

## Advantages

- **Integrated.** Radio transmitter sealed inside the register.
- **Reliable.** Proven design of radio transmitter and water meter.
- **Long-Life Battery.** Calculated at over twenty years.
- **Precise.** Proprietary polymer materials maximize long-term accuracy.
- **Easy-to-Install.** Eliminates transmitter wiring for simplified installation.
- **Tamper-Resistant.** Transmitter is protected inside the meter register.
- **Compliance.** FCC-compliant transmitter, unlicensed frequency; AWWA-compliant meter.



The MetraMeter, an integrated wireless meter for submetering, provides the benefits of a high-quality water meter and popular Inovonics radio transmitter in one product.

The integrated radio frequency (RF) transmitter by Inovonics® Wireless uses the EchoStream® radio technology so it works with the Inovonics Commercial Mesh Network. The need for a wired connection to an external transmitter is eliminated since the transmitter is part of the sealed register, making it a single, easy-to-install product.

The MetraMeter features a long-life battery (calculated at over 20 years), which reduces meter maintenance and lowers operating costs. Additional reliability of the transmitter is provided by conformal coating that helps protect the radio from moisture.

The water meter main case is the industry-proven, T-10 meter by Neptune® Technology Group, which meets or exceeds the latest AWWA C700 standard. Its nutating disc, positive displacement design is time-proven for accuracy and dependability, ensuring maximum revenue. The “no-lead”, copper alloy main case has a lifetime guarantee and is California Prop 65 compliant and ANSI/NSF 61 Certified.

## The MetraMeter Consists of Three Assemblies:

### Register

- Incorporates Inovonics' EchoStream® radio transmitter within a sealed register body.
- Easy-to-read meter allows for visual reading when required.
- Magnetic drive and low torque registration ensures meter accuracy.
- Retrofittable onto any Neptune 5/8" maincase to enable automated meter reading.

### Power Pack

- Utilizes the long-life Panasonic BR-AG Lithium battery.
- Installed on the top of the register for easy accessibility.
- Cover protects battery and reset switch.

## Submetering System

Data transmitted from the EN1550 is received and processed by the Inovonics Wireless TapWatch® Submetering System. TapWatch System components include FCC certified Transmitters, Repeaters, Receiver and Site Data Concentrator & Communicator.

## Features & Specifications of the EN1550 used in the TapWatch EchoStream submetering system:

### Meter Usage:

- For indoor submetering installations with potable cold water up to 80°F and working pressure up to 150 psi.

### Standards Compliance T-10 Meter Radio:

- American Water Works Association Standard C700 and is ANSI/NSF 61 Certified.
- No license by the end user is required.
- FCC Part 15.

### RF Signal:

- Inovonics Wireless EchoStream 900 MHz
- Modulation: Frequency hopping, Spread Spectrum
- Operating Frequency Range: 902 to 928 ISM band
- Open field range: 5000 feet

### Ambient Operating Temperature:

- 32 to 140° F (0 to 60° C), non-condensing

### Transmission Frequency:

- Approximately once an hour.
- Installation Rapid Transmit Mode provides once/minute transmissions.

### Battery Type & Life:

- 20 year battery life, calculated.
- Guaranteed by Inovonics for 10 years.
- Panasonic® BR-AG Lithium Cylindrical.

### Low Battery Detection:

- The battery is checked periodically for low voltage. Once detected, a low battery indicator is sent with each RF data message to provide approximately two weeks notice before the battery will fail.

### Maincase

- Proven in the utility market to withstand typical service conditions of internal water pressure, rough handling, and in-line piping stress.
- Made of "no-lead" high copper alloy.
- Positive displacement nutating disk measuring chamber provides quiet operation and a wide effective flow range.
- Floating chamber design is unaffected by meter position or in-line piping stresses.

### Transmitter Count:

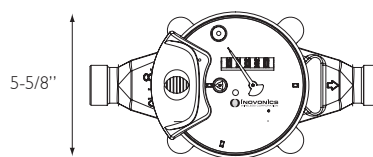
- One count for every one U.S. gallon.

### Installation:

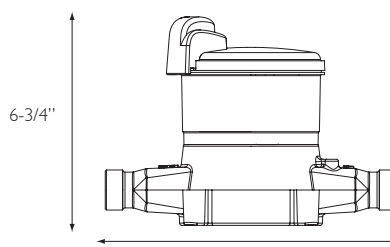
- Any orientation (horizontal, vertical, diagonal).
- Register can be mounted in one of four positions on the meter.
- No wiring of the transmitter to the meter.

### Meter Accuracy

- Normal Operating Range @ 100% Accuracy (+/- 1.5%) is 0.5 to 20 US GPM.
- Same as Neptune T-10 Meter, 5/8" x 3/4".



Top View



Side View

### Specifications

**Meter Size:** 5/8" x 3/4"

**Overall Length:** 7-1/2"

**Overall Width:** 5-5/8"

**Overall Height:** 6-3/4"

**Threads/inch:** 11-1/2

**Thread OD:** 1.290"

**Weight:** 4.0 lbs



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