OMNTEC MMRD7-SS Series Universal Remote Display Instruction Manual

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Contents

DESCRIPTION

The PROTUES® Mini-Me™ is a remote color-graphic display allowing AutomaƟc Tank Gauge (ATG) users the ability to gain access to current tank and alarm informaƟon.
ATG's monitor storage tanks for level, temperature, volume, and alarm status. They are usually installed in locaƟons where the ATG's display, and audiovisual alarms are not conveniently accessible. In addiƟon, these tank gauges are oƠen difficult to use and understand.
The PROTEUS Mini-Me works with all industry-standard ATG's, allowing the user to gain remote access easily and intuiƟvely to the ATG's data and alarm status from anywhere in the world with internet connecƟvity.
The Mini-Me features standard RS-232, RS-485, and Ethernet communicaƟon. The Mini-Me can also be configured for wireless communicaƟon using opƟonal accessories. Contact sales for details.

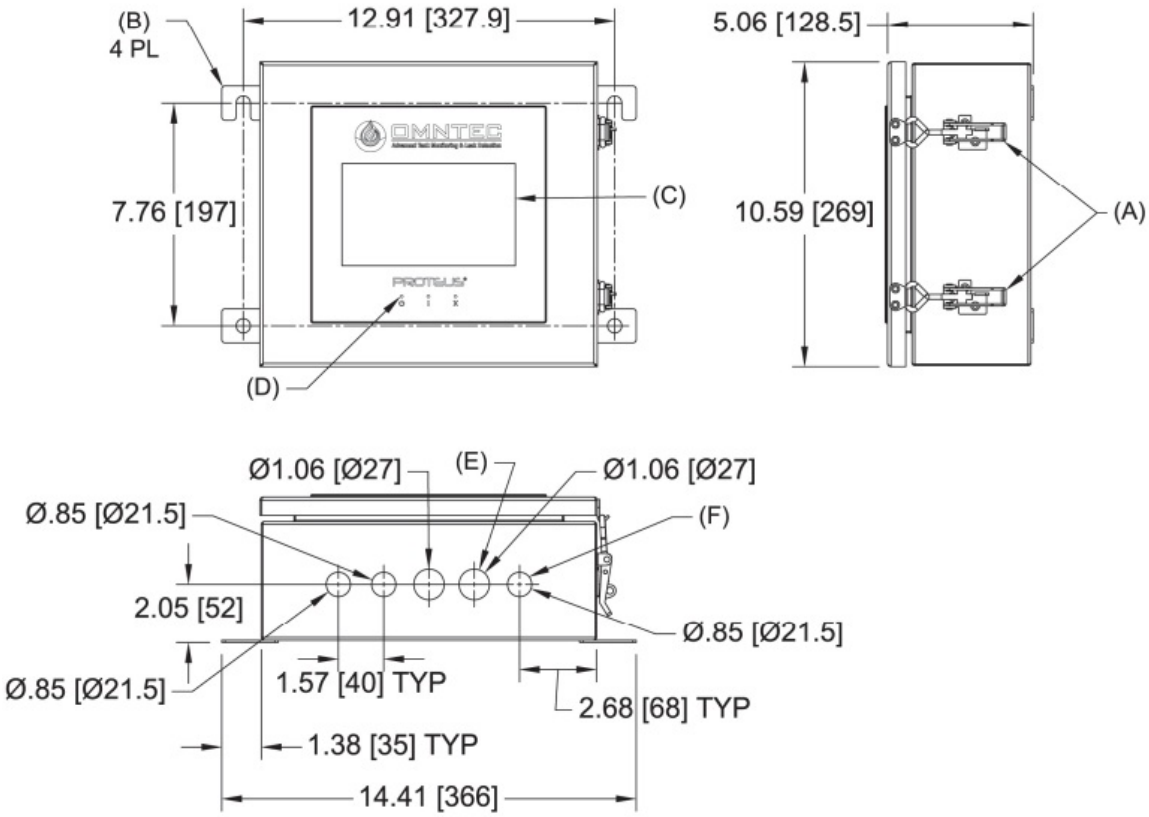
SAFETY

- Do not perform any installation or service procedures if you are not familiar with the National Electrical Code® and all other federal, state, and local codes and regulations pertaining to this installation.
- Do not perform any installation or service procedures until you have read and understood this entire manual.
- Do not install the controller in a hazardous location.
- Do not drill through the enclosure.
- Do not mount where temperatures are outside of the operating temperature range (see Specifications; page 5) without a heater and/or thermostat. Contact OMNTEC sales for details and options.
- Always turn off power to the controller before servicing.
- Take all safety precautions to avoid accidents.
- Keep the entire work area clean.

SPECIFICATIONS

Input Power	100-240 VAC +/- 10% 50/60 Hz 30 watts
DisplayAudible alarm System status	Color 7-Inch graphic display with capacitive touch screen 85 dB piezoelectric horn3 LED's (Power, Warning, Alarm)
Operating Temperature	-22 to 140′ F (-30″ to 60° C)
Outdoor Rating	Nema 4X
Standard Communications	TCP/IP I RS-485) RS-232
Models Available	MMRD7-SS
Cables	RS-232 (optional; OMNTEC EC-4) RS-485 (optional; OMNTEC EC-4)
Accessories	WRS-232 Wireless RS-232 link includes both tank gauge an d remotetransceivers and (2) RD-232C-75 cablesWRS-232XR Long ran ge wireless RS-232 link includes both tank gaugeand remote transceivers (up to 1 mile)ENC-4X-WRS-232 Nema 4X fiberglass enclosure for WRS-232 tran sceivers(2 required)RD-232C-75 75′ RS-232 cableC232-422-RD7CT S RS-232-422 Booster Kit to increase distance of RS-232output 3,000 feet (Includes 2 converters and 2 power transformers)
Weight	14 lbs. (6.4 kg)
Dimensions	(h) 10.5″ (w) 14.4? (d) 5.08″

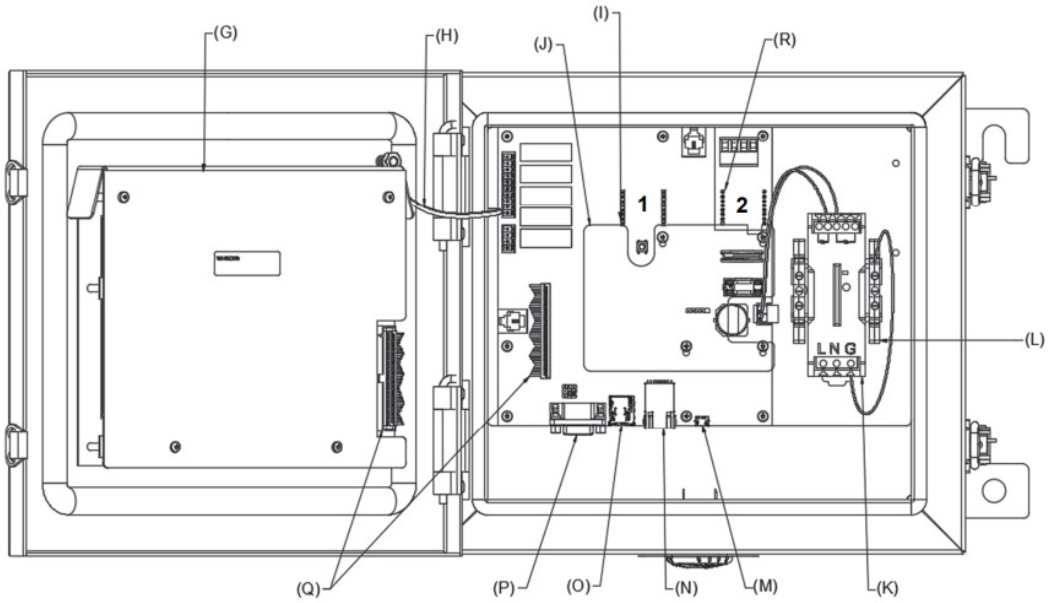
DIMENSIONS AND EXTERNAL COMPONENTS



(A) Latches
(B) Mounting Brackets
(C) Touch-Screen Display
(D) Indicator Lights

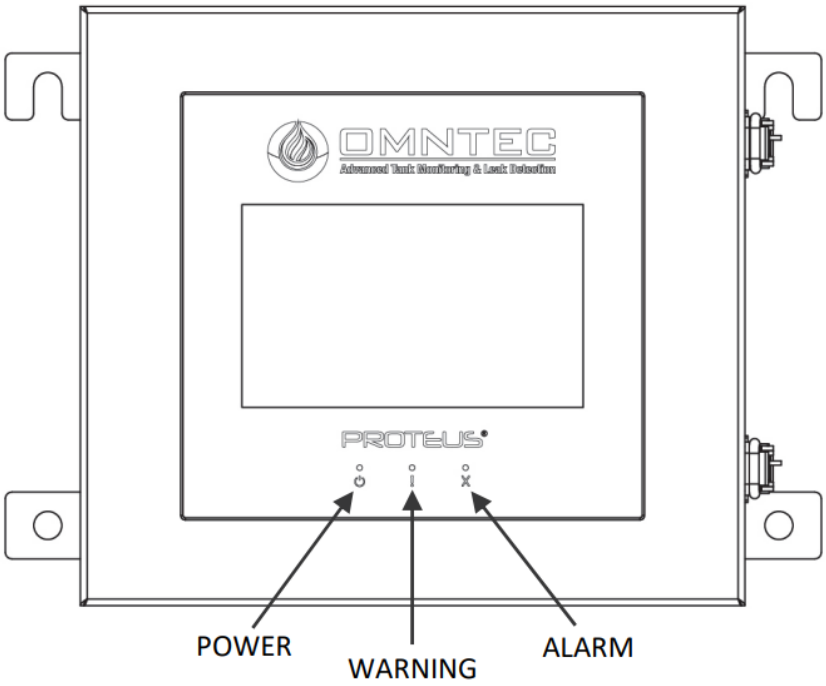
(E) Additional Knockouts (a total of four)
(F) Power Supply Knockout

INTERNAL COMPONENTS



G) Display Board Cover
(H) Grounding Stud
(I) Reset Button (under plate)
(J) MCU Cover
(K) Power Supply
(L) Grounding Block
(M) MicroSD USB
(N) Ethernet
(O) MicroSD Card
(P) RS-232 Connector
(Q) Display Cable
(R) MB-232/485 Option Board

FRONT PANEL INDICATOR LIGHTS



INSTALLATION

IMPORTANT: Read all instructions prior to starting the installation process. Do not apply power to the Mini Me until the unit has been mounted and all wiring connections have been made. All work must be performed by authorized installers in accordance with local and National Electric Code.

120/240 VAC power wires must be combined in a separate (isolated) conduit.

Use and select the proper conduit types and sizes in accordance with applicable codes. Even in situations where they are not required by code, it is recommended that conduit is used to protect wiring.

Note: Make certain that all conduits and junction boxes are dry and watertight. Wet wires can result in the faulty operation of the system.

All wires should enter the controller via proper conduit.

Reference pages 5 and 6 in this document for (lettered callout) components detailed below. Reference pages 5 and 6 in the document for (lettered callout) components detailed below

1. Measure base mounting dimensions and fasten the supplied wall anchors. Install screws for the top two mounting flange holes **(B)** leaving a minimum of ¼-inch of thread exposed.
2. Mount the base onto the top two flange screws **(B)** then tighten and secure.
3. Fasten the two bottom flange screws **(B)** to the base mounting holes and secure.
4. Bring power wires (100-240 VAC) through the right-side preformed knockout **(F)** and secure on the power supply **(K)** and grounding block **(L)** as illustrated.

⚠ FAILURE TO COMPLY CAN CREATE AN ELECTRIC SHOCK OR EXPLOSION HAZARD CAUSING DEATH, PERSONAL INJURY, OR PROPERTY DAMAGE.

TERMINAL BLOCK AND POWER SUPPLY WIRING

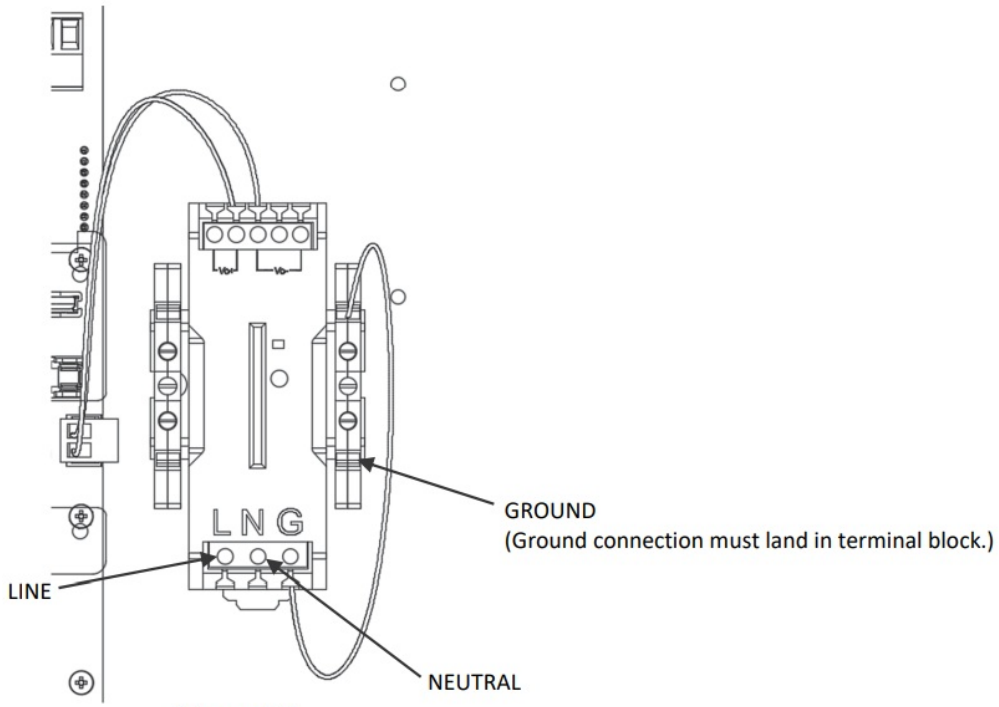


Figure 1.0

Communication wiring and setup is either RS-232, RS485, or Ethernet depending on your preference of communication. The setup of these communication options follows below; RS-485 has two available setup options.

RS-232 SETUP

1. Bring a low-voltage RS-232 (1.5 pair or 4-conductor 22 AWG twisted pair with shield) through one of the additional preformed knockouts **(E)** and secure to the RS-232 connector **(P).**
2. Prepare the proper ATG connection for RS-232.
3. Configure the RS-232 port from the main ATG through the programming settings
4. Power up the Mini-Me and view the programming guide to adjust system settings.

When using an RS-232 connection, the Mini-Me can connect to any industry-standard ATG.

RS-485 SETUP – OPTION 1 (WITH RS-232 TO RS-485 CONVERTER)

Reference pages 5 and 6 in this document for (lettered callout) components detailed below. See Figure 1.0 (page 8) and Figure 2.0 (page 10) for board connector locations.

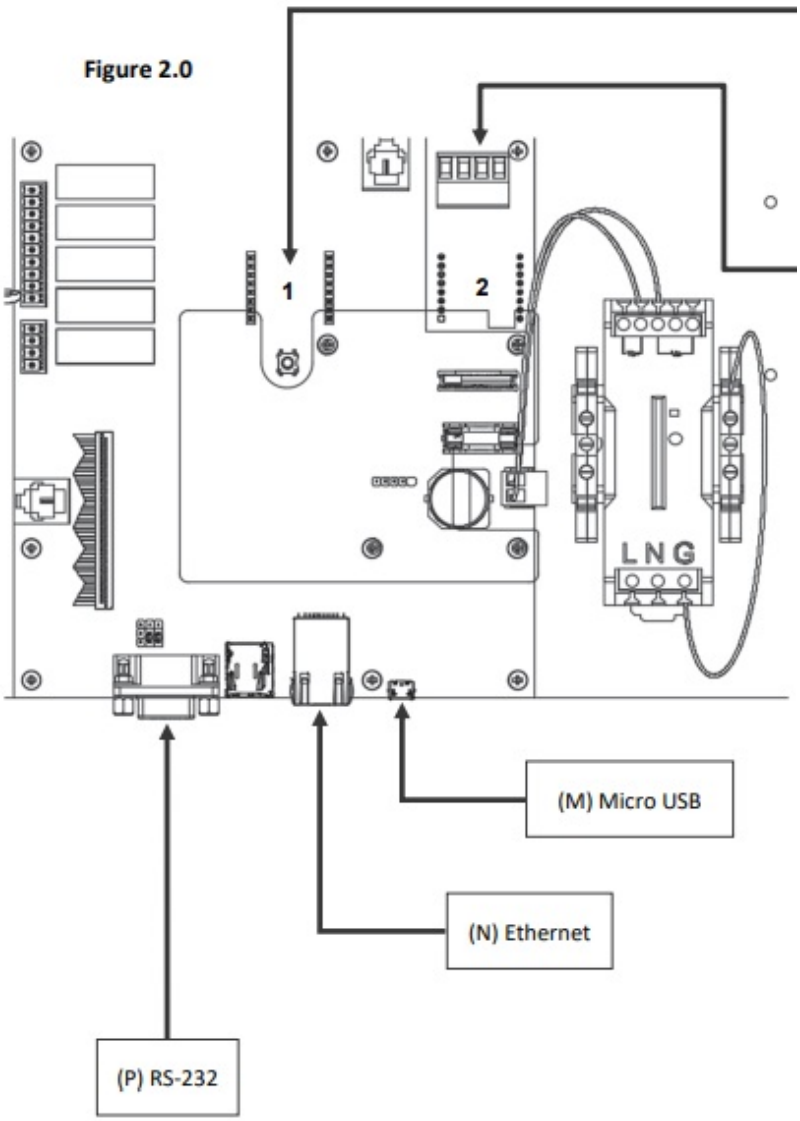
1. Bring a low-voltage RS-232 (1.5 pair or 4-conductor, 22 AWG twisted pair with shield) through one of the additional preformed knockouts (E) and secure to the RS-232 connector (P).
2. Prepare the proper ATG connection for RS-232.
3. Attach RS-232 to RS-485 converter.
4. Configure the RS-232 port from the main ATG through the programming settings.
5. Power up the Mini-Me and view the programming guide to adjust system settings.

RS-485 SETUP – OPTION 2

1. Follow instructions Step 1 from the RS-485; Option 1 (above) section.
2. Prepare the proper ATG connection for RS-485 through the desired option bus.
3. Configure the RS-485 port from the main ATG through the programming settings.
4. Power up the Mini-Me and view the programming guide to adjust system settings.

BOARD CONNECTOR LOCATIONS

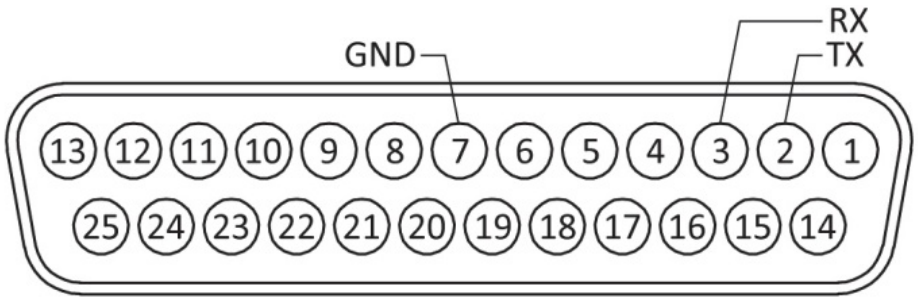
Figure 2.0



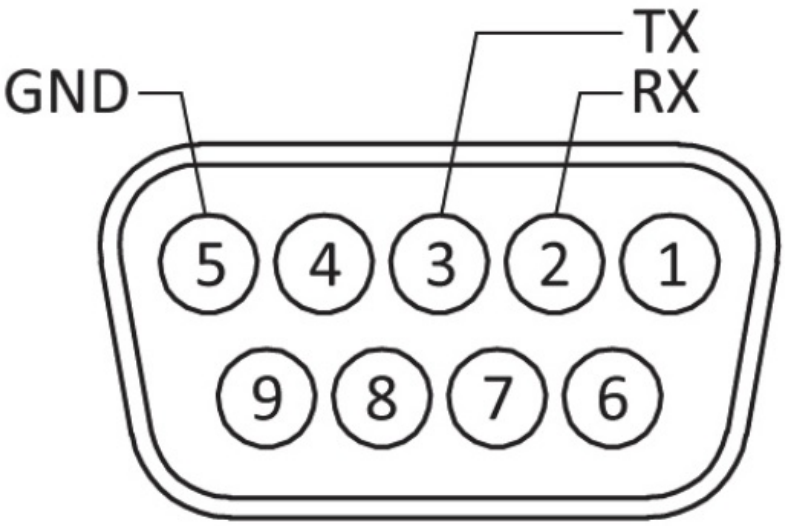
RS-485 and RS-232 alternate connectors (option bus 1 and 2).
RS-232 and RS-485 connectors can be added to the two positions and can be used for communication.
PIN ALIGNMENT IS CRITICAL!

MB-232/485 Option Board (INSTALLED W/ MATING CONNECTOR)
(REFERENCE DOC DI00012)

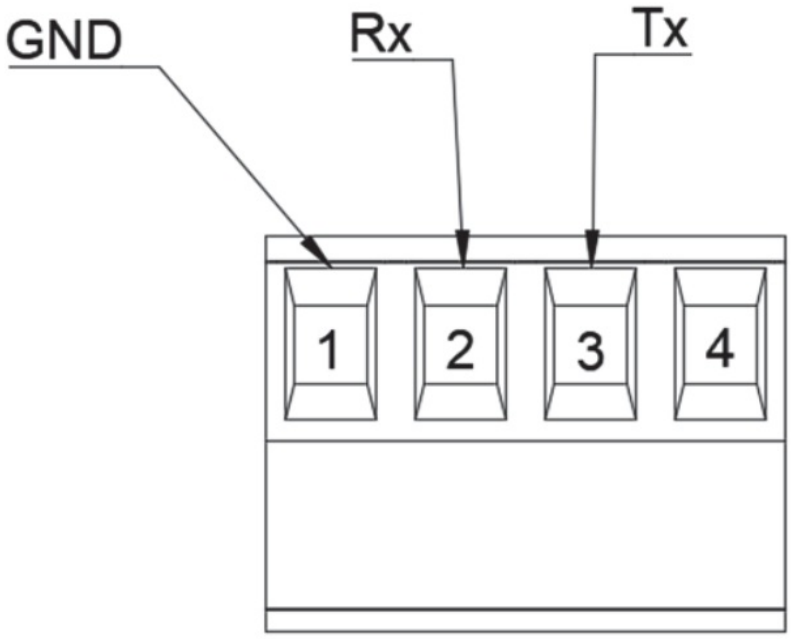
RS-232 PIN-OUTS FROM ATG
25 PIN D CONNECTOR



9 PIN D CONNECTOR



MB-232/485 CONNECTOR



1. Open the camera app
2. Focus the camera on the QR code by gently tapping the code
3. Follow the instructions on the screen to view PDF file

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Documents / Resources

	OMNTEC MMRD7-SS Series Universal Remote Display [pdf] Instruction Manual MMRD7-SS Series Universal Remote Display, MMRD7-SS Series, Universal Remote Display, Remote Display

References

- OMNTEC | Tank Monitoring & Leak Detection Systems
- User Manual