

# PD6800

ProtEX-Pro Explosion-Proof Process & Level Meter

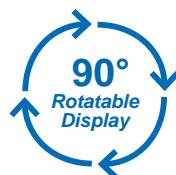


APPROVED



PROCESS & LEVEL

- 4-20 mA Input Loop-Powered
- Modern, Sleek and Practical Enclosure for Hazardous Locations
- 5-Digit, 0.7" (17.8 mm) Upper Display (0.6" for -0L1 Models)
- Optional Level Indicator Bar Graph
- 7 Alphanumeric Character, 0.4" (10.2 mm) Lower Display
- SafeTouch® Through-Glass Button Programming
- Password Protection
- 32-Point, Square Root, or Exponential Linearization
- Loop or External DC-Powered Backlight Standard
- 3.0 V Drop (6.0 V with Backlight)
- Explosion-Proof, IP68, NEMA 4X Enclosure
- Flanges for Wall or Pipe Mounting
- HART® Protocol Transparent
- Operates from -40 to 75°C



## PD6800 Process &amp; Level Meter

Displays clear alphanumeric tag names


 Through-Glass Button Programming

 Explosion-Proof  
Die-Cast Aluminum  
NEMA 4X Enclosure

 SafeTouch®  
Enter or Alarm  
Acknowledge Button

Process Variable

 Alphanumeric  
Engineering Units

Alarm Indicator

Password Protection

SafeTouch®

Display or Up Arrow

Mechanical Buttons  
(4 Places)

## Process Displays



Level in Liters



Level in Feet



Pressure Indication

## Easy to Setup



Programming

## OVERVIEW

The new ProtEX-Pro PD6800 explosion-proof process meter brings modern design, easy readability, and enhanced functionality to hazardous areas around the world in a way never seen before. Competitors have lost sight of the fact that the primary thing customers do with meters is look at them. They want a reliable meter with a display that provides the important information about their process, can be seen under varied lighting conditions, from wide angles, and from a distance. The PD6800 delivers all these and more, plus it boasts an optional segmented bar graph level display. Spend a few minutes reviewing the features described in the graphic above and you will see how!

## KEY FEATURES

## Informative &amp; Easy to Read Display

The high contrast, backlight LCD display is easy to read from far away and under various lighting conditions. The upper display is 0.7" high and shows 5 digits of flow rate. The PD6800-OL1 models have a segmented bar graph level indicator included with 5 digits 0.6" in height. The lower display is 0.4" high and shows either flow total or a tag with 7 alphanumeric characters. And best of all, the display is mounted right up against the glass so it can be seen from a wide viewing angle.

## Through-Glass SafeTouch® Buttons

The PD6800 is equipped with four sensors that operate as through-glass buttons so that it can be programmed and operated without removing the cover (and exposing the electronics) in a hazardous area. These buttons can be disabled for security by selecting the LOCK setting on the switch located on the connector board in the base of the enclosure. To actuate a button, press one finger to the glass directly over the marked button area. When the cover is removed, four mechanical buttons located next to the sensors are used.

## Modern, Sleek and Practical Enclosure

The first thing customers notice about a product is its enclosure and the ProtEX-Pro really shines here. The copper-free (0.30%), smooth, die-cast aluminum NEMA 4X (IP68) enclosure is finished with a corrosion resistant epoxy coating that literally does make the ProtEX-Pro shine. The built-in mounting flanges make for convenient wall or pipe mounting and there is even a slot on the back of the enclosure for centering on the pipe. There are two ¾" NPT conduit holes for wiring.

## Wide Viewing Angle

Customers can't always look at the display from straight on, so the window and display module have been optimized to provide a wide viewing angle of approximately +/- 40°; nearly twice that of the competition! Remember, the PD6800 is designed to be looked at.



## Environmentally Tough

ProtEX™ Series meters not only look great with their modern, smooth die cast aluminum enclosures, but they can be installed virtually anywhere. The NEMA 4X / IP68 enclosure provides serious protection from the elements, high impact, corrosion and electrical interference and the extensive, worldwide agency approvals means they can be installed virtually anywhere.



**SPECIFICATIONS**

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

**General**

**Display:** Five digits (-9999 to 99999) 0.70" (17.8 mm) high, 7-segment, automatic lead zero blanking; **-OL1:** 0.6" high with level bar graph. Lower: Seven characters 0.4" (10.2 mm) high, 14 segment alphanumeric. Symbols: for high & low alarm, Password Lock. Backlight: White

**Decimal Point:** Upper process display has up to four decimal places or none: d.dddd d.ddd, d.dd, d.d, or dddd

**Display Update Rate:** Ambient > -25°C: 2 Updates/Second.

Ambient < -25°C: 1 Update/5 Seconds

**Externally Powered Backlight:**

Voltage Range: 9-36 VDC

Supply Voltage	9 VDC	12 VDC	24 VDC	30 VDC
Maximum Power	0.2 W	0.25 W	0.5 W	0.75 W

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

**Overrange:** Display flashes 99999

**Underrange:** Display flashes -9999

**Programming Method:** Four SafeTouch® through-glass buttons when cover is installed. Four internal pushbuttons when cover is removed.

**Noise Filter:** Programmable - Lo, Med, Hi, 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.

**Password:** Programmable password restricts modification of programmed settings.

**Advanced Functions:** Live input calibration, linearization, square root, or programmable exponent

**Alarm Indication:** Flashing display plus HI/LO indicators

**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 Range:** -40 to 75°C.

**Storage Temperature Range:** -40 to 85°C.

**Relative Humidity:** 0 to 90% non-condensing

**Connections:** Screw terminals accept 12 to 22 AWG wire

**Enclosure:** Explosion-proof die-cast aluminum with glass window, corrosion resistant epoxy coating, color: blue. NEMA 4X, 7, & 9, IP68.

Copper-free (0.3%). Two ¾" NPT threaded conduit openings.

One ¾" NPT metal conduit plug with 12 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" (W x H x D)

(144 mm x 133 mm x 124 mm)

**Weight:** 5.00 lbs (80 oz, 2.27 kg)

**Warranty:** 3 years parts and labor

**Input**

**Input range:** 4-20 mA

**Accuracy:** ±0.03% of calibrated span ±1 count, square root & programmable exponent accuracy range: 10-100% of calibrated span.

**Temperature Drift:** 50 PPM/°C

**Decimal Point:** User selectable decimal point

**Calibration Range:** An error message will appear if input 1 and input 2 signals are too close together. Input Range: 4-20 mA. Minimum Span Input 1 & Input 2: 0.10 mA

**Maximum Voltage Drop:** 3.0 VDC @ 20 mA without loop-powered backlight. 6.0 VDC @ 20 mA with loop-powered backlight

**Equivalent Resistance:** 150 Ω @ 20 mA without loop-powered backlight. 300 Ω @ 20 mA with loop-powered backlight

**Input Overload:** Over current protection to 2 A max.

**Open Collector Output (-OL1 Models Only)**

**Rating:** Isolated open collector, 30 VDC @ 150 mA max.

**Alarm Output:** Assign to level or volume for high or low alarm trip point.

**Deadband:** 0-100% FS, user selectable

**Acknowledge:** Front panel ENTER button and external RESET terminals resets output and screen indication.

**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, AEx d IIC T6 Gb. 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

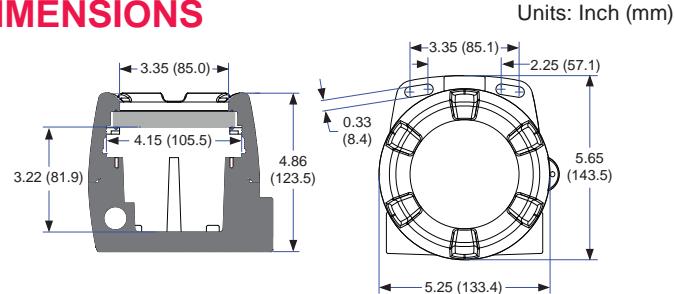
**CSA:** Class I, Division 1, Groups B, C, D. Class II, Division 1, Groups E, F, G. Class III, Division 1; T6. Class I, Zone 1, Ex d IIC T6. Ta = -40 to 75°C.

Enclosure: Type 4X & IP66.

Certificate number: 11 2325749

**IECEx:** Ex d IIC T6 Gb. Ex tb IIIC T85°C Db IP68. Ta = -40 to 75°C

Certificate number: IECEx SIR 10.0056X.

**DIMENSIONS****ORDERING INFORMATION**

ProtEX-Pro PD6800 • Process Meter	
Model	Description
PD6800-0K0	ProtEX-Pro Process Meter with Backlight
PD6800-0L1	ProtEX-Pro Process Meter with Level Bar Graph & Backlight

**Accessories**

Model	Description
PDA0001	3/4" M-NPT to F-M20 Reducer
PDA0002	3/4" M-NPT to 1/2" F-NPT Reducer
PDA6846	Pipe mounting kit; includes zinc-plated u-bolt for 2" pipe, (2) washers, and (2) nuts.
PDA6846-SS	Pipe mounting kit; includes stainless steel u-bolt for 2" pipe, (2) washers, and (2) nuts.

**Your Local Distributor is:****Disclaimer**

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