

E-Mon D-Mon[®] Installation Manual

EWM External Wireless Module



Dear Valued Customer,

We are pleased that you chose to purchase one of our products and want you to be just as pleased with owning it. To be sure that you are 100% satisfied with our products, we provide toll-free technical and sales support Monday through Friday, 8:00 am to 7:30 pm, eastern time. The toll-free numbers are: Langhorne, PA - (800)334-3666 and San Diego, CA - (800)810-3666. You may also reach us via email at *info@emon.com*.

Before installing your new E-Mon product, please read the information on the following pages carefully.

We believe that you will find the E-Mon D-Mon[®] products easy to install and use for monitoring and evaluating your electrical usage.

If you have any questions, we can handle them quickly and effectively with a telephone call. Please let us try to help you by phone **BEFORE** you remove your E-Mon product. To better serve your needs, please have all relevant information on hand when you call (model or part numbers, nature of difficulty, etc.)

Be sure to forward this manual to the owner after installation is complete so that they may use it as a reference guide when reading the E-Mon meters.

Thank you.

Table Of Contents

	Page
Section 1.0 Introduction	1
Section 1.1 Module Address	1
Section 2.0 Installation Instructions	2
Section 3.0 Additional Information	3
Section 4.0 Technical Specifications	5

1.0 Introduction

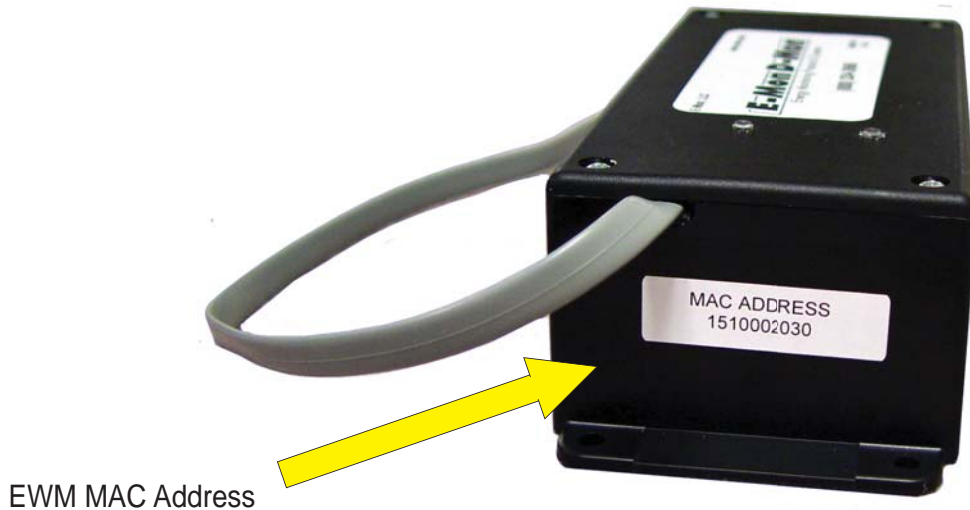
The E-Mon D-Mon® External Wireless Module (EWM) is a mesh network RF, 915 Mhz, transceiver that is designed to interface with E-Mon Class 1000 and 2000 kWh and demand meters. It can be utilized with E-Mon meters that were manufactured from 1997 to present. The EWM is powered from the E-Mon meter and does not require a separate power supply to operate. It reports its date to a gateway unit that reads all modules in the system and provides an interface to the AMR (Automated Meter Reading) system's computer and E-Mon Energy software.

The EWM receives pulse data from the meter which is stored as interval data. The pulses are stored in the unit in 15 minute time-stamped segments. This allows the software to provide detailed graphs and charts that show usage patterns in addition to total consumption. Additionally, TOU billing is supported through the software.

As the unit has full mesh capability, it will begin to establish communication to the gateway as soon as it is powered up. The mesh network is self- configuring and self -healing (if a unit is removed). Each module has a specific and unique address. This address must be noted in order to be associated with the meter that is connected to it.

1.1 Module Address

IMPORTANT: The (Media Access Control) MAC address number of each EWM module is located on a label on the end of the unit. Notation of this unique address is required and must be associated with the meter connected to the module for proper data acquisition.



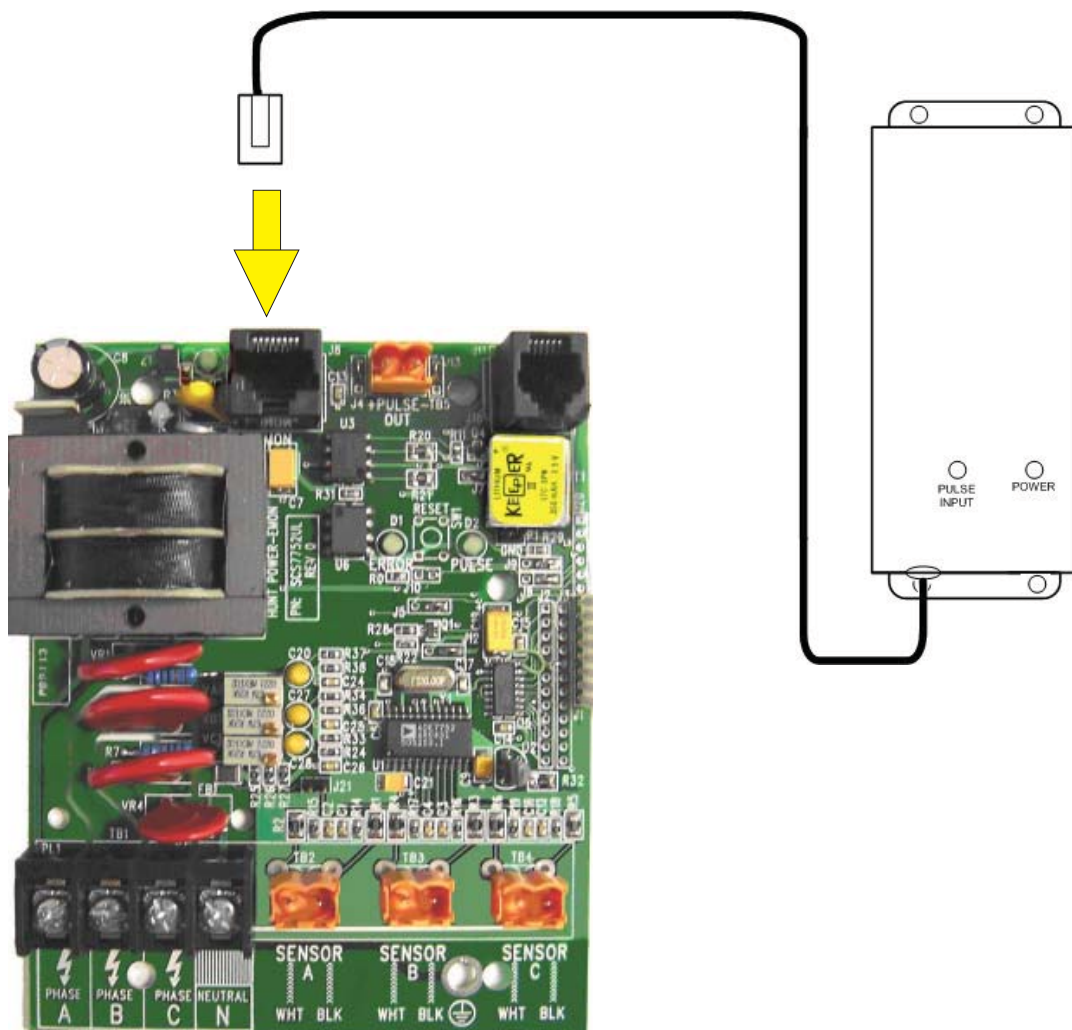
2.0 Installation Instructions

Mount the EWM module using the four mounting holes on the enclosure. The unit must be mounted close enough to the E-Mon Class 1000 or 2000 meter to allow its cable to reach the meter.

Entry to the meter is through the 1/2 inch conduit knockout on the top of the meter. Proper hardware must be used to assure the integrity of the cable and to seal the entry. Do not enter the meter enclosure from the bottom.

Plug the cable into the 8-position modular jack on the top of the meter's circuit board. (see picture below). The RED "power" indicator on the EWM should now be illuminated. If the metered circuit is active, you should also see the GREEN pulse indicator on the EWM blink off and on. The frequency of blinking is determined by the actual load being monitored. The heavier the load, the faster the pulse indicator will operate.

Write down the MAC Address from the EWM unit, in addition to noting the information on the meter size and what the meter is monitoring (circuit, tenant, etc.). This will be needed later when the (Automated Meter Reading) AMR system is established - to provide accurate data.



2.0 Installation Instructions Continued

After it is plugged into the active meter, the EWM will search for the gateway and automatically establish itself into the wireless mesh network. The proper time and date will be sent to the EWM module from the gateway for load profile recording.

3.0 Additional Information

The EWM works in conjunction with the *Wireless Gateway*. This device is used as the data gathering and communication point for all of the E-Mon wireless devices. Whether the modules are used for electric, water, or gas - or are an internal component of the electric meters - the gateway is necessary to provide the gathering point for the data from the modules and the communication means to the computer and AMR (Automated Meter Reading) software.

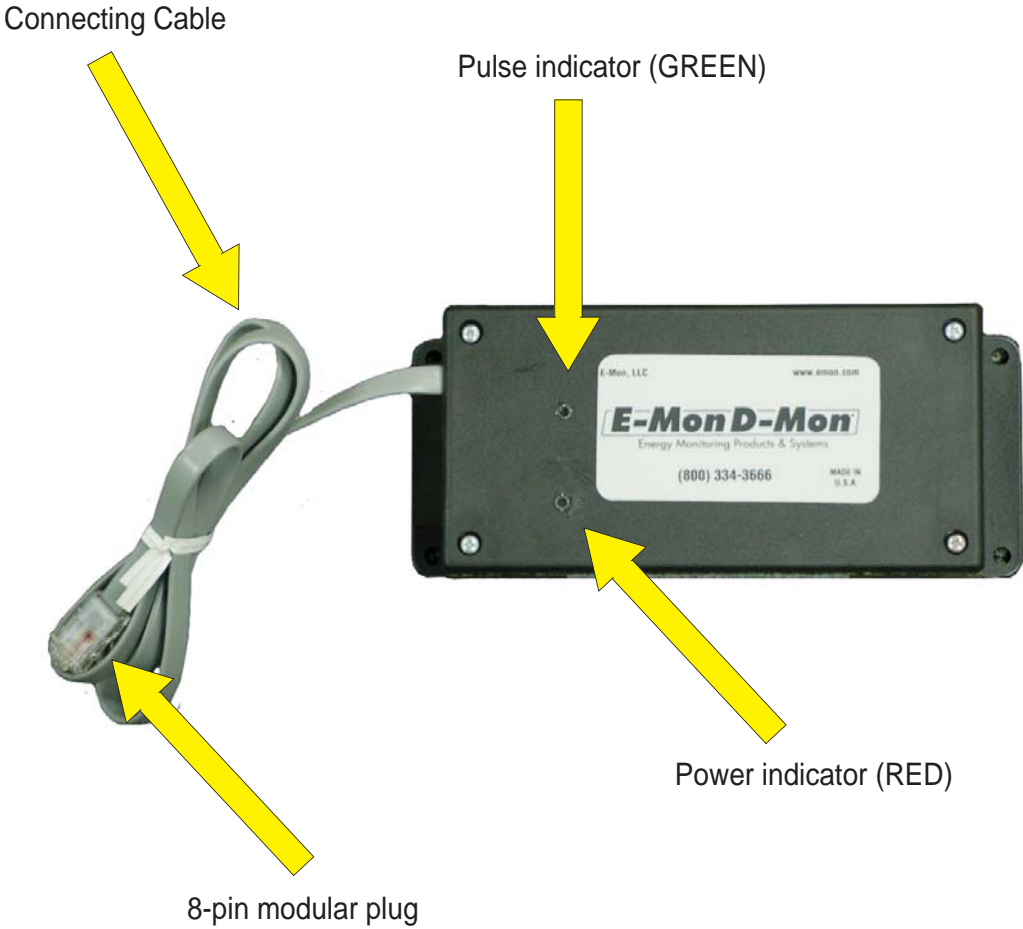
The gateway can be used to directly interface with the computer over Ethernet or can be accessed over the internet when it is set up with a public IP address. A software program provides for the communication with the gateway and for conversion to the proper data format used by the E-Mon Energy software for billing and analysis.



Wireless Gateway

3.0 Additional Information

EWM component information.



4.0 Technical Specifications

	Size	L = 7", W = 3", H = 2.1"
	Operating Frequency	903----928 MHz
	Mode	Frequency Hopping Spread Spectrum
	Data Rate	76.8 Kbps
	RF Output	20 dBm
	Sensitivity	-93 dBm
Range	Outdoor	> 1000'
	Indoor	200----400'
	Input	Pulse from E-Mon meter
	Power Supply	Power drawn from E-Mon meter
	Environmental	-40 deg. C to 85 deg. C
	Internal Data Storage	> 1 month

E-Mon, LLC
850 Town Center Drive
Langhorne, PA 19047
(800) 334-3666
www.emon.com - info@emon.com