

# MODEL 1210 Low Pressure

**PC Board Mountable Pressure Sensor**  
**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

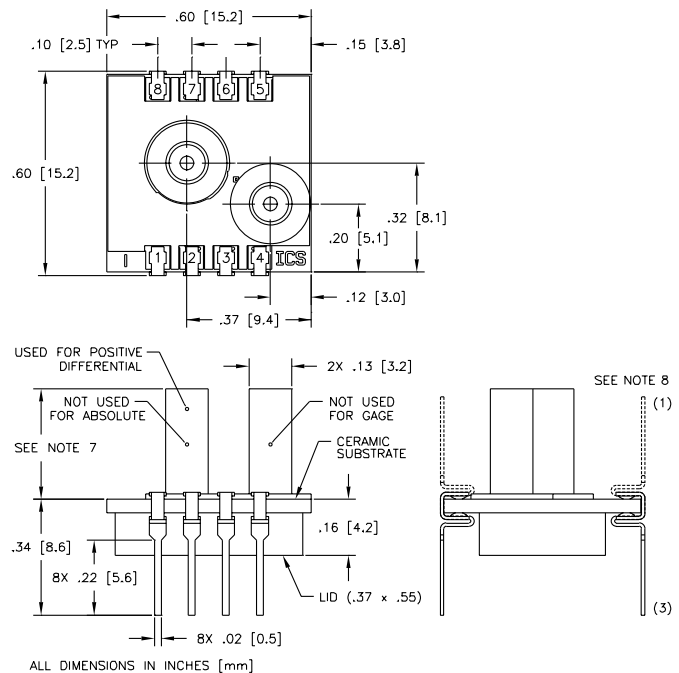
The Model 1210 is a temperature compensated, piezoresistive silicon pressure sensor packaged in a dual-in-line configuration and intended for cost sensitive applications where excellent performance and long-term stability are required.

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 ±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.

## DIMENSIONS



## FEATURES

- Dual-in-line Package
- ±0.3% 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	psid	psig
0 to 1	•	•

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### PERFORMANCE SPECIFICATIONS

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

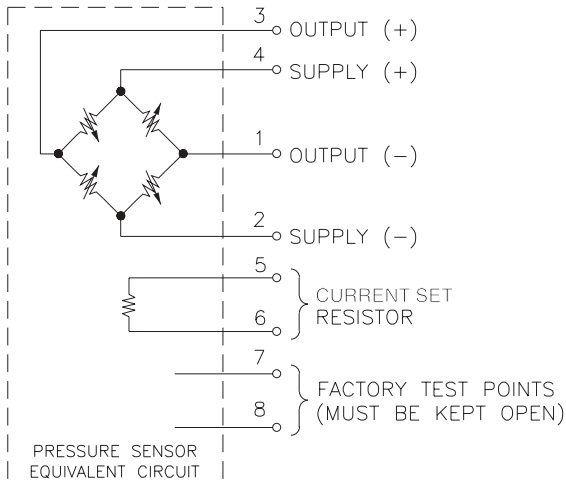
PARAMETERS	PRESSURE RANGE 0 -1 psi			UNITS	NOTES
	MIN	TYP	MAX		
Full Scale Output Span	65	100	150	mV	1
Zero Pressure Output			2	±mV	2
Pressure Non-linearity		0.2	0.3	±%Span	3
Pressure Hysteresis		0.01	0.05	±%Span	
Input & Output Resistance	2500	4400	6000	Ω	
Temperature Error - Span		0.5	1.0	±%Span	4
Temperature Error - Zero		0.5	1.0	±%Span	4
Thermal Hysteresis - Zero		0.1		±%Span	4
Supply Current		1.5	2.0	mA	
Response Time (10% to 90%)		1.0		mS	5
Output Noise		1.0		µV p-p	6
Output Load Resistance	2			MΩ	
Insulation Resistance (50 VDC)	50			MΩ	
Long Term Stability		0.2		±%Span/yr	
Pressure Overload			10	psi	
Operating Temperature	-40°C to +125°C				
Storage Temperature	-50°C to +150°C				
Media	Non-Corrosive Dry Gases Compatible with Wetted Materials				9
Weight	3 Grams				

#### Notes

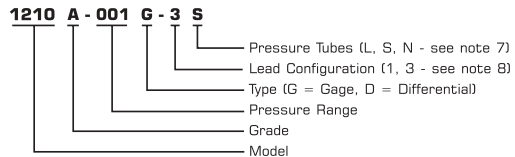
- Output span of unamplified sensor.
- For most models, compensation resistors are an integral part of the sensor package; no additional external resistors are required. Check specific product data sheets for details.
- Best Fit Straight Line.
- Temperature range: 0-50°C in reference to 25°C.

- 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, gold, and aluminum.

### CONNECTIONS



### ORDERING INFORMATION



### APPLICATION SCHEMATIC

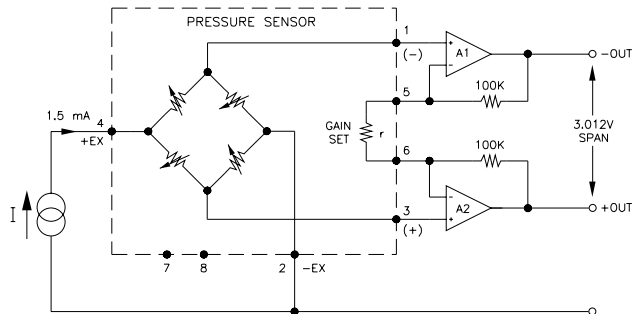


FIGURE 1: GAIN SET CIRCUIT