PD6870

Explosion-Proof NEMA 4X, IP68 Loop-Powered Meter

Actual Size Digits

ProtEX™ FarVu

FM APPROVED   CSA   ⟨Ex⟩   C E   Explosion-Proof / Flame-Proof

3½ DIGITS • LARGE DISPLAY

90° Rotatable Display

- Explosion-Proof / Flame-Proof Loop-Powered Process Meter
- 4-20 mA Input
- 1.0" (25.4 mm) 3½ Digits LCD Display; -1999 to 1999
- 1 Volt Drop (4 Volt Drop with Backlight)
- HART® Protocol Transparent
- Loop-Powered Backlight Option
- Operates from -40 to 75°C (-40 to 167°F)
- Coarse and Fine Zero & Span Potentiometer Adjustments for Easy Field Scaling
- Flanges for Wall or Pipe Mounting
- Explosion-Proof, IP68, NEMA 4X Die-Cast Aluminum Enclosure
- FM Approved as Explosion-Proof / Dust-Ignition Proof / Flame-Proof
- CSA Certified as Explosion-Proof / Dust-Ignition Proof
- ATEX and IECEx Certified as Flame-Proof
- Conformal Coated PCBs for Dust and Humidity Protection
- Two ¾" NPT Threaded Conduit Openings (One Plug Installed)
- Pipe Mounting Kits
- Stainless Steel Tag Available
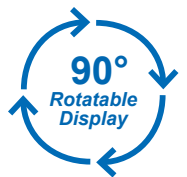
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OVERVIEW

The PD6870 is an FM Approved, CSA Certified and ATEX and IECEx Certified explosion-proof loop-powered indicator that is easy to install and program. It can be seen from considerable distance and even in bright sunlight. The fact that this meter is loop-powered means that there is no need to run additional, costly power lines into a hazardous area. The meter gets all of the power it needs from the 4-20 mA loop and its 1 V drop results in a minimal burden on the loop. The meter features a wide -40 to +75°C operating temperature range and comes with two ¾" NPT threaded conduit openings and flanges for wall or pipe mounting. Calibration is a quick two-step process involving the adjustment of only high and low, non-interacting potentiometers.

SPECIFICATIONS

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

Display: 1.0" (25.4 mm) LCD, 3½ digits; -1,999 to 1,999
Display Update Rate: 2.5 Updates/Second
Display Orientation: Display may be mounted at 90° increments up to 270° from default orientation.
Overrange: Display reads 1 on the left most digit.
Programming Method: Four front mounted potentiometers accessed when the cover is removed.
Recalibration: Recommended at least every 12 months.
Normal Mode Rejection: 60 dB rejection ratio
Operating Temperature Range: -40 to 75°C
Storage Temperature Range: -40 to 75°C
Relative Humidity: 0 to 90% non-condensing. Printed circuit boards are conformally coated.
Connections: Screw terminals accept 12 to 22 AWG wire
Enclosure: Explosion-proof die cast aluminum with glass window, 0.30% max copper content, corrosion resistant epoxy coating, color: blue. NEMA 4X, IP68. Two ¾" NPT threaded conduit openings. One ¾" NPT nickel plated brass conduit plug with 10 mm hex key fitting installed.
Mounting: May be mounted directly to conduit. Two slotted flanges for wall mounting or NPS 1½" to 2½" or DN 40 to 65 mm pipe mounting.
Overall Dimensions: 5.65" x 5.25" x 4.86"
(144 mm x 133 mm x 124 mm) (W x H x D)
Weight: 5.00 lbs (80 oz, 2.27 kg)
Warranty: 3 years parts and labor

Input

Input: 4-20 mA
Accuracy: ±0.1% of full span ±1 count
Temperature Drift: 150 PPM/°C from -40 to 75°C ambient
Decimal Point: User selectable decimal point
Calibration Range: 4 mA input: -1000 to +1000; 20 mA between 20 and 2000 counts greater than 4 mA display. Two point linear display span.
Maximum Voltage Drop: 1 VDC @ 20 mA without backlight; 4 VDC @ 20 mA with loop-powered backlight.
Input Overload: Over current protection to 2 A max.
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 Class I, Division 1, Groups B, C and D and Dust-ignition-proof for Class II/ III, Division 1, Groups E, F and G; T6 Flame-proof for use in Class I, Zone 1, AEx d Group IIC; T6 Protection by Enclosure, Zone 21, AEx tb IIIC; T85°C
Ta = -40 to +75°C. Enclosure: Type 4X, IP66. Certificate number: 3040391
ATEX: II 2 G D. Ex d IIC T6 Gb. Ex tb IIIC T85°C Db IP68.
Ta = -40 to 75°C. Certificate number: Sira 10ATEX1116X
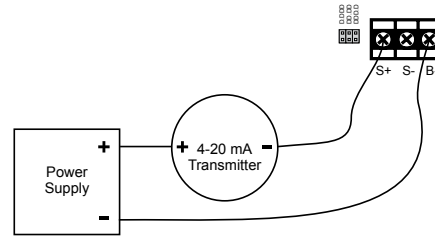**IECEx:** Ex d IIC T6 Gb. Ex tb IIIC T85°C Db IP68. Ta = -40 to 75°C.
IECEx SIR 10.0056X.
CSA: Class I, Division 1, Groups B, C, D. Class II, Division 1, Groups E, F, G. Class III, Division 1; T6. Class I, Zone 1, Ex d IIC T6.
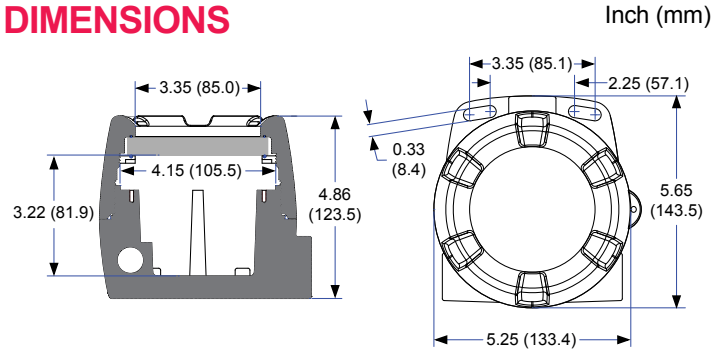Ta = -40 to 75°C. Enclosure: Type 4X & IP66/68.
Certificate number: 2325749

CONNECTIONS

PD6870 Input Connections with Loop-Powered Backlight

DIMENSIONS

Inch (mm)

ORDERING INFORMATION

PD6870 Explosion-Proof Loop-Powered Meter	
Model	**Options Installed**
PD6870-0L0	None
PD6870-0K0	Backlight

Accessories	
Model	**Description**
PDA0001	PDA0001 3/4" M-NPT to F-M20 Approved Reducer
PDA0002	PDA0002 3/4" M-NPT to 1/2" F-NPT Approved Reducer
PDA6846	2" Pipe Mounting Kit (Zinc Plated Steel)
PDA6846-SS	2" Pipe Mounting Kit (Stainless Steel)
PDAPLUG75	3/4" NPT 316 Stainless Steel Approved Stopping Plug
PDA-SSTAG	Stainless Steel Tag

Your Local Distributor is:

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