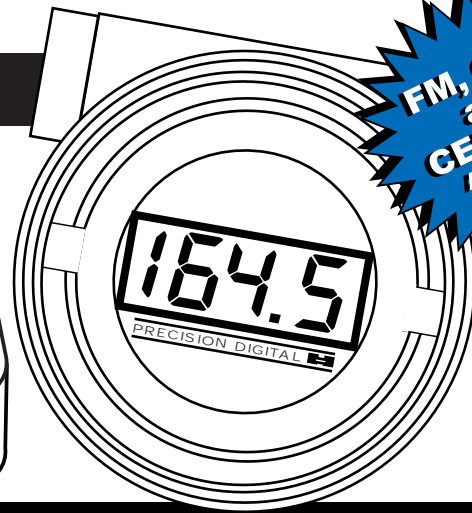
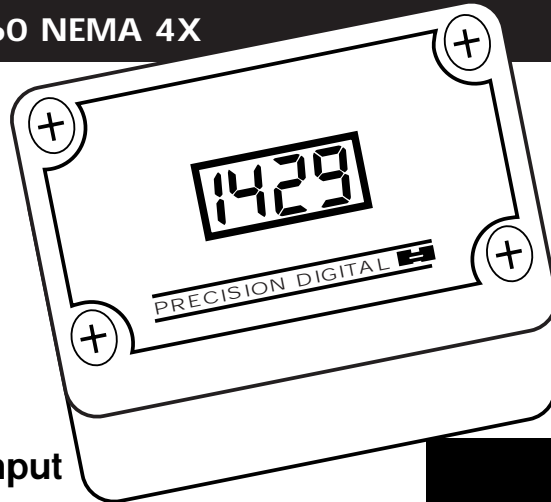


# LOW COST 3 1/2 DIGIT LOOP-POWERED METERS

MODEL PD660 NEMA 4X



MODEL PD661 EXPLOSION-PROOF

- 4-20 mA Input
- 3 1/2 Digit Display
- Easy Calibration and Installation
- Loop-Powered Backlighting Option
- Wide Operating Temp Range: -40 to 80°C

## Specifications

**INPUT:** 4-20 mA @ 24 VDC Maximum

**DISPLAY:** Sharp, 0.5" high LCD, 3 1/2 digits; 1999, 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 to 2000 above 4 mA display

**MAXIMUM VOLTAGE DROP:** 1.5 VDC @ 20 mA; 3.5 VDC @ 20 mA with backlighting option

**ACCURACY:** ±0.1% of span, ±1 count

**CONNECTIONS:** Removable screw terminal block

**OPERATING TEMPERATURE RANGE:** -40 to 80°C

**APPROVAL:** The PD661-N-EX and PD661-B-EX have been FM and CSA certified as explosion-proof for Class I, Division 1, Groups B, C, and D; dust-ignition proof for Class II, Division 1, Groups E, F, and G; and Class III hazardous (classified) locations. LCIE (CENELEC) certified as flame-proof, EEx d IIC T6.

**PD660 ENCLOSURE:** High impact-resistant ABS plastic body, clear ABS plastic cover; NEMA 4X; 1/2" conduit hole provided at base. May be provided on back for panel mounting applications, call factory for details.

**PD661 ENCLOSURE:** Cast aluminum, approved by FM and CSA; NEMA 4, 7 and 9; Class I, Groups B, C, and D; Class II, Groups E, F, and G; and Class III. Two 1/2" NPT holes provided.

**LOOP-POWERED BACKLIGHTING OPTION:** Factory installed only. Powered directly off the 4-20 mA loop, no batteries required. The display brightness will increase as the input signal current increases.

**WARRANTY:** 1 year parts and labor

**EXTENDED WARRANTY:** May be extended an additional 12 months by returning the Product Registration Form within 2 months from date of purchase. Go to [www.predig.com](http://www.predig.com) for online registration.

### ORDERING INFORMATION

Model	Description
PD660-N	NEMA 4X Loop-Powered Meter
PD660-B	NEMA 4X Loop-Powered Meter with Loop-Powered Backlighting
PD661-N	Explosion-Proof Loop-Powered Meter
PD661-B	Explosion-Proof Loop-Powered Meter with Loop-Powered Backlighting
PD661-N-EX	FM, CSA, & CENELEC Explosion-Proof Meter
PD661-B-EX	FM, CSA, & CENELEC Explosion-Proof Meter with Loop-Powered Backlighting
PDA6604	Panel Mounting Kit (Panel Mounting Kit does not provide NEMA 4X seal to the panel)
PDA6845	2" Pipe Mounting Kit (Available for PD660 Only)

Please visit the Precision Digital website at [www.predig.com](http://www.predig.com) for complete information on the entire line of Precision Digital products, technical information and much more.

YOUR LOCAL DISTRIBUTOR IS:

PRECISION DIGITAL CORPORATION  
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[www.predig.com](http://www.predig.com)

# LOW COST 3<sup>1</sup>/<sub>2</sub> DIGIT LOOP-POWERED METERS

## SETUP

The only tools needed for calibration are a calibrated current source and a screwdriver.

## PD660 INSTALLATION

Installation of the PD660 involves removing the display board and screw terminal connector. It may also be necessary to remove the input signal board depending on type of conduit hubs used.

## PD661 INSTALLATION

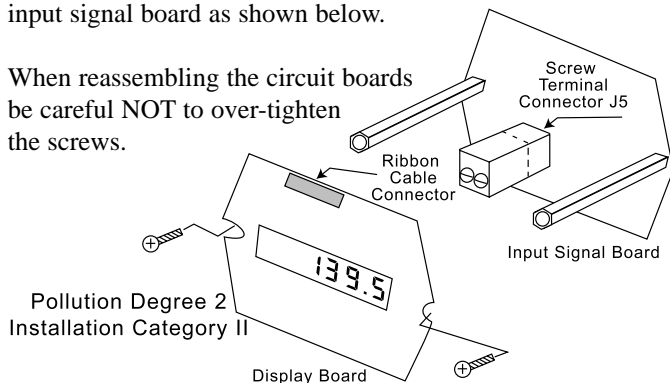
The PD661 has no provisions for wall mounting. Installation of the unit is accomplished by using the two 1/2" NPT conduit holes provided with 1/2" NPT fittings.

## DISASSEMBLY

The removable screw terminal connector is located on the lower circuit board. To access these input terminals it is necessary to remove the display board from the input signal board. This is done by first removing the enclosure cover. Next, loosen the 2 screws that hold the display board to the standoffs. Rotate the display board so the right side comes off the stand-off first, proceed to remove the display board from both stand-offs. Be careful to avoid contact of the display with rough surfaces. The display board may be disconnected from the ribbon cable simply by pulling up on the ribbon cable connector located above the display.

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

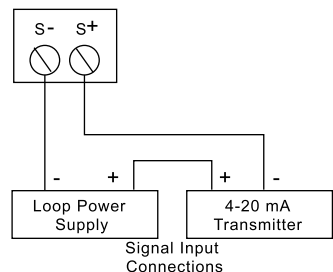
When reassembling the circuit boards be careful NOT to over-tighten the screws.



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'ENLEVER 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.

## CONNECTIONS

### Screw Terminal Connector



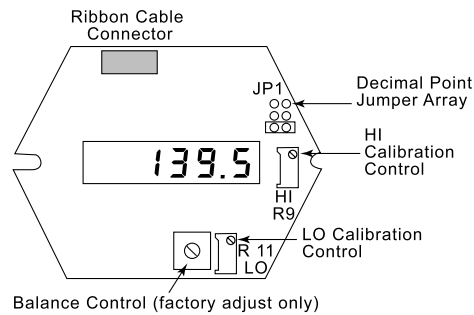
## DECIMAL POINT SELECTION

The decimal point jumper array (JP1) is located in the upper right corner of the display board. Place a jumper across the bottom pins for a display of 199.9, across the middle pins for a display of 19.99, and across the top pins for a display of 1.999.

## CALIBRATION

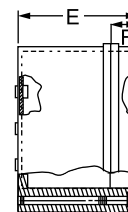
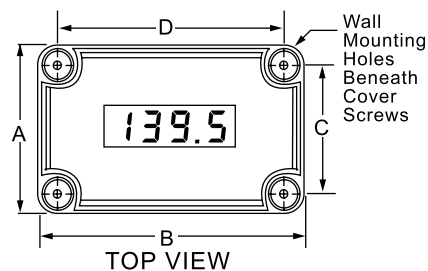
The LO calibration control (R11) is located below the display and the HI calibration control (R9) is located to the right of the display.

Apply a 4 mA input 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 procedure by making any minor adjustments to the LO and HI controls.



## DIMENSIONS

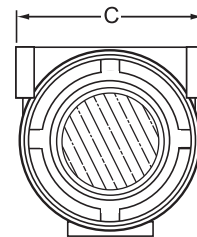
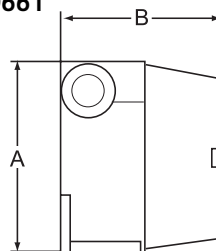
### PD660



### END VIEW

A: 3.15" (80 mm)      C: 2.36" (60 mm)      E: 2.56" (65 mm)  
B: 4.33" (110 mm)      D: 3.54" (90 mm)      F: 0.79" (20 mm)  
Weight: 12 oz (340 g)

### PD661



A: 4.75" (121 mm)      B: 3.75" (95 mm)      C: 4.5" (114 mm)  
Weight: 4 lbs (1.8 kg)      FM and CSA certified enclosure

LIM660-661 Rev C 06/00

PRECISION DIGITAL CORPORATION

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