

4½ DIGIT LOOP-POWERED METERS

Model PD673 1/8 DIN Panel Mount



PD673

- 0.4" (10.2 mm) LCD
- NEMA 4X, IP65
- 1/8 DIN, high impact plastic case
- 6.6 oz (188 g)

Model PD675 NEMA 4X

PD675

- 0.7" (17.8 mm) LCD
- FM Approved & CSA Certified
- Impact-resistant polycarbonate body
- 12 oz (340 g)



Model PD677 Explosion-Proof



PD677

- 0.7" (17.8 mm) LCD
- PD677-N-EX is FM Approved & CSA Certified
- Explosion-proof, cast aluminum with glass window
- 5.7 lb (2.6 kg)

General

- 4½ Digit LCD; 19999
- Operates from -20 to 65° C
- Easy to Calibrate



WARNING: If any of the following operations are performed in hazardous areas, all appropriate hazardous area procedures must be followed (PD675 & PD677).

WARNING: Disconnect from supply before opening. Keep cover tight while circuits are alive. Conduit seals must be installed within 18" of the enclosure (PD677).

AVERTISSEMENT: Ouvrir le circuit avant D'enlever le couvercle garder le couvercle bien fermé tant que les circuits sont sous tension. Un scellement doit être installé à moins de 450 mm du boîtier (PD677).

WARNING: Calibration of the Loop-Powered Display should be performed in a non-hazardous area prior to installing it in its enclosure (PD675 & PD677).

CAUTION: Care should be taken to avoid static electricity damaging the electronic circuitry.

SETUP

The only tools needed for calibration are a calibrated current source, a flat head screwdriver & a phillips head screwdriver. Please note that the meter must be disassembled in order to perform the setup functions.

Disassembly

The calibration controls are located behind the display faceplate. To access these controls, you must first remove the enclosure cover and faceplate by doing the following:

PD673: Grasp the top and bottom edges of the cover and firmly pull it forward. The faceplate is removed along with the cover. The latch will remain around the enclosure.

PD675: Loosen the four screws on the enclosure cover and remove. Unscrew the two fasteners that hold the faceplate, then remove.

PD677: Turn the enclosure cover counterclockwise to remove. Unscrew the two fasteners that hold the faceplate, then remove.

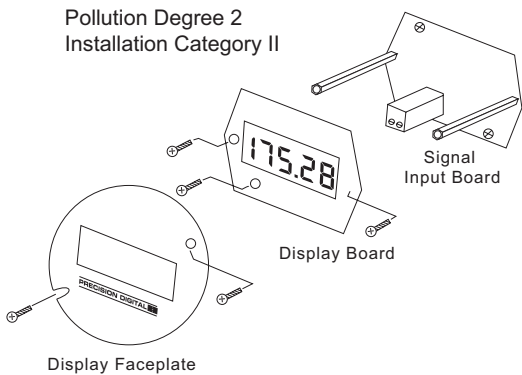


Figure 2. PD677 Assembly

Note: When reassembling boards DO NOT to over-tighten screws.

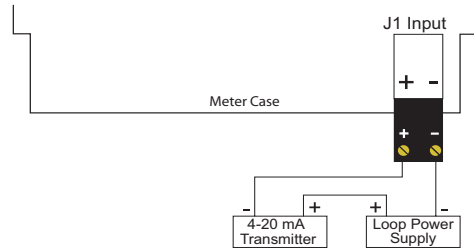
Connections

Field connections are accessed by doing the following:

PD673: Field connections are made to the screw terminals at the rear of the instrument. It is not necessary to remove the instrument from its enclosure to access the screw terminals.

PD675 & PD677: Field connections are made to the screw terminals located on the Signal Input Board. To access these screw terminals it is necessary to remove the Display Board from the Signal Input Board. First, disconnect the ribbon cable connector from the Display Board. Next, remove the two screws located to the left and right of the LCD that hold the Display Board in place. Finally, remove the Display Board carefully to avoid contact with any rough surfaces.

PD673



PD675 & PD677

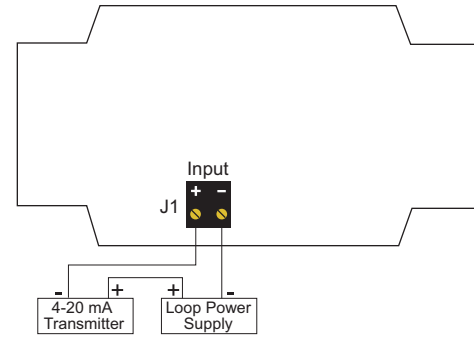


Figure 1. Signal Input Connections

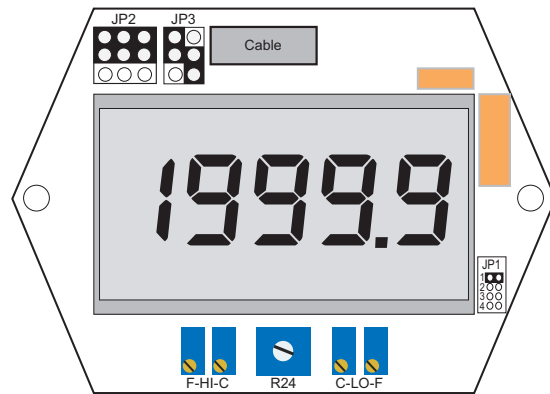
Calibration Controls

Calibration of these meters is a two-step process involving four controls. On the PD673, these controls are located behind the faceplate. The LO controls are located on the right and the HI controls are located on the left. For the PD675 & PD677 these controls are located on the Display Board. The LO controls are on the right and the HI controls on the left. The pre-configured jumper array is also located on the Display Board.

Calibration Procedure

Connect the 4-20 mA input signal. Apply 4 mA to the input and adjust the coarse and fine LO controls for the desired reading. Next apply a signal between 16 and 20 mA and adjust the coarse and fine HI controls for the desired reading. Complete the calibration by making any minor adjustments to the LO and HI displays.

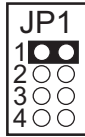
Jumper Positions



PD675 & PD677 Board
Balance Potentiometer (R24) is preset at the factory
(PD673 has decimal point jumpers only)

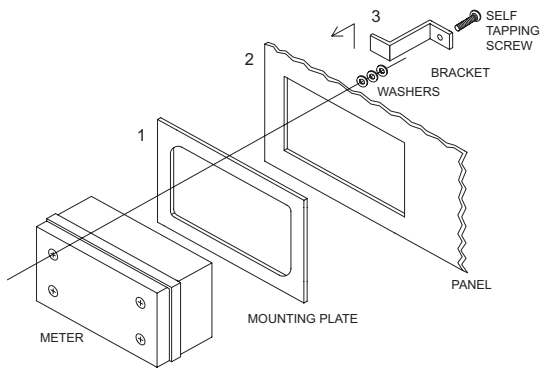
Decimal Point Selection

Decimal point selection is accomplished using JP1 located behind the faceplate to the right of the display. Leave jumper on one pin only for a display of 19999 (default), place the jumper over both pins of #1 for a display of 1999.9, #2 for 199.99, #3 for 19.999, #4 for 1.9999

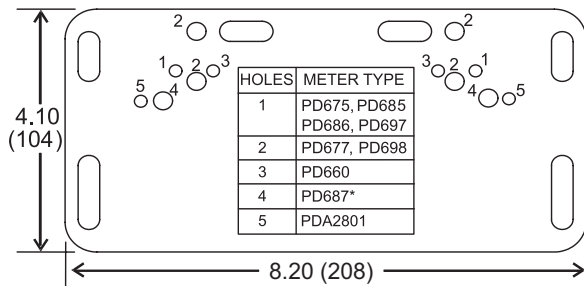
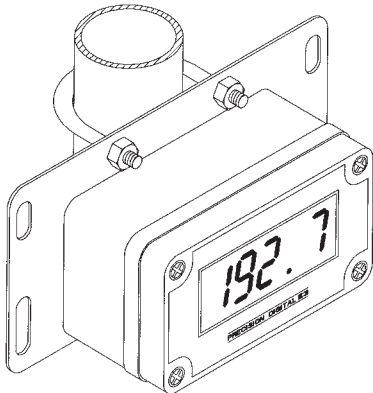


MOUNTING KIT OPTIONS

PD675 Panel Mount



PD675 & PD677 Pipe Mount



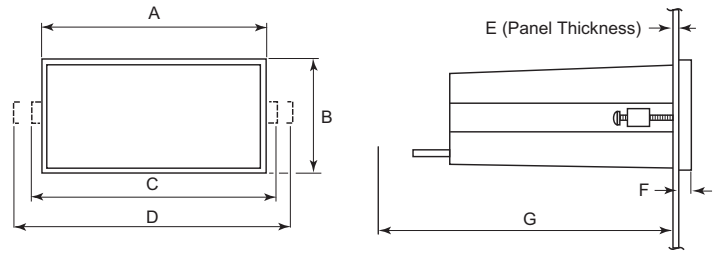
Units: Inch (mm)

Mounting Plate Hole Pattern

DIMENSIONS

Units: Inch (mm)

PD673



A: 4.25 (108)

B: 2.30 (59)

C: 4.30 (109) Installed

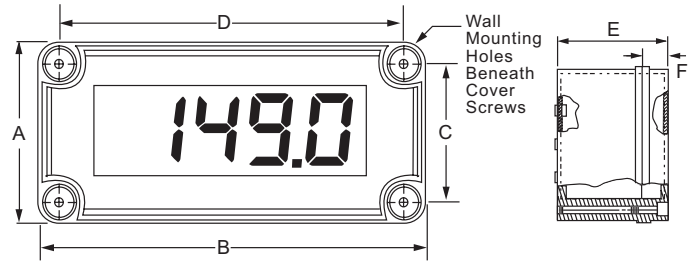
D: 4.83 (123) Required for Inst.

E: 0.125-0.250 (3.2-6.4)

F: 0.575 (14.6)

G: 6.0 (152) Clearance

PD675



A: 3.15 (80)

B: 5.51 (140)

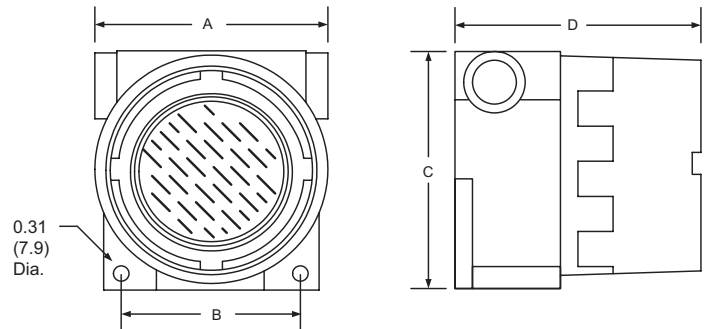
C: 2.36 (60)

D: 4.72 (120)

E: 2.56 (65)

F: 0.79 (20)

PD677



A: 5.44 (138)

B: 4.06 (103)

C: 5.63 (143)

D: 5.63 (143)

ORDERING INFORMATION

Model	Description
PD673-N	Panel Mount Loop-Powered Meter
PD675-N	NEMA 4X Loop-Powered Meter
PD677-N	Explosion-Proof Loop-Powered Meter
PD677-N-EX	FM Approved & CSA Certified Exp-Proof Meter
Accessories	
PDA6844	Panel Mounting Kit for PD675 (PDA6844 does not provide NEMA 4X seal to the panel)
PDA6845	2" Pipe Mounting Kit for PD675, PD677
PDA6845-SS	2" Pipe Mounting Kit SS for PD675, PD677
PDA-SSTAG	Stainless Steel Tag
NEMA 4X Enclosures for PD673	
PDA2407	Houses one PD673 meter
PDA2411	Houses two PD673 meters
PDA2412	Houses three PD673 meters
PDA2414	Houses one PD673 meter & one PD141
PDA2415	Houses four PD673 meters

SERVICES ORDERING INFORMATION

Calibration	
PDN-CAL	2-Point Calibration
PDN-CERTCAL	Certificate of Calibration
PDN-CERTCAL2	Certificate of Calibration with Data
PDN-LTCAL	Lifetime Annual Recertification (shipped back same day)
PDN-LTCAL2	Lifetime Annual Recertification (shipped back next day)
PDN-LTCAL5	Lifetime Annual Recertification (shipped back within 5 days)
PDN-ONEDAYRTN	One-Day Turnaround Service

Certificate of Conformance	
PDN-CERTCON	Certificate of Conformance

Extended Warranty	
PDN-EXTWRNTY1-0	1 Year with a list price between: \$0-\$299
PDN-EXTWRNTY1-1	1 Year with a list price between: \$300-\$599
PDN-EXTWRNTY2-0	2 Years with a list price between: \$0-\$299
PDN-EXTWRNTY2-1	2 Years with a list price between: \$300-\$599

YOUR LOCAL DISTRIBUTOR IS:

SPECIFICATIONS

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

General

Input: 4-20 mA @ 24 VDC maximum

Accuracy: ±0.05% FS ±2 counts

Decimal Point: User selectable

Calibration Range: 4 mA input: -5000 to +5000;

20 mA input: between 200 and 20000 above 4 mA input

Maximum Voltage Drop: 5.2 VDC @ 20 mA

Display Update Rate: 2.5/second

Operating Temperature: -20 to 65°C

Storage Temperature: -40 to 80°C

Relative Humidity: 0 to 90% non-condensing

Connections: Removable screw terminals accept 12 to 22 AWG

Warranty: 2 years parts & labor

Extended Warranty: 1 or 2 years, refer to Price List for details.

PD673

Display: 0.4" (10.2 mm) LCD, 4½ digits; 19999

Front Panel: NEMA 4X, IP65; panel gasket provided

Enclosure: 1/8 DIN, high impact plastic, UL 94V-0, color: black

Weight: 6.6 oz (188 g)

PD675

Display: 0.7" (17.8 mm) LCD, 4½ digits; 19999

Approvals: FM Approved & CSA Certified as non-incendive for Class I, Division 2, Groups A, B, C, & D; suitable for Class II, Division 2, Groups F & G; suitable for Class III, Division 2, indoor and outdoor, hazardous (classified) NEMA 4X locations.

Enclosure: Impact-resistant polycarbonate body, color: gray; clear polycarbonate cover; NEMA 4X, IP67. ½" conduit hole provided at base.

Weight: 12 oz (340 g)

PD677

Display: 0.7" (17.8 mm) LCD, 4½ digits; 19999

Approvals: The PD677-N-EX is FM Approved & CSA Certified as explosion-proof for Class I, Division 1, Groups B, C, & D; dust-ignition proof for Class II, Division 1, Groups E, F, & G, Class III hazardous (classified) locations.

Enclosure: Explosion-proof, cast aluminum with glass window, 0.3% max copper content, corrosion resistant polyester powder coating, color: safety blue. NEMA 4X, 7, & 9, IP66; FM Approved & UL/C-UL Certified: Class I, Division 1, Groups B, C, & D, Class II, Groups E, F, & G, Class III; Class I, Zone 1 AEx d IIC hazardous outdoor (Type 4X) locations. IEC rating: Ex d IIC IEC 60529 IP66. Two ¾" NPT holes provided.

Weight: 5.7 lb (2.6 kg)

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