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**Part Number: 1 INCH-D2-P4V-MINI, Low Pressure (1” H2O to 30 “ H2O) Sensors Prime Grade**

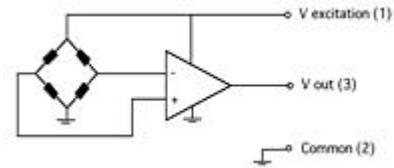
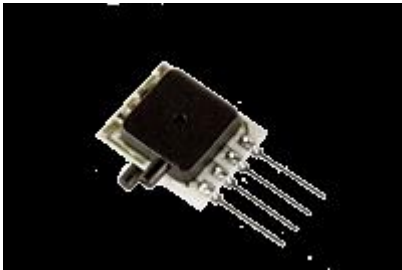
**Low Pressure (1” H2O to 30 “ H2O) Sensors Prime Grade**

The Miniature Amplified Output pressure sensors is based upon a proprietary technology to reduce all output offset or common mode errors. This model provides a calibrated amplified output with superior output offset characteristics. Output offset errors due to change in temperature, stability to warm-up, stability to long time period, and position sensitivity are all significantly reduced when compared to conventional compensation methods. In addition the sensor utilizes a silicon, micromachined, stress concentration enhanced structure to provide a very linear output to measured pressure.

These calibrated and temperature compensated sensors give an accurate and stable output over a wide temperature range. This series is intended for use with non-corrosive, non-ionic working fluids such as air, dry gases and the like.

The output of the device is ratiometric to the supply voltage and operation from any D.C. supply voltage between 4.5 and 5.5 volts. Pressure Response: for any pressure applied the response time to get to 90% of pressure applied is typically less than 100  $\mu$ s.

All parameters are measured at 5.0 volt excitation, for the nominal full scale pressure and room temperature unless otherwise specified. Pressure measurements are with positive pressure applied to the front port.



**SPECIFICATIONS**

Pressure Sensor Line	Miniature Amplified Low
Operating Pressure	$\pm$ 1 inch H2O
Nominal Span	4 V
Proof Pressure	100 inch H2O
Burst Pressure	200 inch H2O
Pressure Port Orientation	Opposite Directional Pressure Ports
Supply Voltage Vs (DC)	4.5 to 5.5 V
Common-mode Pressure	10 psig
Lead Temperature	250 °C

Compensated Temperature Range	-25 to 85 °C
Operating Temperature Range	-40 to 125 °C
Storage Temperature Range	-40 to 125 °C
Humidity Limits	0 to 95 %RH
Nominal Operating Differential Pressure Range	&plusmn;1.0 inch H2O
Minimum Output Span Voltage	&plusmn;1.90 V
Nominal Output Span Voltage	&plusmn;2.0 V
Maximum Output Span Voltage	&plusmn;2.10 V
Output Span Voltage Range	&plusmn;1.90 to &plusmn;2.10 V
Minimum Offset Voltage at Zero Differential Pressure	2.15 V
Nominal Offset Voltage at Zero Differential Pressure	2.25 V
Maximum Offset Voltage at Zero Differential Pressure	2.35 V
Offset Voltage Range at Zero Differential Pressure	2.15 to 2.35
Maximum Offset Voltage	&plusmn;60 mV
Nominal Offset Voltage (Warm-up Shift)	&plusmn;10 mV
Nominal Offset Voltage (Position Sensitivity &plusmn;1g)	&plusmn;5 mV
Nominal Offset Voltage (Long Term Drift 1 Year)	&plusmn;10 mV
Nominal Linearity (Hysteresis Error)	0.05 %fs
Maximum Linearity (Hysteresis Error)	0.25 %fs
Linearity Range (Hysteresis Error)	0.05 to 0.25 %fs
Maximum Span Shift (-25°C to 85°C)	&plusmn;2.0 %span
Package Series Description	Amplified Side Port
Operating Mode (Differential, Gauge, Absolute)	Differential