

5-DIGIT DUAL-LINE EXPLOSION-PROOF LOOP-POWERED PROCESS METER

ProtEX™



Approvals presently apply to explosion-proof enclosure only. Complete product approvals expected soon, contact factory for details.



ProtEX™ • Model PD6800

- 4-20 mA Input Loop-Powered
- 5 Digits, 0.7" (17.8 mm) Upper Display
- 7 Characters, 0.4" (10.2 mm) Lower Display
- SafeTouch™ Through-Glass Button Programming
- 6.0 Volt Drop with Backlight
- Explosion Proof, IP68, NEMA 4X Enclosure
- Flanges for Wall or Pipe Mounting
- Linear, Square Root, or Programmable Exponent
- DC-Powered Backlight Option
- Operates from -40 to 75°C

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INTRODUCTION

The ProtEX™ PD6800 is a rugged, explosion-proof loop-powered meter fully featured for demanding applications in hazardous areas or in the harshest environmental conditions. The meter derives all of its power from the 4-20 mA loop. It is programmed using the four SafeTouch™ through glass buttons, without removing the cover, and can be scaled with or without a calibration signal. The numeric display will read up to 99999 and the alphanumeric display can be programmed to show any combination of numbers and letters up to seven characters long for use as engineering units and/or the process identification tag. The backlight lets you see the display under any lighting condition and can be powered from either the 4 20 mA loop or from a separate DC power supply.

The enclosure is provided with two threaded conduit holes and integrated pipe or wall mounting slotted flanges. Pipe mounting kit is available, P/N PDAXXXX.

SAFETOUCH™ BUTTONS

The ProtEX 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, the four mechanical buttons located next to the sensors are used. The sensors are disabled when a mechanical button is pressed and will automatically be re-enabled after five minutes of inactivity.



DISPLAY

Text Here

PASSWORD PROTECTION

The Password menu is used to program a five-digit password to prevent unauthorized changes to the programmed parameter settings. The lock symbol is displayed to indicate that settings are protected.

If the meter is password protected, the meter will display the message LOCKED when the Menu button is pressed. Press the Enter button while the message is being displayed and enter the correct password to gain access to the menu. After exiting the programming mode, the meter returns to its password protected condition.

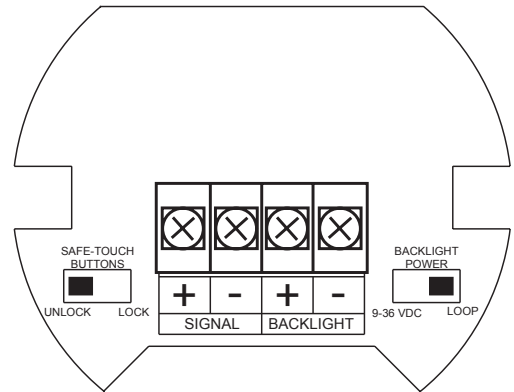


BACKLIGHT

Text goes here Im iliquat, quipit, vel ullamet aci eugait praesed el diam alit praesequis am non venis amconulput adit ut dolor sum etum nos aut la facipit ut irit nonullumsan ulputat aliquatem in eugue dolortie Veniamet ipsustrud tie min velit aliquisisi.



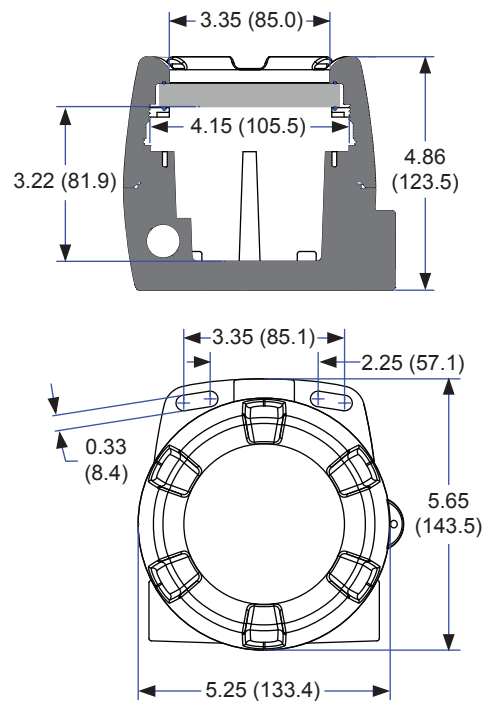
CONNECTIONS



PD6800 Connections

DIMENSIONS

Units: Inch (mm)



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. Seven characters

(Engineering Units) 0.4" (10.2 mm) high, 14 segment. Symbols: High & Low Alarm, Password Lock. Backlight: White.

Display Update Rate: Ambient > -25°C: 2 Updates/Second. Ambient < -25°C: 1 Update/5 Seconds

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.

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 75°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.

Two ¾" NPT threaded conduit openings. One ¾" NPT nickel plated brass 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

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

Temperature Drift: 50 PPM/°C from -40 to 75°C ambient

Decimal Point: User selectable decimal point

Minimum Span: Input 1 & Input 2: 0.40 mA

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: 0.40 mA

Maximum Voltage Drop: 3.0 VDC @ 20 mA Without Backlight or with Externally-Powered (DC Powered) Backlight. 6.0 VDC @ 20 mA With Loop-Powered Backlight

Equivalent Resistance: 150 Ω @ 20 mA Without Backlight or with Externally-Powered (DC Powered) Backlight. 300 Ω @ 20 mA With Loop-Powered Backlight

Externally Powered Backlight:

| Voltage Range: | Maximum Power | | | |
|----------------|---------------|--------|--------|--------|
| 9-36 VDC | 9 VDC | 12 VDC | 24 VDC | 36 VDC |
| | 0.2 W | 0.25 W | 0.5 W | 0.75 W |

Input Overload: Over current protection to 2 A max.

Rate/Totalizer

Function: Linear, square root, or programmable exponent

Totalizer: Calculates total based on rate, time base of second, minute, hour, or day, and field programmable multiplier; stored in non-volatile memory upon power loss.

Totalizer Reset: User selectable via SafeTouch™ buttons, time delay, external contact closure, or protected

Enclosure Ratings & Approvals

FM & CSA: FM Approved & CSA Certified. Explosion-proof for use in Class I, Division 1, Groups B, C, and D; Dust-Ignition-proof for Class II, Division 1, Groups E, F, and G, Class III; hazardous (classified) locations, USA: Indoor and outdoor (Type 4X and IP66); Ta = -40°F to +185°F FM Certificate: 3032880

Canada: Indoor and outdoor (Type 4X); Ta = -40°C to +85°C

CSA Certificate: 2210414

ATEX & IECEX: ATEX Certified: Group 2, Category 1 (Zone 1), Gases, Vapors, Mists, or Dusts: II 2 G D, Ex d IIC Gb, Ex tb Db IIIC IP68.

Ta = -40°C to +85°C. ATEX Certificate: Sira 08ATEX1325U

IECEX Certified: Flameproof, Gas Group IIC, Ex d IIC Gb, Ex tb IIIC IP68.

Ta = -40°C to +85°C. IECEX Certificate: IECEX SIR 08.0126U

ORDERING INFORMATION

ProtEX™ PD6800 • Explosion-Proof Loop-Powered Meter

| Model | Description |
|------------|---|
| PD6800-0K0 | Explosion-Proof Loop-Powered Process Meter with Backlight |



Your Local Distributor is:

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