

CLASS 2100 KWH METER

with Built-In Wireless Transceiver

Features

- Direct-read 8-digit LCD display without multiplier displays accumulative kWh and "real-time" kW load.
- Meter has built-in wireless transceiver for in-building remote meter data collection and can interface with E-Mon wireless gateways to automatically compile data in PC-based E-Mon metering software.
- Fully self-configuring wireless mesh network allows for easy installation and configuration with no network management required.
- Demand option displays kW/Demand and kW Peak date and time (15 minute interval standard, 30 minute interval available.)
- NEMA 4X outdoor enclosure with 1 1/16" KO (3/4" cond.) on bottom of enclosure.
- Non-volatile Memory
- Utility Grade Metering Accuracy. Certified to ANSI C12.1 and C12.16 electronic meter National Accuracy Standards.
- Wireless transceiver is FCC certified not to interfere with existing infrastructure.
- Wireless mesh network operates in the 915 MHz frequency hopping spread-spectrum license-free band. No cellular wireless service contracts are required.
- Meters with built-in wireless transceivers can be mounted inside buildings within approximately 500 feet line-of-sight from each other and up to 200 feet through walls, depending on wall material.
- 0-2 volt output split-core current sensors promote enhanced safety and accurate remote mounting of current sensors up to 2000 feet from meter without power interruption. (Optional solid-core sensors available.)
- Meters are equipped with a current sensor diagnostics indicator to assist in installation.
- Parallel up to three (3) sets of current sensors for cumulative reading.
- Meter can be used on the following configurations:
 - 3-Phase, 4-Wire
 - 3-Phase, 3-Wire
 - 2-Phase, 3-WireFor other configurations contact factory.



Dimensions: 7 1/2" H x 7 1/2" W x 4" D

Model Numbers

120/208-240V, 3-Phase, 4W
240V, 3-Phase, 3W
208100RWT KIT (100 amp)
208200RWT KIT (200 amp)
208400RWT KIT (400 amp)
208800RWT KIT (800 amp)
2081600RWT KIT (1600 amp)
2083200RWT KIT (3200 amp)

277/480V, 3-Phase, 4W
480V, 3-Phase, 3W
480100RWT KIT (100 amp)
480200RWT KIT (200 amp)
480400RWT KIT (400 amp)
480800RWT KIT (800 amp)
4801600RWT KIT (1600 amp)
4803200RWT KIT (3200 amp)

NOTE: All meter kits include one set of three (3) split-core current sensors

For demand option add suffix "D" to the model number. e.g., 208400RWTD KIT

Features

- Easy-to-read 6-digit electro-mechanical display for diagnostics.
- Meter has built-in wireless transceiver for in-building remote meter data collection and can interface with E-Mon wireless gateways to automatically compile data in PC-based E-Mon metering software.
- Meters with built-in wireless transceivers can be mounted inside buildings within approximately 500 feet line-of-sight from each other and up to approximately 200 feet through walls, depending on wall material.
- Revenue grade accuracy.
- On-board memory.
- Meter can be used on the following configurations:
 - 1-Phase, 2-Wire
 - 2-Phase, 3-Wire
- 0-2 volt output split-core current sensors allow for safe and accurate remote mounting of current sensors up to 2,000 feet from meter without power interruption. (Optional solid-core sensors available.)
- Non-metallic enclosure is ideal for installation inside tenant and residential spaces.
- Wireless mesh network operates in the 915 MHz license-free band. No cellular wireless service contracts are required.
- Fully self-configuring wireless mesh network allows for easy installation and configuration with no network management required.
- FCC certified not to interfere with existing infrastructure.
- Meets national accuracy standards of ANCI C12.1 and C12.16.
- UL Listed. New York City approved, Con Edison approved for RSP program. Measurement Canada approved for revenue metering. California Bureau of Weights and Measures certified.



Dim: 7" H x 6" W x 2" D

Model Numbers

120V, 1-Phase, 2W
(Supplied with 1 split-core current sensor)
2120100WT KIT (100 amp)
2120200WT KIT (200 amp)

120/208-240V, 1- or 2-Phase, 3W
(Supplied with 2 split-core current sensors)
3208100WT KIT (100 amp)
3208200WT KIT (200 amp)

Additional Components

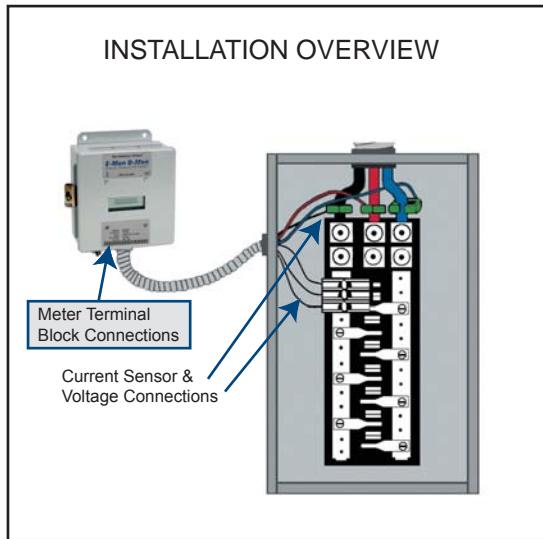
Wireless Gateway	WGATEWAY
Wireless Meter	
Reading Software	WRSOFT

INSTALLATION OVERVIEW

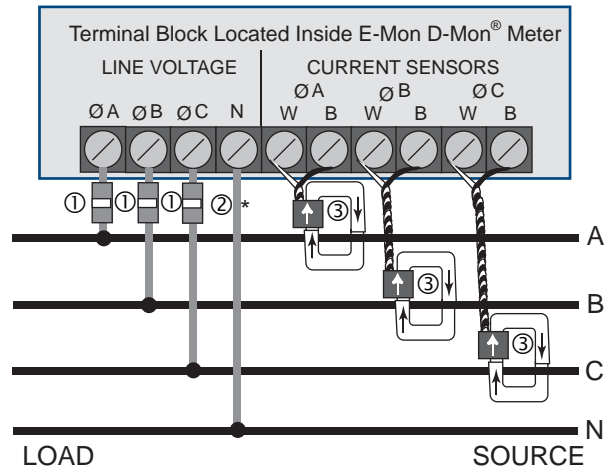
CLASS 1000, 2000 and 3000 Meters

E-Mon D-Mon

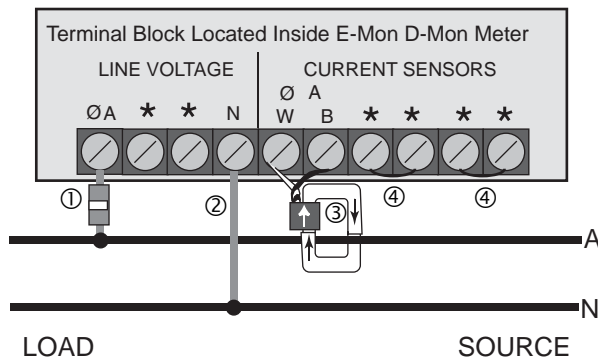
Energy Monitoring Products & Systems



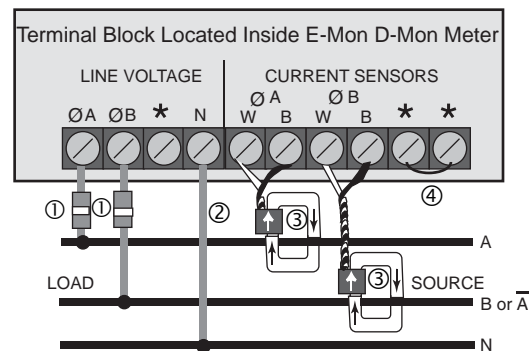
3-PHASE, 3-WIRE OR 3-PHASE, 4-WIRE INSTALLATION DIAGRAM



1-PHASE, 2-WIRE 120 or 277 VOLT INSTALLATION DIAGRAM (Class 1000 Series Only)



SINGLE-PHASE, 3-WIRE 120/240, 120/208 or 480 VOLT INSTALLATION DIAGRAM



* These terminals are not used in Class 1000 installations.

- ① Recommended fuses or circuit breaker per the National Electrical Code (Meter load 6VA.)
- *② Neutral not required in delta system.
- ③ Split-core current sensors. Install according to instructions.
- ④ Install jumper.

External Wireless Module for use with E-Mon D-Mon Meters

Features

- Stand-alone wireless mesh network module for retrofit of existing E-Mon D-Mon Class 1000 and 2000 meters. Ideal for upgrading existing installations to an automatic meter reading system.
- Module powered by E-Mon D-Mon meter.
- Integrate with E-Mon wireless metering systems.
- Compatible with 208 and 480 volt meters.
- Plug-and-play installation. Self-configures to the wireless mesh network.
- Allows creation of usage graphs, charts and usage statements via E-Mon Energy software.
- Contains local storage for 2+ months of 15 minute interval data.
- Wireless tranceiver is FCC certified not to interfere with existing infrastructure.
- Wireless mesh network operates in the 915 MHz frequency hopping spread-spectrum license-free band. No cellular wireless service contracts are required.
- Wireless modules can be mounted inside buildings within approximately 500 feet line-of-sight from each other and up to 200 feet through walls, depending on wall material.
- Automatic time synchronization.
- Automatic network acquisition at power ON.
- Utilizes EKA Systems technology.



Dimensions: 7" H x 3" W x 2" D

Model Number

EWM

Features

- Complete wireless socket meter package compatible with E-Mon D-Mon wireless metering solutions.

- Meter Features:

- Electronic LCD Display
- Polycarbonate Cover
- Demand Reset
- Optical Tower
- Test Mode Push Button
- Test LED
- Meets ANSI, IEC and FCC standards.
- Available Configurations:
 - Two or Three Wire
 - 120 or 240 Volt
 - Form 1S, 2S, 3S, 4S or 12S
 - Class 20, 100, 200 or 320
- Temperature -40 to +85 degrees C.
- Humidity 0% to 95% non-condensing
- ANSI C12.20 0.5 Accuracy Class

- Wireless Features:

- Operates in 915 MHz license-free bands
- Installed "under the glass"
- Fully self-configuring wireless mesh network
- Automatic time synchronization
- Local non-volatile data storage
- Internal and external antenna options
- Provides real-time access to interval data
- Provides full wireless routing capability
- Full peer-to-peer communication
- Multiple redundant paths
- No network address management required
- Automatic network acquisition at Power ON
- Automatic time synchronization of all meters in the network.



Dim: 6.29" Diameter x 4.98" Depth

Metering Packages

Multi-Family Residential

Voltage	Element	Form	Model
120/240V	1	2S	EMON2S
120/208V	2	12S	EMON12S

Three-Phase Commercial

Contact Factory at (800) 334-3666.

Additional Components

Wireless Gateway	WGATEWAY
Wireless Meter	
Reading Software	WRSOFT

Features

- Interface with water and gas meters equipped with pulse output (solid-state or reed switch.)
- Includes 120 VAC power supply module.
- Compatible with E-Mon D-Mon wireless metering systems.
- Plug-and-play installation. Self-configures to the wireless mesh network.
- Contains local storage for 2+ months of 15 minute interval data.
- Allows creation of graphs, charts and usage statements via E-Mon Energy software.
- Wireless transceiver is FCC certified not to interfere with existing infrastructure.
- Wireless mesh network operates in the 915 MHz frequency hopping spread-spectrum license-free band. No cellular wireless service contracts are required.
- Wireless modules can be mounted inside buildings within approximately 500 feet line-of-sight from each other and up to 200 feet through walls, depending on wall material.
- Automatic time synchronization.
- Automatic network acquisition at power ON.
- Utilizes EKA Systems technology.



Dimensions: 7" H x 3" W x 2" D

Model Number

GW1

Description

The wireless gateway is a reliable, fully bidirectional gateway between the Internet/backbone network and the E-Mon wireless mesh network. It is compatible with standard communication protocols and can support multiple meter types on the same network. The wireless gateway provides simple remote configuration of the wireless devices and accurately transmits the energy data from the wireless network to E-Mon meter reading software for billing and analysis.



Features

- Compiles data from wireless transceivers and transmits data to E-Mon's meter reading software for billing and analysis.
- Interfaces with E-Mon D-Mon Class 4100 meters with built-in wireless transceivers as well as stand-alone transceivers connected to other metering devices such as gas, water and utility electric meters.
- Wireless mesh network operates in the 915 MHz license-free band. No cellular wireless service contracts are required.
- Fully self-configuring wireless mesh network allows for easy installation and configuration with no network management required.
- FCC certified not to interfere with existing infrastructure.
- 128 bit encryption on wireless network.
- Expandable local storage.
- Communication logs and automatic data recovery features.
- User and administration access control.

Model Numbers

Wireless Gateway	WGATEWAY
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Additional Components

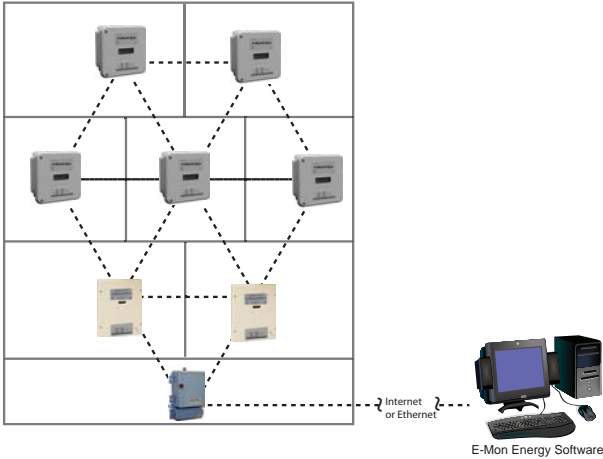
Wireless Meter Reading Software	WRSOFT
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Wireless Mesh Network Configuration Diagram

Wireless system can monitor E-Mon D-Mon electric submeters and other types of utility meters equipped with wireless transceivers supplied by E-Mon. (contact factory for details.)

One wireless gateway (per building) transmits meter data to E-Mon Energy™ software via Internet or Ethernet communication.

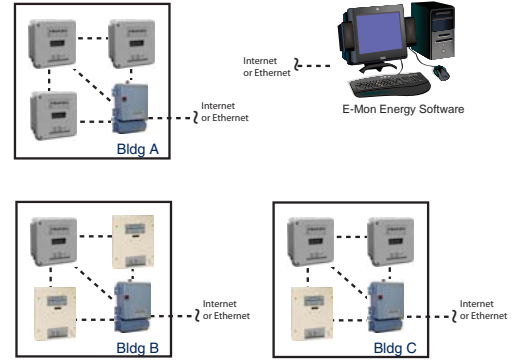
Multi-Floor Facility



Symbol Key



Multiple Building Facilities



Radio Specifications

Operating Frequency:	902-928 MHz	RF output power (Max.)	20 dBm
Receiver sensitivity	Max transmit power 20 dBm Sensitivity-93 dBm (@0.1%BER,+25°C)	Mode	Frequency hopping spread spectrum

Network Specifications

- Full peer-to-peer communication
- Fully self-configuring
- Multiple redundant paths
- No network address management required
- Automatic network acquisition on Power ON
- Automatic time synchronization of all nodes in the network
- 128 bit authentication/encryption