Level Plus®

Magnetostrictive Liquid-Level Sensors
with Temposonics® Technology

LCD Modbus Terminal
Modbus RTU Input
Product Specification

Temposonics
AN AMPHENOL COMPANY

Features

■ **RS -485, Modbus RTU Input**
■ **NEMA 4X rated enclosure and Display**
■ **UV rated Overlay for Outdoor use**
■ **Numerical Display**
■ **Calibrate transmitter From Display**
■ **Hazardous area approved115 VAC Input Power**
■ **24 VDC transmitter and terminal Power supply**
■ **Options:**
  - **Elays (6 per module)**
  - **4 to 20 ma Outputs (4 per module)**

APPLICATIONS

■ **Field Indication**
■ **Controller**

MARKETS

■ **Petroleum and Petrochemical**
■ **LPG terminals**
■ **Water and Wastewater**

Product Overview

The LCD Modbus Terminal is a fully programmed remote terminal that can be placed in the field or in a control room. The Terminal accepts Modbus RTU, displays tank information, and can output Modbus RTU to a plant wide system (PLC, DCS, SCADA).

The Terminal features calibration ability, audible alarms and visual diagnostics. Relays and 4 to 20 mA output signals are optional for each Terminal.

The LCD Modbus Terminal can display up to 8 tanks showing product level, interface level, and temperature. If the user would like to also display volume information, up to 4 tanks can be shown.

The LCD Modbus Terminal includes a NEMA 4X rated enclosure. The front overlay for the Terminal is designed for outdoor use with a UV rated material. The front panel of the display also has a NEMA 4X rating.

Level Plus® LCD Modbus terminal
(part number 280494-X)

Product specifications

Parameters	s pecifications
INPUT	
Modbus RTU :	RS-485 port
OUTPUT	
Modbus RTU :	1 RS-485 port 1 Ethernet Port
Optional Outputs:	Relays (6 per module) 4 to 20 mA outputs (4 per module)
ELECTRONICS	
Input voltage:	115 Vdc ±10%
Transmitter supply:	24 Vdc ±20% supply
Display:	Decimal format 3.2 inch, 128 x 64 PPI LCD with yellow LED backlight
ENVIRONMENTAL	
Enclosure rating:	NEMA 4X
Front panel:	NEMA 4X (Front panel overlay - UV rated)
Humidity:	0 to 80% relative humidity, non condensing
Operating temperatures:	**electronics:** 0 °C (32 °F) to 50 °C (122 °F) **s torage temperature:** -30 °C (-22 °F) to 70 °C (158 °F)
Altitude:	2000 meters
FIELD INSTALLATION	
Enclosure mounting hole dimensions:	**Height:** 324 mm (12.75 in.) **Width:** 203 mm (8.01 in.)
Enclosure dimensions	**Height:** 343 mm (13.51 in.) **Width:** 207 mm (11.29 in.) **Depth:** 142 mm (5.58 in.)

Agency Approvals

Parameters	s pecifications
Hazardous Approvals:	Class I, Division 2, Groups A, B, C, and D Class II, Division 2, Groups F and G Class III, Division 2 ◊ *Approvals are obtained by original manufacturers for individual components. MTS does not maintain any approval for the Modbus terminal final assembly.*

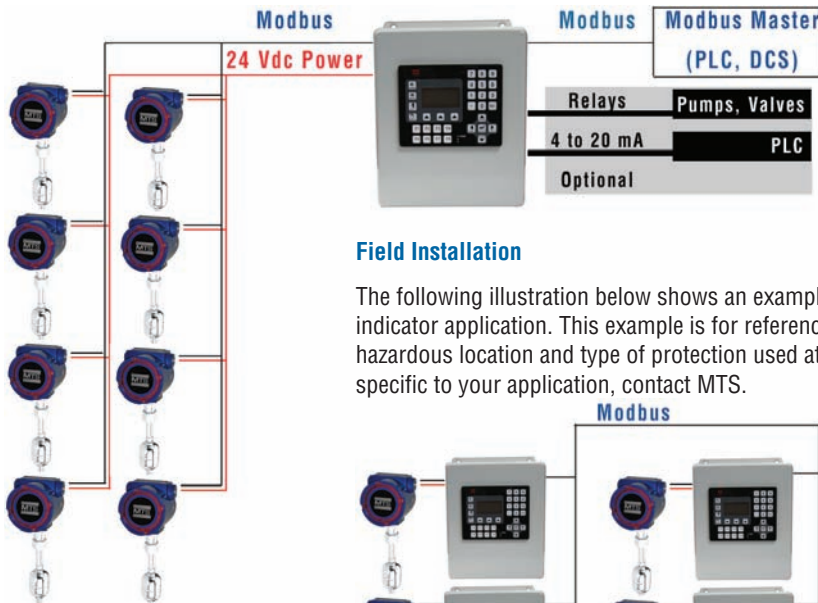## Level Plus M-s eries LCD Modbus t erminal Dimension references

The following drawing is for reference only.

203 mm (8.01 in.)

343 mm
(13.51 in.)

324 mm
(12.75 in.)

142 mm
(5.58 in.)

Mounting holes
8 mm (0.32 in.) dia. (4X)

203 mm (8.01 in.)

287 mm (11.29 in.)

Panel size
273 x 226 mm (10.75 x 8.88 in.)
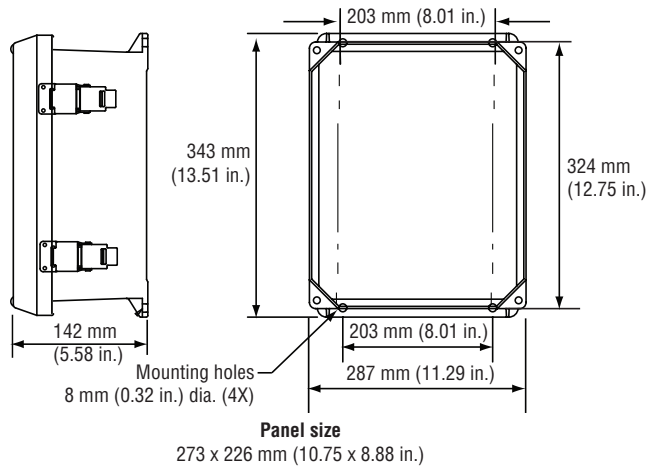
Installation examples

Control room Installation

The following illustration shows an example of the Touchscreen Modbus Terminal used as a controller in a plant-wide automation application. The following illustration shows an example of the Touchscreen Modbus Terminal used as a controller in a plant-wide automa-tion application. This example is for reference only. Actual configurations are dependent on the hazardous location and type of protection used at a Modbus terminal installation site. For information specific to your application, contact Temposonics.

Modbus

24 Vdc Power

Modbus | Modbus Master
(PLC, DCS)

Relays | Pumps, Valves
4 to 20 mA | PLC
Optional

Field Installation

The following illustration below shows an example of the LCD Modbus Terminal used as a remote field indicator application. This example is for reference only. Actual configurations are dependent on the hazardous location and type of protection used at a Modbus terminal installation site. For information specific to your application, contact MTS.

Modbus | Modbus Master
(PLC, DCS)
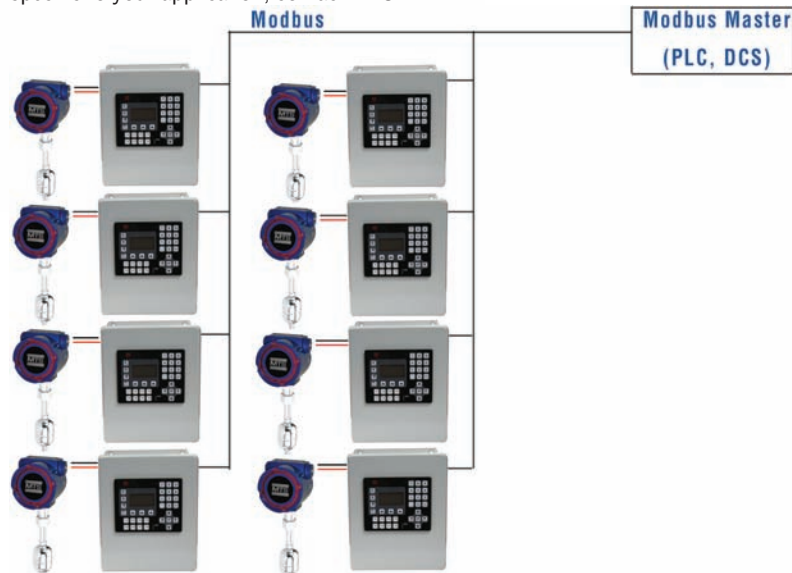
Ordering information

LCD MODBUS TERMINAL	Part Number
The LCD Modbus terminal includes: NEMA 4X Rated enclosure 24 Vdc Transmitter power supply Custom programming	280494-X

Relays	Part Number
Optional, 6 per module	380101

4 TO 20 MA OUTPUTS	Part Number
Optional, 4 per module	380100

ISO 9001
C E R T I F I E D

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