



E-CODER®)R900i™

Why did Neptune® combine these products into a single housing?

Customers requested ways to reduce both installation costs and the potential for tampering. The E-CODER®)R900i™ meets both of these needs.

Where is the R900® MIU?

The R900 radio board has been combined with the E-CODER® board inside the register housing. (The “i” stands for integrated.)

How does the radio performance compare to a standard R900 wall MIU?

The performance is similar to the performance of an R900 wall MIU installed in a basement, below grade application. An R900 wall MIU installed 4’ above grade on the exterior of a home will exceed the performance of below grade inside set MIUs.

Does the E-CODER)R900i feature the same E-CoderPlus functions and R900 protocol?

Yes. The E-CODER)R900i is able to provide the same customer service value-added data, such as leak, tamper, and reverse flow detection.

Is the antenna of the E-CODER)R900i inside version removable?

No.

Can the E-CODER)R900i inside version be installed in pits?

No. An inside version installed in a pit will VOID the warranty.

Is the battery replaceable on the E-CODER)R900i?

No. In order to maximize field robustness and reliability, the battery in the E-CODER)R900i is fully potted inside the unit.

Does the E-CODER)R900i have a battery inside to power the register?

No. The E-CODER)R900i registers water consumption using no external power supply and no internal battery. The E-CODER)R900i features an advanced Application Specific Integrated Circuit (ASIC) design using nonvolatile memory technology for a self-powered digital odometer.

Is it possible to read the E-CODER)R900i if the LCD read-out fails?

Yes. The unit will continue to transmit even when the LCD turns off due to low light. The absolute odometer reading is stored in nonvolatile memory in the ASIC and is not dependent on the LCD.

Is the E-CODER)R900i networkable for compound meters?

No. Due to the wireless design, a separate E-CODER)R900i must be installed on each side of a compound meter assembly. Note that one ID number is printed on each label.



Is the E-CODER)R900i field programmable like the ProRead™ or standard E-CODER? If so, can you use the standard field programmer and the same programming functions that are used for ProRead?

No. The E-CODER)R900i does not require any programming.

Since the E-CODER)R900i does not have a mechanical odometer wheel bank, how are the digits encoded and what makes the E-CODER)R900i absolute?

The E-CODER)R900i features an advanced ASIC design using nonvolatile memory technology for a self-powered digital odometer. The digital registration odometer in the ASIC and the LCD read-out are guaranteed to be absolutely the same. The visual registration and the remote reading are provided by the same source, making the E-CODER)R900i an absolute encoder.

Why are there nine (9) digits on the LCD read-out, but I receive only eight (8) digits on my reading device?

The E-CODER)R900i features nine digits for a visual read only for high-resolution meter testing and leak indication. Eight (8) digits are passed through the route management software for operational and billing purposes.

I only bill in 100s/1000s. What happens to the additional digits?

The meter reading software could truncate the unnecessary digits for billing if desired.

What are the solid and striped lines around the six most significant digits on the dial face of the E-CODER)R900i?

These lines were added to assist meter readers in identifying the 4 or 6 most significant digits for visual meter reading based on 100 or 1000 billing units.

The installed E-CODER)R900i has a forward arrow with a plus sign (+) flashing very slowly in the LCD read-out, and it will not stop flashing. What is the problem?

This indicates a very slight flow. Watch the 9th digit in the LCD read-out and you will see it increment over time.

The installed E-CODER)R900i has a reverse arrow with a negative (-) sign in the LCD read-out.

What does this mean?

This icon indicates reverse flow. You either have reverse flow occurring at the site or the water meter has been installed backwards.

What is the solid faucet icon on the LCD read-out?

The solid faucet indicates a continuous leak occurrence over the last 24 hours. Check the 9th digit in your LCD readout to see if it is incrementing. If so, check your interior and exterior faucets, the valves in your toilets, and look around the exterior of your home for signs of surface water.

What is the flashing faucet icon on the LCD read-out?

The flashing faucet indicates an intermittent leak occurrence over the last 24 hours. Check your interior and exterior faucets and the valves in your toilets to see if leakage is occurring.

Why are all of my E-CODER)R900i units showing days of no flow following installation?

Since the E-CODER)R900i is an integrated unit, the PLUS features are activated and the 35-day window is in effect. As long as there is no consumption, the E-CODER will log days of no flow. The E-CODER will also show reverse flow due to factory testing for reverse flow functionality. Current leak data will clear after 24 hours following

testing at factory, but days of no flow and reverse flow data will not clear for 35 days following activation in the water system.

Does the E-CODER)R900i provide rate of flow information?

The E-CODER)R900i provides a localized read out of average flow rate.

Does the E-CODER)R900i unit provide consumption activity history capabilities?

Yes. Consumption activity history is standard on the E-CODER)R900i.

How many days of consumption activity information is stored in the E-CODER)R900i?

The E-CODER)R900i stores consumption in hourly intervals for a rolling total of 96 days. This is equal to 2,304 hourly intervals of consumption.

What products do I use to capture the consumption history data?

The data logging information is captured with either a Trimble handheld or an MRX920 mobile collector. Capture of the data is accomplished with the program entitled “data logger” on the handheld.

How long does it take to retrieve the data from the E-CODER)R900i?

After activation and the data is being received by the receiver, it typically takes about a minute to download all 96 days’ worth of consumption history information.

Does the consumption activity feature have an impact on my battery life of the E-CODER)R900i unit?

No. The battery warranty for the E-CODER)R900i is still 20 years even though the unit is logging 96 days of consumption data. The E-CODER)R900i still carries the twenty (20) year warranty with the first ten (10) years offering full replacement and the remaining ten (10) years being at a prorated discount off the then-list price.

Will my current host software be compatible with consumption activity?

N_SIGHT versions 3.0 and higher are compatible with the consumption activity feature.

Will I be able to determine when a leak flag or reverse flow flag actually begins?

Yes. Both the leak and reverse flow flags will be restored in the consumption activity data. The time and date of these flags will show on the usage analysis graphs. In addition, if a leak is present, the consumption bars will be color coded red for the number of days the leak remains present. If a backflow event occurs, the consumption bars will be color coded grey. Lastly, missed data and the first/last days of the graph will be colored yellow to signify missed data.



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