

P993

Low Range Differential Pressure PCB Mount Sensor



Typical Applications

- Variable Air Volume Systems (VAV)
- Filter Pressure Monitoring
- Duct Air Flow
- Modulated Furnace Controls
- Combustion Air Flow
- Gaseous Leak Detection

Standard Full Scale Pressure Ranges

1, 2, 5, 10, ± 1 , ± 2 , and ± 5 inches of H₂O

Features

- Rugged PCB Mount Package
- Amplified Temperature Compensated Linear Output
- No Position Sensitivity
- EMI/RFI & ESD Protected
- Superior Output Signal Stability

Description

The P993 series of pressure sensors incorporates a silicon capacitive sensing element in a compact package.

Using a 5 Vdc input, the sensors provide a 0.25 to 4.0 Vdc output proportional to pressure. Internal temperature compensation provides an accurate, easy to use device.

The innovative design eliminates mounting position effects found on other low pressure differential sensors currently available in the market.

Technical Specifications

Note: Performance Specifications with 5 Vdc supply at 25°C

Differential Pressure Ranges

(inches of H₂O): 1, 2, 5, 10, ±1, ±2, and ±5

Proof Pressure: 1.0 PSI (either port)

Burst Pressure: 1.5 PSI (either port)

Supply Voltage: 5.0 ± 0.25 Vdc

Supply Current: 4mA Max.

Output Voltage (Ratiometric): 0.25 to 4.0 Vdc

Calibration Tolerance

(at 5.0 Vdc supply and no load):

Zero/Null Pressure: 0.25 Vdc ± 60 mV

Span: 3.75 Vdc ± 60 mV

Voltage Ratiometricity: ±1.5% of span Max.

4.75 to 5.25 Vdc supply

Total Error Band

(10° to 40°C): ±2% of span Max. (±3% for 0-1" range)

Output Impedance: 100 Ω Max.

Service Life: 10,000,000 cycles Min.

Shock: 10 g's at 6ms duration

Vibration: 1 g from 20 Hz to 1200 Hz

Operating Temperature: 0°C to 60°C

Storage Temperature: -40°C to +95°C

Humidity: 95% RH, non-condensing

Weight: 20 grams Max.

Electrical Termination: 3 solderable pins, tin plated

Preferred Mounting Position: None

Pressure Connection: 1/8" diameter tube fitting with barb for 3/16 ID tubing

Recommended Interface

Impedance: 25 kΩ Min. resistance between transducer output and ground, in parallel with 0.2 uF Max. capacitance

Over-Voltage Protection: 16 Vdc

Reverse Polarity Protection: -6 Vdc



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non-compliance can result in serious injury and/or damage to the equipment.

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How to Order

Use this diagram, working top to bottom and left to right to construct your model number. An example is shown below. Custom OEM options are also available.

P993 Low Range Differential Pressure PCB Mount Sensor

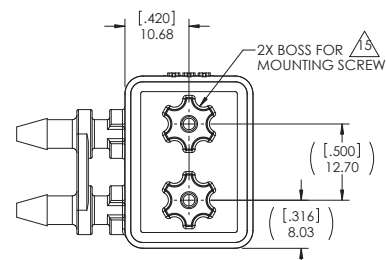
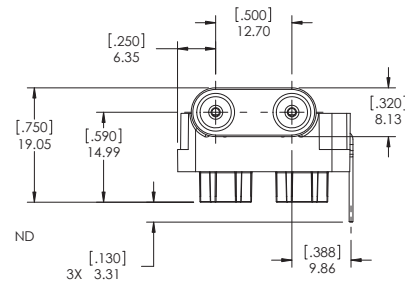
Pressure Range

1	0 - 1.0" H ₂ O
1B	±1" H ₂ O
2	0 - 2.0" H ₂ O
2B	±2" H ₂ O
5	0 - 5.0" H ₂ O
5B	±5" H ₂ O
10	0 - 10" H ₂ O

P993 - 5B

Example: P993 - 5B

Description: P993 Pressure Sensor, ±5" H₂O



Dimensions in: mm [inches]

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