

MT2W™

Long-Range Synthesized Radio Meter Transmitter

Installation Manual

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Book 144

Approved: Efi Rev: NEW 21-Oct-15

MT2W™ General Description

The MT2W™ is a 2W output power and -117DBm sensitivity long-range, synthesized radio-metering transceiver for narrow band wireless networks in the VHF 136-174 MHZ frequency band.

At a preprogrammed interval (default is every hour) the MT2W interrogates the register to obtain the most recent read, and transmits the data to the central receiver.

Unit parameters and meters values are easily programmed using the GUP5000™ utility-programming software (see the MT2W™ Programming Guide) or by the FTU.

The MT2W™ has one connector (see Figure 1).

1. **Meter Input:** The meter input is either a single three-wire or double three-wire cable, depending on factory configuration. These wires connect to the meter output.

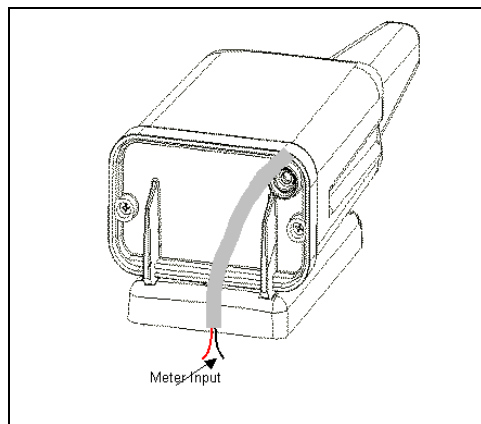


Figure 1: MT2W™ View

Preparing for Operation

Before installing the MT2W on site, perform the following preparations:

1. Setting communication parameters
2. Self test

Setting Communication Parameters

Connect GUP5000 program to the MT2W (see the MT2W™ Programming Manual)

Self-Test

See the Field Programmer User Guide for directions on performing a self-test.

Signal Level Verification

Before attaching the MT2W to the mounting bracket, verify signal level in the planned mounting location, by following these steps:

1. Turn on the FTU101 signal strength unit.
2. Hold the MT2W in the planned mounting location (after connecting the 3 wires to the register – see the **Wiring** section for directions how to connect the MT2W to the register) and swipe the magnet along the bottom of the unit.
3. Look at the FTU101 screen, and make sure you get a **good** or **full** signal from at least one of the repeaters that is receiving the ID of the MT2W that was just activated.

4. If the strongest signal received is only a **weak** signal, move the MTU to another location, wait 20 seconds and swipe the magnet along the bottom of the unit again.
5. Repeat step 4 until the location with the best signal level is found.

Installing the MT2W™

There are two mounting methods:

- Wall mounting
- On-pipe mounting

Wall Mounting Installation

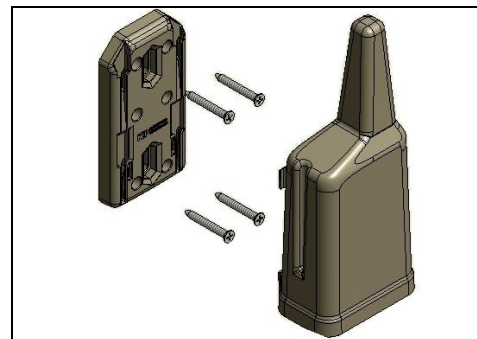


Figure 2: Wall Mounting

1. Fasten the mounting bracket on the wall with four screws (See figure 2)
2. Slide the MT2W unit on the mounting bracket until the 4 clips lock the unit
3. Define the parameters with the field programmer (FTU100) see the FTU User Guide
4. Swipe the magnet along the bottom of the MT2W unit. The MT2W wakes and sends a transmission.

On-pipe Mounting Installation

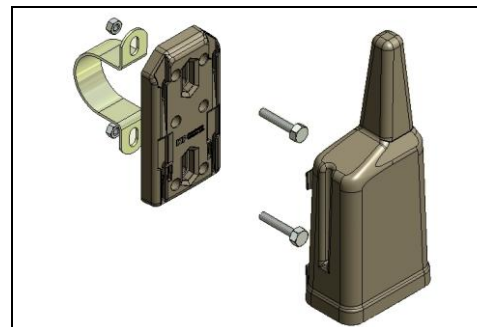


Figure 3: On-pipe Mounting

1. Fasten the mounting bracket on the pipe with two screws and the “Omega” bracket (See figure 3)
2. Slide the MT2W unit on the mounting bracket until the 4 clips lock the unit
3. Define the parameters with the field programmer (FTU100) see the FTU User Guide
4. Swipe the magnet along the bottom of the MT2W unit. The MT2W wakes and sends a transmission.

Restrictions

Before installation pay attention to the following restrictions:

1. Do not mount the MT2W on any metallic surface.
2. Do not run wires next to the MT2W antenna.
3. Do not mount the MT2W horizontally. Always mount unit with antenna facing upwards.
4. Do not wrap excess wire around the MT2W.
5. When installing more than a one MT2W in the same site, make sure you keep distance of at least 3 ft. between two adjacent the MT2W units installed on the same wall/surface.

Wiring

1. Connect the three wires from the MT2W to the register wires using a self-stripping insulated connector (3M-Scotchlock™ or equivalent), or directly to the register terminals.

Connect as follows:

MT2W Wire	Register Wire/Terminal
Green	Green
Red	Red
Black	Black

2. Polarity:
 - If a Passive Pulse type meter is connected, there is no polarity and the wires can be connected in any order
 - If an Active Pulse type meter is connected, there is a polarity and the wires have to be connected in the following order:
 - Red wire to the POSITIVE (+) poll

- Black wire to the NEGATIVE (–) poll.

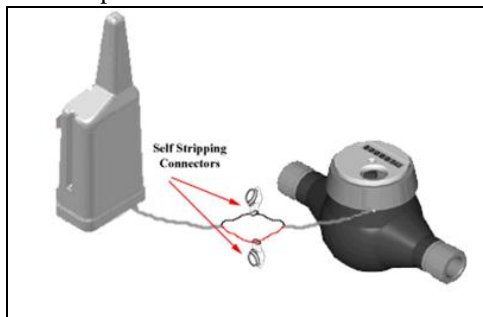


Figure 4: Wiring

Technical Specifications

Operating Voltage	8–15 VDC
Standby Current	30μA max.
Tx Current	0.8A max.
Power Output	2W
Freq. Stability	±5ppm at operating temp. range
Operating Temp.	-22°F ÷ 120°F (-30°C ÷ 60°C)
Storage Temp.	-40°F ÷ 158°F (-40°C ÷ 70°C)
Weight	0.5 lb. (230 gr.)

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