

NEPTUNE R900 INSTALLATION GUIDE

R900 Wall MIU

- For best results, Neptune recommends mounting the MIU on the outside of the building and in a location which provides a direct line-of-sight to the meter reading device.
- For best results, Neptune recommends installing the MIU approximately five feet above the ground.
- Install the MIU in a vertical and upright position.
- The preferred mounting surface for the MIU would be a flat wall, but the unit can also be mounted to a pipe.
- The selected location must be clear of all obstructions.
- Avoid installing the MIU behind metal fences or walls.
- The maximum cable length between the encoder register and MIU is 500 feet

Wiring the Encoder Register.

- 22 American Wire Gauge (AWG) three-conductor cable must be used from the encoder register to the MIU.
 1. Connect the three-conductor wire to the encoder register's terminals
 - Black / B
 - Green / G
 - Red / R
 - 2 Thread the cable around the strain relief posts of the encoder.
 - 3 Apply sealant liberally and ensure that it encapsulates the terminal screws and exposed wires

Installing the R900 Wall MIU

- 1 Remove the main housing from the mounting adapter.
(The Hi-Lo fastener for securing the main MIU housing to the adapter plate is shipped separately in box).
A variety of holes in the mounting adapter allows for a quick and easy installation:
The cable enters through the bottom or rear cable entry of the mounting adaptor.
When the MIU replaces a receptacle, use the appropriate holes to allow reuse of the receptacle's original mounting holes. (See mounting hole configuration in Figure 2 Mounting Adapter.)
When mounting the MIU to a pipe, use the bolt hole for pipe mounting to bolt the mounting adapter to a pipe clamp.



- 2 Study Figure 2 Mounting Adapter and the location requirements, then decide how to install the MIU and mount adapter with set screw positioned at bottom.



Cable Exit
Pipe Clamp Holes
Figure 2 Mounting Adapter

- 3 Connect each individual colored wires from the Wall MIU with the appropriate colored wire from the approved encoder per the encoder wiring (see Table 2 on page 5). Repeat this step for each colored wire
- 4 For rear cable entry, store excess wire and Scotch Loks in the hollow cavity in the back of the MIU using the strain relief guides as shown in Figure 3 Back of MIU.



Figure 3 Back of MIU

- 5 For bottom cable exit, store Scotchlocks in the hollow cavity in the back of the MIU and guide the remaining wire through the cable exit notch at the bottom right side of the MIU as shown in Figure 4 Cable Exit Notch.



Figure 4 Cable Exit Notch

Connection from the MIU to the approved encoder should be made using 22AWG three-conductor wire. Neptune requires that you use either type UR or UY Scotchlok™ gel caps to connect the pigtail from the MIU to the register wire.

When using the Scotchlok gelcaps,

- Pair the wires according to the color codes
- Slide the ends of the pair of colored wires into the gel caps as far as they can go. **Do not strip individual colored wires.**
- An approved crimping tool is recommended. Pliers or channel locks may cause the gelcap to seat improperly, causing the wires to fail to contact each other.

Completing the R900 Wall MIU Installation

- 1 Install a seal wire or seal clip through the seal holes, if desired.
- 2 Read the MIU one more time before leaving the site to ensure MIU is transmitting.
- 3 Make sure the appropriate ID# on the MIU has been assigned to the meter setting. This is the ID number that the Water Department will use to distinguish the account. It is found on the peel and stick tag on the MIU. Each MIU has the ability to be connected to two meters, if networked. For single meters, the number to be used is in the **bold print** (HI)

Location of the R900

The Cincinnati Water Works Meter Reading Department must be able to read the meter with their mobile reading system. While their specifications do not necessarily call for the R900 to be mounted on the outside of the building, it should be mounted on an exterior wall above grade, facing the street whenever possible. The trajectory of the radio signal is approximately 180 degrees, so a side wall is normally sufficient. If the signal cannot be read from their equipment, it is the responsibility of the owner to move the R900 to a more advantageous location.