

PD480 Low-Cost Loop-Powered Digital Panel Meter

Instruction Manual



FEATURES

- Powered Entirely From 4-20 mA Loop
- Loop-Powered Backlight Standard
- 4-20 mA Input
- 1.5 Volt Drop (4.5 Volt Drop with Backlight)
- 0.55" (14 mm) LCD Display
- 3½ Digits; -1999 to 1999
- Panel Cutout: 2.9" x 1.6" (73 mm x 40 mm)
- Snap-in Bezel for Quick Panel Mounting
- 1.0" (25 mm) Behind Panel
- HART® Protocol Transparent
- Operates from 0 to 50°C (32 to 122°F)
- Zero & Span Potentiometer Adjustments for Easy Field Scaling

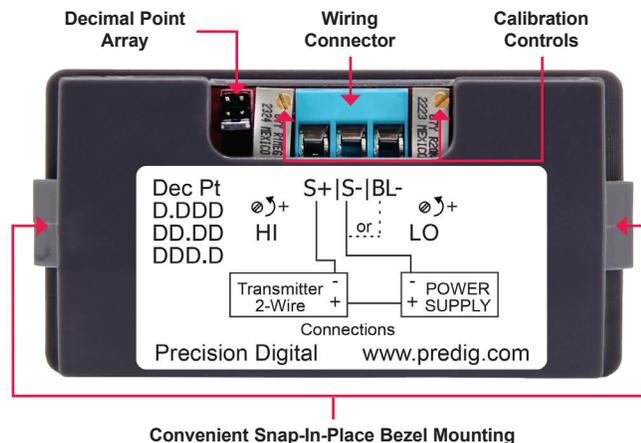
OVERVIEW

The PD480 is an affordable, loop-powered digital panel meter with a large display and compact design. It accepts a 4-20 mA input that can easily be scaled to engineering units in the field using the zero and span potentiometers. The meter comes equipped with a 3½ digit LCD and a loop-powered backlight.

Being loop-powered eliminates the need for additional power lines, reducing costs. The meter draws all the required power from the 4-20 mA loop, with a minimal 1.5 V voltage drop, ensuring a low impact on the loop.

This meter operates in a broad temperature range from 0 to 50°C (32 to 122°F). Calibration is simple and quick, involving just a two-step process with the adjustment of high and low non-interacting potentiometers.

REAR VIEW



SPECIFICATIONS

Except where noted all specifications apply to operation at +25°C.

Input	4-20 mA @ 30 VDC maximum
Display	0.55" (14.0 mm) LCD, 3½ digits; -1999 to 1999
Accuracy	±0.1% FS ±1 count
Decimal Point	User selectable
Calibration	Two-step; non-interacting zero and span
Calibration Range	4 mA input: -1000 to +1000; 20 mA input: between 20 and 2000 counts > 4 mA display
Display Update Rate	2.5/second
Maximum Input Current	30 mA
Maximum Voltage Drop	1.5 V @ 20 mA (4.5 V @ 20 mA with backlight)
Environmental	Operating Temperature: 0 to 50°C (32 to 122°F) Storage Temperature: 0 to 50°C (32 to 122°F) Relative Humidity: 0 to 90% non-condensing
Enclosure	Color: gray; NEMA 1, IP40
Connections	Screw terminals accept 14 to 26 AWG
Panel Cutout	2.9" x 1.6" (73 mm x 40 mm)
Depth Behind Panel	1.0" (25 mm)
Mounting	Snap-in bezel; No tools required
Overall Dimensions	3.1" x 1.7" x 1.0" (80 mm x 42 mm x 25 mm) (W x H x D)
Weight	2 oz (57 g)
Warranty	1 year parts and labor. See Warranty Information and Terms & Conditions on www.predig.com for complete details.

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SETUP

The only tools needed for calibration are a calibrated current source and a small slotted / flathead screwdriver.

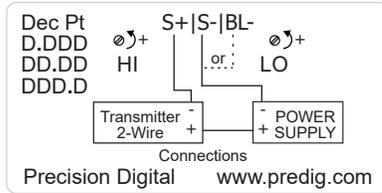


Figure 1: PD480 Wiring Label

Decimal Point Selection

The decimal point jumper array is located to the left of the HI calibration potentiometer. It is labeled D.DDD, DD.DD, DDD.D. Place a jumper over both pins of DDD.D for a display of 199.9, DD.DD for 19.99, or D.DDD for 1.999.

Loop Connections

Disconnect power to the loop and connect the meter as illustrated in Figure 2. Connect the power supply to the (S-) terminal or to activate backlight connect to the (BL-) terminal.

Calibration

LO and HI calibration controls are located next to the screw terminal connector (See Figure 1). Apply a signal equal to 4 mA and adjust the LO control to display the desired reading. Apply a signal between 16 and 20 mA and adjust the HI control to display the desired reading. Complete the calibration procedure by making any minor adjustments to the LO and HI controls.

CONNECTIONS

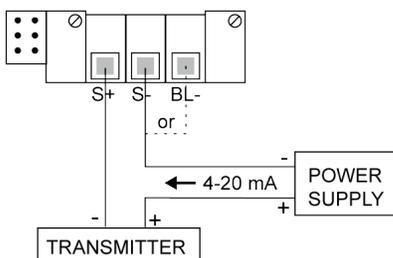


Figure 2: Transmitter Connections Diagram
(to activate backlight, connect “-” on power supply to “BL” terminal)

WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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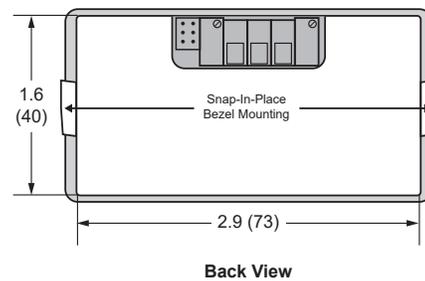
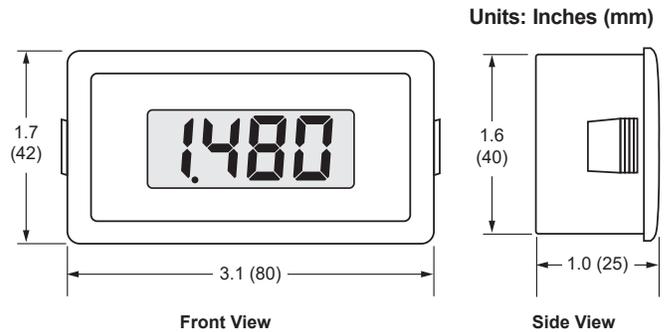
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DIMENSIONS

Panel Mount Dimensions



Notes:

1. Panel cutout required: 2.9" x 1.6" (73 mm x 40 mm)
2. Panel thickness: must be greater than 0.06" (1 mm)
3. Snap-in-place bezel mounting requires no tools

PLASTIC ENCLOSURES



Plastic enclosures are available to house one, two or three PD480 meters. They are intended to provide a convenient way to mount these meters to a wall, not to provide protection against liquid or dust. A more appropriate solution for one meter in an enclosure would be the PD662.

ORDERING INFORMATION

PD480 Loop-Powered Meter	
Model	Description
PD480	Loop-Powered Digital Panel Meter with Backlight