TEK-L CD 7800C

Panel Mount Loop-Powered Process Indicator

Decimal Display

Decimal Display with Bar Graph

Feet & Inches Display with Bar Graph

INDICATOR/
CONTROLLER

Flow | Level | Temperature | Pressure | Valves | Analyzers | Accessories | TekValSys

Introduction

Tek-LCD 7800C Panel Mount Loop-Powered Process Indicator 1/8 DIN digital panel meters can be installed virtually anywhere. It provides a convenient and informative display of any 4-20 mA signal. One of the most important feature of this instrument is the dual-line display. This dual-line display is mostly used to display the process variable on the 5-digit alphanumeric top line along with the units or a tag on the 8-digit alphanumeric bottom line. Tek-LCD 7800C Panel Meter can easily set up to display the input in one scale on the top and bottom line (such as feet and Gallon, respectively). Both theses top and bottom lines use 14- alphanumeric segment characters, which clearly indicate tags, units, and alarm messages.

The Tek-LCD 7800C Panel Mount Loop-Powered Process Indicator displays the 20-segment bar graph. This bar graph represents a numeric percent value. It also consists of the model that displays the level in feet and inches as per the customer requirement. Tek-LCD 7800C Panel Meters does not require an external power source, as if virtually installed. This Loop-Powered Panel Meter consists of NEMA 4X, IP65 front panel, conformal coated PCBs, and a backlit LCD. Output can be easily read in bright sunlight or dimly lit areas due to backlight LCD. There are intrinsically safe and nonincendive versions of this process indicator, which can be installed in hazardous areas. For programming and set up the meter, PC based software easily connects to the meter via USB cable. Also, the meter can be programmed, set up, and operated through the four front panel buttons.

Additionally, the digital input is used for the remote reset to trigger an alarm. All models are well equipped with two open collector outputs, which include two solid-state relays along with 4-20 mA analog output options. Hence, it is useful for alarm indication or pulse output.
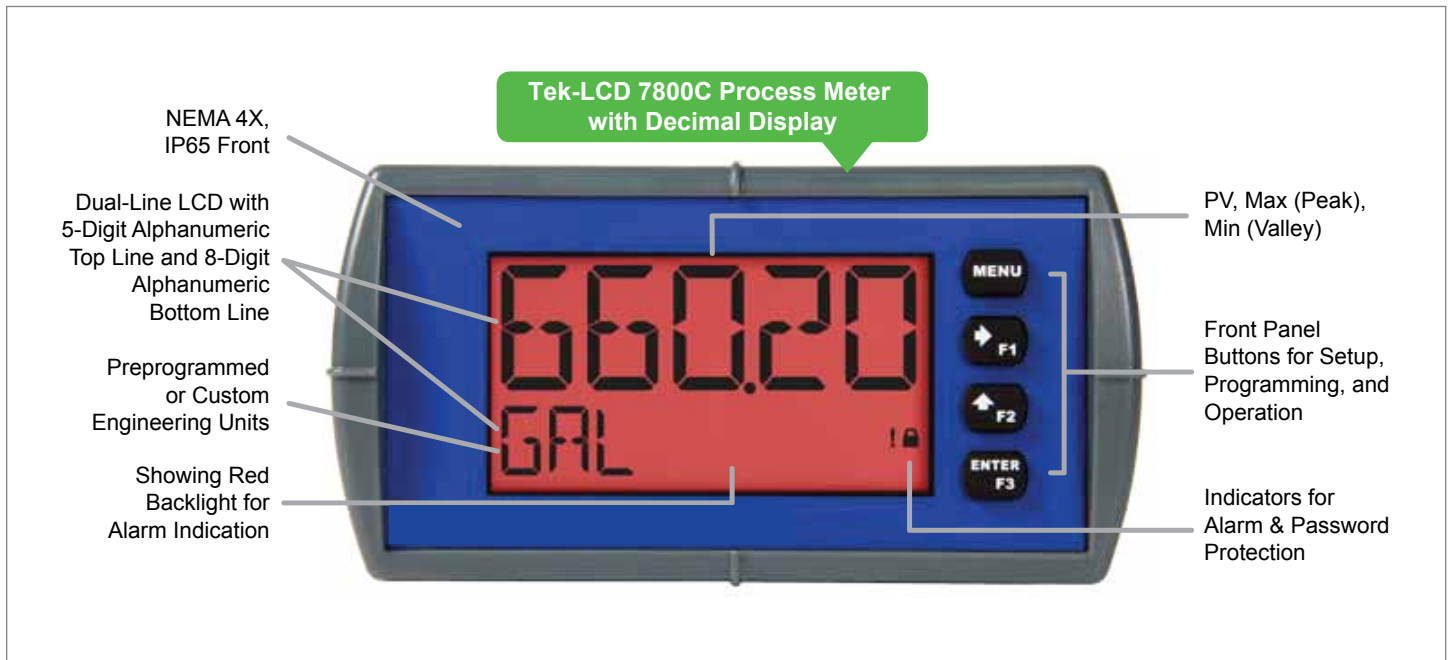

Fig 1: Tek-LCD 7800C Panel Mount Loop-Powered Process Indicator

Different Display Types

Tek-LCD 7800C Panel Mount Loop-Powered Process Indicator consists of three different models of Loop Leaders with different displays as following:

Decimal Display

• 5-Digit Alphanumeric Top Line
• 8-Digit Alphanumeric Bottom Line

Fig 2: Decimal Display

Decimal Display with Bar Graph

• 5-Digit Alphanumeric Top Line
• 8-Digit Alphanumeric Bottom Line
• 20-Segment Bar Graph with Numeric Percentage

Fig 3: Decimal Display with Bar Graph

Feet & Inches Display with Bar Graph

• Feet & Inches on Top Line
• 8-Digit Alphanumeric Bottom Line
• 20-Segment Bar Graph with Numeric Percentage

Fig 4: Feet & Inches Display with Bar Graph

Features

- 4-20 mA Input.
- Loop-Powered Process Meter.
- 1.5 Voltage Drop (4.5 Voltage Drop with Backlight).
- Loop-Powered Backlight with Red Backlight for Alarm Conditions.
- NEMA 4X, IP65 front panel.
- Operating Temperature Range for Safe Area: -40 to 167°F (-40 to 75°C).
- PC-Based USB Programming Software.
- 5-Digit Alphanumeric Top Line.
- 8-Digit Alphanumeric Bottom Line.
- Displays Level in Feet and Inches (up to 999 Feet, 11 & 15/16 inches).
- 20-Segment Bar Graph with Numeric Percent Indication
- Conformal Coated PCBs for Dust and Humidity Protection.
- Two Open Collector Outputs Standard.
- Optional Loop-Powered Solid-State Relays.
- Optional 4-20 mA Analog Output.
- Relay Pump Alternation Based on Level and Runtime.
- Display Relay Runtime and Cycle Count.

Specifications

Note: All specifications apply to operation at 77°F (25°C).		
Display	Five Digits Top Display (-9999 to 99999)	¾" (17.8 mm) high 14-segment alphanumeric Automatic lead zero blanking
	Seven Characters (Engineering Units)	½" (10.2 mm) high 14-segment alphanumeric
	Symbols	High & Low Alarm, Password Lock
	Backlight	White
Display Update Rate	Ambient > -13°F: 2 Updates/Second Ambient < -13°F: 1 Update/5 Seconds	
Overrange	Display flashes 99999	
Underrange	Display flashes -9999	
Programming Method	Four through-window buttons when cover is installed Four internal push-buttons when cover is removed	
Recalibration	Recalibration is recommended at least every 12 months	
Max/Min Display	Max/Min readings reached by the process are stored until reset by the user or until power to the meter is turned off	
Password	Programmable password restricts modification of programmed settings Pass GT: Restricts the reset of grand total to require re-entering the password May enable a non-resettable grand total and permanent lockout of grand total- related settings with a specific password	
Non-Volatile Memory	All programmed settings are stored in non-volatile memory for a minimum of ten years	
Normal Mode Rejection	64 dB at 50/60 Hz	
Accuracy	±0.05% FS ±0.001mA	
Temperature Range	Operating Temperature: -40°F to 167°F(-40°C to 75°C) for safe area products -40°F to 158°F (-40 to 70°C) for hazardous area products Storage Temperature: -40°F to 185°F (-40 to 85°C)	
Relative Humidity	0 to 90% non-condensing Printed circuit boards are conformally coated	

Dimensional Drawing

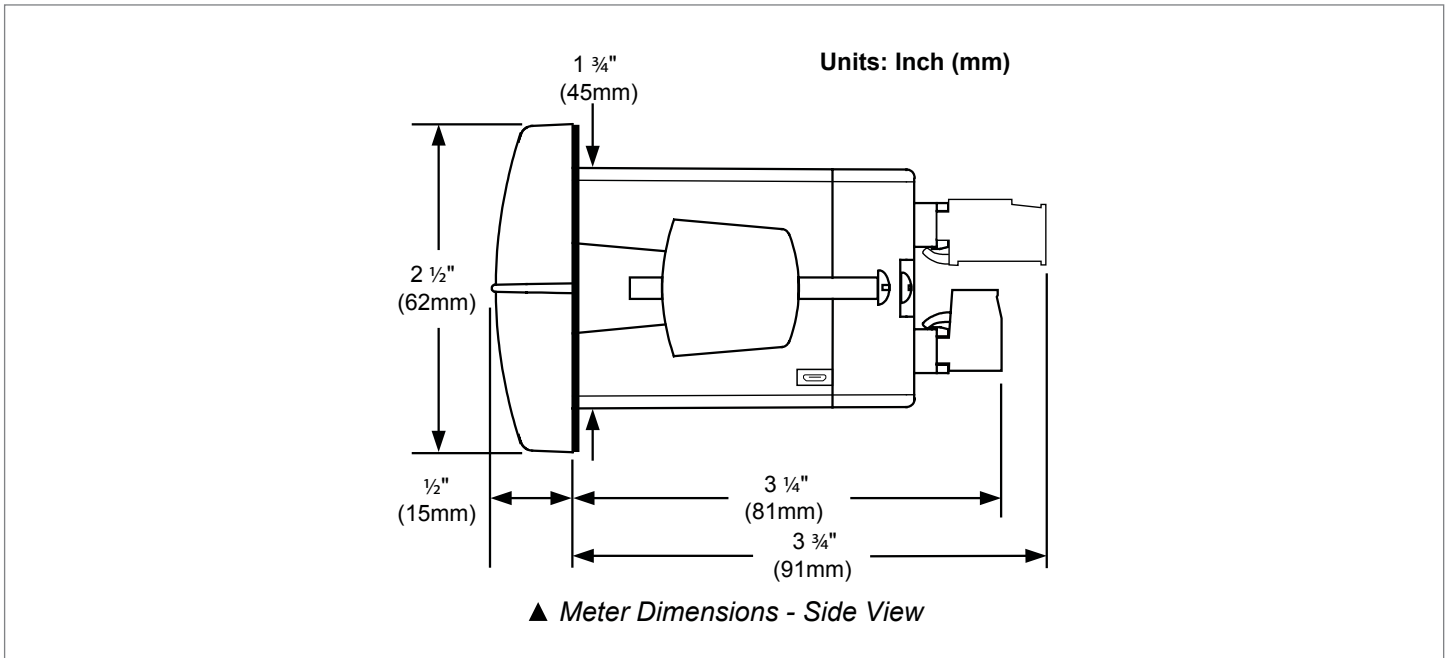## Enclosure Dimension - Front View

Units: Inch (mm)

1 ¾" (45mm)

2 ½" (62mm)

½" (15mm)

3 ¼" (81mm)

3 ¾" (91mm)

▲ Meter Dimensions - Side View

Fig 5: Enclosure Dimension - Front View

Enclosure Dimension - Side View

MENU

F1

F2

ENTER F3

2 ½" (62mm)

4 ¾" (119mm)

▲ Meter Dimensions - Front View
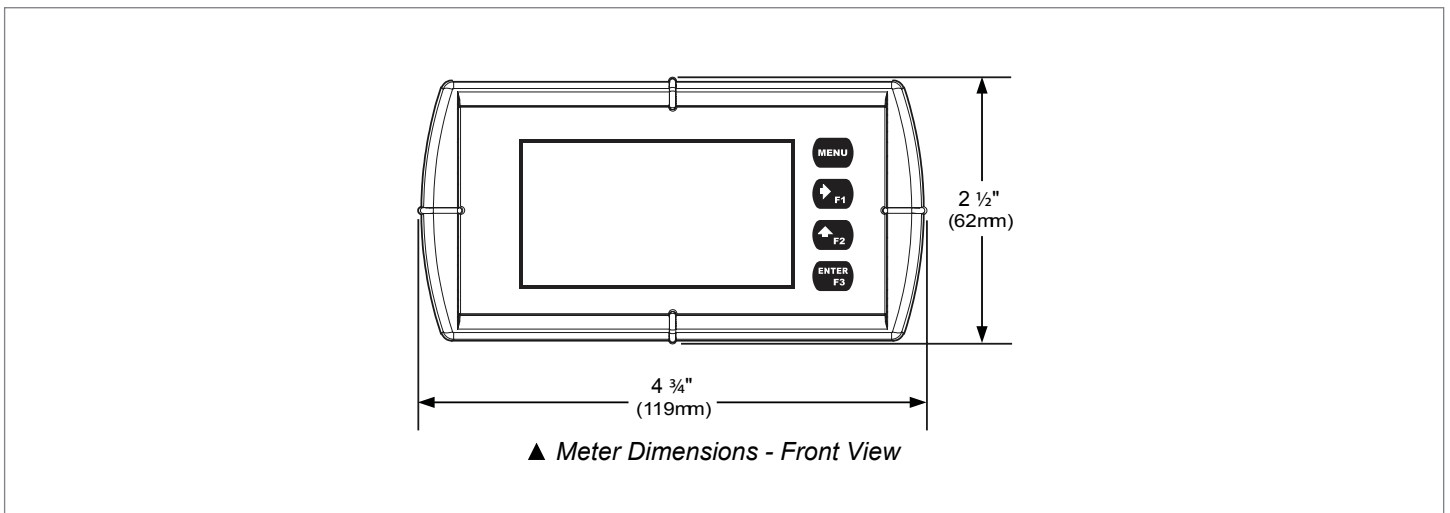
Fig 6: Enclosure Dimension - Side View

Popular Models

Model Number	Description
7800C-LNN	1/8 DIN Loop-Powered Meter with Bar Graph
7800C-L2N	1/8 DIN Loop-Powered Meter with Bar Graph, 2 Relays
7800C-L3N	1/8 DIN Loop-Powered Meter with Bar Graph, Isolated 4-20mA
7800C-L5N	1/8 DIN Loop-Powered Meter with Bar Graph, 2 Relays, Isolated 4-20mA

Enclosures

Model Number	Description
7800C-PDA2301	Plastic NEMA 4X Enclosure, Hinged Door, One 1/8 DIN Cutout
7800C-PDA2302	Plastic NEMA 4X Enclosure, Hinged Door, Two 1/8 DIN Cutout
7800C-PDA2303	Plastic NEMA 4X Enclosure, Hinged Door, Three 1/8 DIN Cutout
7800C-PDA2304	Plastic NEMA 4X Enclosure, Hinged Door, Four 1/8 DIN Cutout
7800C-PDA2305	Plastic NEMA 4X Enclosure, Hinged Door, Five 1/8 DIN Cutout
7800C-PDA2306	Plastic NEMA 4X Enclosure, Hinged Door, Six 1/8 DIN Cutout

Customer Service & Support

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Flow | Level | Temperature | Pressure | Valves | Analyzers | Accessories | TekValSys