



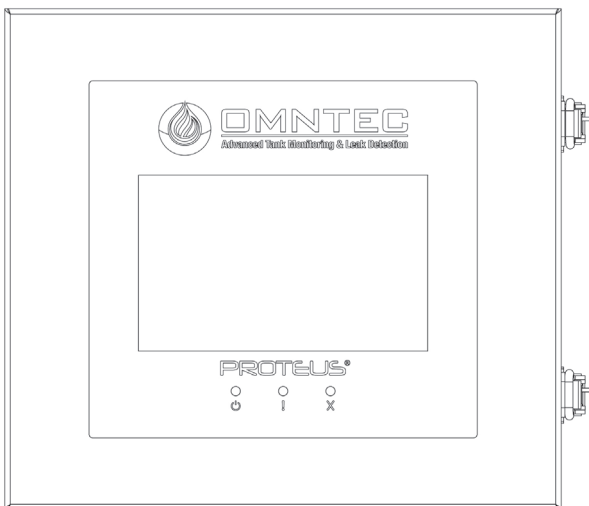
OMNTEC
Advanced Tank Monitoring & Leak Detection



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

M^{PROTEUS}[®] Mini-ME[™]

MMRD7-SS Series INSTALLATION MANUAL



PROTEUS[®] Series UNIVERSAL REMOTE DISPLAY

Revision 1.2

Document No. DI00007

OMNTEC[®] Mfg., Inc. has been certified
by DQS Inc. to ISO 9001:2015

TABLE OF CONTENTS

DESCRIPTION.....	3
SAFETY.....	3
SPECIFICATIONS.....	4
DIMENSIONS AND EXTERNAL COMPONENTS.....	5
INTERNAL COMPONENTS.....	6
FRONT PANEL INDICATOR LIGHTS.....	7
INSTALLATION.....	7
TERMINAL BLOCK AND POWER SUPPLY WIRING.....	8
RS-232 SETUP.....	8
RS-485 SETUP - OPTION 1.....	9
RS-485 SETUP - OPTION 2.....	9
BOARD CONNECTOR LOCATIONS.....	10
ETHERNET SETUP.....	11
WIRELESS.....	11
ADDITIONAL OPTIONS.....	11

DESCRIPTION

The PROTUES® Mini-Me™ is a remote color-graphic display allowing Automatic Tank Gauge (ATG) users the ability to gain access to current tank and alarm information.

ATG's monitor storage tanks for level, temperature, volume, and alarm status. They are usually installed in locations where the ATG's display, and audiovisual alarms are not conveniently accessible. In addition, these tank gauges are often 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 intuitively to the ATG's data and alarm status from anywhere in the world with internet connectivity.

The Mini-Me features standard RS-232, RS-485, and Ethernet communication. The Mini-Me can also be configured for wireless communication using optional accessories. Contact sales for details.

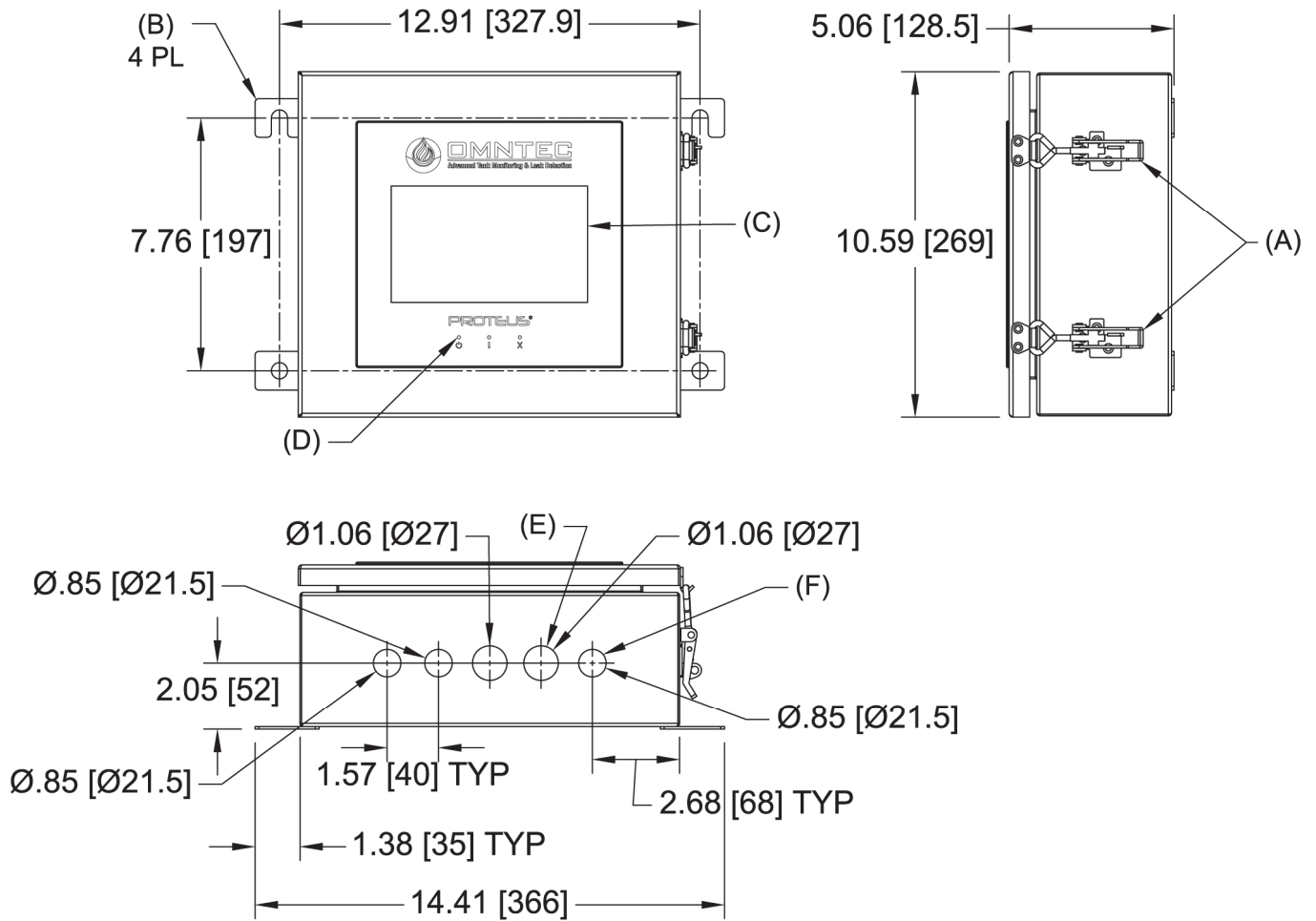
SAFETY

- 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

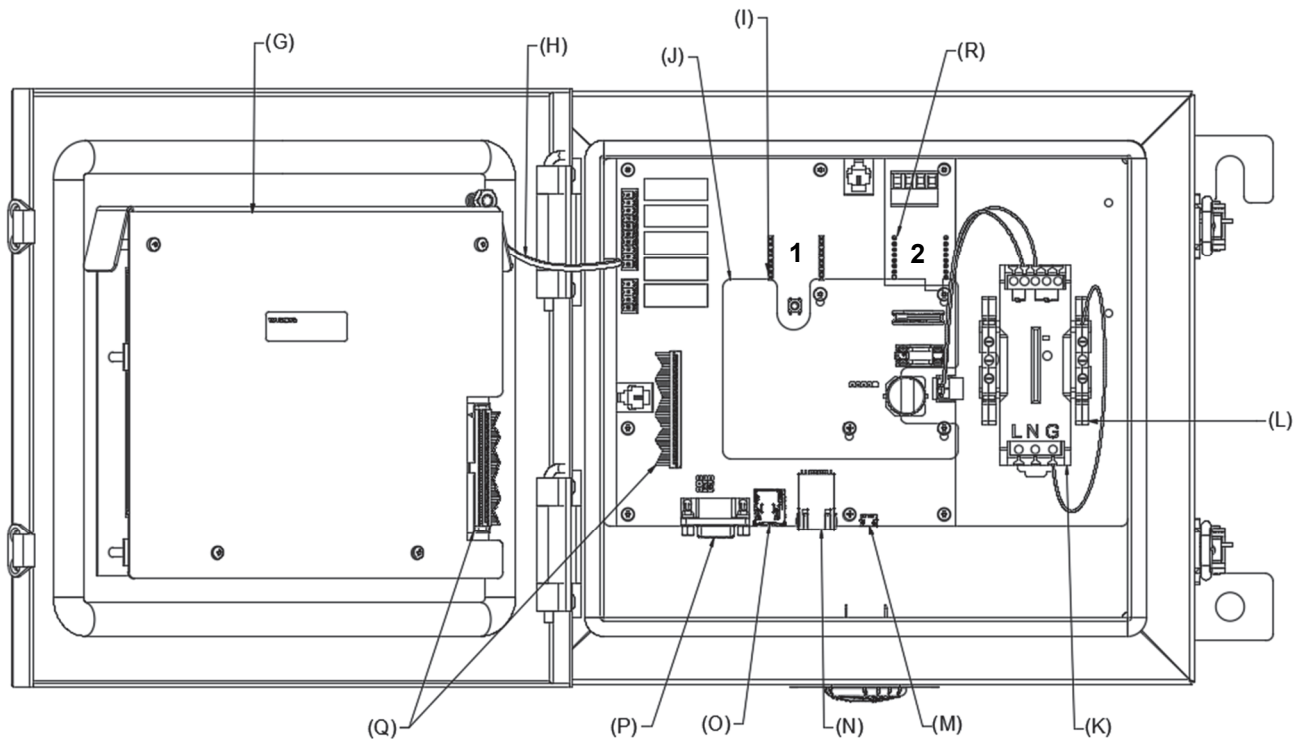
Input Power	100-240 VAC +/- 10% 50/60 Hz 30 watts										
Display	Color 7-inch graphic display with capacitive touch screen										
Audible alarm	85 dB piezoelectric horn										
System status	3 LED's (Power, Warning, Alarm)										
Operating Temperature	-22 to 140° F (-30° to 60° C)										
Outdoor Rating	Nema 4X										
Standard Communications	TCP/IP RS-485 RS-232										
Models Available	MMRD7-SS										
Cables	RS-232 (optional; OMNTEC EC-4) RS-485 (optional; OMNTEC EC-4)										
Accessories	<table border="0"> <tr> <td style="vertical-align: top;">WRS-232</td> <td>Wireless RS-232 link includes both tank gauge and remote transceivers and (2) RD-232C-75 cables</td> </tr> <tr> <td style="vertical-align: top;">WRS-232XR</td> <td>Long range wireless RS-232 link includes both tank gauge and remote transceivers (up to 1 mile)</td> </tr> <tr> <td style="vertical-align: top;">ENC-4X-WRS-232</td> <td>Nema 4X fiberglass enclosure for WRS-232 transceivers (2 required)</td> </tr> <tr> <td style="vertical-align: top;">RD-232C-75</td> <td>75' RS-232 cable</td> </tr> <tr> <td style="vertical-align: top;">C232-422-RD7CTS</td> <td>RS-232-422 Booster Kit to increase distance of RS-232 output 3,000 feet (Includes 2 converters and 2 power transformers)</td> </tr> </table>	WRS-232	Wireless RS-232 link includes both tank gauge and remote transceivers and (2) RD-232C-75 cables	WRS-232XR	Long range wireless RS-232 link includes both tank gauge and remote transceivers (up to 1 mile)	ENC-4X-WRS-232	Nema 4X fiberglass enclosure for WRS-232 transceivers (2 required)	RD-232C-75	75' RS-232 cable	C232-422-RD7CTS	RS-232-422 Booster Kit to increase distance of RS-232 output 3,000 feet (Includes 2 converters and 2 power transformers)
WRS-232	Wireless RS-232 link includes both tank gauge and remote transceivers and (2) RD-232C-75 cables										
WRS-232XR	Long range wireless RS-232 link includes both tank gauge and remote transceivers (up to 1 mile)										
ENC-4X-WRS-232	Nema 4X fiberglass enclosure for WRS-232 transceivers (2 required)										
RD-232C-75	75' RS-232 cable										
C232-422-RD7CTS	RS-232-422 Booster Kit to increase distance of RS-232 output 3,000 feet (Includes 2 converters and 2 power transformers)										
Weight	14 lbs. (6.4 kg)										
Dimensions	(h) 10.5" (w) 14.41" (d) 5.08"										

DIMENSIONS AND EXTERNAL COMPONENTS



- | | |
|--------------------------|--|
| (A) Latches | (D) Indicator Lights |
| (B) Mounting Brackets | (E) Additional Knockouts (a total of four) |
| (C) Touch-Screen Display | (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

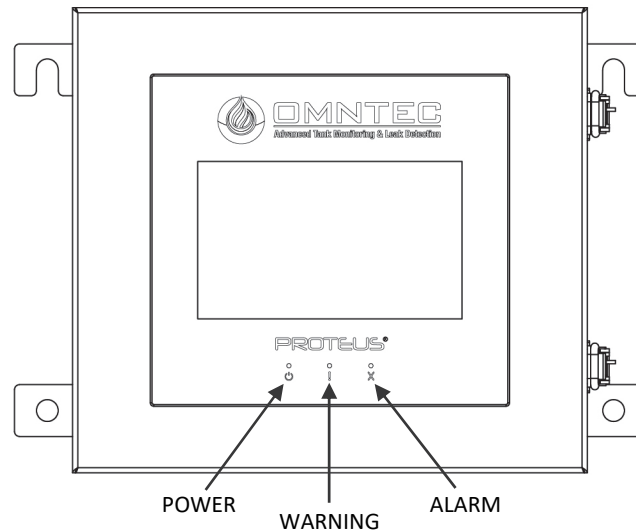
(O) MicroSD Card

(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

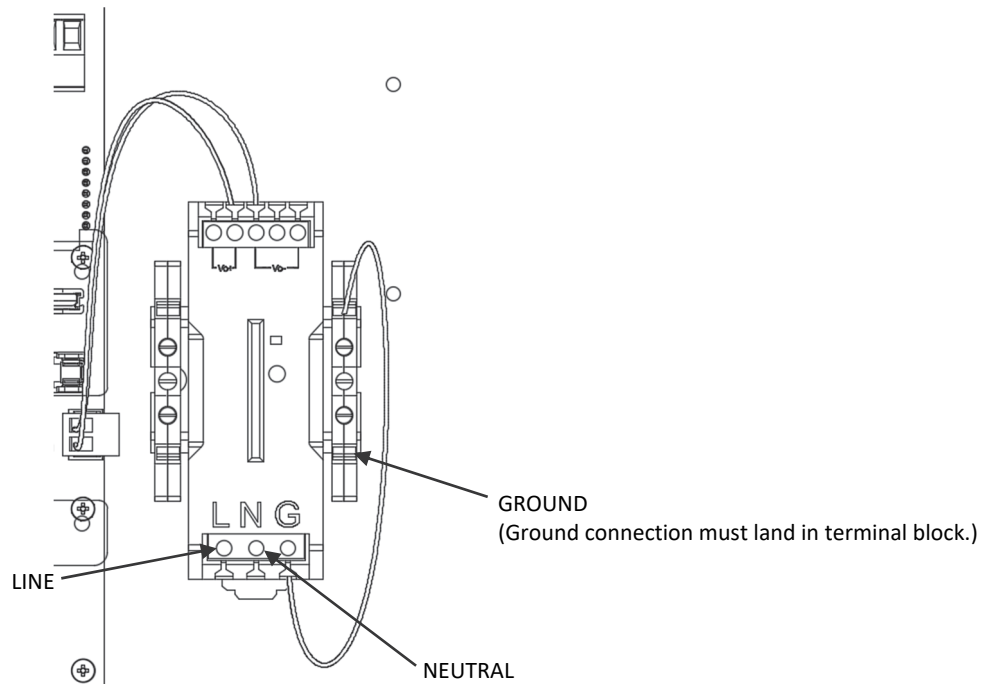


Figure 1.0

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.

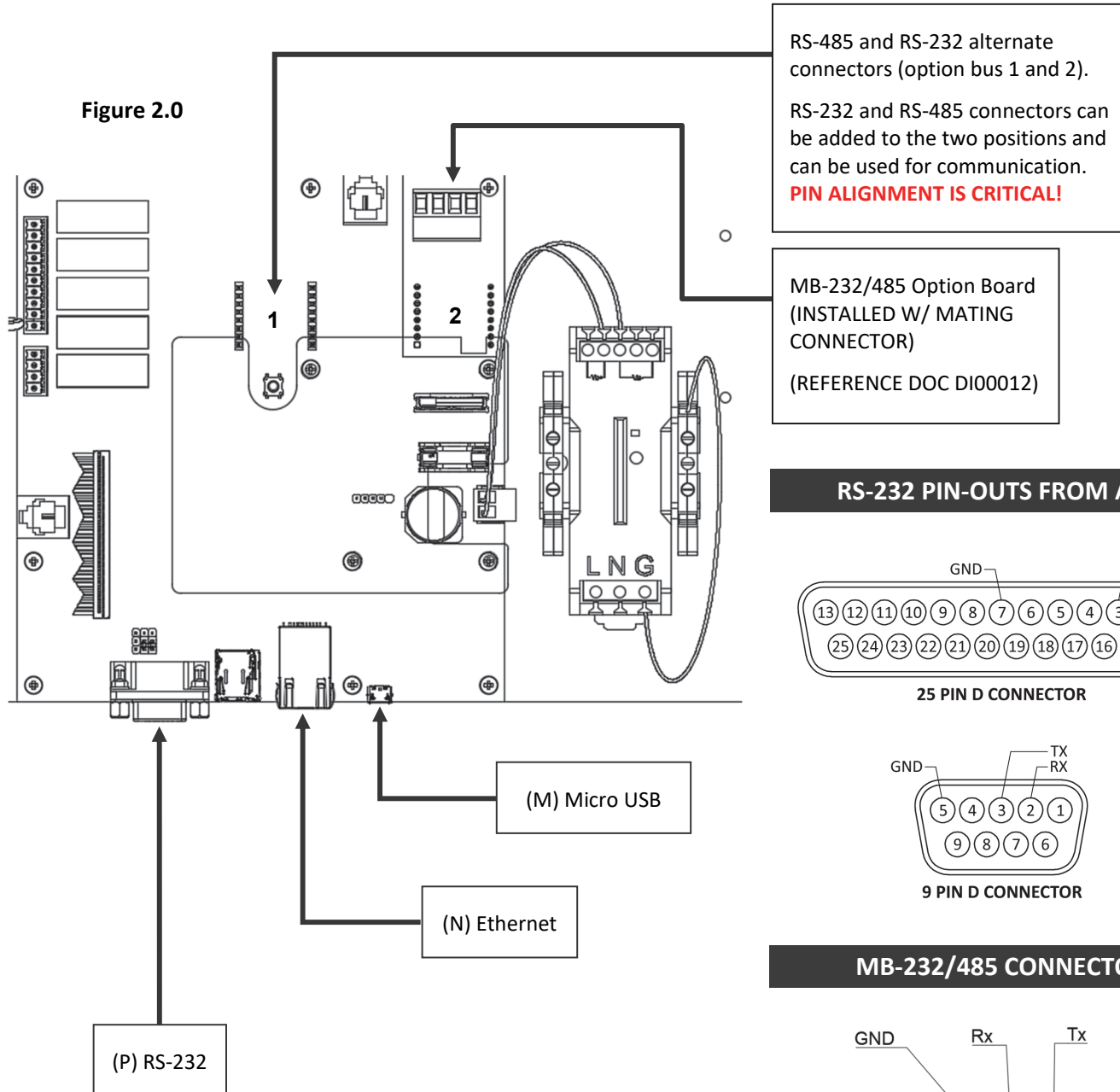
1. Bring a low-voltage RS-232 (1.5 pair or 4-conductor, 22 AWG twisted pair with shield) through one of the additional preformed knockouts (E) and secure to the RS-232 connector (P).
2. Prepare the proper ATG connection for RS-232.
3. Attach RS-232 to RS-485 converter.
4. Configure the RS-232 port from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

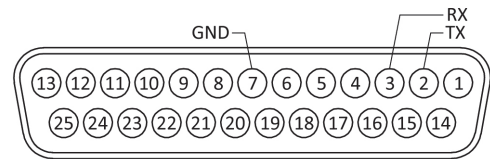
Figure 2.0



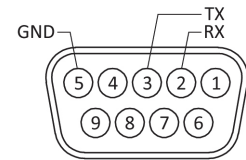
RS-485 and RS-232 alternate connectors (option bus 1 and 2).
 RS-232 and RS-485 connectors can be added to the two positions and can be used for communication.
PIN ALIGNMENT IS CRITICAL!

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

RS-232 PIN-OUTS FROM ATG

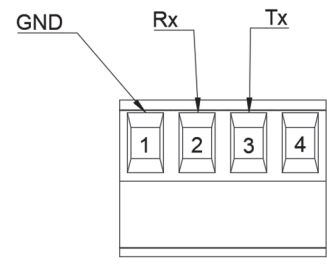


25 PIN D CONNECTOR



9 PIN D CONNECTOR

MB-232/485 CONNECTOR



ETHERNET SETUP

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

1. Follow instructions Step 1 from the **RS-485; Option 1** (page 9).
2. Bring an Ethernet through one of the preformed knockouts (E). Secure to the Ethernet connector (N).
3. Prepare the proper ATG connection for Ethernet through the Ethernet connector (N).
4. Configure the Ethernet port from the main ATG through the programming settings.
5. Power up the Mini-Me and view the programming guide to adjust system settings.

WIRELESS

Optional wireless communication is available. Please contact OMNTEC for additional information.

ADDITIONAL OPTIONS

Additional components can plug into option bus 1 and 2. Please call OMNTEC for more details.

Refer to supplemental document.

IMPORTANT: Specifications subject to change without notice, verify with manufacturer.