

PD663

Explosion-Proof NEMA 4X IP68 Loop-Powered Meter



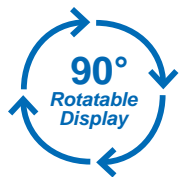
ProtEx
Lite



Explosion-Proof / Flame-Proof

PROCESS METER

- Explosion-Proof / Flame-Proof Loop-Powered Process Meter
- 4-20 mA Input
- 0.6" (15.2 mm) 3½+ Digits LCD Display; -1999 to 2999
- 1.7 Volt Drop (4.7 Volt Drop with Backlight)
- HART® Protocol Transparent
- Loop-Powered Backlight Option
- Operates from -40 to 75°C (-40 to 167°F)
- Four Internal Buttons for Easy Field Scaling
- Display Mountable at 0°, 90°, 180°, & 270° Degrees
- 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 / Flame-Proof
- ATEX and IECEx Certified as Flame-Proof and Protection by Enclosure
- Conformal Coated PCBs for Dust and Humidity Protection
- Two ½" NPT Threaded Conduit Openings (One Plug Installed)
- Pipe Mounting Kits
- Stainless Steel Tag Available



**PRECISION
DIGITAL**

PD663 Explosion-Proof NEMA 4X IP68 Loop-Powered Meter



OVERVIEW

The PD663 is a loop-powered field meter that is FM Approved and CSA Certified as Explosion-Proof, Dust-Ignition Proof, and Flame-Proof, and ATEX & IECEx Certified as Flame-Proof and Protection by Enclosure. The PD663 is easy to install and program and it can be seen in a variety of lighting conditions 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 1.7 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 1/2" NPT threaded conduit openings and flanges for wall or pipe mounting. Calibration is a quick process involving the four internal push buttons. The PD663's display will read up to 2999; we call this 3½+ digits!

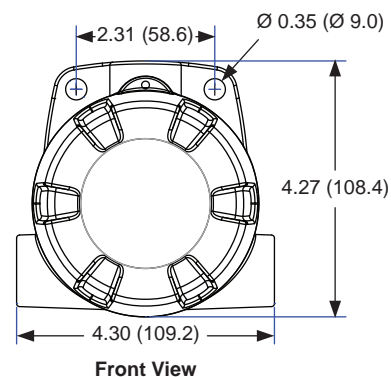
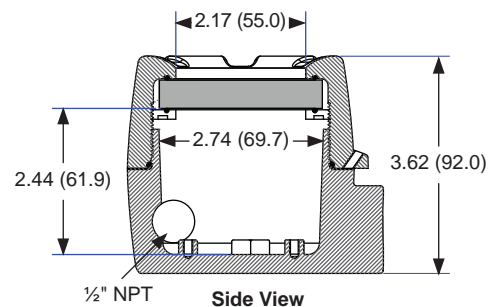
Programming

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.



DIMENSIONS

Units: Inch (mm)



Download free 3-D CAD files of these instruments to simplify your drawings!

predig.com/documentation-cad

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SPECIFICATIONS

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

General

Display: 0.6" (15.2 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 Internal Pushbuttons (behind glass).

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. Printed circuit boards are conformally coated.

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

Function: Linear (2 to 32 points) or square root

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

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

Equivalent Resistance: 85 Ω @ 20 mA without backlight; 245 Ω @ 20 mA 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 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 & IECEx: II 2 G D. Flame-proof for use in Zone 1, Ex d IIC T6 Gb

Protection by Enclosure for use in Dust Atmospheres (Zone 21),

Ex tb IIIC T85°C Db IP68. Ta = -40 to +75°C

ATEX Certificate Number: Sira 10ATEX1116X

IECEx Certificate Number: IECEx SIR 10.0056X

CSA: Explosion-proof for use in Class I, Division 1, Groups B, C and D.

Dust-ignition proof for use in Class II/III, Division 1, Groups E, F and G; T6

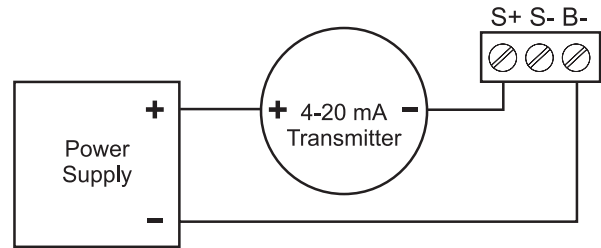
Flame-proof for use in Zone 1, Ex d IIC T6

Ta = -40 to 75°C. Enclosure: Type 4X & IP66/IP68.

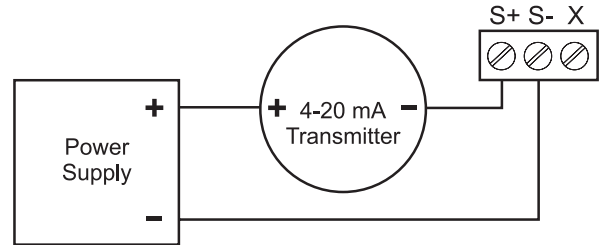
Certificate number: 2325749

WARNING - Cancer and Reproductive Harm - www.P65Warnings.ca.gov

CONNECTIONS



PD663 Input Connections with Backlight



PD663 Input Connections without Backlight

ORDERING INFORMATION

ProtEX-Lite PD663 • Explosion-Proof Process Meter	
Model	Options Installed
PD663-0L0-00	None
PD663-0K0-00	Loop-Powered Backlight

Accessories	
Model	Description
PDA0003	½" M-NPT to ¾" F-NPT Adapter
PDA1024-01	24 VDC Power Supply for DIN Rail
PDA6631	1.5" U-Bolt Pipe Mounting Kit
PDA6631-SS	1.5" U-Bolt Pipe Mounting Kit, Stainless Steel
PDA6863	2" Pipe Mounting Kit, 2 Holes & 2 Slots
PDA6863-SS	2" Pipe Mounting Kit, 2 Holes & 2 Slots, Stainless Steel
PDA-SSTAG	Stainless Steel Tag

Your Local Distributor is:

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