



E-CODER) R900i™

INSIDE AND PIT VERSIONS



E-Coder) R900i™
Inside Version



E-Coder) R900i™
Pit Version



E-Coder)R900i combines the field-proven R900™ with our solid state absolute E-Coder.

The E-Coder)R900i combines the field-proven R900™ radio frequency meter interface unit (MIU) with our solid state absolute E-Coder™ into one integrated package to offer utilities the advantages of the cost savings associated with the ease and speed of installation. The E-Coder)R900i does not have any external wires to be installed or require any special programming for operation. The E-Coder)R900i operates within the 902-928 unlicensed RF band width.

The R900 MIU portion of the integrated unit collects meter-usage data and transmits the data for collection by the meter reader. Data transmitted by the R900 MIU is received by the Neptune walk-by, mobile, or targeted fixed-network data collection systems and stored for downloading at the utility office. The R900 MIU is a one-way communication device that transmits data every 14 seconds using frequency hopping spread spectrum technology to ensure data security and improved meter reading accuracy and reliability. The E-Coder portion of the integrated unit features a custom integrated circuit design that digitally encodes the rotation of the measuring chamber providing “absolute” registration with no internal battery requirement.

The E-Coder)R900i provides high resolution, 8-digit remote meter reading and value-added features including leak detection, tamper detection, and reverse flow detection. In

addition to this data, E-Coder provides a visual read out on rate of flow every six seconds when the LCD is activated. True point-of-use leak detection is provided by monitoring a 24-hour period in fifteen-minute intervals. Tamper detection is provided by reverse flow detection and the number of days of zero consumption over the previous 35 days.

The E-Coder)R900i PLUS features are communicated through the E-Coder protocol allowing host software platforms to interpret the data and pass the information directly to billing packages, CIS screens, and operations and maintenance reports. The E-Coder)R900i features enhance customer service and improve operational efficiencies for water utilities.

The E-Coder)R900i Inside Version

The inside version features a non-oil-filled plastic enclosure with an integrated antenna. This unit also features a field-replaceable battery.

The E-Coder)R900i Pit Version

The pit version features a non-oil-filled roll-sealed copper shell and glass lens housing for superior protection in a flooded pit environment. The standard unit is designed with a whip antenna for installation under a pit lid and can be easily upgraded to a through-the-lid antenna if desired. The unit also features a field replaceable battery.

KEY FEATURES

- Ease of installation – no external wiring
- Integral antenna
- “Absolute” 9-digit meter reading on display
- 8-digit remote meter reading
- No FCC license required
- No MIU programming required
- Batteryless encoder metrology
- Long-life lithium battery with HLC capacitor
- Available in both pit and inside versions
- Fully submersible pit version
- Leak, tamper and reverse flow detection
- LCD leak indicators
- Directional flow indicator
- Rate of flow on LCD display

KEY BENEFITS

- Enhanced cost savings and ease of installation
 - No external wires
 - Reduces labor cost
 - Reduces potential wire vandalism
- Enhanced “customer care”
 - Leak history/diagnostics
 - Proactive leak notification
 - Improves meter reading accuracy
 - Eliminates estimated reads
- Increased operational efficiencies
 - Reduces costs
 - Minimizes reading time
 - Improves meter reading safety
 - Work order reduction for high water bill inquiries
 - Prioritization of meter maintenance
- Drought management
 - Reduction of water loss through proactive notification of water leaks
- Tamper management
 - Identification and prioritization of potential tamper situations

PARTS

- Replaceable Battery 1
- Antenna 2
- Light Sensor 3
- Flow Indicators 4
- Date of Manufacture 5
- LCD Display 6
- T-10 Meter 7

E-Coder R900i™



ICONS AND DISPLAYS

	<p>LIGHT SENSOR Recessed under the small hole near the center of the faceplate of the E-Coder)R900i, supplies the power for the LCD panel (light activated).</p>
	<p>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.</p>
	<p>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.</p>
RATE	<p>RATE OF FLOW Average flow rate is displayed every six 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-Coder PLUS Reading (8-digit remote reading) 4 Testing units used for diagnostics 5 Extended reading units 6 Customary billing units

TECHNICAL SPECIFICATIONS

- Electrical Specifications:
 - MIU Power: Lithium battery with HLC capacitor
- Transmitter Specifications:
 - Transmit period: Every 14 seconds
 - Transmitter channels: 50
 - Channel frequency: 910 to 920 MHz spread spectrum
 - Output Power: Meets FCC Part 15.247
 - FCC Verification: Part 15.247
- Environmental Conditions:
 - MIU and E-Coder
 - 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: 0 to 95% (non-condensing)
- Materials
 - Register housing:
 - Inside Set: Plastic Polycarbonate
 - Pit Set: Roll-sealed copper shell
 - Lens:
 - Inside Set: Plastic
 - Pit Set: Glass
- Antennas
 - Inside Set: Fixed antenna
 - Pit Set: Standard whip type
 - Optional through the lid
 - 18" Coax
 - 6' Coax
 - 20' Coax

OPTIONS

- Sizes
 - Available for all sizes and makes of current Neptune meters
- Data Collection Systems
 - Handhelds - Walk-by RF
 - MRX920/MTX950 - Mobile RF
 - EZNet™ - Fixed-network RF for targeted C&I applications
- Units of Measure: U.S. Gallons, Cubic Feet, Imperial Gallons

WARRANTY

- Register: 20 years (10/10)
- R900 MIU: 20 years (10/10)
- R900 Battery: 20 years (10/10)

Neptune Technology Group Inc.
 1600 Alabama Highway 229
 Tallahassee, AL 36078
 USA
 Tel: (800) 645-1892
 Fax: (334) 283-7299

Neptune Technology Group (Canada) Ltd.
 7275 West Credit Avenue
 Mississauga, Ontario
 L5N 5M9
 Canada
 Tel: (905) 858-4211
 Fax: (905) 858-0428

Neptune Technology Group Inc.
 Ejército Nacional No. 418
 Piso 12, Desp. 1201-1202
 Col. Chapultepec Morales
 Delegación Miguel Hidalgo
 11570 México, Distrito Federal
 Tel: (525) 55203 5294 / (525) 55203 5708
 Fax: (525) 55203 6503

