

5 DIGIT LOOP-POWERED PANEL METER WITH LOOP-POWERED BACKLIGHT

Model PD683



Coming Soon: Model PD688
FM Approved & CSA Certified

- 2 V Drop (5.7 V with Backlight)
- 5 Digit LCD, 0.6" (15.2 mm) High
- Custom Engineering Units
- 20 Segment Bargraph Display
- Type 4X, NEMA 4X, IP65 Front
- Linear, Square Root, or Programmable Exponent
- Maximum/Minimum Display
- Non-Volatile Memory – No Battery Needed
- Loop-Powered Backlight

INTRODUCTION

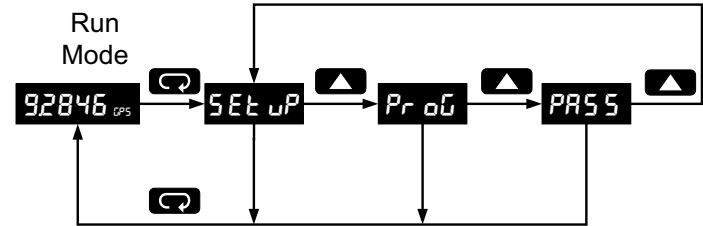
The PD683 is a general purpose loop-powered digital meter for safe area applications. The meter's four front panel buttons make the setup and programming an easy task. Five digits, bargraph, engineering units, and trend arrows provide a clear and attractive presentation of the process.

Square root and programmable exponent functions are standard features on the PD683. These features allow for conditioning of outputs from non-linear transmitters without adding external components to the system and the convenience of scaling without a signal source makes the PD683 the ideal choice for any process display application.

SETUP & PROGRAMMING

Main Menu

The Main menu consists of the most commonly used functions: *Setup*, *Program*, and *Password*.



- Press **Menu** button to enter Programming Mode then press **Up arrow** button to scroll main menu.
- Press **Menu** button, at any time, to exit and return to *Run Mode*. Changes made to settings prior to pressing **Enter/Ack** button are not saved.
- Changes to the settings are saved to memory only after pressing **Enter/Ack** button.
- The display moves to the next menu every time a setting is accepted by pressing **Enter/Ack** button.

Display Features

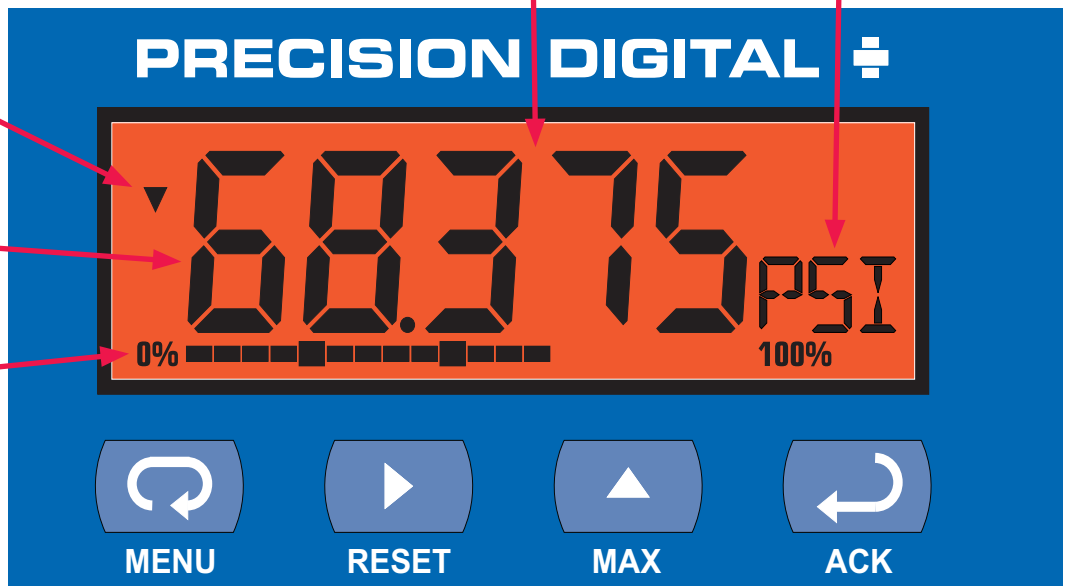
Standard Backlight

Engineering Units

Trend Arrow

5 Digits
0.6" High

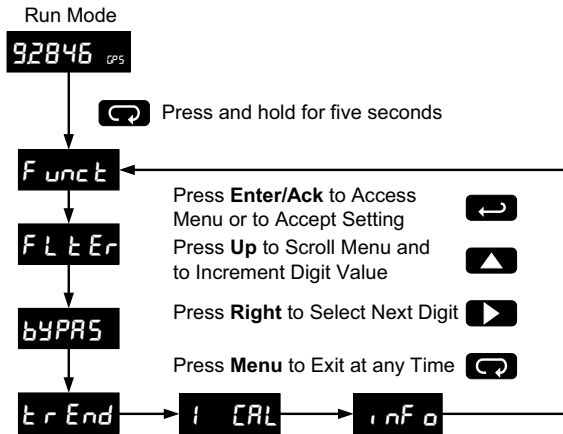
Bargraph



Advanced Features Menu

To simplify the setup process, functions not needed for most applications are located in the Advanced features menu.

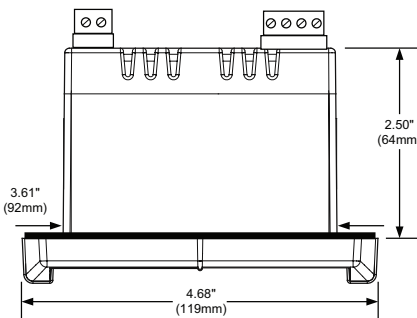
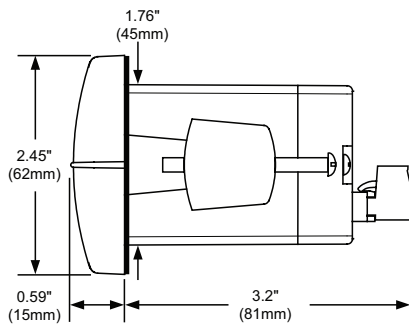
- Press and hold the **Menu** button for five seconds to access the advanced features of the meter.



INSTALLATION

There is no need to remove the meter from its case to complete the installation, wiring, and setup of the meter.

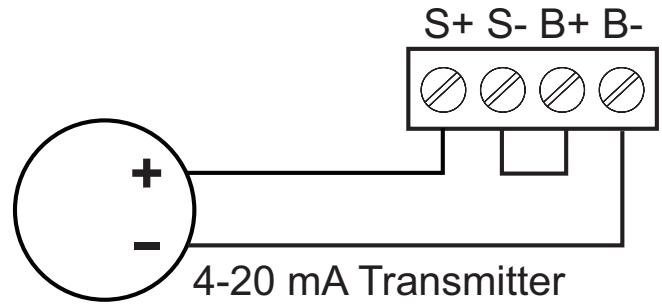
Mounting Dimensions



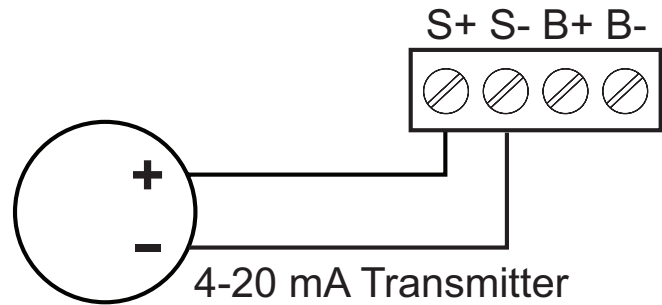
Notes:

- Panel cutout required: 1.772 x 3.622 (45 x 92)
- Panel thickness: 0.040 – 0.250 (1.0 – 6.4)
- Mounting brackets lock in place for easy mounting

PD683 Wiring Diagrams



with Backlight



without Backlight

OPTIONAL FIELD ENCLOSURES



Enclosures available for one to ten meters

Go to: www.predig.com for complete details

PDA2706 NEMA 4 Enclosure Shown with Six PD683 Meters

SPECIFICATIONS

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

General

Display:

- Five digits:** -99999 to 99999, 0.60" (15.2 mm) high, 7-segment, automatic lead zero blanking.
- Engineering Units:** 0.25" (6.4 mm) high, 14-segment.
- Bargraph:** 20-segment, 0% to 100% indication.
- Trend arrows:** Up and down trend indication.
- Backlight:** Bright orange (intensity varies with signal)

Display Update Rate: 2.5/second

Overrange: Display flashes 99999

Underrange: Display flashes -99999

Programming Method: Four front panel buttons

Noise Filter: Programmable from 1 to 199

Recalibration: 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.

Voltage Drop:

Without Backlight: 2.0 V max

With Backlight: 5.7 V max

Equivalent Resistance:

Without Backlight: 125 Ω @ 20 mA

With Backlight: 315 Ω @ 20 mA

Normal Mode Rejection: 64 dB at 50/60 Hz

Environmental:

Operating temperature range: -40 to 85°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: 1/8 DIN, high impact plastic, UL 94V-0, color: gray

Mounting: 1/8 DIN panel cutout required. Two panel mounting bracket assemblies provided

Tightening Torque:

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

Overall Dimensions: 2.45" x 4.68" x 4.19" (62 x 119 x 106 mm)

Weight: 8.0 oz (227 g)

Warranty: 3 years parts and labor

Extended Warranty: 1 or 2 years, refer to Price List for details

Input

Accuracy: ±0.03% of span ±1 count, square root and programmable exponent: 10-100% FS

Function: Linear, square root, or programmable exponent

Low-flow Cutoff: -99999 to 99999 (-99999 disables cutoff function)

Temperature Drift: 50 PPM/°C from -40 to 85°C ambient

Decimal Point: Up to four decimal places

d.dddd, dd.ddd, ddd.dd, dddd.d, or ddddd

Calibration Range:

Input Range: 4-20 mA

Minimum Span Input 1 & Input 2: 0.40 mA

Note: An Error message will appear if input 1 and input 2 signals are too close together

Input Overload: Over current protection to 2 A max.

ORDERING INFORMATION

Model	Description
PD683-0K0	Loop-Powered Panel Meter for Safe Area

Enclosures

Model	Meters	Description	Mounting
PDA25XX	1 - 10*	Plastic NEMA 4X	Inside Cover
PDA26XX	1 - 6 *	Stainless Steel NEMA 4X	Through Door
PDA27XX	1 - 6 *	Steel NEMA 4X	Through Door

* Go to www.predig.com to find individual model numbers

Note: **XX** represents the last two digits of the model number which vary depending upon the actual model chosen.

Services

Model	Description
PDN-CAL	2-Point Calibration
PDN-CERTCAL	Certificate of Calibration
PDN-CERTCAL2	Certificate of Calibration with Data
PDN-LTCAL	Lifetime Annual Recertification (shipped back same day)
PDN-LTCAL2	Lifetime Annual Recertification (shipped back next day)
PDN-LTCAL5	Lifetime Annual Recertification (shipped back within 5 days)
PDN-CERTCON	Certificate of Conformance
PDN-CSETUP	Custom Setup
PDN-ONEDAYRTN	One-Day Turnaround Service
PDN-EXTWRNTY1-0	Extended Warranty 1 Year (List Price \$0 - \$299)
PDN-EXTWRNTY2-0	Extended Warranty 2 Year (List Price \$0 - \$299)

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