage from property owners to tenants for improved cash flow
- The VerifEye ModHopper Wireless Transceiver provides a self-optimizing wireless mesh network between multiple meters for a full submetering solution at a fraction of the traditional cost
- Eliminate the need for costly wiring with the VerifEye ModHopper Wireless Transceiver, which provides a self-optimizing wireless mesh network between multiple meters, for a full submetering solution
- Open architecture data collection offers freedom to utilize any third party billing company or VerifEye BMO Tenant Billing Module web-based software
- Integrate data and allocate costs from a variety of utilities including electric, gas, and water







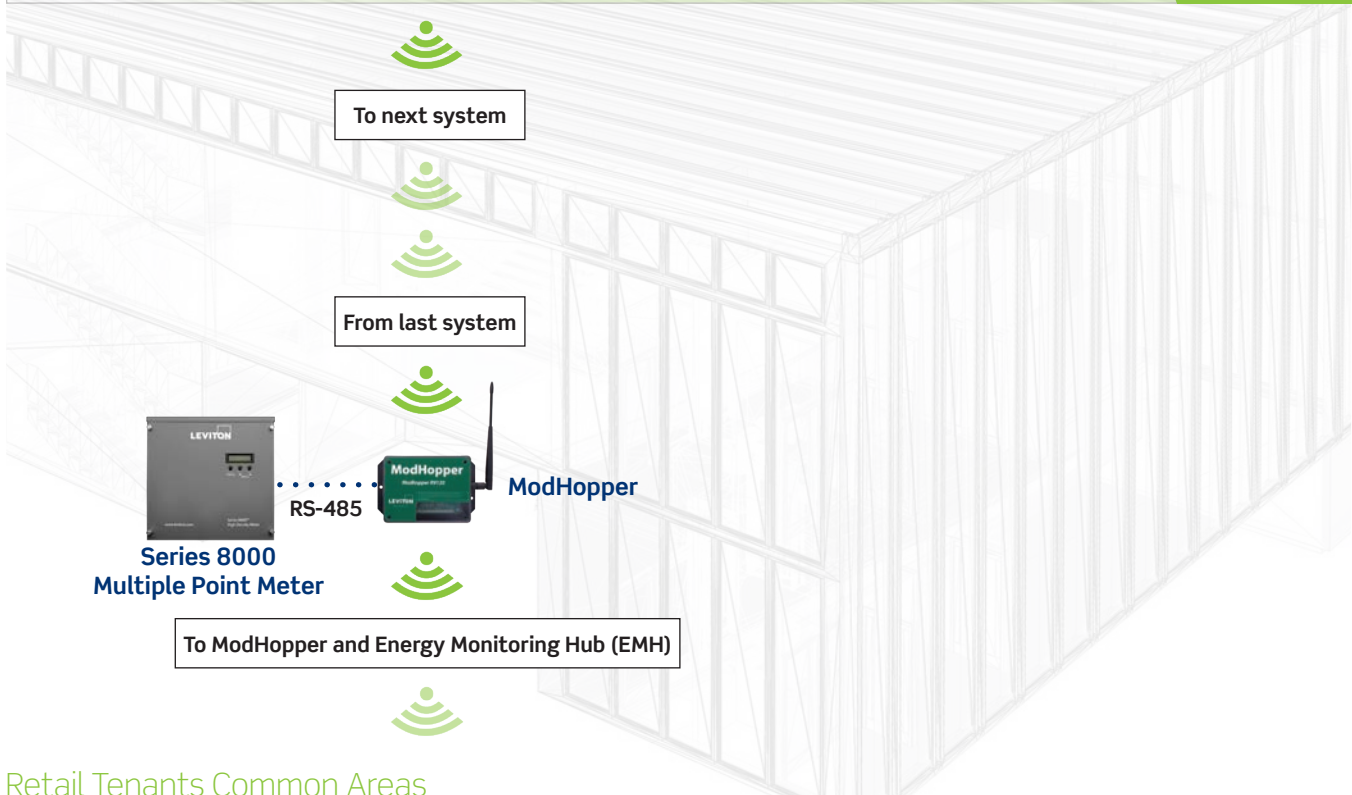
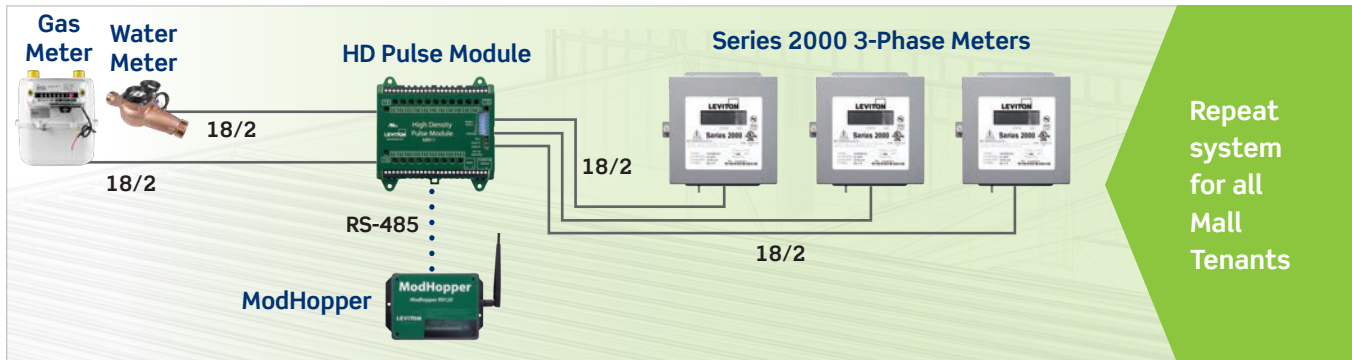
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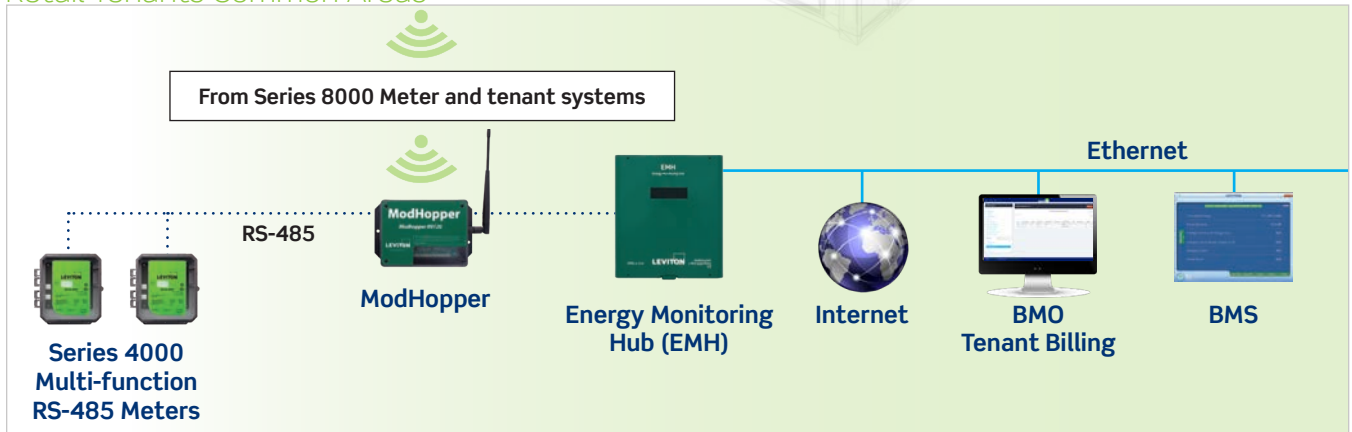
## Retail Malls

New Construction & Retrofit Applications

# PUTTING IT ALL TOGETHER



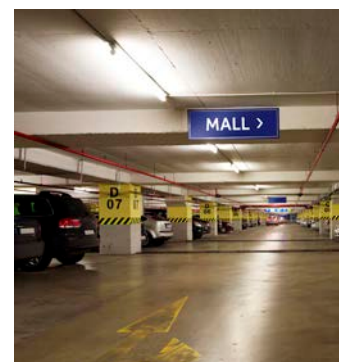
## Retail Tenants Common Areas



# CORE LEVITON COMPONENTS

Retail Malls			
Product	Voltage	Description	Cat. No.
ModHopper	—	ModHopper	R9120-500
High Density Pulse Module	—	High Density Pulse Module, 23 Inputs	A8911-023
Series 2000 3-Phase Meter	—	See <a href="http://www.leviton.com/verifeye">www.leviton.com/verifeye</a> for full listing and details	2K208-xxx
Series 4000 ModBus RTU	Universal 3PH 3W/4W	100A, 3 Split Core CTs	4KUMR-01M
		200A, 3 Split Core CTs	4KUMR-02M
		400A, 3 Split Core CTs	4KUMR-04M
		800A, 3 Split Core CTs	4KUMR-08M
		20-5000A, 3, 12" Rogowski Coil CTs	4KUMR-R12
		20-5000A, 3, 18" Rogowski Coil CTs	4KUMR-R18
Series 8000 Multi-Point High Density Meter	120/208V	Phase Config 24x1, 12x2, 8x3 with Wiring Harness	S8UWH-241
Energy Monitoring Hub	—	Energy Monitoring Hub	A8812-000
BMO Tenant Billing Module Software	—	See <a href="http://www.leviton.com/verifeye">www.leviton.com/verifeye</a> for full listing and details	BMOSW-BIL

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# Educational and Professional Campuses

## New Construction & Retrofit Applications

In the face of escalating utility costs, energy metering and monitoring provides a prime opportunity for substantial savings on college campuses. Modern educational facilities have become increasingly reliant on technology to improve the learning environment. Computers at every desk, sophisticated

A/V equipment in every room, proliferation of personal mobile devices, etc.: all these devices and systems consume vast amounts of energy.

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See pages 22-23



Installing a Leviton VerifEye submetering system provides visibility into downstream energy usage that can be used to improve energy efficiency and distribute costs equitably. Identifying and correcting system inefficiencies and equipment problems using data provided by submeters can result in significant savings. Submeters provide the required data for energy and facility managers to understand where to focus their time and money.

VerifEye provides the right products to allow energy submetering from the whole building down to individual branch circuits on a single platform campus wide. Collected data can be sent to multiple stakeholders including energy monitoring software, EMS/BMS, dorm competition dashboards, ESCOs, etc.

### The Leviton Advantage

- Clear visibility into downstream energy data facilitates departmental cost allocation and aids in forecasting future energy needs
- Integration of multiple utilities (electric, water, gas and steam) into single data collection platform with open protocol data access
- Broad line of metering products and communication architecture platforms to suit a wide variety of environments
- Highly scalable system can be phased in to accommodate resource constraints and ease adoption
- Cost-effective and convenient method of monitoring usage for energy savings, code compliance and LEED measurement and verification





**Lecture Hall**  
Series 8000  
Multiple Point Meter



**Health Sciences**  
Series 3500



**Facilities Management**  
Energy Monitoring  
Hub (EMH)



**Library**  
Series 3500



**Faculty Hall**  
Series 3500



**Administration**  
Series 3500



**Gymnasium**  
Series 3500



**Research Lab**  
Series 3500

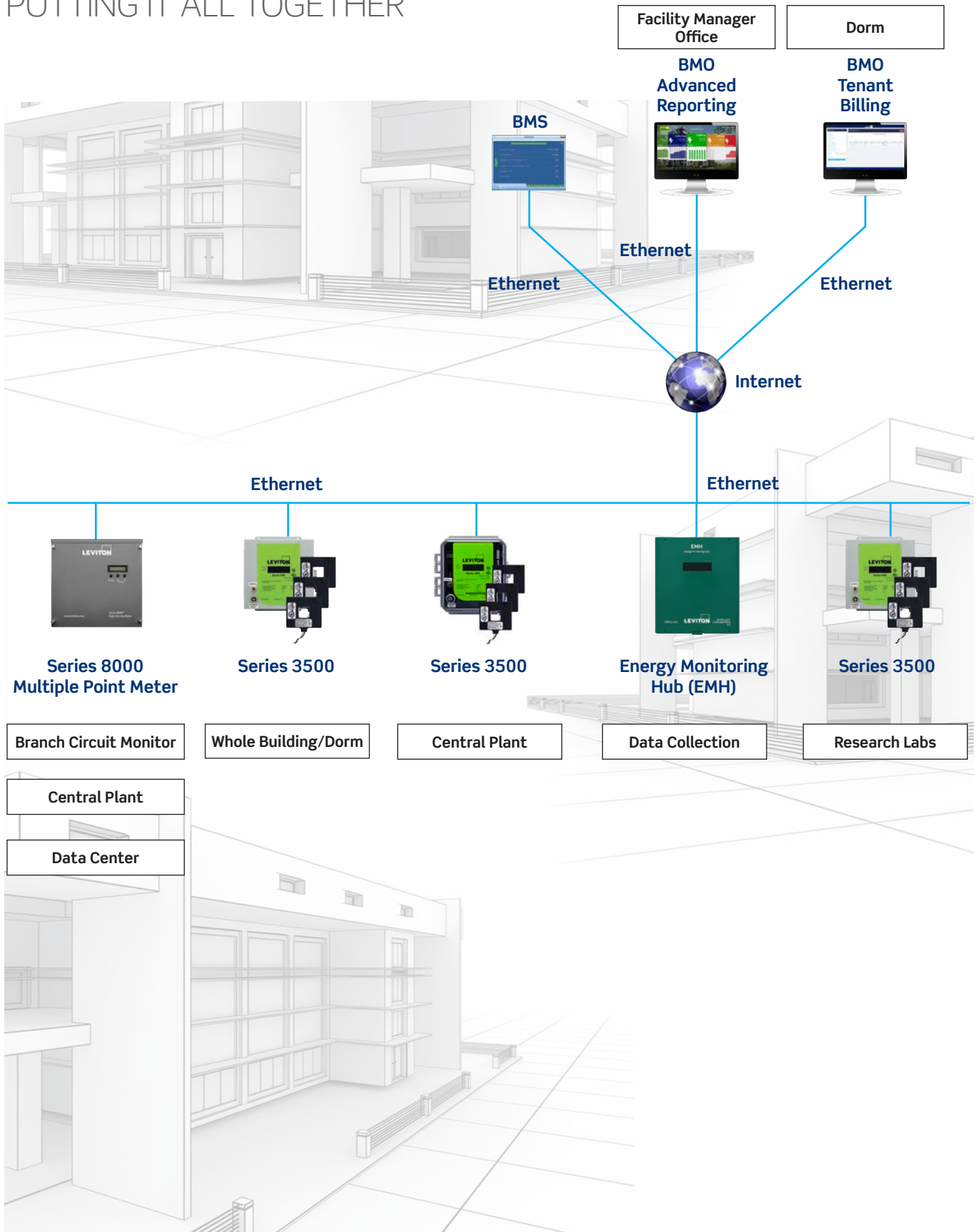


Ethernet

# Educational and Professional Campuses

New Construction & Retrofit Applications

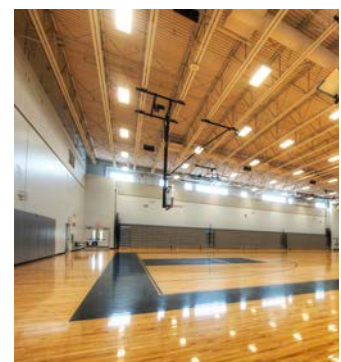
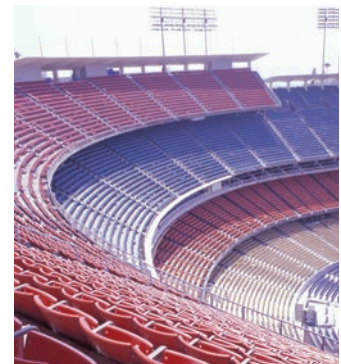
## PUTTING IT ALL TOGETHER



# CORE LEVITON COMPONENTS

Educational and Professional Campuses				
Product	Voltage	Description	Amps	Cat. No.
BMO Tenant Billing Module Software	—	BMO Tenant Billing Software (up to 50 data points)	—	BMOSW-BIL
BMO Advanced Reporting Module Software	—	BMO Energy Management Software with Advanced Reporting (up to 50 data points)	—	BMOSW-EXE
Suggested Meters for Individual Buildings				
Low Range — Gymnasium, Faculty Hall				
Series 3500 Ethernet Meter Kits* INDOOR ENCLOSURE <small>*Kits include meter, specified enclosure and required current transformers</small>	208-480VAC 3P 3W/4W	ModBus TCP/BACnet IP, 3 Split CTs	100A	3KUMT-01M
			200A	3KUMT-02M
		ModBus TCP/BACnet IP, 3 Solid CTs	100A	3KUMT-1SM
			200A	3KUMT-2SM
Series 3500 Ethernet Meter Kits* OUTDOOR ENCLOSURE <small>*Kits include meter, specified enclosure and required current transformers</small>	208-480VAC 3P 3W/4W	ModBus TCP/BACnet IP, 3 Split CTs	100A	30UMT-01M
			200A	30UMT-02M
		ModBus TCP/BACnet IP, 3 Solid CTs	100A	30UMT-1SM
			200A	30UMT-2SM
Mid Range — Administration, Dormitory, Health Sciences, Library				
Series 3500 Ethernet Meter Kits* INDOOR ENCLOSURE <small>*Kits include meter, specified enclosure and required current transformers</small>	208-480VAC 3P 3W/4W	ModBus TCP/BACnet IP, 3 Split CTs	400A	3KUMT-04M
			800A	3KUMT-08M
		ModBus TCP/BACnet IP, 3 Solid CTs	200A	3KUMT-2SM
			3000A	3KUMT-30M
High Range — Data Center, Research Lab				
Series 3500 Ethernet Meter Kits* INDOOR ENCLOSURE <small>*Kits include meter, specified enclosure and required current transformers</small>	208-480VAC 3P 3W/4W	ModBus TCP/BACnet IP, 3 Split CTs	800A	3KUMT-08M
			1600A	3KUMT-16M
		ModBus TCP/BACnet IP, 3 Solid CTs	3000A	3KUMT-30M
			5000A	3KUMT-50M
Facilities Management				
Energy Monitoring Hub	—	Energy Monitoring Hub - Non-Configured	—	A8812-000
Lecture Hall				
Series 8000 Meter	120/208V	Phase Config 24x1, 12x2, 8x3 with Terminal Strips	—	S8UTS-241
		Phase Config 24x1, 12x2, 8x3 with Wiring Harness	—	S8UWH-241

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# Industrial/ Manufacturing Plants, Major Building Systems

## New Construction and Retrofit Applications

It takes a tremendous amount of energy to run manufacturing process equipment, lighting and HVAC systems within a typical plant. As major consumers of electricity and other utilities, factories and industrial facilities can achieve significant cost savings by improving equipment performance, by load shifting, and by eliminating wasteful consumption. In addition, accurate allocation of utility costs made possible through submetering can enhance management of per-unit production costs. Energy monitoring data can facilitate a robust energy management and improvement plan that if utilized properly, will provide significant savings opportunities.

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See pages 26-27



In an environment where downtime can quickly erode profits, a submetering system that can be phased in without interrupting processing or production

has measurable advantages. Leviton's VerifEye submetering system is extremely scalable so it can be installed in phases, while use of split core transformers enables installation without power interruptions. Once in action, submetering provides facility managers and operators with valuable insight into the performance of the overall facility.

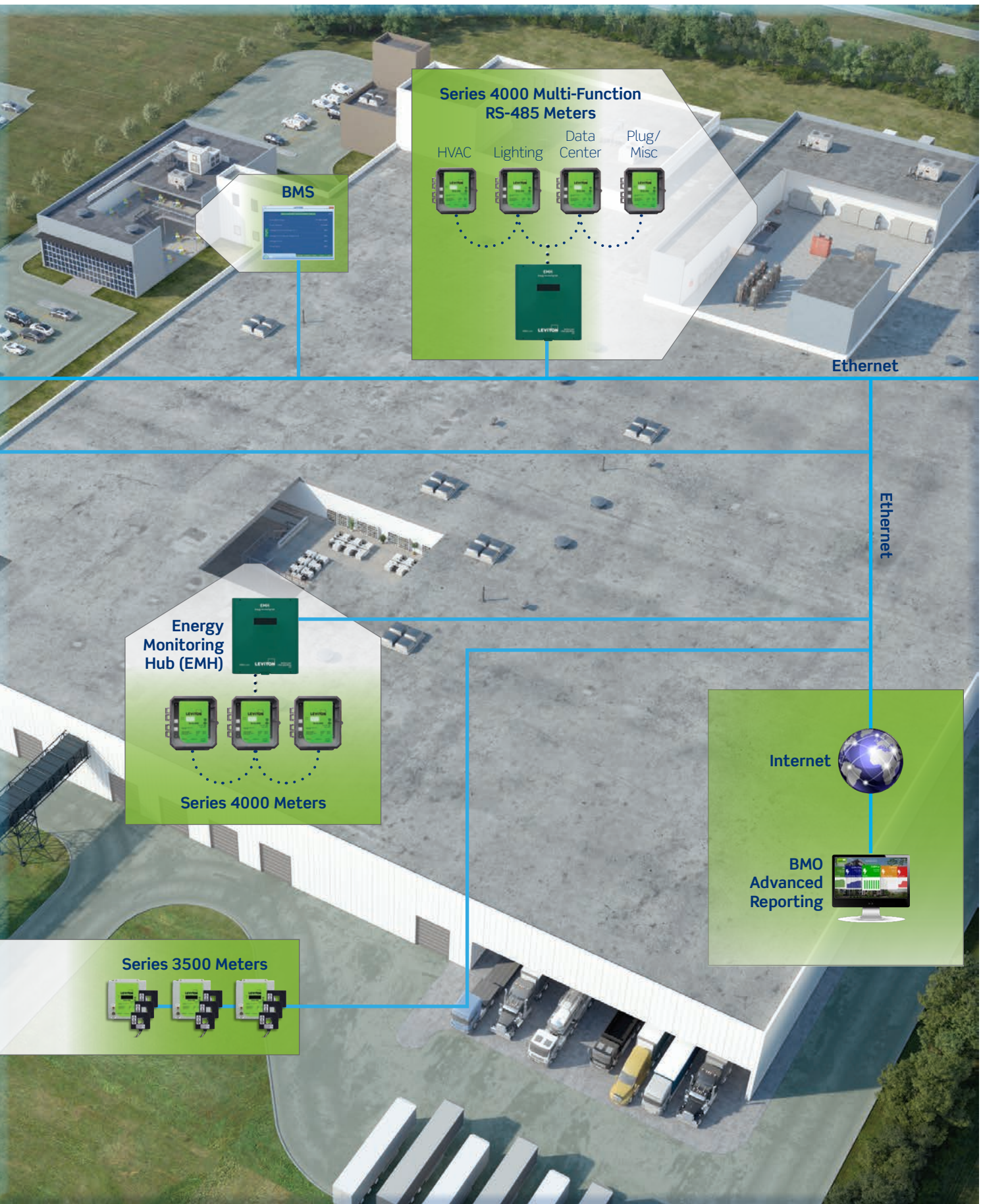
Leviton's VerifEye submetering system can help streamline demand analysis, production and administrative cost allocation, and equipment maintenance opportunities. The end result is a better bottom line.

### The Leviton Advantage

- Highly scalable system can be phased in so as not to interrupt daily operations
- Monitoring of processes, equipment and major building system loads for energy savings
- Ideal solution for departmental cost allocation
- Easy integration of utility data into building and energy management systems
- Versatile metering products accommodate split core transformers or Rogowski Coil CTs for relatively easy retrofitting into any environment



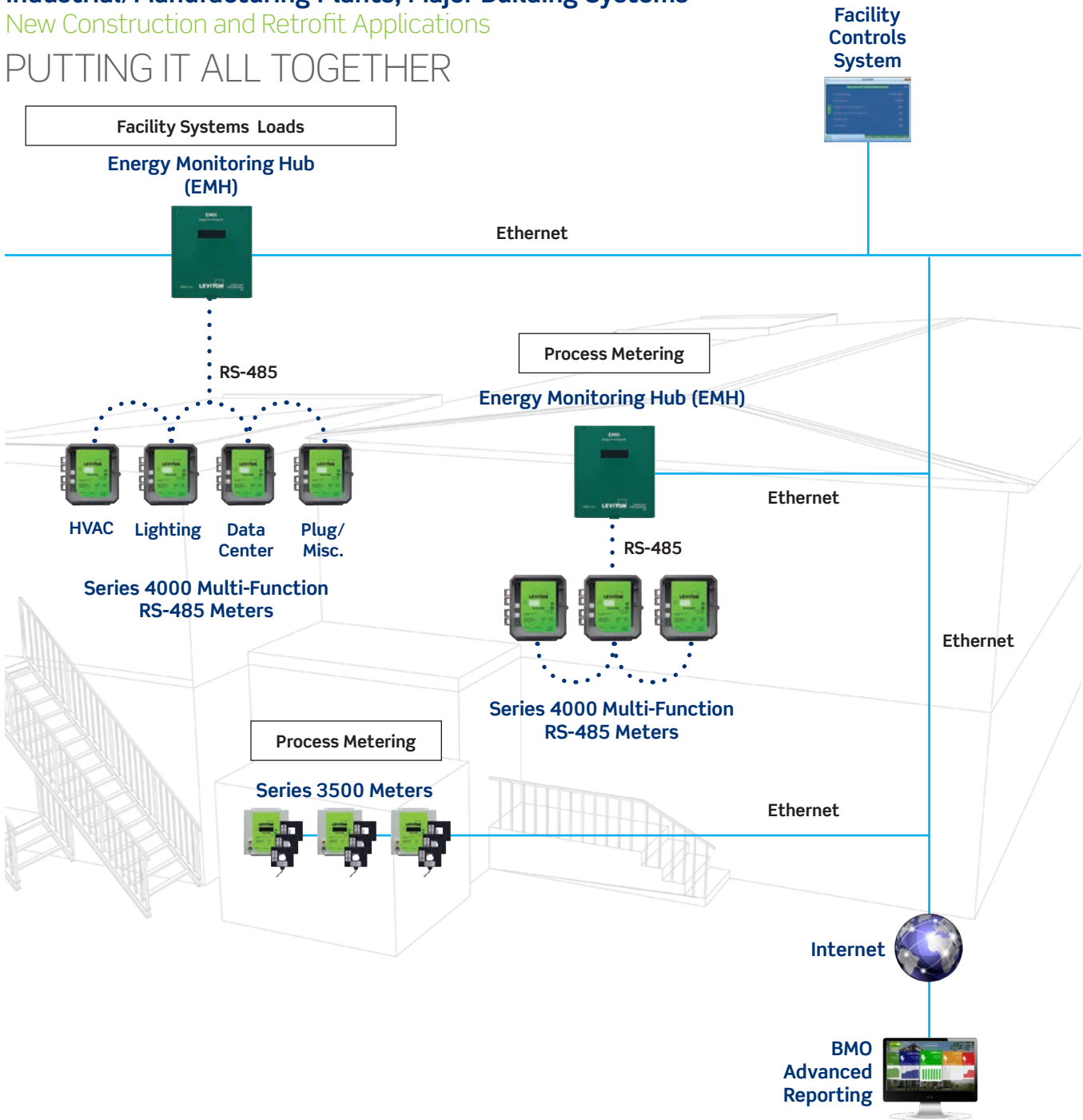




# Industrial/Manufacturing Plants, Major Building Systems

New Construction and Retrofit Applications

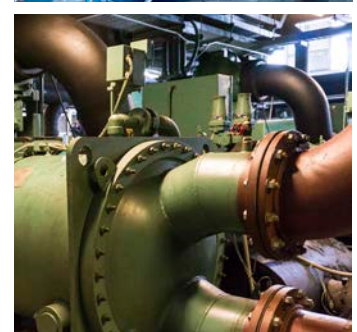
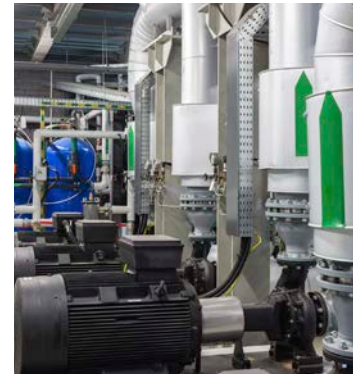
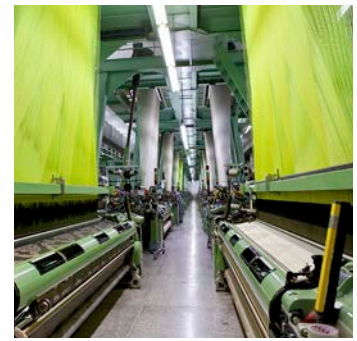
## PUTTING IT ALL TOGETHER



# CORE LEVITON COMPONENTS

Industrial/Manufacturing Plants, Major Building Systems				
Product	Voltage	Description	Amps	Cat. No.
Series 4000 ModBus RTU	Universal 3P 3W/4W	100A, 3 Split Core CTs	—	4KUMR-01M
		200A, 3 Split Core CTs	—	4KUMR-02M
		400A, 3 Split Core CTs	—	4KUMR-04M
		800A, 3 Split Core CTs	—	4KUMR-08M
		20-5000A, 3, 12" Rogowski Coil CTs	—	4KU MR-R12
		20-5000A, 3, 18" Rogowski Coil CTs	—	4KUMR-R18
		20-5000A, 3, 24" Rogowski Coil CTs	—	4KUMR-R24
Series 3500 Ethernet Meter Kits* INDOOR ENCLOSURE <small>*Kits include meter, specified enclosure and required current trans- formers</small>	208-480VAC 3P 3W/4W	ModBus TCP/BACnet IP, 3 Split CTs	100A	3KUMT-01M
			200A	3KUMT-02M
			400A	3KUMT-04M
			800A	3KUMT-08M
			1600A	3KUMT-16M
		ModBus TCP/BACnet IP, 3 Split CTs	3000A	3KUMT-30M
			5000A	3KUMT-50M
		ModBus TCP/BACnet IP, 3 Solid CTs	100A	3KUMT-1SM
200A	3KUMT-2SM			
Energy Monitoring Hub	—	Energy Monitoring Hub	—	A8812-000
BMO Advanced Reporting Module Software	—	BMO Energy Management Software with Advanced Reporting (up to 50 data points)	—	BMOSW-EXE

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## VERIFEYE METERS



Mini Meter  
MMU



Mini Meter Flush Mount



Mini Meter Kit  
with AMR



Mini Meter Outdoor



Series 8000



Series 7000  
and 7100

	Multi-Family Residential		Residential/Commercial		
Specifications	Mini Meter™ Kits		Mini Meter Kits with AMR	Series 8000 High Density Multi-Circuit Meter	Series 7000 and 7100 Advanced Branch Circuit Monitor
	kWh Meter		kWh Meter		
Phase/Wiring	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	
Voltage Configurations	120/208/240		120/208 120/240 277/480 480*	90-346 Volts AC Line-to-Neutral, 600V Line-to-Line	
Amperages	100-200A	200A	100-5000A	50-4000A	
Measuring Parameters	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	
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	
Current Transformers Options	Split Core Solid Core	Solid Core	Split Core Solid Core	Split Core Solid Core Rogowski Coil	
Enclosure Options	<b>OEM Module</b> <b>Indoor</b> Plastic Flush Mount NEMA 1 <b>Outdoor</b> NEMA 4X <b>MMU</b> NEMA 4X	<b>Indoor</b> Flush Mount <b>Indoor</b> Surface Mount	<b>Indoor</b> JIC Steel NEMA1	<b>Indoor</b> Plastic NEMA 1 Panel Mount — no enclosure	
Display Type	LCD or Mechanical Counter	LCD	Local LCD, Scroll	Local LCD, Scroll Buttons	
Accuracy	C12.10 +/- 0.5% with paired CTs	C12.20 / 0.5% with paired CTs	C12.20 +/- 0.5%	C12.20 / 0.2%	
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 Data in 15 min Intervals	Last reading - User Selectable	

\*With potential transformer — consult factor for availability



Commercial				Commercial and Industrial					
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	
kWh Meter with Demand					Advanced kWh Meter with Communication				
Phase/Wiring	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				
Voltage Configurations	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				
Amperages	100-800A		100-1200A	100-5000A	Split Core: 100, 200, 400, 800A Rogowski: 50-5000A				
Measuring Parameters	kWh kW (standard on S2000 Indoor models only)			kWh kW (peak demand reset) Meter Totals: kVAR, kVA, Power Factor & kW By Phase: Volts, Watts, Amps, Power Factor, Interval Data	<b>Series 4000:</b> kVARh, kW, kVAR, kVA, Voltage L-L, L-N, Current, Power Factor, Frequency <b>Series 4100:</b> 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 S4100 Meter				
Communications Protocol (Standard)	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			
Current Transformers Options	Split Core Solid Core			Split Core .333V secondary output only Rogowski Coil: lengths available in 12", 18" and 24"					
Enclosure Options	<b>Indoor</b> JIC Steel NEMA 1 <b>Outdoor</b> NEMA 4X		<b>Indoor</b> JIC Steel NEMA 1 <b>Outdoor</b> NEMA 4X	<b>Indoor</b> JIC Steel NEMA 1 <b>Outdoor</b> NEMA 4X	<b>Indoor</b> DIN Rail Mount <b>Outdoor</b> NEMA 4X				
Display Type	Local LCD			Local LCD, Scroll Buttons					
Accuracy	C12.10 and C12.20 +/- 0.5%			C12.10 +/- 0.5%	C12.20 / 0.2%				
Multiple Meter Unit (MMU) Configurations	—			—					
Data Storage	Last Reading Peak Demand and Instantaneous Demand- Standard on S2000 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			

## MINI METER™

### EQUITABLE TENANT BILLING

Some multi-tenant residential properties include energy costs in rental fees and generally charge tenants for energy based on the square footage occupied. To be truly equitable, tenants should pay only for what they actually use. With Leviton Mini Meters, building managers can easily track and allocate energy usage costs fairly to multiple tenants, as well as recoup energy expenses from common-use areas (parking lots, hall lighting, etc.). Tenants benefit by paying only for the energy they use; and when they focus on conserving energy, they can see direct financial benefits from their efforts.

- kWh Meter
- 120/208V 1PH/3W and Split Phase 120/240V
- 100-200 Amps
- Pulse Output - standard feature
- Available in NEMA 4X indoor/outdoor individual meter enclosures and Multiple Meter Units (MMUs) from 2 to 19 meters
- Select surface of flush mount models include built in wireless transmitter for automated meter reading when other required system components are purchased
- Revenue grade accuracy: 0.5% accuracy class
- Use with split core or solid core CTs



Indoor Flush Mount  
Mini Meter



Indoor Surface Mount  
Mini Meter



Outdoor  
Mini Meter



Mini Meter with  
Transceiver

## MINI METER KITS

Note: Kits include meter, specified enclosure and required current transformers

### MINI METER KITS - INDOOR FLUSH MOUNT ENCLOSURE

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
120/208V 1PH 3W or 120/240V 2PH 3W (Split Phase)	100A	2 SOLID CTs	MK240-1SW
	200A		MK240-2SW

### MINI METER KITS - OUTDOOR ENCLOSURE

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
120/208V 1PH 3W or 120/240V 2PH 3W (Split Phase)	100A	2 SOLID CTs	MO240-1SW
	200A		MO240-2SW
120/208V 1PH 3W or 120/240V 2PH 3W (Split Phase)	100A	2 Split CTs	MO240-01W
	200A		MO240-02W

### MINI METER KITS WITH WIRELESS AMR - INDOOR SURFACE OR FLUSH MOUNT ENCLOSURE\*

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
120/208V 1PH 3W or 120/240V 2PH 3W (Split Phase) Flush Mount Surface Mount	200A	2 SOLID CTs	MDTFW-2SC
			MDTSW-2SC

### WIRELESS REPEATER

DESCRIPTION	CAT. NO.
Repeater, 5V, includes 5VDC 1A plug-in power supply and internal backup battery	T95RX-000

### WIRELESS DATA CONCENTRATING ACCESS POINTS (DCAPS)\*\*

DESCRIPTION	CAT. NO.
Data Concentrating Access Point (DCAP), Low Capacity (150 meter points max), built-in radio receiver	T25DX-151
DCAP, High Capacity (1000 meter points max), built-in radio receiver	T25DX-102

\*For a complete wireless Automatic Meter Reading (AMR) system, data transceivers and other wireless network components (DCAPs and Repeaters) are required as dictated by building construction

TOU = Time of Use, providing 15-minute time-stamped kWh interval data

\*\*All DCAPs and Gateways shipped with 6VDC, minimum 1.5 Amp power supply, Ethernet cable and USB cable

## MULTIPLE METER UNITS (MMUs)

Leviton Multiple Meter Units (MMUs) come pre-wired per project configuration sheets with clearly labeled connections, minimizing the electrical installation time. All VerifEye MMUs are UL listed assemblies. Available in a NEMA 4X weatherproof outdoor enclosure in 4, 8 or 19 single phase mini meter models. All MMUs are configurable for individual projects and each meter order requires submittal of a Configuration Form. **Note:** All MMUs come with UL listed final enclosures. Go to [leviton.com/verifeye](http://leviton.com/verifeye) for more information.

## MULTIPLE METER UNITS (MMUs)

### MINI METER MMUs

#### INPUT

**VOLTAGE DESCRIPTION CAT. NO.**

#### MEDIUM MINI METER MMU, 2-4 METERS

120/208V 3PH 4W, 120/240V 2PH 3W	2 Dual Element Meters	6M302-CFG
	3 Dual Element Meters	6M303-CFG
	4 Dual Element Meters	6M304-CFG

#### LARGE MINI METER MMU, 5-8 METERS

120/208V 3PH 4W, 120/240V 2PH 3W	5 Dual Element Meters	6L305-CFG
	6 Dual Element Meters	6L306-CFG
	7 Dual Element Meters	6L307-CFG
	8 Dual Element Meters	6L308-CFG

#### EXTRA-LARGE MINI METER MMU, 9-19 METERS, NEMA 4X ENCLOSURE

120/208V 3PH 4W, 120/240V 2PH 3W	9 Dual Element Meters	6X309-CFG
	10 Dual Element Meters	6X310-CFG
	11 Dual Element Meters	6X311-CFG
	12 Dual Element Meters	6X312-CFG
	13 Dual Element Meters	6X313-CFG
	14 Dual Element Meters	6X314-CFG
	15 Dual Element Meters	6X315-CFG
	16 Dual Element Meters	6X316-CFG
	17 Dual Element Meters	6X317-CFG
	18 Dual Element Meters	6X318-CFG
	19 Dual Element Meters	6X319-CFG



Mini Meter  
Medium Multiple Meter Unit (MMU)



Mini Meter  
Large Multiple Meter Unit (MMU)



## SERIES 8000 MULTI-POINT HIGH DENSITY METERS

The Series 8000 Multi-Point High Density Meters are designed to meter high density applications such as multi-tenant office and residential buildings, medium-sized retail stores, institutional facilities. They are also excellent for branch circuit monitoring applications. For easy data accessibility, the Series 8000 design is based on an open protocol network to transmit data over ModBus, BACnet and Ethernet. Combining revenue-grade electrical submetering with building automation communications technology, the Series 8000 complies with all regulatory electric safety and communications requirements and meets stringent ANSI 0.5 % Accuracy Class standards.

- Allows for revenue grade metering of up to 24 individual circuits in one device
- Monitors up to 24 current transformers:
  - 8 circuits, 3 phase loads
  - 12 circuits, 2 phase loads
  - 24 circuits, 1 phase loads
- 100-5,000 Amp current transformers
- Native communications protocol—ModBus TCP, ModBus RTU (RS-485) and BACnet IP standard
- Measures kW hours, kW demand, volts, amps
- Interval and net metering
- Two onboard pulse channels available for co-located meters with contact closures



Series 8000 Meter

## SERIES 8000 MULTI-POINT HIGH DENSITY METERS

VOLTAGE	DESCRIPTION	CAT. NO.
<b>MULTI-FAMILY RESIDENTIAL</b>		
120/208/240V	Phase Config 3x2 with Wiring Harness	S8120-032
	Phase Config 6x2 with Wiring Harness	S8120-062
	Phase Config 9x2 with Wiring Harness	S8120-092
	Phase Config 12x2 with Wiring Harness	S8120-122
120/208V	Phase Config 8x3 with Terminal Strips	S8UTS-241
	Phase Config 12x2 with Terminal Strips	
	Phase Config 24x1 with Terminal Strips	
120/208V	Phase Config 8x3 with Wiring Harness	S8UWH-241
	Phase Config 12x2 with Wiring Harness	
	Phase Config 24x1 with Wiring Harness	
<b>COMMERCIAL &amp; INDUSTRIAL</b>		
277/480V	Phase Config 8x3 with Terminal Strips	277TS-241
	Phase Config 12x2 with Terminal Strips	
	Phase Config 24x1 with Terminal Strips	
277/480V	Phase Config 8x3 with Wiring Harness	277WH-241
	Phase Config 12x2 with Wiring Harness	
	Phase Config 24x1 with Wiring Harness	

### CHOOSING BETWEEN A WIRING HARNESS AND TERMINAL STRIPS

- **Wiring harnesses offer a less labor intensive solution when all CTs are located in one panel** like in a multi-family high rise project. This eliminates the need to extend CT wires out of the panel.
- **Terminal strips are ideal for installers who prefer to land each wire and not use a color-coded wiring harness.** For CTs located in different panels or different locations with a switchboard, terminal strips offer an easier solution with the ability to extend the current transformer wiring back to the meter location for termination. Terminal strip models also carry a slightly higher cost and should be considered with the project budget.

## SERIES 7000 AND 7100 ADVANCED BRANCH CIRCUIT MONITORS

The VerifEye™ Series 7000 and 7100 Advanced Branch Circuit Monitors are cost-effective solutions for electrical load management. The Series 7000 and 7100 platforms are ideal for high density, branch circuit monitoring applications in both new construction and retrofit applications. The Series 7000 and 7100 monitors either 12 or 48 branch circuits with one meter board.

- 12 or 48 independent, user defined inputs
- 48 Unit versions configurable as follows:
  - 48 Single Pole Meters -or-
  - 16 Two Pole Meters -or-
  - 16 Three Pole Meters
- 12 Input versions configurable as follows:
  - 12 Single Pole Meters -or-
  - 4 Two Pole Meters -or-
  - 4 Three Pole Meters
- Consult factory for any other configuration options
- Reference Voltage inputs
  - 12 Input Version—One set of three phase reference inputs
  - 48 Input Version—Two sets of three phase reference inputs
- Line powered from 90-600V, phase-to-phase
- Meets ANSI & IEC metering system accuracy requirements including branch CTs
- Supports solid core, split core and Rogowski Coil CTs
- Meter board features:
  - Easy access terminals for CT wiring, removable connectors
  - Available with or without display embedded options
- Reports volts, amps, power, demand and energy for each circuit
- User-configurable alarm thresholds register for improved load management
- Selectable phase orientation and number of circuits
- Limited 5-year warranty



70D48-000



70N48-000



71D48-000



70D12-000



71D12-000

## SERIES 7000 AND 7100 ADVANCED BRANCH CIRCUIT MONITORS

VOLTAGE	DESCRIPTION	CAT. NO.
90-346 Volts AC Line-to-Neutral, 600V Line-to-Line	Series 7000 Dual Voltage, Embedded Panel Mount (no enclosure) Branch Circuit Monitor, 48 inputs, LCD display	70D48-000
	Series 7000 Dual Voltage, Embedded Panel Mount (no enclosure) Branch Circuit Monitor, 48 inputs, no display	70N48-000
	Series 7100 Dual Voltage, Branch Circuit Monitor, 48 inputs, LCD display, NEMA 1 enclosure	71D48-000
	Series 7000 Embedded Panel Mount (no enclosure) Branch Circuit Monitor, 12 inputs, LCD display	70D12-000
	Series 7000 Embedded Panel Mount (no enclosure) Branch Circuit Monitor, 12 inputs, no display	70N12-000
	Series 7100 Branch Circuit Monitor, 12 Inputs, LCD display, NEMA 1 enclosure	71D12-000

COMPATIBLE CT OPTIONS*		
AMP	DESCRIPTION	CAT. NO.
50	Split Core CT, 333mV, 0.4"	CTV5X-WA4
100	Split Core CT, 333mV, 1.6" x 2.1"	CTV01-KD0
200	Split Core CT, 333mV, 2.2" x 2.8"	CTV02-KD0
400	Split Core CT, 333mV, 6.0" x 5.2"	CTV04-KD1
800	Split Core CT, 333mV, 6.0" x 5.2"	CTV08-KG1
100	Solid Core CT, 333mV, 0.75" (19mm) ID	CDV01-K17
200	Solid Core CT, 333mV, 0.75" (19mm) ID	CDV02-K17
400	Solid Core CT, 333mV, 1.0" (25mm) ID	CDV04-K25
5-4000A	Rogowski Coil CT 16", 131mV/1000A @ 60Hz, 109.2mV/1000A @ 50Hz	CRV50-LR2
5-4000A	Rogowski Coil CT 24", 131mV/1000A @ 60Hz, 109.2mV/1000A @ 50Hz	CRV50-LR4

\*333mV CTs, sold separately

## SERIES 1000 SINGLE PHASE METERS

- kWh meter
- 100 - 800 Amps
- Isolated Pulse output - standard feature
- Large LCD Display
- Revenue grade accuracy: 0.5% accuracy class
- Use with split core or solid core CTs
- UL listed



Series 1000 Meter  
Outdoor



Series 1000 Meter  
Indoor

## SERIES 1000 SINGLE PHASE METER KITS

Note: Kits include meter, specified enclosure and required current transformers

### INDOOR ENCLOSURE

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
120V 1PH 2W	100	1 Split CT	1K120-01W
	200		1K120-02W
	400		1K120-04W
	800		1K120-08W
	100	1 SOLID CT	1K120-1SW
200	1K120-2SW		
120/208V 1PH 3W or 120/240V 1PH 3W (Split Phase)	100	2 Split CTs	1K240-01W
	200		1K240-02W
	400		1K240-04W
	800		1K240-08W
	100	2 SOLID CTs	1K240-1SW
200	1K240-2SW		
277V 1PH 2W	100	1 Split CT	1K277-01W
	200		1K277-02W
	400		1K277-04W
	800		1K277-08W
	100	1 SOLID CT	1K277-1SW
	200		1K277-2SW

### OUTDOOR ENCLOSURE

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
120V 1PH 2W	100	1 Split CT	1O120-01W
	200		1O120-02W
	400		1O120-04W
	800		1O120-08W
120/208V 1PH 3W or 120/240V 1PH 3W (Split Phase)	100	2 Split CTs	1O240-01W
	200		1O240-02W
	400		1O240-04W
	800		1O240-08W
277V 1PH 2W	100	1 Split CT	1O277-01W
	200		1O277-02W
	400		1O277-04W
	800		1O277-08W

## SERIES 2000 THREE PHASE METERS

- kWh & Demand Meter (Peak & Current Demand)
- 120/208V or 277/480V 3PH 4W WYE only
- 100 - 1200 Amps
- Isolated Pulse output—standard feature
- Large LCD Display
- Revenue grade accuracy: 0.5% accuracy class
- Use with split core or solid core CTs
- UL listed



Series 2000 Meter  
Outdoor



Series 2000 Meter  
Indoor

## SERIES 2000 THREE PHASE METER KITS

Note: Kits include meter, specified enclosure and required current transformers;\*Outdoor meters do not offer demand functionality.

### INDOOR ENCLOSURE

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
120/208V 3PH 4W WYE Demand Meter	100	3 Split CTs	2K208-01D
	200		2K208-02D
	400		2K208-04D
	800		2K208-08D
	1200		2K208-12D
277/480V 3PH 4W WYE Demand Meter	100	3 Split CTs	2K480-01D
	200		2K480-02D
	400		2K480-04D
	800		2K480-08D
	1200		2K480-12D

### OUTDOOR ENCLOSURE\*

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
120/208V 3PH 4W WYE kWh Meter	100	3 Split CTs	2O208-01W
	200		2O208-02W
	400		2O208-04W
	800		2O208-08W
	1200		2O208-12W
277/480V 3PH 4W WYE kWh Meter	100	3 Split CTs	2O480-01W
	200		2O480-02W
	400		2O480-04W
	800		2O480-08W
	1200		2O480-12W

## SERIES 3500 MULTI-FUNCTION ETHERNET METERS

- Communications Protocol
  - ModBus TCP/IP or BACnet IP
  - Isolated pulse output
- Universal voltage for 120-480V
- Measured Parameters
  - Total Meter:
    - kWh/kW
    - kVAh
    - kVA and kVAR
    - Power Factor
    - Line Frequency
  - Per Phase:
    - Voltage L-N
    - Current
    - Watts
    - VA, VAR
    - Power Factor
    - Voltage L-L
- Large LCD display with scroll feature
- Revenue grade accuracy: 0.5% accuracy class
- Installation diagnostics
- Low voltage detection
- Real time clock with battery backup for TOU reading
- Use with split core or solid core CTs
- Indoor JIC steel and outdoor (NEMA 4X) enclosure options
- UL/cUL Listed Energy Usage Monitor per CCN FTRZ



## SERIES 3500 METER KITS

### INDOOR ENCLOSURE

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
208-480V AC 3P 3W/4W ModBus TCP/ BACnet IP	100	3 Split CTs	3KUMT-01M
	200		3KUMT-02M
	400		3KUMT-04M
	800		3KUMT-08M
	1600		3KUMT-16M
	3000		3KUMT-30M
	5000	3KUMT-50M	
	100	3 SOLID CTs	3KUMT-1SM
	200		3KUMT-2SM
	400		3KUMT-4SM

### OUTDOOR ENCLOSURE

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
208-480V AC 3P 3W/4W ModBus TCP/ BACnet IP	100	3 Split CTs	3OUMT-01M
	200		3OUMT-02M
	400		3OUMT-04M
	800		3OUMT-08M
	1600		3OUMT-16M
	3000		3OUMT-30M
	5000	3OUMT-50M	
	100	3 Solid CTs	3OUMT-1SM
	200		3OUMT-2SM
	400		3OUMT-4SM

**NOTE:** Kits include meter, specified enclosure and required current transformers

## SERIES 4000 INDUSTRIAL MODBUS METER KITS

Series 4000 Industrial ModBus Meter Kits are revenue-grade (ANSI C12.20 Class 0.2%) kWh electrical meters. The Series 4000 Kits include a DIN rail mount, 3-phase, advanced communication meter with split core or flexible rope-style Rogowski CTs for compact or irregular shaped conductors. Combinations of serial communication, pulse output and phase alarms are provided to suit a wide variety of applications.

- Industrial Temperature Range of -22 to 158°F (30 to 70°C)
- DIN Rail options available
- Options for 100, 200, 400 and 800A Split Core CTs and Rogowski CTs (50-5000A)
- ANSI 12.20 0.2% accuracy, IEC 62053-22 Class 0.2S
- Real energy output and phase loss alarm output
- User-enabled password protection to protect meter from tampering
- Bright, backlit LCD for installation in dark areas and viewing real time data
- AMR/BAS system integration via ModBus RTU- RS-485 2-wire with shield
- 90-600VAC (50/60Hz) versatility including 347V (L-N) and 600V (L-L) with fewer models to stock



Series 4000 DIN Rail Mount



Series 4000 Outdoor NEMA Enclosure

## SERIES 4000 MODBUS METER KITS

### DIN RAIL MOUNT KITS

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
Universal 3PH 3W/4W	100	Split Core CTs	4KUMR-01M
	200		4KUMR-02M
	400		4KUMR-04M
	800		4KUMR-08M
	50-5000	12" Rogowski Coil CTs	4KUMR-R12
	50-5000	18" Rogowski Coil CTs	4KUMR-R18
	50-5000	24" Rogowski Coil CTs	4KUMR-R24

### STANDALONE METERS ONLY

Universal 3PH 3W/4W	100, 200, 400, 800	Split Core CTs Only	4KUMR-00M
Universal 3PH 3W/4W	50-5000	Rogowski Coil CTs Only	4KUMR-00R

### OUTDOOR NEMA ENCLOSURE KITS

Universal 3PH 3W/4W	100	Split Core CTs	4OUMR-01M
	200		4OUMR-02M
	400		4OUMR-04M
	800		4OUMR-08M
	50-5000	12" Rogowski Coil CTs	4OUMR-R12
	50-5000	18" Rogowski Coil CTs	4OUMR-R18
	50-5000	24" Rogowski Coil CTs	4OUMR-R24

### COMPONENTS

AMPS	DESCRIPTION	CAT. NO.
100	Split Core CTs	CTV01-KD0
200		CTV02-KD0
400		CTV04-KD1
800		CTV08-KG1
—	Fuse Pack, 1/2A, 600VAC, slow blow	CTV00-FK3
20-5000	12" Rogowski Coil CTs	CRV50-K62
	18" Rogowski Coil CTs	CRV50-K93
	24" Rogowski Coil CTs	CRV50-KC2
100	333mV CTs	CDV01-K17
200	333mV CTs	CDV02-K17

## SERIES 4100 BIDIRECTIONAL MODBUS RTU OR BACNET MS/TP METER KITS

The VerifEye Series 4100 Bidirectional ModBus RTU or BACnet MS/TP Meter Kits feature bidirectional monitoring specifically designed for renewable energy applications. The Series 4100 Meter Kits measure power imported from the utility grid and power exported from renewable energy source like solar panels. The Series 4100 Meter Kits are available in a standalone DIN rail mount or NEMA 4X enclosures and come with either split core or flexible rope-style Rogowski Current Transformers (CTs).

- Bidirectional energy monitoring for renewable energy applications
- Industrial temperature range: -22 to 158°F (-30 to 70°C)
- 50/60 Hz
- Options for 100, 200, 400, and 800A Split Core CTs and Rogowski CTs (50-5000A)
- DIN rail mount option available
- User-enabled password protection to protect meter from tampering
- Bright, backlit LCD for installation in dark areas and viewing real time data
- AMR/BAS system integration via ModBus RTU or BACnet MS/TP - RS-485 Serial
- CSI approval for California Solar Initiative
- 90-600V versatility (347V L-N max)



Series 4100 DIN Rail Mount



Series 4100 Outdoor NEMA Enclosure

## SERIES 4100 BIDIRECTIONAL MODBUS RTU AND BACNET MS/TP METER KITS

### INDOOR DIN RAIL MOUNT MODBUS METER KITS

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
Universal 3PH 3W/4W ModBus RTU	100	Split Core CTs	4DUMR-01M
	200		4DUMR-02M
	400		4DUMR-04M
	800		4DUMR-08M
	50-5000	12" Rogowski Coil CTs	4DUMR-12R
	50-5000	18" Rogowski Coil CTs	4DUMR-18R
	50-5000	24" Rogowski Coil CTs	4DUMR-24R

### OUTDOOR NEMA ENCLOSURE - MODBUS METER KITS

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
Universal 3PH 3W/4W ModBus RTU	100	Split Core CTs	41OUM-01M
	200		41OUM-02M
	400		41OUM-04M
	800		41OUM-08M
	50-5000	12" Rogowski Coil CTs	41OUM-12R
	50-5000	18" Rogowski Coil CTs	41OUM-18R
	50-5000	24" Rogowski Coil CTs	41OUM-24R

### INDOOR DIN RAIL MOUNT BACNET MS/TP METER KITS

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
Universal 3PH 3W/4W BACnet MS/TP	100	Split Core CTs	4DUBM-01B
	200		4DUBM-02B
	400		4DUBM-04B
	800		4DUBM-08B
	50-5000	12" Rogowski Coil CTs	4DUBM-12R
	50-5000	18" Rogowski Coil CTs	4DUBM-18R
	50-5000	24" Rogowski Coil CTs	4DUBM-24R

### OUTDOOR NEMA ENCLOSURE - BACNET MS/TP METER KITS

VOLTAGE	AMPS	CTS INCLUDED	CAT. NO.
Universal 3PH 3W/4W BACnet MS/TP	100	Split Core CTs	41OUB-01B
	200		41OUB-02B
	400		41OUB-04B
	800		41OUB-08B
	50-5000	12" Rogowski Coil CTs	41OUB-12R
	50-5000	18" Rogowski Coil CTs	41OUB-18R
	50-5000	24" Rogowski Coil CTs	41OUB-24R

## CURRENT TRANSFORMERS

The better the equipment, the better the measurement. Leviton meters utilize highly accurate current transformers for revenue-grade performance certified to ANSI standards. Competing products use current sensors that do not provide the same level of performance. Leviton Meter Kits include Split Core, Rogowski Coil, or Solid Core Current Transformers (CTs) for high-quality, long-term accuracy and reliability. For added safety, all Leviton current transformers come with built-in voltage suppression devices that prevent hazardous voltages from developing on CT secondaries should they become disconnected from a meter with load current present. Compact and cost-effective solid core CTs slip over power lines to measure the electrical current flowing through the line. For solid core CT installation, power must be de-energized and the circuit opened, in order to slip the CT over the power line.

## CURRENT TRANSFORMERS

**SOLID CORE—FOR USE WITH SERIES 1000, 2000, 3500 AND 8000 METERS, MINI METERS AND MMUS ONLY**

AMP	DESCRIPTION	CAT. NO.
100:0.1A	Solid Core, 0.72", Black	CDA01-K12
	Solid Core, 0.72", Blue	CDA01-L12
	Solid Core, 0.72", Red	CDA01-R12
200:0.1A	Solid Core, 0.72", Black	CDA02-K12
	Solid Core, 0.72", Blue	CDA02-L12
	Solid Core, 0.72", Red	CDA02-R12
400:0.1A*	Solid Core, 1.5", Black	CDF04-K24

\*Not for use with Mini Meters

**333mV SOLID CORE—FOR USE WITH SERIES 4000 AND 7000 METERS ONLY**

AMP	DESCRIPTION	CAT. NO.
100:0.333mV	Solid Core, 0.75", Black	CDV01-K17
200:0.333mV	Solid Core, 0.75", Black	CDV02-K17

**SPLIT CORE—FOR USE WITH SERIES 1000, 2000, 3500, 8000, MINI METERS METERS AND MULTIPLE METER UNITS (MMUs) ONLY**

AMP	DESCRIPTION	CAT. NO.
100:0.1A	Split Core, .75" x .75"	CTD01-K16
200:0.1A	Split Core, 1" x 1"	CTD02-K16
400:0.1A	Split Core, 1.5", x 1.5"	CTD04-K23
800:0.1A	Split Core, 3" x 3.5"	CTC08-K46
1200:0.1A	Split Core, 4" x 6"	CTC12-K46
1600:0.1A	Split Core, 4" x 6"	CTC16-K96
3000:0.1A	Split Core, 5" x 7"	CTC30-57B
5000:0.1A	Split Core, 5" x 7"	CTC50-57B

**333mV SPLIT CORE—FOR USE WITH SERIES 4000, 4100 INDUSTRIAL MODBUS METER KITS AND SERIES 7000 AND 7100 METERS ONLY**

AMP	DESCRIPTION	CAT. NO.
50:0.333V	Split Core, 0.4"	CTV5X-KD0
100:0.333V	Split Core, 1.6" x 2.1"	CTV01-KD0
200:0.333V	Split Core, 2.2" x 2.8"	CTV02-KD1
400:0.333V	Split Core, 6" x 5.2"	CTV04-KG1
800:0.333V	Split Core, 6" x 5.2"	CTV08-K40

**ROGOWSKI COIL—FOR USE WITH SERIES 4000 AND 4100 INDUSTRIAL MODBUS METER KITS ONLY**

AMP	DESCRIPTION	CAT. NO.
50-5000A	Rogowski Coil, 12"	CRV50-K62
	Rogowski Coil, 18"	CRV50-K93
	Rogowski Coil, 24"	CRV50-KC2

**ROGOWSKI COIL—FOR USE WITH SERIES 7000 AND 7100 METERS ONLY**

AMP	DESCRIPTION	CAT. NO.
50-4000A	Rogowski Coil, 16"	CRV50-LR2
	Rogowski Coil, 124"	CRV50-LR4



Solid Core  
Current Transformers  
100A, 200A, 400A,  
100mA/333mV available



333mV Solid Core  
Current Transformers  
100A-200A available



Split Core  
Current Transformers  
100A-5,000A 100mA available



333mV Split Core  
Current Transformers  
100A-5000A available



Rogowski Coil  
Current Transformer  
50A-5000A available



## WATER METERS

Address a wide range of water measurement and verification applications with Leviton water meter solutions. Water meter options include polymer and bronze models. These meters offer a cost-effective, reliable solution for incorporating water tenant billing and other metering projects. They are compatible with automated reading hardware and wireless AMR transmitters, simplifying integration into other metering and building systems.

### COMMERCIAL & RESIDENTIAL WATER METERS

- Meets all AWWA standards
- California CTEP and NTEP approved models available for hot and cold applications
- High quality long-life parts
- Tamper detection
- NSF-61-G
- Pulse output
- Designed for water tenant billing applications
- Compatible with wireless AMR solutions
- Register units—US gallons



Residential Polymer Cold Water Meter



Residential Polymer Cold Water Meter

## LEVITON WATER METERS

### COMMERCIAL WATER METERS

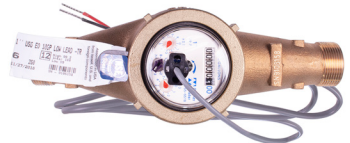
DESCRIPTION	CAT. NO.
3/4-in by 5/8-in Bronze Water Meter with Couplings	WMC75-BU1
1-in Bronze Cold Water Meter with Couplings	WMC10-BU1
1.5-in Bronze Cold Water Meter with Couplings	WMC15-BU1
2-in Bronze Cold Water Meter with Couplings	WMC20-BU1
3/4-in Bronze Hot Water Meter with Couplings	WMH75-BU1
1-in Bronze Hot Water Meter with Couplings	WMH10-BU1
1.5-in Bronze Hot Water Meter with Couplings	WMH15-BU1
2-in Bronze Hot Water Meter with Couplings	WMH20-BU1

### RESIDENTIAL WATER METERS

DESCRIPTION	CAT. NO.
3/4-in Cold Water Meter - CA certified, couplings sold separately	WMC75-PC1
3/4-in Hot Water Meter - CA certified, couplings sold separately	WMH75-PC1
3/4-in Meter Couplings, Polymer Set (2)	WMX75-PZ1
3/4-in Spacer Tube, Polymer	WMX75-PY1



Commercial Bronze Hot Water Meter



Commercial Bronze Multi-Jet Cold Water Meter

## GAS METERS

Gas meter options offer a cost-effective, reliable solution for incorporating gas tenant billing and other metering projects. They are compatible with automated reading hardware and wireless AMR transmitters, simplifying integration into other metering and building systems.

- AMR/AMI compatible
- Tamper-resistant
- Pulse output
- Compatible with Wireless AMR
- 400 CFH Meter's Easy Turn design allows for a drastically simplified installation

## LEVITON GAS METERS

DESCRIPTION	CAT. NO.
Residential Gas Meter with pulse output, 0.75-in NPT connectors included	GMP75-201
250 CFH Gas Meter with temp condensation and pulse output, 1-in connector set included	GMP10-251
400 CFH Commercial Gas Meter with temp condensation and pulse output, includes 1-in or 1.5-in connector set	GMP15-401



GMP75-201



GMP15-401



GMP10-251

## VERIFEYE COMMUNICATION PRODUCTS



Energy Monitoring Hub (EMH)



EMB Hub



EMB HubLite



High Density Pulse Module



Flex I/O Module



ModHopper

Specifications	Data Acquisition Hubs (ModBus Master)			Input/Output Module		Wireless ModBus/Pulse Transceiver
	Energy Monitoring Hub (EMH)*	EMB Hub*	EMB HubLite*	High Density Pulse Module	Flex I/O Module	ModHopper
	A8812	A8810	A7810	A8911	A8332	R9120
Communication Protocols	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
Applications	Use with an Ethernet (LAN) connection to push-or-pull data via HTTP, XML, and 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-in 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

### HOW TO SELECT THE APPROPRIATE DATA ACQUISITION HUB

	ModBus TCP	ModBus RTU	4 Pulse Inputs Onboard	8 Flex Inputs On Board**	Requires Separately Ordered Power Supply
<b>A8812-000 EMH</b>	X	X	-	X	-
<b>A8810-000 EMB Hub</b>	X	X	-	-	X
<b>A7810-000 EMB HubLite</b>	X	-	X	-	X

\*\* Pulse, analog, status and resistive

## METERING COMMUNICATIONS SYSTEMS

To create a data network between Leviton submeters and stakeholders (BAS, third party billing, Building Manager Online (BMO) 3.0), Leviton offers Metering Communication Systems. These solutions transmit data from meters to end systems, creating a seamless transition between data collection and data display. Leviton Metering Communications Systems also enable facilities to create metering systems that can easily share data through open protocols such as ModBus, and IP-based data transfer through HTTP/FTP of .csv or XML files. The results are robust and reliable networks scalable to accommodate future expansion, with data made accessible from any internal or external location.

## DATA ACQUISITION HUBS

### ENERGY MONITORING HUBS

Data Acquisition Hubs, including the Energy Monitoring Hub (EMH), EMB and EMB HubLite are intelligent, flexible data acquisition servers allowing users to collect energy data from meters and environmental sensors. As Designed to connect to IP-based applications such as enterprise energy management, demand response and smart grid programs, Hub servers allow you to connect thousands of energy points, benchmark energy usage and reduce energy costs.

- Collects and logs data from connected wired or wireless devices based on user-set intervals
- Pushes or pulls data via HTTP, XML, FTP or any custom protocol using an Ethernet (LAN) connection
- No software required—information can be accessed through any web browser in any location
- Plug and play connectivity
- Compatible with nearly any front-end software platform allowing customers to use a variety of reporting tools
- Push or pull meter data to energy dashboards, kiosks and software applications
- Monitor performance of critical systems (lighting, HVAC, PDUs, inverters, etc.)

## DATA ACQUISITION HUBS\*

DESCRIPTION	CAT. NO.
Energy Monitoring Hub	A8812-000
EMB Hub	A8810-000
EMB HubLite	A7810-000
Power Supply for EMB Hub and EMB HubLite	YBM07-001

Refer to page 16 for the EMH+ Integrated Meter and Energy Monitoring Hub



Energy Monitoring Hub



EMB Hub



EMB HubLite

## INPUT/OUTPUT MODULES

### HIGH DENSITY PULSE MODULE

The High Density Pulse Module provides a convenient way to expand a VerifEye metering system by connecting the HD Pulse Module to an Energy Monitoring Hub (EMH) and/or ModHopper for system expansion. The HD Pulse Module accepts up to 23 standard pulse meters or sensors and can function as a slave device with any ModBus master. This data can easily be integrated to a network of other critical energy sensors to provide a comprehensive energy monitoring solution. The HD Pulse Module is ideal for applications with a high density of pulse output devices, giving users access to meters that would previously require manual reading.

- External communications handled via shielded twisted pair 18-22 gauge wire allowing communication up to 4,000 ft and pulse input communications up to 200 ft using 18-24 gauge control wire
- DIN or wall mounting make installations quick and easy
- Device verification—LED indicators for each pulse input allow for fast indication and verification of pulses to reduce installation and troubleshooting time
- Non-volatile memory retains configuration and pulse count totals during power failures for reliable data collection and retention
- Easily add pulse meters to ModBus network for a scalable, open protocol solution
- Field upgradable firmware for user-friendly future upgrades and expansion
- Pulse output value is user selectable (ex: industry standard is 1 pulse per 1 kWh)



High Density Pulse Module

### FLEX I/O MODULE

The Flex I/O Module is a cost-effective way to collect data from meters or sensors and bring the information into a ModBus network or energy monitoring system. As a stand-alone or bundled package, the Flex I/O Module can be incorporated with data acquisition and metering devices to provide a cost-effective energy monitoring solution. The Flex I/O Module is compatible with virtually any ModBus master, allowing customers the flexibility to use it in existing ModBus networks. Use with the VerifEye Energy Monitoring Hub (EMH).

- Easily add meters and sensors to the ModBus network
- 8x user selectable inputs
- 2x output relays for manual controls or pulse replication
- Non-volatile memory
- Industrial temperature range of -22 to 158°F (-30 to 70°C)
- LEDs for visual verification/status reduce installation and troubleshooting time
- Din or wall mount for easy installation
- Field upgradable firmware for user-friendly future upgrades and expansion



Flex I/O Module

## INPUT/OUTPUT MODULES

DESCRIPTION	CAT. NO.
High Density Pulse Module, 23 Inputs	A8911-000
Flex I/O Module, 8 User Selectable Inputs, 2 Relay Outputs	A8332-000
DIN Rail Mount Power Supply, +24VDC	PST24-I10

## MODHOPPER

### WIRELESS

The ModHopper is designed with breakthrough mesh technology that makes connecting ModBus RTU (RS-485) and pulse devices simple and cost effective. Our “smart” ModHopper transceivers eliminate the need for costly wiring runs allowing users to wirelessly capture meter data in the most challenging retrofit and campus environments. Collect data from meter points in existing buildings with minimum down-time or disruption of day-to-day operations.

- Designed specifically for wireless metering and VerifEye submetering solutions for guaranteed compatibility
- No software or programming required and devices automatically configure when powered, reducing labor costs and installation time
- Wireless “mesh” network—self-healing, self-optimizing for ease of installation and maintenance
- Connect up to 32 ModBus and 2 pulse devices per ModHopper for the ultimate expandable solution
- Long distance communication (3,000 ft indoor/14 miles LOS Outdoors) for flexibility of placement and easier future expansion
- Multiple independent network capability
- Reliable, constant two-way communication and packet verification
- Point to multi-point communication
- Field upgradable firmware for user-friendly future upgrades and expansion



ModHopper

## WIRELESS MODBUS/PULSE TRANSCEIVER

DESCRIPTION	CAT. NO.
ModHopper and Power Supply	R9120-500
High Gain Antenna for ModHopper	R9120-ANT



High Gain Antenna for ModHopper

## NEMA COMMUNICATION BUNDLES

NEMA Communication Bundles combine VerifEye’s Data Acquisition Products into one enclosure for a VerifEye-exclusive, all-in-one-bundled communication solution for indoor use. All VerifEye NEMA communication bundles have one part number and are factory pre-assembled for ease of ordering eliminating the need for field assembly.

## NEMA COMMUNICATION BUNDLES

DESCRIPTION	CAT. NO.
Energy Monitoring EMB Hub with Line Voltage Power Supply, NEMA 4X Enclosure	A8810-PS1
Energy Monitoring EMB HubLite with Line Voltage Power Supply, NEMA 4X Enclosure	A7810-PS1
HD Pulse Module with Line Voltage Power Supply, NEMA 4X Enclosure	A8911-PS1
Flex I/O Module with Line Voltage Power Supply, NEMA 4X Enclosure	A8332-PS1



## VERIFEYE SOFTWARE PRODUCTS

### BUILDING MANAGER ONLINE (BMO)

VerifEye Building Manager Online (BMO) web-based software provides the Measurement & Verification (M&V) tools necessary to get the most out of your submetering system.

<b>BASE MODULE</b>	
<b>CAT. NO.</b>	<b>DESCRIPTION</b>
BMOSW-050	BMO Energy Management Software (first 50 data points are included at no charge for the first year)
BMOSW-MTR	BMO Energy Management - Additional 50 data points (1st year)
BMOSW-TR1	BMO Energy Management Software - Annual Renewal Tier 1 (50 data points)
BMOSW-TR2	BMO Energy Management Software - Annual Renewal Tier 2 (100 data points)
BMOSW-TR3	BMO Energy Management Software - Annual Renewal Tier 3 (250 data points)
BMOSW-TR4	BMO Energy Management Software - Annual Renewal Tier 4 (500 data points)
<b>ADVANCED REPORTING MODULE</b>	
<b>CAT. NO.</b>	<b>DESCRIPTION</b>
BMOSW-EXE	BMO Energy Management Software with Advanced Reporting (up to 50 data points)
BMOSW-EXU	BMO Advanced Reporting Upgrade - per each additional 50 data points (1st year)
BMOSW-MTE	BMO Energy Management with Advanced Reporting - Add 50 data points
BMOSW-ER1	BMO Energy Management Software with Advanced Reporting - Annual Renewal Tier 1 (50 data points)
BMOSW-ER2	BMO Energy Management Software with Advanced Reporting - Annual Renewal Tier 2 (100 data points)
BMOSW-ER3	BMO Energy Management Software with Advanced Reporting - Annual Renewal Tier 3 (250 data points)
BMOSW-ER4	BMO Energy Management Software with Advanced Reporting - Annual Renewal Tier 4 (500 data points)
<b>TENANT BILLING MODULE</b>	
<b>CAT. NO.</b>	<b>DESCRIPTION</b>
BMOSW-BIL	BMO Tenant Billing Software (up to 50 data points)
BMOSW-MTB	BMO Tenant Billing - Add 50 data points
BMOSW-TRA	BMO Tenant Billing - Annual Renewal Tier A (50 data points)
BMOSW-TRB	BMO Tenant Billing - Annual Renewal Tier B (100 data points)
BMOSW-TRC	BMO Tenant Billing - Annual Renewal Tier C (250 data points)
BMOSW-TRD	BMO Tenant Billing - Annual Renewal Tier D (500 data points)
<b>SUPPORT SERVICES</b>	
<b>CAT. NO.</b>	<b>DESCRIPTION</b>
BMOSW-STP	BMO Short Term Support Plan (90 Days)
BMOSW-LTP	BMO Long Term Support Plan (1 Year)

## BUILDING MANAGER ONLINE (BMO) MODULES



	Base Energy Management	Energy Management with Advanced Reporting	Tenant Billing
	Web-Based Software		
<b>Primary Functions</b>	<p>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 Title 24, ASHRAE 90.1, Seattle Energy Code and New York Local Law 88.</p>	<p>Includes all the functionality of the Base Module with the addition of enhanced reporting and dashboarding features.</p> <p>Adds support for Daily and Hourly Heat Maps, Drift Analysis reporting and Kiosk display.</p> <p>Provides custom report design features.</p>	<p>Monitor individual units to create invoices and tenant billing reports.</p> <p>Supports an online portal for tenants to log in and monitor their usage and billing information.</p> <p>Includes all the features of both the Base and Advanced Reporting Modules.</p>



# Service and Support

## During Every Step of the Process

There is much more to measuring and managing a facility's energy than just installing a meter or two. System design, product selection, installation and service: it all has to come together. That's where Leviton service and support options come in. We'll help you design your system and make the right product selections so you can create an energy management system that does exactly what you want it to do while saving electricity, billing tenants and meeting codes and standards.

It all starts with the Leviton sales representative. Our metering specialists are here to support you every step of the way. They can perform on-site facility audits and suggest specific products and strategies for improving energy monitoring and management.

### Exclusive Wealth of Resources

- **Exclusive Training** - contact your local Leviton representative to have a meter expert provide training in person or online exclusively for your team
- **ASHRAE 90.1, IECC and California Title 24 Apps** - simplifies metering requirements and provides examples for common applications - available for Android and Apple devices - download at [www.leviton.com/apps](http://www.leviton.com/apps)
- **ASHRAE Web Portal** - access application diagrams and product solutions - visit [www.leviton.com/ashrae](http://www.leviton.com/ashrae)
- **IECC Web Portal** - access application diagrams and product solutions - visit [www.leviton.com/iecc](http://www.leviton.com/iecc)
- **Title 24 Web Portal** - access application diagrams and product solutions - visit [www.leviton.com/title24](http://www.leviton.com/title24)
- **ez-Learn™** - get Leviton smart from the comfort of your home or office with this exclusive 24/7 online training - go to [www.leviton.com/ezlearn](http://www.leviton.com/ezlearn)
- Field service engineers for top-level support
- Factory commissioning service
- Dedicated technical support via phone at **800-959-6004**







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