

# PSC-PMB-Solo

## Self-Contained Infrared Temperature Sensor for Direct Connection to PLC



PSC-PMB-SOLO models are miniature digital non-contact sensors that may be connected directly to an RS485 Modbus SCADA system or PLC. Networkable and versatile, they make it possible to measure the temperature of thousands of locations on the same network. Boasting a response time of 125ms and accuracy of  $\pm 1\%$  of readings, they are compact and were designed to conform to the most demanding installation conditions. PSC-PMB-SOLO sensors are constructed of 316 grade stainless steel and can operate at temperatures up to 120°C without cooling apparatus.

### MODEL NUMBERS



**PSC-PMB** - **SOLO** - **20**

**Field of view**  
**2** = 2:1 divergent optics  
**20** = 20:1 divergent optics  
**CF** = 14:1 (Focus 2" for 0.14" spot)

**Series**  
**PSC-PMB** = Process MultiBus



**PSC-PM180** Optional 6-channel touch screen terminal with data logging

### SENSOR ACCESSORIES

IP65 junction box for 6 sensors **PSC-PMB-HUB**

Fixed or Adjustable mounting bracket **PSC-FBS/PSC-ABS**

Fixed / Adjust. mounting bracket with continuous laser sighting **PSC-DLSBFS / PSC-DLSBAS**

Extended cable **PSC-PMBCE**

Calibration certificate **PSC-CALCERTA**

Protective plastic / silicon window in stainless steel holder **PSC-PWS / PSC-SIWS**



PSC-PMB-SOLO sensors are designed to measure the surface temperature of non-reflective materials from -20°C to 1000°C.

Rated for IP65, built from 316-grade stainless steel, and fully tested to industrial EMC standards.

Designed to measure food, paper, thick plastics, asphalt, paint, bulk materials and organic materials, as well as most dirty, rusty or oily surfaces.

### ROBUST

PSC-PMB-SOLO sensors have an operating temperature rating of up to **120°C** with no need for cooling. (70°C on CF models).

### COMPACT

The sensors measure just 45 mm long (plus cable gland), so they can fit into the smallest of spaces.

### CONFIGURABLE

Analog and relay outputs are available via separate DIN rail mounted modules with use of optional PSC-PM180 touch screen display.

### LOW COST

The PSC-PMB-SOLO is an ideal low-cost non-contact temperature measurement system.

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## SPECIFICATIONS



### PSC-PMB-SOLO SENSOR SPECIFICATIONS

**Temperature Range**

-20°C to 1000°C (-4°F to 1832°F)

**Interface**

RS485 Modbus RTU

**Accuracy**

±1% of reading or ±1°C whichever is greater

**Repeatability**

± 0.5% of reading or ± 0.5°C whichever is greater

**Emissivity Setting**

0.2 to 1.0

**Response Time, t<sub>90</sub>**

125 ms (90% response)

**Spectral Range**

8 to 14 μm

**Supply Voltage**

6 to 28 V DC

**Supply Current**

50 mA max.

**Baud Rate**

9600 baud \*

**Format**

8 data bits, no parity, 1 stop bit \*

\* Other configurations available upon request

### CONFIGURATION

**Configuration Method**

Via PSC-PM180 touch screen, or directly via RS485 Modbus

**Configurable Parameters**

Emissivity Setting, Averaging, Reflected Energy Compensation

### MECHANICAL

**Construction**

Stainless Steel

**Dimensions**

18 mm diameter x 45 mm long

**Thread Mounting**

M16 x 1 mm pitch

**Cable Length**

1m (longer lengths available to order)

**Weight with Cable**

85 g (3 oz)

### ENVIRONMENTAL

**Environmental Rating**

IP65

**Ambient Temperature**

0°C to 120°C

**Relative Humidity**

95% max. non-condensing

### PSC-PMB-HUB SPECIFICATIONS

**Construction**

Die Cast Aluminum

**Electrical Connections**

Removable screw terminals, 28 AWG to 18 AWG

**Weight**

250 g (8.8 oz)

**Environmental Rating**

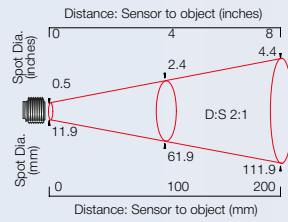
IP65

**Enclosure Dimensions**

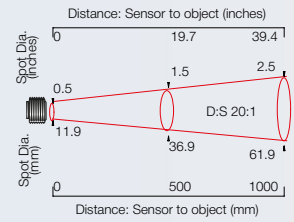
Same as PSC-PM180

## OPTICS

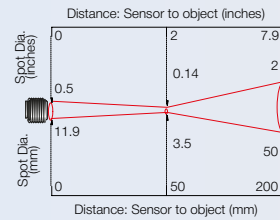
Diameter of target spot measured versus distance from sensing head (90% energy)



**PMB-SOLO-2**



**PMB-SOLO-20**

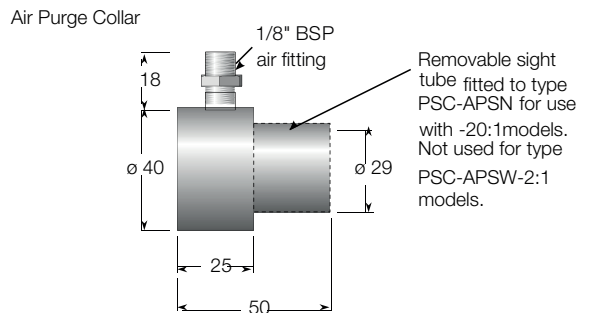
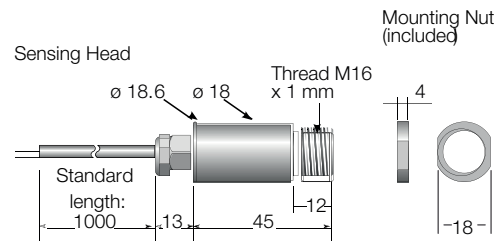


**PMB-SOLO-CF**

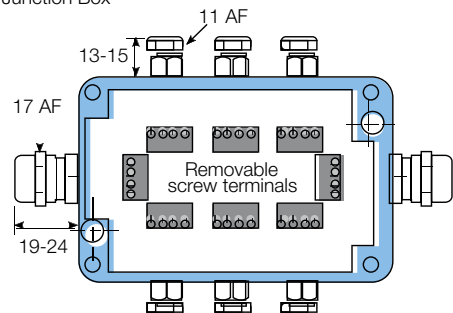
All models can measure at longer distances than shown, with a larger spot size.

Accuracy is not affected by measurement distance in clean air.

## PRODUCT DIMENSIONS



**PSC-PMBHUB Junction Box**



Dimensions in mm