

# LOW-COST OEM PROCESS METER

*Sabre Series*

Sabre P • Model PD603



- 0-20, 4-20 mA, 0-5, 1-5, 0-10,  $\pm 10$  V Inputs
- Input Current Overload Protection
- NEMA 4X, IP65 Front
- Shallow Depth 1/8 DIN Case 3.6" Behind Panel
- 4 Digit Display, 0.56" (14 mm) High, Red LEDs
- Easy Front Panel Programming
- Scale without a Signal Source
- Calibrate with a Signal Source
- Maximum/Minimum Display
- Universal Power Supply 85-265 VAC
- 12-36 VDC/12-24 VAC Power Option
- 24 VDC @ 200 mA Transmitter Supply Option

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## EASY SETUP & PROGRAMMING

The Sabre P process meter is easily programmed using the four front panel buttons. There are no jumpers or switches to configure and there is no need to ever open the case.

### Front Panel Buttons



### User Friendly Menu Structure

To simplify programming, one menu handles all the setup functions.

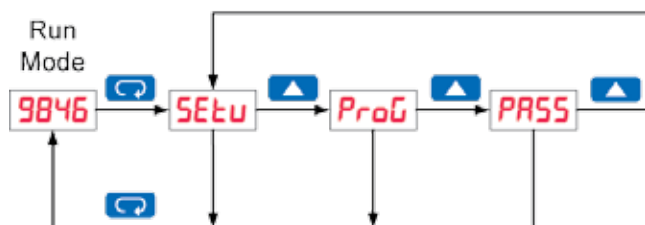
- Press the Menu button to enter or exit the Programming Mode at any time.
- Press the Right arrow button to move to the next digit during digit programming.
- Press the Up arrow button to scroll through the menus, decimal point, or to increment the value of a digit.
- Press the Enter/Ack button to access a menu or to accept a setting.

### Menu Structure

The menu consists of the following functions: **Setup**, **Program**, and **Password**. Press the **Menu** button to enter the Programming Mode then press the **Up arrow** button to scroll through the menu.

The **Setup** menu is used to select the input signal and decimal point. The **Program** menu is used to scale or calibrate the meter. The **Password** menu is used to program a password.

The display moves to the next menu after the **Enter/ACK** button is pressed.

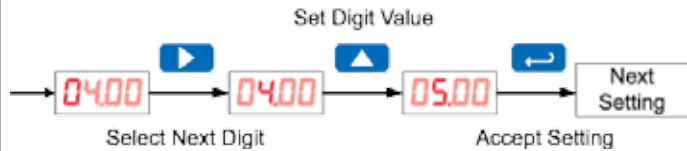


### Setting Numeric Values

The numeric values are set using the **Right** and **Up arrow** buttons. Press the **Right arrow** button to select next digit and the **Up arrow** button to increment the digit value.

The digit being changed is displayed brighter than the rest.

Press the **Enter/ACK** button, at any time, to accept a setting or the **Menu** button to exit without saving the changes.



## SIMPLE OPERATION

Look to the Sabre P process meter for the key features you want and don't worry about getting bogged down in a confusing array of things you don't need. The Sabre P provides all the utility needed to handle your application with accuracy and simplicity.

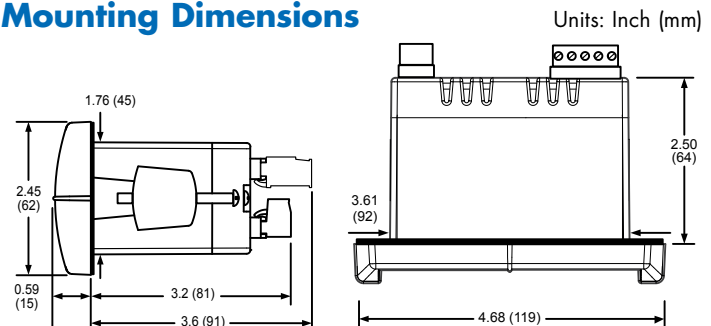
### Maximum/Minimum Readings

To display the maximum and minimum readings since the last reset/power-up, use the **Up arrow/Max** button.

## QUICK INSTALLATION

The Sabre P is housed in a 1/8 DIN shallow depth case that is designed for easy installation and servicing. The extra large front bezel is rated Type 4X, IP65. The mounting brackets are locked in place to make it easy to mount the meter in the panel. The removable screw terminal connectors make for easy and convenient wiring.

### Mounting Dimensions



Notes:

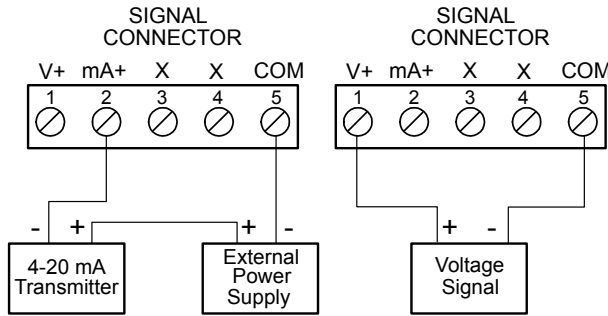
1. Panel cutout required: 1.772 x 3.622 (45 x 92)
2. Panel thickness: 0.040 – 0.250 (1.0 – 6.4)
3. Mounting brackets lock in place for easy mounting

**PROCESS INPUTS**

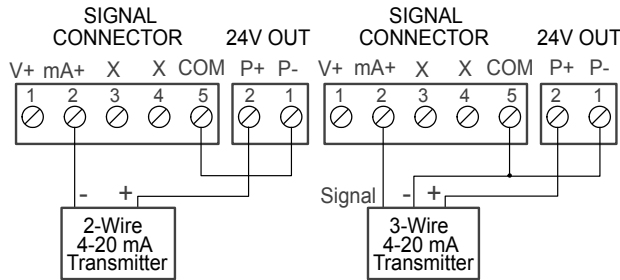
The Sabre P meter is factory calibrated to accept 0-20, 4-20 mA, 0-5, 1-5, 0-10, and ±10 VDC. The meter can be scaled with or without applying an input signal for any display range required.

**Current & Voltage Inputs**

Setting up the meter to accept current or voltage input could not be easier. All setup is performed with the front panel buttons and there are no switches or jumpers to deal with. The removable screw terminal connectors are clearly labeled to prevent wiring errors.



**Transmitter Powered by External Supply**

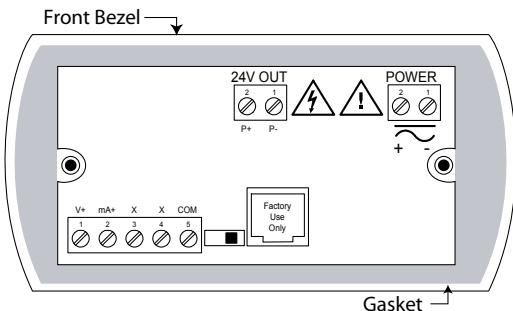


**Transmitters Powered by Internal Supply (Optional)**

**Current Overload Protection**

To protect the meter from unexpected current overload the current input circuit contains an auto-resettable fuse. The fuse limits the current to a safe level when it detects a fault condition, and automatically resets itself when the fault condition is removed.

**Connectors Location**



**Rear View**

**Meter with 24 V Transmitter Supply Option**

**OPTIONAL FIELD ENCLOSURES**

The Sabre P process meter is available with a wide variety of NEMA 4, NEMA 4X, and explosion-proof enclosures.

**NEMA 4 & NEMA 4X Enclosures**

The NEMA 4 and NEMA 4X enclosures are available in stainless steel, steel, and plastic. They come with pre-punched 1/8 DIN cutouts for up to ten meters. The meters are mounted in the enclosure door so they can be programmed without opening the enclosure. Options include 2" pipe mounting kits and engraved plastic labels.

Visit our website [www.predig.com](http://www.predig.com) for complete details and specifications of the NEMA 4 & NEMA 4X Enclosures.

**Low-Cost Plastic NEMA 4X Enclosure**

The PDA2801 is a low-cost, compact, plastic NEMA 4X enclosure that will house one meter.



**Plastic, Steel & Stainless Steel**



These NEMA 4 & 4X enclosures house from one to ten meters and feature a hinged door.

Enclosures and meters are ordered and packaged separately.

**Engraved Plastic Labels**

These custom engraved plastic labels are the perfect solution for identifying both the enclosure and labeling each individual meter

*Whether the meters are mounted in one of our enclosures or installed into your existing control panel these custom engraved plastic labels are the answer you're looking for!*

**Explosion-proof Enclosures**

These explosion-proof enclosures house one or two meters and are UL & C-UL Classified as NEMA 4, 7 & 9 for location in Class I, Groups C & D; Class II, Groups E, F, G; and Class III. Enclosures and meters are ordered and packaged separately.

**SPECIFICATIONS**

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

**General**

- Display:** 0.56" (14.2 mm) red LED, 4 digits (-1999 to 9999)
- Front Panel:** NEMA 4X, IP65; panel gasket provided
- Programming Methods:** Four front panel buttons
- Display Update Rate:** 5/sec
- Overrange:** Display flashes 9999
- Underrange:** Display flashes -1999
- Recalibration:** All inputs are calibrated at the factory; recalibration is recommended at least every 12 months.
- Max/Min Display:** Stored until reset by user or meter is turned off.
- Password:** Restricts modification of programmed settings.
- Non-Volatile Memory:** Settings stored for a minimum of 10 years.
- Power Options:** 85-265 VAC, 50/60 Hz; 90-265 VDC, 20 W max or 12-36 VDC; 12-24 VAC, 6 W max.
- Required Fuse:** UL Recognized, 5 A max, slow-blow; up to 6 meters may share one fuse.
- Normal Mode Rejection:** 64 dB at 50/60 Hz
- Isolation:** 4 kV input/output-to-power line; 500 V input-to-24 VDC supply
- Operating Temperature:** 0 to 65°C
- Storage Temperature:** -40 to 85°C
- Relative Humidity:** 0 to 90% non-condensing
- Connections:** Removable screw terminal blocks accept 12 to 22 AWG. Note: RJ11 header for factory use only.
- Enclosure:** 1/8 DIN, high impact plastic, 94V-0, color; gray
- Weight:** 8.5 oz (241 g)
- UL File Number:** E160849; 508 Industrial Control Equipment
- Warranty:** 1 year parts & labor
- Extended Warranty:** 1 or 2 years, refer to Price List for details.
- Process Inputs**
- Inputs:** Field selectable: 0-20 mA, 4-20 mA, 0-5, 1-5 V, ±10 V
- Accuracy:** ±0.05% FS ±1 count
- Function:** Linear
- Decimal Point:** Up to 3 decimals: d.ddd, dd.dd, ddd.d, or dddd
- Calibration:** Scale without signal or calibrate with signal source
- Calibration Range:** User programmable over entire range of meter
- Input Impedance:** Voltage range: greater than 1 MΩ,
- Current Range:** 50-100 Ω, varies with resettable fuse impedance
- Input Overload:** Protected by auto-resettable fuse
- Temperature Drift:** ±50 PPM/°C
- Transmitter Supply:** Isolated, P+, P-: 24 VDC ±10% @ 200 mA max



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**ORDERING INFORMATION**

| Sabre P • Model PD603 |                  |  |
|-----------------------|------------------|--|
| 85-265 VAC* Model     | 12-36 VDC* Model | Description                                |
| PD603-6R0-0           | PD603-7R0-0      | Process Meter                              |
| PD603-6R0-1           |                  | Process Meter with 24 V Transmitter Supply |

\* All models may be powered from AC or DC, See Specifications for Details

Note: Factory orders for Sabre products require a five (5) piece minimum of any combination of Sabre (PD603 & PD743) products. For instance, an order of three (3) PD603-6R0-0 and two (2) PD743-7R0-0 qualifies. For information on individual unit sales, please contact your local distributor.

| NEMA 4 & NEMA 4X Enclosures |             |                                   |               |
|-----------------------------|-------------|-----------------------------------|---------------|
| Model                       | # of Meters | Description                       | Mounting      |
| PDA2501                     | 1           | Plastic NEMA 4X Enclosure         | Through Door  |
| PDA2502                     | 2           | Plastic NEMA 4X Enclosure         | Through Door  |
| PDA2503                     | 3           | Plastic NEMA 4X Enclosure         | Through Door  |
| PDA2504                     | 4           | Plastic NEMA 4X Enclosure         | Through Door  |
| PDA2505                     | 5           | Plastic NEMA 4X Enclosure         | Through Door  |
| PDA2506                     | 6           | Plastic NEMA 4X Enclosure         | Through Door  |
| PDA2508                     | 8           | Plastic NEMA 4X Enclosure         | Through Door  |
| PDA2510                     | 10          | Plastic NEMA 4X Enclosure         | Through Door  |
| PDA2512                     | 2           | Plastic NEMA 4X Enclosure (Large) | Through Door  |
| PDA2601                     | 1           | Stainless Steel NEMA 4X Enclosure | Through Door  |
| PDA2602                     | 2           | Stainless Steel NEMA 4X Enclosure | Through Door  |
| PDA2603                     | 3           | Stainless Steel NEMA 4X Enclosure | Through Door  |
| PDA2604                     | 4           | Stainless Steel NEMA 4X Enclosure | Through Door  |
| PDA2605                     | 5           | Stainless Steel NEMA 4X Enclosure | Through Door  |
| PDA2606                     | 6           | Stainless Steel NEMA 4X Enclosure | Through Door  |
| PDA2701                     | 1           | Steel NEMA 4 Enclosure            | Through Door  |
| PDA2702                     | 2           | Steel NEMA 4 Enclosure            | Through Door  |
| PDA2703                     | 3           | Steel NEMA 4 Enclosure            | Through Door  |
| PDA2704                     | 4           | Steel NEMA 4 Enclosure            | Through Door  |
| PDA2705                     | 5           | Steel NEMA 4 Enclosure            | Through Door  |
| PDA2706                     | 6           | Steel NEMA 4 Enclosure            | Through Door  |
| PDA2801                     | 1           | Plastic NEMA 4X Enclosure         | Through Cover |

| Calibration Services |                                     |
|----------------------|-------------------------------------|
| Model                | Description                         |
| PDN-CAL              | Calibration with Certificate        |
| PDN-CALDATA          | Calibration with Certificate & Data |

**Your Local Distributor is:**

LDS603\_D 04/08