ARB® UTILITY MANAGEMENT SYSTEMS™

Accu-Flo
Meter Service Ltd.

NEPTUNE
TECHNOLOGY GROUP

E-CODER™
SOLID STATE ABSOLUTE ENCODER

INSIDE SET VERSION

PIT SET VERSION

The E-Coder (ARB VII) is Neptune's next generation high-resolution solid state absolute encoder register. The E-Coder 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 functions in two modes: E-Coder BASIC and E-Coder PLUS. The E-Coder BASIC mode functionality is the same as ProRead (ARB VI) featuring programmability up to a 10-digit ID number, 3 user characters, and 3-6 digit meter reading. In addition to the meter reading, E-Coder provides a visual readout on rate of flow every six seconds when the LCD display is activated. When connected to Neptune's R900* radio MIU, the E-Coder automatically operates in E-Coder PLUS mode, providing a high resolution, 8-digit remote meter reading, and value-added features including leak detection, tamper detection, and reverse flow detection. 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 flow over the previous 35 days.

The E-Coder 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 operation and maintenance reports. The E-Coder PLUS features enhance customer service and improve operational efficiencies for water utilities.

The E-Coder is available in two different configurations – inside set meters and pit meters. For inside set applications, the E-Coder will be housed in our field-proven plastic encoder register housing less the mineral oil. For pit set applications the E-Coder will be housed in the same field-proven glass lens and copper can enclosure used on our current direct read registers.

WARRANTY
Neptune provides a 10-year limited warranty with respect to its E-Coder solid state absolute encoder register for performance, materials, and workmanship.
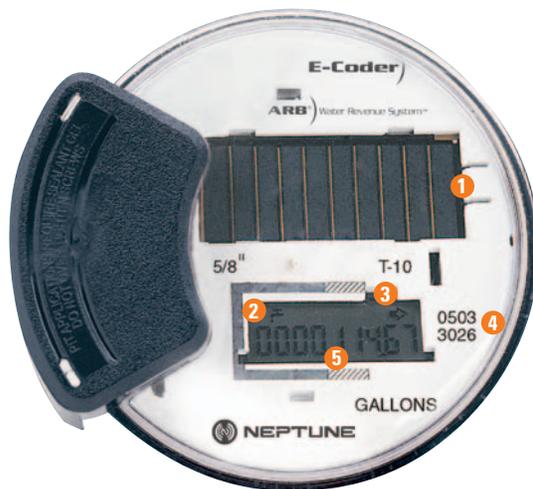
KEY FEATURES

- "Absolute" 9-digit meter reading on display
- Up to 8-digit remote meter reading*
- Batteryless functionality
- Pit set version: Roll-sealed copper shell and glass lens, oil-free design
- Inside set version: Plastic enclsoure, oil-free design
- True point-of-use leak detection*
- Tamper detection*
- Reverse flow detection*
- LCD leak indicators
- Directional flow indicator
- Rate of flow on LCD display

KEY BENEFITS

- Enhanced "customer care"
  - Leak history/diagnostics
  - Proactive leak notification
- Increased operational efficiencies
  - 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 & prioritization of potential tamper situations

* When connected to second generation R900.

Solar Cell **1**
Leak Icon **2**
Flow Indicators **3**
Date of Manufacture **4**
LCD Display **5**

SOLAR CELL
Located at the top of the E-coder, supplies power for the LCD panel (light activated.)

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.
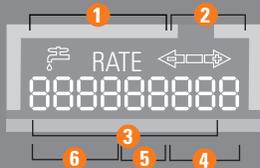(+)   Forward flow.

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

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

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-Coder PLUS Reading (8-digit remote reading)
4 Testing units used for diagnostics
5 Extended reading units
6 Customary billing units

- Materials
  - Inside Set Housing: Polycarbonate
  - Pit Set Housing: Copper shell and glass lens
  - Connecting wire: 3-lead #22 AWG
- Distance
  - A single register may be located with up to 500 feet (152m) of wire from receptacle or MIU.
  - Two networked registers can be located with up to 300 feet (91m) of wire from receptacle or MIU
- Register: 20 years (10/10)
- R900 MIU: 20 years (10/10)
- R900 Battery: 20 years (10/10)

- Sizes
  - Available for all sizes and makes of current Neptune meters.

- Electronic Accessory Equipment
  - R900 Wall & Pit Radio MIUs
- Data Collection Systems
  - DAP Handhelds - Walk-by RF
  - EZDrivePLUS™ - Mobile RF
  - EZNet™ - Fixed-network RF for targeted C&I applications
- Units of Measure: U.S. Gallons, Cubic Feet, Imperial Gallons, Cubic Metres

- 9-digit local registration
- 8-digit remote registration
- 4-8 digits can be communicated for billing.

Accu-Flo Meter Service Ltd.

4028-7th Street S.E.,Calgary, Alberta T2G 2Y8
Ph:(403)243-1425 Fx:(403)243-6577 Toll Free: 1-800-921-ACCU(2228)
Email: sales@accuflo.com Website: www.accuflo.com

NEPTUNE TECHNOLOGY GROUP
neptunetg.com