



E-CODER®)R450i™



The E-Coder®)R450i™ combines the high-power, two-way radio frequency (RF) R450™ meter interface unit (MIU) with our E-Coder® solid state absolute encoder into one integrated package to offer utilities the advantages associated with ease and speed of installation. The E-Coder)R450i does not have any external wires to be installed. Designed for pit applications, the high-power RF transmission reduces the number of collectors, thereby lowering a utility's overall deployment cost.

The E-Coder)R450i is designed to collect meter usage data and remotely transmit the information to collectors at pre-determined intervals. The R450 is a powerful MIU that operates within the 450–470 MHz FCC-licensed band to ensure maximum read success rates as well as reliable RF performance. The standard R450 MIU is programmed to deliver meter usage and 24-hour consumption profile data daily. Hourly consumption profiling helps address such issues as consumption disputes and conservation compliance as well as monitoring large commercial and industrial usage.

The E-Coder)R450i can monitor, identify, and notify utilities of alarm states, such as continuous leaks and reverse flow occurrences. The E-Coder)R450i can be configured to send priority alarms via email or text message to utility personnel when key system events are identified.

The E-Coder)R450i PLUS features are also communicated through the E-Coder protocol, allowing host software platforms to interpret the data and pass the information directly to the billing packages, CIS screens, and operations and maintenance reports. The value-added data received through Neptune's E-Coder)R450i enhances customer service and improves operational efficiencies.

KEY FEATURES

- 8-digit remote meter reading and usage profiling
- Standard 24-hour consumption data
- Leak, tamper, and reverse flow detection
- Ease of installation – no external wiring
- Solid state absolute encoder
- Encoder metrology requires no battery
- No MIU programming required
- Long-life lithium battery with capacitor
- Fully submersible pit register
- LCD leak indicators
- Directional flow indicator
- Rate of flow on LCD display

KEY BENEFITS

- Enhanced “customer care”
 - Leak history/diagnostics
 - Proactive leak notification
 - Provides hourly consumption data
 - Improves meter reading accuracy
 - Eliminates estimated reads
- Enhanced cost savings and ease of installation
 - No external wires
 - Reduces labor cost
 - Reduces potential wire vandalism
- Improves operational efficiencies
 - Configurable proactive alarm notification
 - Residential: Leak, tamper, and reverse flow detection
 - Optimum read success rates and security with licensed frequencies
 - R450 MIUs configurable over the air
 - Endpoints are configurable (two-way)
 - No need for truck rolls
 - Provides tools for time-of-use billing
- Supports conservation initiatives
 - Reduce Non-Revenue Water (NRW)
 - Track water usage restrictions (odd/even day usage)
 - Email consumption to the end user



- Antenna Connector 1
- Solar Panel 2
- Date of Manufacture 3
- LCD Display 4
- T-10 Meter 5

	<p>FLOW INDICATOR Shows the direction of flow through the meter:</p> <p>ON Water in use. OFF Water not in use. Flashing Water is running slowly. (-) Reverse flow. (+) Forward flow.</p>
	<p>LEAK INDICATOR Displays a possible leak:</p> <p>OFF No leak indicated. Flashing Intermittent leak indicates that water has been used for at least 50 of the 96 15-minute intervals during the previous 24-hour period. On Continuously Indicates water use for all 96 15-minute intervals during the previous 24-hour period.</p>
<p>RATE</p>	<p>RATE OF FLOW Average flow rate is displayed every twelve (12) seconds on LCD display.</p>
	<p>LCD DISPLAY Nine-digit LCD displays the meter reading in billing units of measure: U.S. gallons, cubic feet, Imperial gallons, or cubic metres.</p> <ul style="list-style-type: none"> 1 E-Coder Basic Reading/Customary 6-digit remote reading 2 Customary sweep hand digits 3 E-CoderPLUS Reading (8-digit remote reading)

TECHNICAL SPECIFICATIONS

- Electrical Specifications:
 - MIU power: Lithium battery with capacitor
- Transmitter Specifications:
 - Transmit period: Standard configuration is a midnight meter reading and 24-hour usage/consumption data – daily
 - Operational frequency: Licensed 450-470 MHz band
 - Output power: Meets FCC Part 90
- Environmental Conditions: MIU and E-Coder
 - Operating temperature: 15°F to 149°F (-10°C to 65°C)
 - Storage temperature: -40°F to 158°F (-40°C to 70°C)
 - Operating humidity: 100% submersible
- Materials
 - Register housing: Roll-sealed copper shell
 - Lens: Glass
 - Antennas: Through-the-lid
 - 18" Coax
 - 6' Coax
 - 20' Coax

OPTIONS

- Compatibility
 - Available for all sizes and makes of current Neptune meters
- Units of measure: U.S. Gallons, Cubic Feet, Imperial Gallons, Cubic Metres

WARRANTY

- E-Coder|R450i: 20 years (10/10)
Refer to Warranty Statement

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