



## | P993

### Low Range Differential Pressure PCB Mount Sensor

#### 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.



#### Features

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

#### Applications

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



#### MAIN FEATURES

<b>Pressure Ranges</b>	1, 2, 5, 10, $\pm 1$ , $\pm 2$ , $\pm 5$ Inches of H2O
<b>Electrical Connection</b>	3 solderable pins, tin plated
<b>Pressure Connection</b>	1/8" diameter tube fitting with barb
<b>Housing Material</b>	PET 30% glass reinforced, flame retardant
<b>Output Signal</b>	0.25 VDC – 4 VDC



#### TECHNICAL SPECIFICATIONS

##### Pressure Ranges

<b>From 0 to ...</b>	Inch of H2O	1	2	5	10	$\pm 1$	$\pm 2$	$\pm 5$
<b>Proof Pressure</b>	PSI	1	1	1	1	1	1	1
<b>Burst pressure</b>	PSI	1.5	1.5	1.5	1.5	1.5	1.5	1.5



# TECHNICAL SPECIFICATIONS (CONTINUED)

## Physical

<b>Operating Life Cycle</b>	min. 10 million full pressure cycles over the full range
<b>Vibration Resistance</b>	1 G from 20 to 1200 Hz
<b>Shock Resistance</b>	10 G's at 6 ms duration
<b>Drop Test</b>	1m onto concrete surface
<b>Weight</b>	≤ 20 grams (without mating connector)
<b>Operating Temperature</b>	-10°C to + 60°C
<b>Storage Temperature</b>	- 40°C to + 95°C
<b>Media</b>	Air

## Performance

<b>Total Error Band</b>	±2% of span Max. (±3% for 0 - 1" range) (10°C ≤ T ≤ 40°C)
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## Electrical

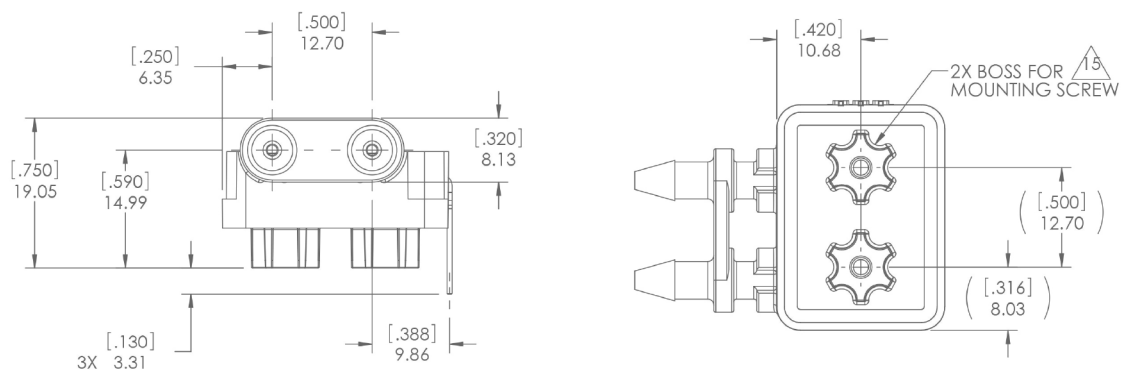
<b>Output Signal</b>	0.25 to 4 VDC Ratiometric
<b>Power Consumption</b>	≤ 20 mW
<b>Operating Supply Signal</b>	5 VDC ± 5%
<b>Oversoltage Protection</b>	min. 16 VDC
<b>Short-circuit Proofness</b>	Yes *1
<b>Reverse Polarity Protection</b>	Yes *2
<b>Output Impedance</b>	100 Ω Max

2. for min. 3 intervals at 5 minutes each  
 3. for min. 10 seconds on assigned pins



## DIMENSIONS

Dimensions in mm [Inch]





## ORDERING OPTIONS

Example: P993-5B

P993 Pressure Sensor, ±5" H2O.

**P993** - **XX**

### Family

**P993**

### Pressure Ranges

- 1:** 0 - 1.0" H2O
- 1B:** ± 1" H2O
- 2:** 0 - 2.0" H2O
- 2B:** ± 2" H2O
- 5:** 0 - 5.0" H2O
- 5B:** ± 5" H2O
- 10:** 0 - 10" H2O



## AGENCY APPROVALS & CERTIFICATIONS



2002/95/EC ROHS Directive



## WARNINGS



### RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

**Failure to follow these instructions can result in serious injury, or equipment damage.**



### HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

**Failure to follow these instructions will result in death or serious injury.**

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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

## CONTACT US

### Americas

+1 (800) 350 2727  
sensors@sensata.com  
switches@sensata.com

### Europe, Middle East & Africa

+359 (2) 809 1826  
pressure-info.eu@sensata.com

### Asia Pacific

sales.isasia@list.sensata.com  
China +86 (21) 2306 1500  
Japan +81 (45) 277 7117  
Korea +82 (31) 601 2004  
India +91 (80) 67920890  
Rest of Asia +886 (2) 27602006  
ext 2808