Easy Installation, Seamless Integration

Neptune® E-CODER®)R900*i*™

The Neptune® E-CODER®)R900*i* ™ is designed as an all-in-one package – pairing absolute encoder technology with the reliable connectivity of any Neptune R900® System endpoint. The E-CODER register provides an easy-to-read LCD display combined with flexible AMR/AMI connectivity and is compatible with any Neptune mechanical meter. Integrated endpoints eliminate the hassle of wiring while reliably delivering accurate data to optimize system performance, improve customer service, and support water conservation initiatives.

- Eliminate the hassle of endpoint programming and wiring

- Flexible meter reading options with simultaneous AMR/AMI capabilities

- Peace of mind with access to 96 days of stored history

- Prevent tampering and environmental damage with no external wires

- Improve quality of service and billing accuracy with detailed consumption data

- Reduce inventory with an all-in-one register and endpoint package

- Pinpoint trouble areas quickly with flags that identify leaks, reverse flow, and tampering

- Streamline testing and onsite troubleshooting with on-screen flow rate and flags

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Endpoint Specifications

Electrical Specifications
- Endpoint power: Lithium battery with capacitor

Transmitter Specifications:
- Two-way endpoint
- Transmissions
  - Standard mobile message
  - Standard fixed network message
  - LoRa fixed network message (only on LoRaWAN model)
- Transmitter Channels:
  - 50 (R900 mobile and fixed network messages)
  - 64 (LoRa fixed network message)
- FCC Verification: Part 15.247
  - Channel Frequency: 902 to 928 MHz
  - Frequency hopping, spread-spectrum
- Meter Reading & Flag Interval:
  - Every 15 minutes
  - Leak, Backflow, Tamper
- Data Logging Interval:
  - 96 days of hourly data

Environmental Conditions
- Operating Temperature: -22°F to +149°F (-30°C to +65°C)
- Storage Temperature: -40°F to +158°F (-40°C to +70°C)
- Operating Humidity: 100% condensing, fully submersible (Pit Set version only)

Materials
- Register Housing:
  - Engineer polymer
  - Roll-sealed copper (Pit Set version only)
- Lens: Tempered Glass

Resolution & Capacity

High Resolution (8-digit reading)

	Size	G	ft³	m³
T-10 (Includes disc side of TRU/FLO)	⅝", ¾", 1"	0.1	0.01	0.001
T-10 (Includes disc side of HPPIII)	1½", 2"	1	0.1	0.01
HP Turbine (Includes FS Turbine, HPPIII, Turbine Side of TRU/FLO)	1½", 2", 3", 4"	1	0.1	0.01
HP Turbine (Includes FS Turbine, HPPIII, Turbine Side of TRU/FLO)	6", 8", 10"	10	1	0.1

Register Capacity

	Size	G	ft³	m³
T-10® (Includes disc side of TRU/FLO®)	⅝", ¾", 1"	10,000,000	1,000,000	100,000
T-10 (Includes disc side of HPPIII)	1½", 2"	100,000,000	10,000,000	1,000,000
HP Turbine (Includes FS Turbine, HPPIII, Turbine Side of TRU/FLO)	1½", 2", 3", 4"	100,000,000	10,000,000	1,000,000
HP Turbine (Includes FS Turbine, HPPIII, Turbine Side of TRU/FLO)	6", 8", 10"	1,000,000,000	100,000,000	10,000,000

Options

Compatibility
- Available for every size Neptune mechanical meter
- Handhelds with belt clip transceiver – mobile RF
- Mobile data collector RF
- Gateway – fixed network RF
- LoRaWAN gateway – fixed network

Units of Measure
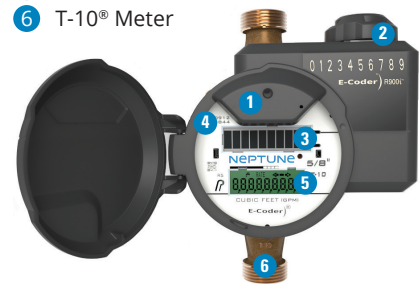- U.S. Gallons, Cubic Feet, Imperial Gallons, Cubic Metres

Antennas
- Internal antenna (not available on LoRaWAN)
- Optional through-the-lid antenna
- 18" coax
- 6' coax
- 20' coax

LCD Display
- 9-digit display for extra resolution on manual reads.

1. Internal Antenna
2. Optional Antenna Port
3. Solar Panel
4. Date of Manufacture
5. LCD Display
6. T-10® Meter

Warranty
- Neptune provides a limited warranty for performance, materials, and workmanship. See warranty statement for details.

FLOW INDICATOR
Shows the direction of flow through the meter: ON Water in use. OFF Water not in use. Flashing Water is running slowly. (-) Reverse flow. (+) Forward flow.

LEAK INDICATOR
Displays a possible leak: OFF No leak indicated. Flashing Intermittent leak indicates that water has been used for at least 50 of the 96 15-minute intervals during a 24-hour period. On Continuously Indicates water use for all 96 15-minute intervals during a 24-hour period.

RATE OF FLOW
Average flow rate is displayed every twelve seconds on LCD display. RATE

LCD DISPLAY
Nine-digit LCD displays the meter reading in billing units of measure: U.S. gallons, cubic feet, Imperial gallons, or cubic metres.
1. E-CODER basic reading/customary 6-digit remote reading
2. Customary sweep hand digits
3. E-CoderPLUS reading (8-digit remote reading)
4. Testing units used for diagnostics
5. Extended reading units
6. Customary billing units

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