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

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

TECHNICAL SPECIFICATIONS

Pressure Ranges

From 0 to …	Inch of H2O	2	5	10	±1	±2	±5
Proof Pressure	PSI	1	1	1	1	1	1
Burst pressure	PSI	1.5	1.5	1.5	1.5	1.5	1.5

TECHNICAL SPECIFICATIONS (CONTINUED)

Physical

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

Performance

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

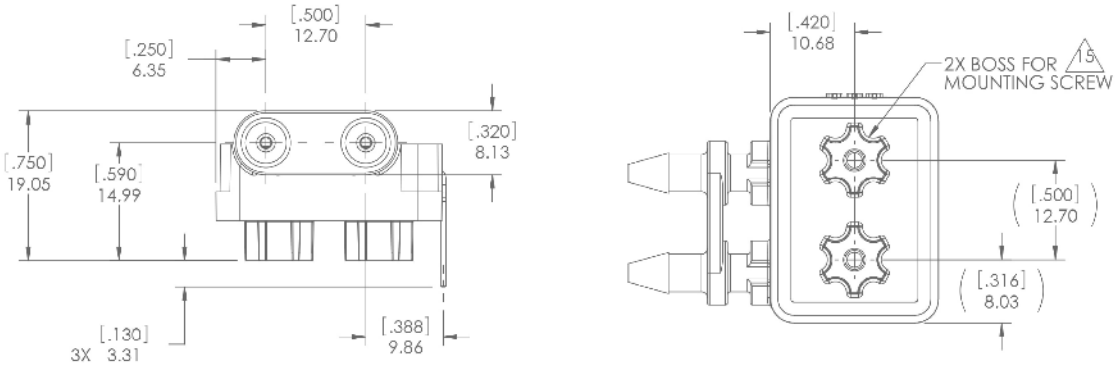
Electrical

Output Signal	0.25 to 4 VDC Ratiometric
Power Consumption	≤ 20 mW
Operating Supply Signal	5 VDC ± 5%
Overvoltage Protection	min. 16 VDC
Short-circuit Proofness	Yes *1
Reverse Polarity Protection	Yes *2
Output Impedance	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

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

DANGER

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.

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