

Model 1210 Low Pressure



PC Board Mountable Pressure Sensor

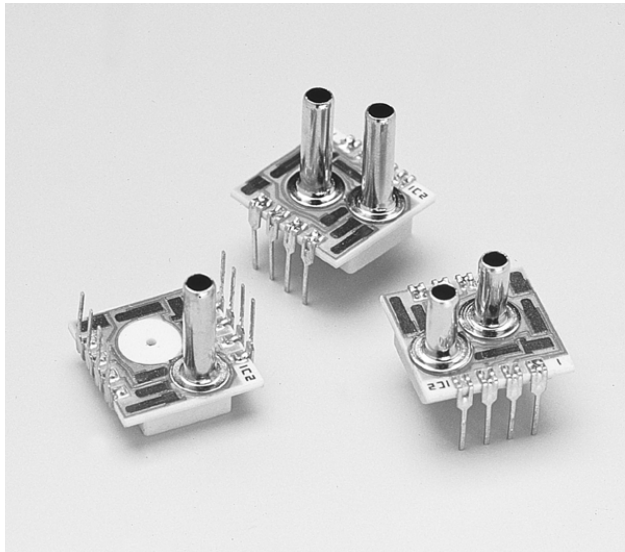
0-10" H₂O to 0-1 PSI

0-100 mV Output

Gage and Differential

Low Cost

- ▶ Medical Instruments
- ▶ Air Flow Measurement
- ▶ HVAC
- ▶ Process Control
- ▶ Factory Automation
- ▶ Leak Detection



DESCRIPTION

The Model 1210 is a temperature compensated, piezoresistive silicon pressure sensor packaged in a dual-in-line configuration and intended for cost sensitive applications where excellent performance and long-term stability are required.

Integral temperature compensation is provided over a range of 0-50°C using laser-trimmed resistors. An additional laser-trimmed resistor is included to adjust the gain of an external differential amplifier. This provides sensitivity interchangeability of $\pm 1\%$.

The sensing element used in the low pressure Model 1210 includes a double bossed design that produces a sensor output of 100 mV (typical) at 1 PSI.

The 1210 is also available in ranges up to 0-100 PSI. For a compensated sensor using a current set resistor instead of a gain set resistor, please refer to the Model 1220.

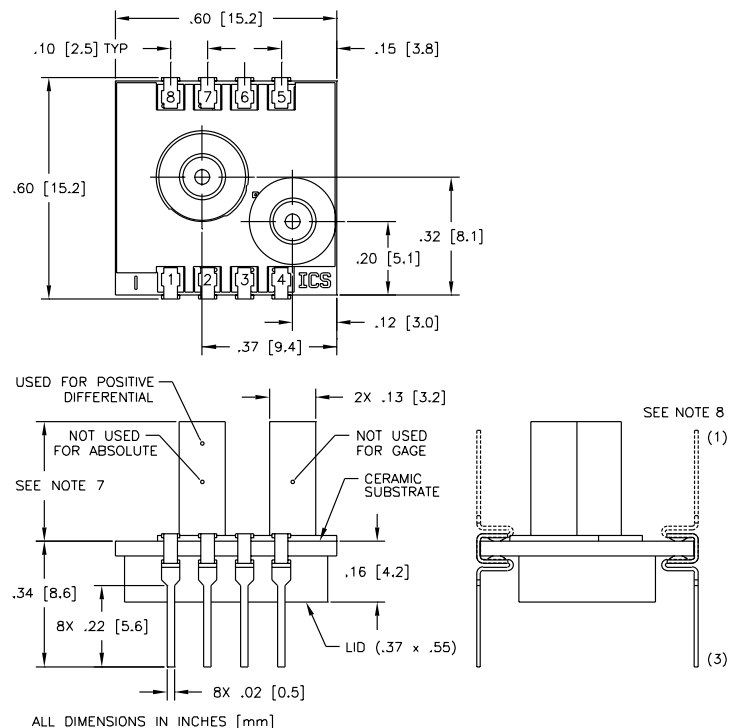
FEATURES

- ▶ Dual-in-line and TO-8 Packages
- ▶ $\pm 0.1\%$ Non-linearity
- ▶ 1.0% Temperature Performance (typical)
- ▶ 1.0% Interchangeable Span (provided by gain set resistor)
- ▶ Temperature Compensated
- ▶ Solid State Reliability
- ▶ Low Power

STANDARD RANGES

Range	psi	in H ₂ O
0 to 1	●	
0 to 10		●

DIMENSIONS



PERFORMANCE SPECIFICATIONS

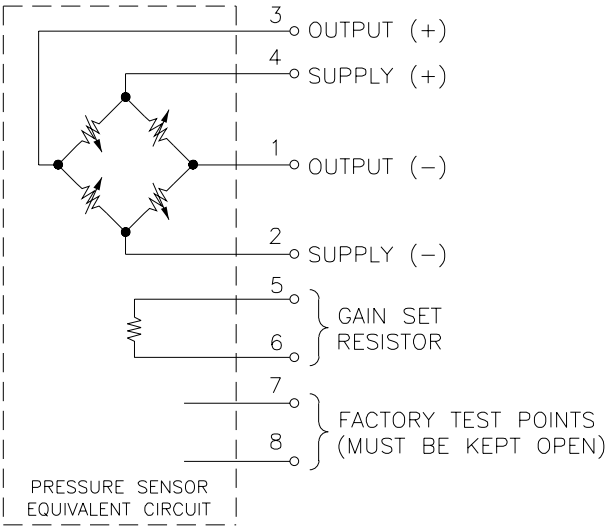
Supply Current: 1.5mA
Ambient Temperature: 25°C (Unless otherwise specified)

PARAMETERS	PRESSURE RANGE						UNITS	NOTES
	0 - 1 psi			0 - 10 in H ₂ O (Note 10)				
	MIN	TYP	MAX	MIN	TYP	MAX		
Full Scale Output Span	75	100	150	25	35		mV	1
Zero Pressure Output			2			2	±mV	2
Pressure Non-linearity		0.1	0.25		0.05	0.1	±% Span	3
Pressure Hysteresis		0.01	0.05		0.01	0.1	±% Span	
Input & Output Resistance	2500	4400	6000	2500	4400	6000	Ω	
Temperature Error - Span		0.5	1.0		0.5	1.0	±% Span	4
Temperature Error - Zero		0.5	1.0		1.0	3.0	±% Span	4
Thermal Hysteresis - Zero		0.1			0.2		±% Span	4
Supply Current		1.5	2.0		1.5	2.0	mA	
Response Time (10% TO 90%)		1.0			1.0		mS	5
Output Noise		1.0			1.0		μV p-p	6
Output Load Resistance	2			2			MΩ	
Insulation Resistance (50 VDC)	50			50			MΩ	
Long Term Stability		0.2			0.5		±% Span/yr	
Pressure Overload			20			20	psi	
Operating Temperature	-40°C to +125°C							
Storage Temperature	-50°C to +150°C							
Media	Non-corrosive Gases Compatible with Wetted Materials							9
Weight	3 Grams							

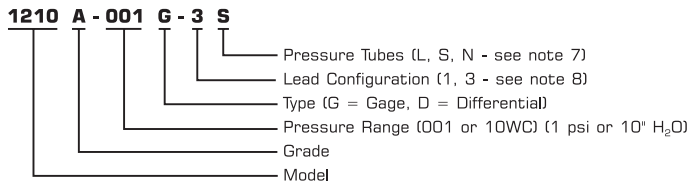
- Notes**

 - Output span of unamplified sensor.
 - For most models, compensation resistors are an integral part of the sensor package; no additional external resistors are required. Check specific product data sheets for details.
 - Best Fit Straight Line.
 - Temperature range: 0-50°C in reference to 25°C.
 - For a zero-to-full scale pressure step change.
- 10 Hz to 1kHz.
 - Tube length: L=470 ± 5 mil, S=300 ± 3 mil, N=no tube.
 - Lead pins can either be in the same or the opposite direction as the pressure tube. See Dimensions drawing for lead configurations.
 - Wetted materials are glass, ceramic, silicon, RTV, nickel, and aluminum.
 - 0-10" water column performance is based on testing at 1 psi full scale pressure.

CONNECTIONS



ORDERING INFORMATION



APPLICATION SCHEMATIC

