

PD663 ProtEX-Lite EXPLOSION-PROOF LOOP-POWERED METER



The PD663 is a rugged, explosion-proof NEMA 4X loop-powered meter perfect for applications where a simple, inexpensive display is required in a hazardous area.

The PD663 derives all its power from the 4-20 mA loop. The PD663 is scaled using four push buttons and can be done without applying an actual calibration signal, and through the explosion-proof enclosure with optional magnetic reed switches and a magnet key. The PD663's display will read up to 2999; we call this 3½+ digits! The loop-powered backlighting option lets you see the display under any lighting condition and is powered completely from the 4-20 mA loop. This means there is no need for additional wiring and never any batteries to change.

The PD663 is housed in a rugged, explosion-proof, cast aluminum, NEMA 4X enclosure and is provided with two threaded conduit holes, one factory installed metal conduit plug, and integrated 1.5" inch pipe or wall mounting flanges.

FEATURES

- 4-20 mA Input
- Modern, Sleek and Practical Enclosure
- 3½+ Digits, 0.6" (15.24 mm) Display
- Display Mountable at 0°, 90°, 180°, & 270° Degrees.
- Easy Four-Button Programming
- Programmable Noise Filter
- Max/Min Display
- Loop-Powered Backlight Option
- 1.7 V Drop (4.7 V with Backlight)
- Explosion-Proof, IP68, NEMA 4X Enclosure
- Flanges for Wall or Pipe Mounting
- HART® Protocol Transparent
- Operates from -40 to 75°C



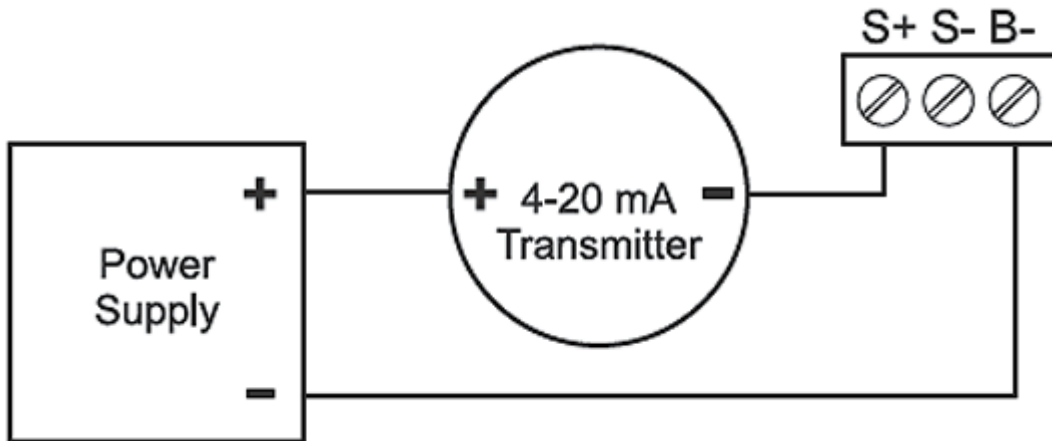
Actual Size Digits

QUICKSTART

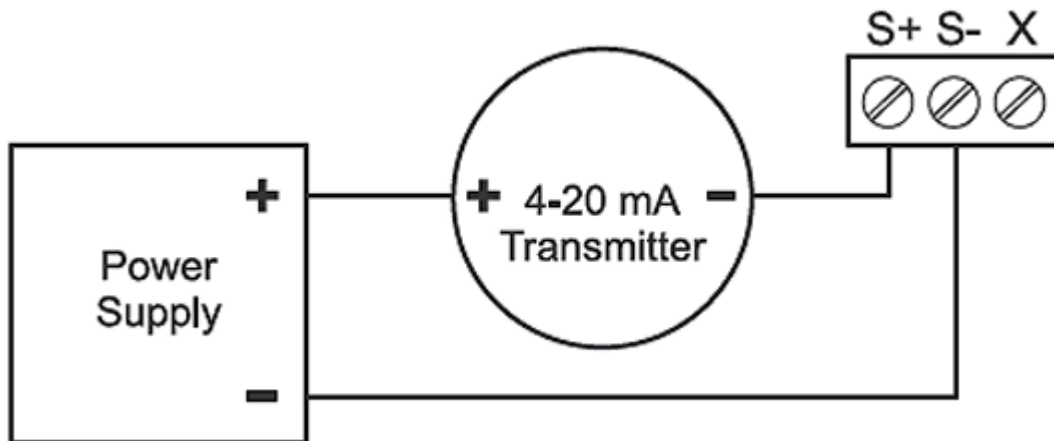
The PD663 is designed to be easily wired into your current loop and quickly programmed.

Wiring

The two wire power/signal connection is made on the back of the PD663 on the three position removable terminal block. Follow instructions printed on the unit for two wire loop-powered connections with or without backlight.



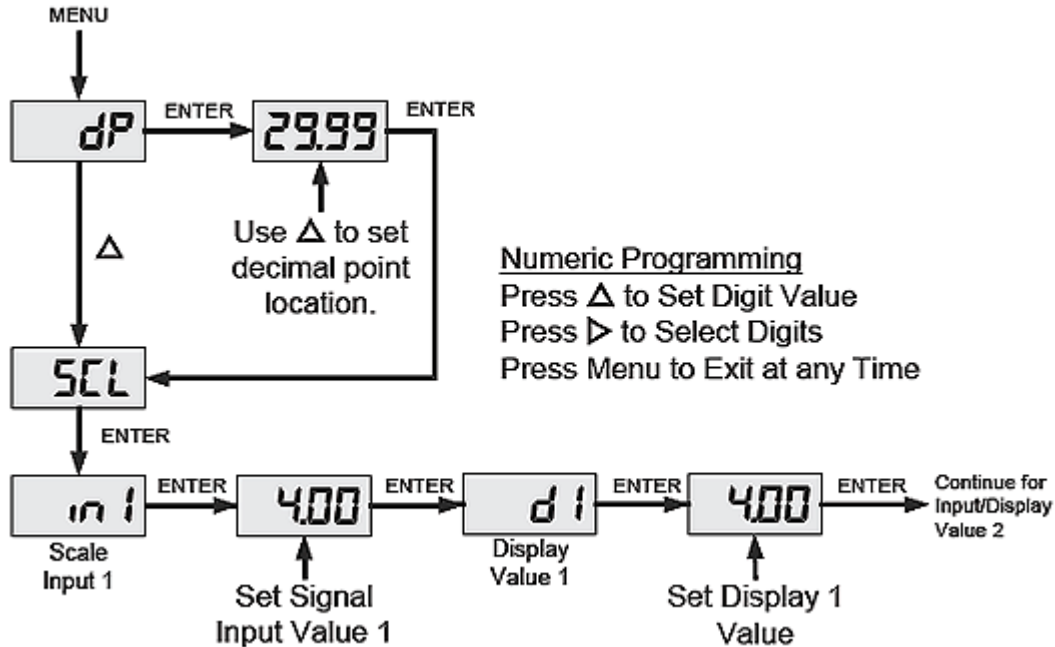
PD663 Input Connections with Backlight



PD663 Input Connections without Backlight

Programming

The PD663 comes calibrated and scaled at the factory to display a 4.00 to 20.00 mA signal on startup. To change the scaling, follow along using the 4 button interface.



PD663 Menu Progression

SPECIFICATIONS

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

General

Display: 0.6" (15.24 mm) LCD, 3½+ digits; -1999 to 2999

Display Update Rate: 2 Updates/Second

Display Orientation: Display may be mounted at 90° increments up to 270° from default orientation.

Over-Range: Display Flashes 2999

Under-Range: Display Flashes -1999

Programming Method: 4 Front Panel Pushbuttons (behind glass). Magnet may also be used for programming; P/N PDA-MAG.

Noise Filter: Programmable HI, LOW, or OFF

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.

Non-Volatile Memory: All programmed settings are stored in non-volatile memory for a minimum of ten years if power is lost.

Normal Mode Rejection: 64 dB at 50/60 Hz

Operating Temperature: -40 to 75°C

Storage Temperature: -40 to 75°C

Relative Humidity: 0 to 90% non-condensing

Connections: Removable screw terminals accept 12 to 22 AWG

Tightening Torque: Screw terminal connectors: 4.5 lb-in (0.5 Nm)

Enclosure: Explosion-proof cast aluminum with glass window, 0.30% max copper content, corrosion resistant powder coating, color: blue. NEMA 4X, IP68. Two ½" NPT threaded conduit openings. One ½" NPT nickel plated brass conduit plug with 10 mm hex key fitting installed.

Mounting: May be mounted directly to conduit. Two mounting holes for 1.5" pipe or wall mounting.

Weight: 40 oz (1.13 kg)

Overall Dimensions: 4.30" x 4.27" x 3.62" (109 mm x 108 mm x 92 mm) (W x H x D)

Warranty: 3 years parts & labor

Input

Input: 4-20 mA

Accuracy: ± 1 count

Temperature Drift: 50 PPM/ $^{\circ}$ C from -40 to 75 $^{\circ}$ C ambient

Decimal Point: User selectable decimal point

Minimum Span: Input 1 & Input 2: 0.40 mA

Maximum Voltage Drop: 1.7 VDC @ 20 mA; 4.7 VDC @ 20 mA with backlight option.

Equivalent Resistance: 85 Ω @ 20mA without backlight; 245 Ω @ 20mA with backlight

Loop-Powered Backlight Option: Factory installed only. Powered directly from the 4-20 mA loop, no batteries required.

Backlight can be enabled or disabled via alternative wiring of terminal block. The display brightness will increase as the input signal current increases.

Product Ratings & Approvals

FM: Explosion-proof for use in Class I, Division 1, Groups B, C, D. Class II, Division 1, Groups E, F, G. Class III, Division 1; T6. Class I, Zone 1, AExd IIC T6 Gb. Zone 21, AEx tb IIIC T85 $^{\circ}$ C. Ta = -40 to 75 $^{\circ}$ C.

Enclosure: Type 4X & IP66. Certificate number: 3040391

ATEX: II 2 G D. Ex d IIC T6 Gb. Ex tb IIIC T85 $^{\circ}$ C Db IP68. Ta = -40 to 75 $^{\circ}$ C.

Certificate number: Sira 10ATEX1116X

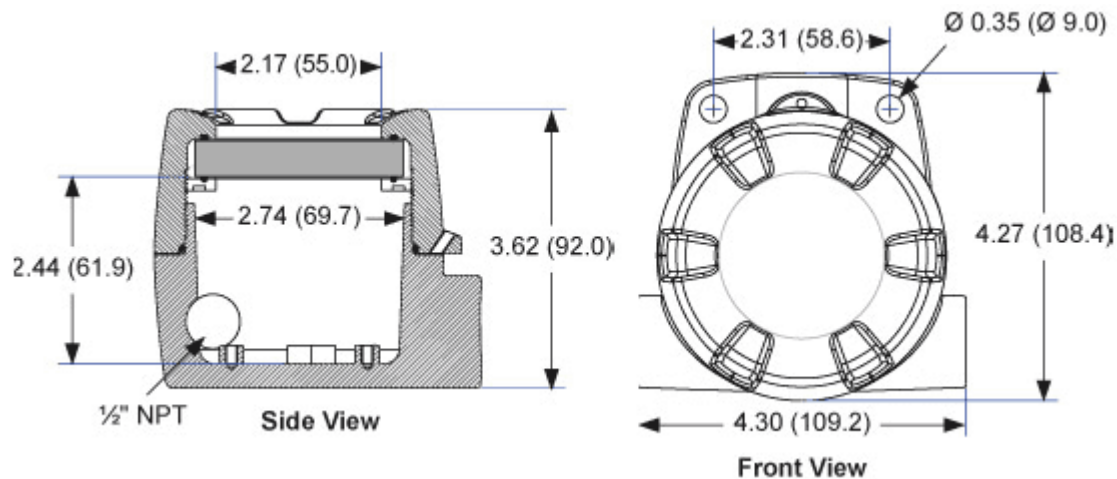
IECEX: IECEx SIR 10.0056X. Ex d IIC T6 Gb. Ex tb IIIC T85 C Db IP68. Ta = -40 to 75 $^{\circ}$ C

CSA: Class I, Division 1, Groups B, C, D. Class II, Division 1, Groups E, F, G. Class III, Division 1; T6. Class I, Zone 1, Ex d IIC T6.

Ta = -40 to 75 $^{\circ}$ C. Enclosure: Type 4X & IP66.

Certificate number: 11 2325749

DIMENSIONS



ORDERING INFORMATION

PD663 Models

| Model | Description |
|---------------------|---|
| PD663-0L0-00 | ProtEX-Lite Explosion-Proof Meter Input: 4-20 mA Power: Loop-Powered Display: 0.6" High, 3½+ Digits LCD ✓ Check Availability |
| PD663-0K0-00 | ProtEX-Lite Explosion-Proof Meter Input: 4-20 mA Power: Loop-Powered Display: 0.6" High, Backlight 3½+ Digits LCD ✓ Check Availability |
| PD663-0LA-00 | ProtEX-Lite Explosion-Proof Meter Input: 4-20 mA Power: Loop-Powered Display: 0.6" High, 3½+ Digits LCD Options: Magnetic Reed Switch Buttons ✓ Check Availability |
| PD663-0KA-00 | ProtEX-Lite Explosion-Proof Meter Input: 4-20 mA Power: Loop-Powered Display: 0.6" High, Backlight 3½+ Digits LCD Options: Magnetic Reed Switch Buttons ✓ Check Availability |