# LOW-COST OEM TEMPERATURE METER

*Sabre Series*

**Sabre T • Model PD743**

PRECISION DIGITAL ÷

MENU RESET MAX ACK

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- **J, K, T, E Thermocouple & 100 Ω Pt RTD**
- **Pre-Calibrated for All Input Types**
- **NEMA 4X, IP65 Front**
- **Shallow Depth 1/8 DIN Case 3.2" Behind Panel**
- **4 Digit Display, 0.56" (14 mm) High, Red LEDs**
- **Easy Front Panel Programming**
- **Maximum/Minimum Display**
- **Universal Power Supply 85-265 VAC**
- **12-36 VDC/12-24 VAC Power Option**

## EASY SETUP & PROGRAMMING

The Sabre T temperature meter is easily programmed using the four front panel buttons. There is only one switch on the entire meter, there are no jumpers, and no need to ever open the case.

### Front Panel Buttons



### User Friendly Menu Structure

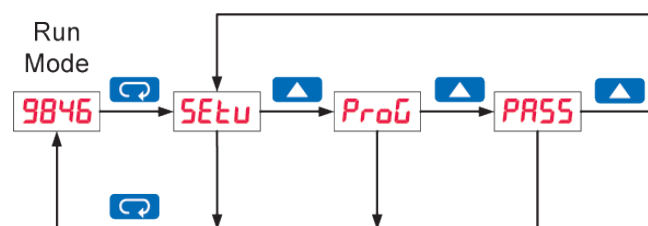To simplify programming, one menu handles all the setup functions.

- 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 °F or °C. The *Program* menu is used to calibrate the meter. The *Password* menu is used to program a password.

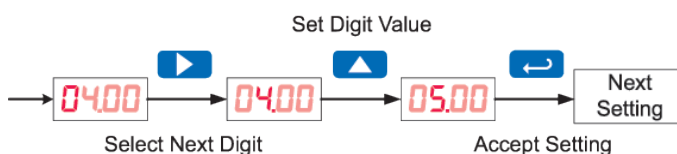The display moves to the next menu after the **Enter/ACK** button is pressed.



## 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 T temperature 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 T provides all the utility needed to handle your application with accuracy and simplicity.
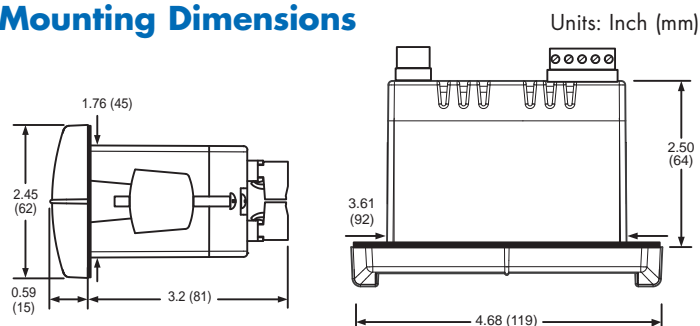
### Maximum/Minimum Readings

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

## QUICK INSTALLATION

The Sabre T 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. Removable screw terminal connectors make for easy and convenient wiring.

### Mounting Dimensions

Units: Inch (mm)



Notes:

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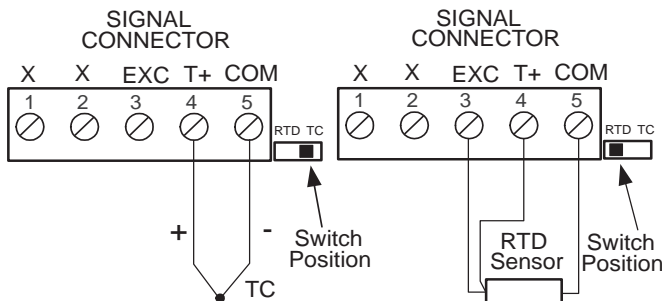3. Mounting brackets lock in place for easy mounting

# TEMPERATURE INPUTS

The Sabre T temperature meter is factory calibrated to accept type J, K, T, or E thermocouples and 100 Ω platinum RTDs. Temperature inputs can be programmed to display in degrees Fahrenheit or Celsius and the type K thermocouple can display up to 2300°F.
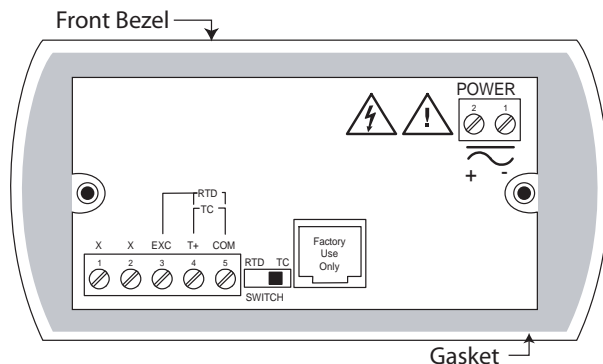
## Thermocouple & RTD Inputs

Setting up the Sabre T to accept thermocouple or RTD inputs is simply a matter of setting a switch at the rear of the case and selecting the input type from the menu.

The meter accepts J, K, T, or E type thermocouples as well as two, three, or four-wire 100 Ω platinum RTDs.



**Thermocouple and RTD Inputs**

## Connectors Location



**Rear View of Meter**

# OPTIONAL FIELD ENCLOSURES

The Sabre T temperature 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 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:** RTD: 5/sec; TC: 2.5/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, 8 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

**Operating Temperature:** 0 to 65°C

**Storage Temperature:** -40 to 85°C

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

**Connections:** Power & Signal: removable screw terminal blocks accept 12 to 22 AWG. Note: RJ11 header for factory use only.

**Enclosure:** 1/8 DIN, high impact plastic, 94 V-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.

## Temperature Inputs

**Inputs:** Factory calibrated, field selectable: type J, K, T, or E thermocouples and 100 Ω platinum RTD (0.00385 or 0.00392 curve)

**Resolution:** 1°; type T: 1° or 0.1°

**Cold Junction Reference:** Automatic

**Temperature Drift:** ±2°C maximum

**Input Impedance:** Greater than 100 kΩ

| Type | Range | Accuracy | Range | Accuracy |
|------|-------|----------|-------|----------|
| J | -58° to 1382°F | ±2°F | -50° to 750°C | ±1°C |
| K | -58° to 2300°F | ±2°F | -50° to 1260°C | ±1°C |
| T | -292° to 700°F | ±2°F | -180° to 371°C | ±1°C |
| E | -58° to 1700°F | ±2°F | -50° to 927°C | ±1°C |
| RTD | -328° to 1382°F | ±1°F | -200° to 750°C | ±1°C |

## Sabre Series

# ORDERING INFORMATION

| Sabre T • Model PD743 | | |
|------------------------|---|---|
| **85-265 VAC Model \*\*** | **12-36 VDC Model \*\*** | **Description** |
| PD743-6R0-0* | PD743-7R0-0 | Temperature Meter |

\*\* All models may be powered from AC or DC, See Specifications for Details
\* Quick Shipment Program product, typically shipped within 2 working days

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 |

\* Quick Shipment Program product, typically shipped within 2 working days

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