LOW COST 3½ DIGIT LOOP-POWERED METERS

MODEL PD660 NEMA 4X

- 4-20 mA Input
- 3½ Digit Display
- Loop-Powered Backlight Option
- Operates from -40 to 80°C

FM APPROVED

SPECIFICATIONS

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

General

Input: 4-20 mA @ 24 VDC maximum
Display: 0.5" (12.7 mm) LCD, 3½ digits; 1999
Accuracy: ±0.1% FS ±1 count
Decimal Point: User selectable decimal point
Calibration: 2 step; non-interacting zero and span
Calibration Range: 4 mA input: -500 to +500;
20 mA input: between 20 and 2000 above 4 mA display
Maximum Voltage Drop: 1.5 VDC @ 20 mA;
3.5 VDC @ 20 mA with backlight option
Display Update Rate: 2.5/second
Loop-Powered Backlight Option: Factory installed only. Powered directly from the 4-20 mA loop, no batteries required. The display brightness will increase as the input signal current increases.
Connections: Removable screw terminals accept 12 to 22 AWG
Operating Temperature: -40 to 80°C
Storage Temperature: -40 to 80°C
Relative Humidity: 0 to 90% non-condensing
Approvals: The PD661-N-EX and PD661-B-EX are 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; and Class III hazardous (classified) locations.
PD660 Enclosure: Impact-resistant ABS plastic body, color: gray, clear polycarbonate cover with blue faceplate; NEMA 4X, IP67; ½" conduit hole provided at base.
PD660 Weight: 9.3 oz (264 g)
PD661 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 & CSA Certified: Class I, Division 1, Groups B, C, & D, Class II, Groups E, F, & G, Class III hazardous outdoor (Type 4X) locations. Two ½" NPT holes provided; mounts directly to conduit.
PD661 Weight: 3.1 lb (1.4 kg)
Warranty: 2 years parts & labor
Extended Warranty: 1 or 2 years, refer to Price List for details.

MODEL PD661 EXPLOSION-PROOF

ORDERING INFORMATION

Model	Description
PD660-N*	NEMA 4X Loop-Powered Meter
PD660-B	NEMA 4X Loop-Powered Meter with Loop-Powered Backlight
PD661-N*	Explosion-Proof Loop-Powered Meter
PD661-B	Exp-Proof Loop-Powered Meter with Loop-Powered Backlight
PD661-N-EX	FM Approved & CSA Certified Explosion-Proof Meter
PD661-B-EX	FM & CSA Exp-Proof Meter with Loop-Powered Backlight

*Quick Shipment Program product, shipped within 2 working days.

Accessories	
PDA6604	Panel Mounting Kit for PD660 (No NEMA 4X Seal to Panel)
PDA6845	2" Pipe Mounting Kit for PD660
PDA6845-SS	2" Pipe Mounting Kit Stainless Steel for PD660
PDA-SSTAG	Stainless Steel Tag

Services	
PDN-CSETUP	Custom Setup
PDN-CAL	2-Point Calibration
PDN-CERTCAL	Certificate of Calibration
PDN-CERTCAL2	Certificate of Calibration with Data
PDN-LTCAL	Lifetime Calibration with Annual Recert. - See Price List for Details
PDN-EXTWRNTY	Extended Warranty Services - See Price List for Details

YOUR LOCAL DISTRIBUTOR IS:

LOW COST 3½ DIGIT LOOP-POWERED METERS

SETUP

The only tools needed for calibration are a calibrated current source, a flat head screwdriver, and 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:

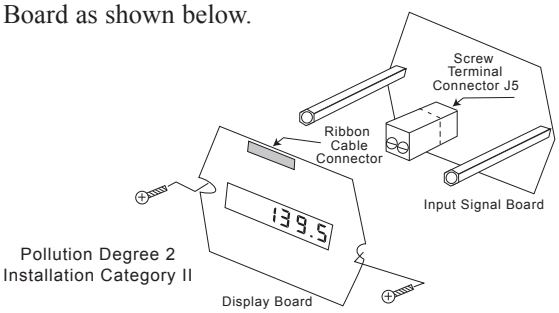
PD660: Loosen the four screws on the enclosure cover and remove. Unscrew the two fasteners that hold the faceplate, then remove.

PD661: Turn the enclosure cover counterclockwise to remove. Unscrew the two fasteners that hold the faceplate, then remove.

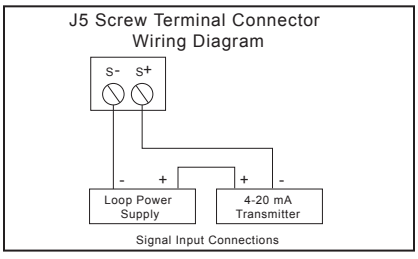
Connections

Field connections are made to the screw terminals located on the Input Signal Board. To access these screw terminals it is necessary to remove the Display Board from the Input Signal Board. First, disconnect the ribbon cable connector from the Display Board. Next, loosen 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.

Connect a 4-20 mA input signal to terminal J5 located on the Input Signal Board as shown below.



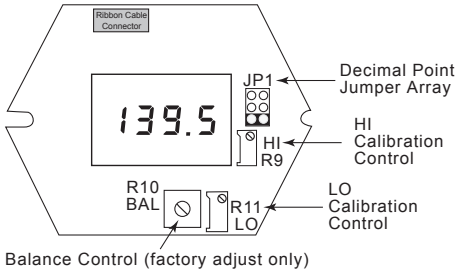
Note: When reassembling boards DO NOT over-tighten screws.



CAUTION - DISCONNECT FROM SUPPLY BEFORE OPENING. KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE. CONDUIT SEALS MUST BE INSTALLED WITHIN 18" OF THE ENCLOSURE.
ATTENTION - OUVRIR LE CIRCUIT AVANT D'ENLEVEL LE COUVERCLE GARDER LE COUVERCLE BIEN FERME TANT QUE LES CIRCUITS SONT SOUS TENSION. UN SCELLEMENT DOIT ETRE INSTALLE A MOINS DE 450 mm DU BOITIER.

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 1999 (default), place the jumper over both bottom pins for a display of 199.9, middle for 19.99, top for 1.999



Calibration

The LO control (R11) is located below the display and the HI control (R9) is located to the right of the display. Apply a 4 mA signal and adjust the LO control to display the desired reading. Next, apply a signal between 16 and 20 mA and adjust the HI control to display the desired reading. Complete the calibration by making any minor adjustments to the LO and HI controls.

MOUNTING

PD660

The PD660 can be wall mounted using the mounting holes beneath the cover screws. It can be panel mounted with the addition of the PDA6604 panel mount kit. It can also be pipe mounted by using the PDA6845 or the PDA6845-SS 2" pipe mounting kit.

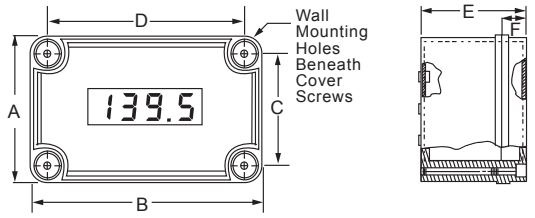
PD661

The PD661 has no provisions for wall mounting. Installation of the unit is accomplished by using the two ½" NPT conduit holes provided with ½" NPT fittings.

DIMENSIONS

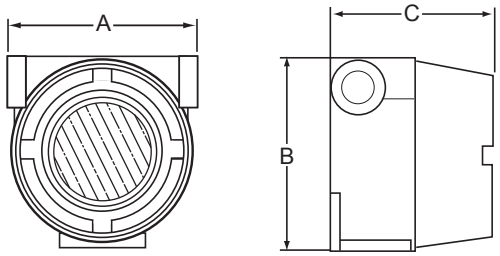
PD660

Units: Inches (mm)



A: 3.15 (80)
B: 4.33 (110)
C: 2.36 (60)
D: 3.54 (90)
E: 2.56 (65)
F: 0.79 (20)

PD661



A: 4.5 (114)
B: 4.75 (121)
C: 3.75 (95)

LIM660-661_E 11/05

PRECISION DIGITAL CORPORATION
19 Strathmore Road • Natick MA • 01760 • USA • Tel: (800) 343-1001 • Fax: (508) 655-8990
www.predig.com