



NEPTUNE
TECHNOLOGY GROUP

WATER | GAS | ELECTRICITY

R900G Remote Endpoint Quick Install Guide



R900G REMOTE ENDPOINT QUICK INSTALL GUIDE

1 General Instructions

The R900G Remote endpoint is designed for use with multiple types of ancillary devices used in natural gas measurement applications. This includes Volume Corrector instruments, meters equipped with optional solid state or reed switch pulsers, and retrofit pulse output devices.

- This manual contains installation and programming instructions for the R900G Remote endpoint.
- Proper performance and reliability of the R900G Remote endpoint depends on the installation in accordance with these instructions.

2 Safety & Preliminary Checks

- Verify that you are at the location specified on the Site Work Order.
- Verify that the site is safe for you and your equipment.
- Notify the customer of your presence, and tell the customer that you must have access to the gas meter.
- Confirm and/or update the R900G Remote ID number on the Site Work Order.
- Ensure that the ancillary device that will be connected to the R900G Remote meets the Intrinsic Safety Entity Parameters as listed on the R900G Remote label.



If the R900G Remote is connected to an ancillary device that does not meet the Entity Parameters as defined on the label, the Intrinsic Safety of the installation will not be in accordance with the Canadian Standards Association (CSA) Approval for R900G Remote. Neptune Technology Group does not accept any liability for installations not made in accordance with the Entity Parameters.

Entity Parameters

You can connect unit output to a simple apparatus sensor or meeting output Entity Parameters. Refer to Figure 1.

Table 1 Entity Parameters

Entity	Parameter
U_o	3.7V
I_o	10 mA
P_o	10 mW
C_o	1000 μ F
L_o	1000 μ H

FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF Exposure Information

This equipment complies with the FCC RF radiation requirements for uncontrolled environments. To maintain compliance with these requirements, the antenna and any radiating elements should be installed to ensure that a minimum separation distance of 20cm is maintained from the general population.

3 Site Selection

- For best results, Neptune recommends mounting the R900G Remote 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 R900G Remote approximately five feet above the ground.

- Install the R900G Remote in a vertical and upright position.
- The preferred mounting surface for the R900G Remote 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 R900G Remote behind metal fences or walls.
- The maximum cable length between the ancillary device and the R900G Remote is 200 feet or 60 meters.

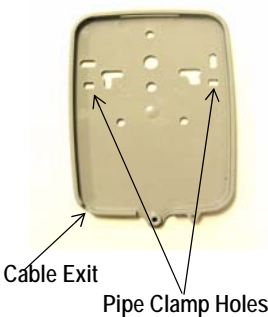
4 Installing the R900G Remote

Complete the following steps to install the R900G Remote.

- 1 Remove the R900G Remote main housing from the mounting adapter plate. The Hi-Lo fastener for securing the main housing to the mounting adapter plate is shipped separately in the box. See Figure 1, R900G Remote.



Figure 1 R900G Remote



- 2 Study Figure 2, Mounting Adapter Plate, and the location requirements, then decide how to install the R900G Remote and mount the adapter plate with the cable exit positioned at the bottom.

Figure 2 Mounting Adapter Plate



- For mounting the adapter plate to a wall, select the appropriate holes as shown in Figure 2.
- Alternatively, for mounting the adapter plate to a pipe clamp, select the appropriate holes as shown on Figure 2.
- The cable shall be routed to exit through the bottom of the mounting adapter plate.

- 3 Guide the R900G Remote cable through the strain relief guides as shown in Figure 3. Guide the remaining cable through the cable exit notch at the bottom right side of the MIU.



Figure 3 Routing for the R900G Remote Cable



Figure 4 R900G Remote Mounting Adapter Plate

- 4 Slide the tongue on the top of the R900G Remote into the groove on the top of the Mounting Adapter Plate. See Figure 4.

- 5 Secure the R900G Remote to the Mounting Adapter Plate using the Hi-Lo Fastener provided. See Figure 5.



Figure 5 Hi-Lo Fastener

5 Connecting the R900G Remote to an Ancillary Device

The R900G Remote cable comes with two 22 AWG wires for connection to an ancillary device. You can route this cable into a third-party volume corrector instrument through a cable gland and connect it to a terminal block. Alternatively, you can attach the cable to a third-party connector, as appropriate for the application. Refer to the following points when wiring the R900G Remote to a third party device:

Ancillary Device Pulse Output specifications:

- Minimum pulse width: 125 ms
- Max frequency: 4 Hz
- Open collector
- Wetting voltage supplied by R900G Remote 3.6 VDC

Wiring:

- Black wire – ground
- Red wire – positive



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Entity Parameters

You can connect unit output to a simple apparatus sensor or meeting output Entity Parameters. Refer to Table 2.

Table 2 Entity Parameters

Entity	Parameter
U_o	3.7V
I_o	10 mA
P_o	10 mW
C_o	1000 μ F
L_o	1000 μ H

6 Programming the R900G Remote

To program an R900G Remote, use the Neptune CE5320 handheld with ARB® N_SIGHT™ Mobile software to display and process the information.



Figure 6 Neptune CE5320 Handheld with Field Programmer Software

Starting the R900G Remote Programmer Software

To program the R900G endpoint, use the Neptune Field Programmer and complete the following steps.

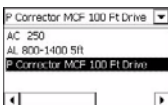
- 1 Start the Neptune Field Programmer software.
- 2 Select **GAS** from the top of the screen.

The Gas Meter Configuration screen appears. See Figure 7.

PROREAD	Gas	Configure
Program Gas	Command Gas	Read Gas
GAS METER CONFIGURATION		
Format Name	[Dropdown]	
Initial Reading	[0]	
Program Result	[Checked]	
MIU ID	[]	
Program	[]	Close


Figure 7 Gas Meter Configuration Screen

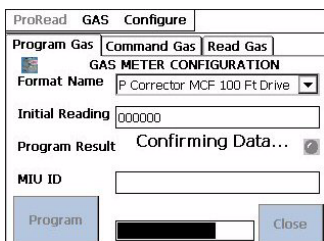
- 3 Touch  for Format Name.



A selection list similar to Figure 8 appears.

Figure 8 Format Name Selection List

- 4 Touch or click the format you want and press **Enter**.
- 5 For **Initial Reading**, type a value.
- 6 Align the IR LED to Gas Programming post, and do one of the following:
 - Press the program button on the mouse, and press **Enter**.
 - Touch or click . (This button can only be used for Programming; it cannot be used for Read or Query.)



The Program Result area of the screen displays that it is Confirming Data, and a progress bar at the bottom of the screen shows you the progress. See Figure 9.

Figure 9 Program Result – Confirming Data

An audible tone signals the Program Result as:

- PASS
- FAIL

The MIU ID displays the ID or serial number of the MIU. See Figure 10.

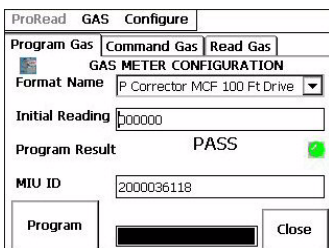



Figure 10 Program Result -- Pass Screen

- 7 You can program another gas endpoint by repeating steps 1 through 6, or touch or click  to return to the main screen.

7 Checklist

Before leaving the installation site, be sure to:

- Record MIU ID for each R900G Remote gas meter.
- Verify that you have followed all requirements of this Quick Install Guide.
- Verify that you have recorded all required information.
- Clean up any installation debris.
- Verify that the requirements of the site work order have been completed.
- Inform the customer that you have completed your work. If you were unable to finish, inform the customer when you'll be back to complete the project.

8 Contact Information

Within the United States, Neptune Support is available Monday through Friday, 8:00 AM to 7:00 PM Eastern Standard Time, by telephone or fax.

To contact Technical Support by phone, call 1-800-647-4832. If all Support Technicians are helping other customers, your call will be routed to the Neptune Support voice mail system. Please leave your name, the name of your company, and your telephone number. Your call will be returned within business hours in the order it was received.

To contact Technical Support by fax, send a description of your problem to 1-334-283-7497. Please include on the fax cover sheet the best time of day for a Support Technician to contact you. To contact Technical Support by email, send your letter to the following address: hhsupp@neptunetg.com.

Notes



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