

Model 1210 Sub PSI Pressure



PC Board Mountable Pressure Sensor

50 mV Output Typical

Differential Pressures

Metal Tube and Ceramic Barbed Ports

Temperature Compensated

DESCRIPTION

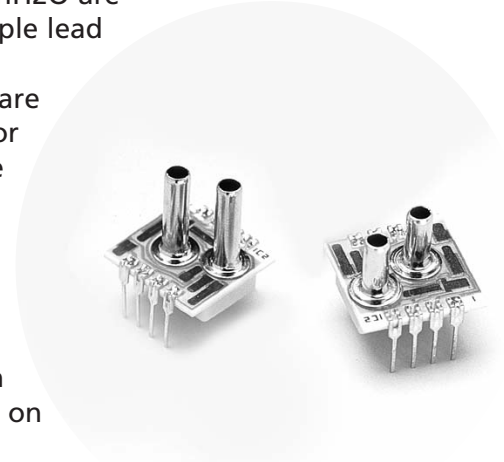
The Model 1210 is a temperature compensated, piezoresistive silicon pressure sensor packaged in a dual-in-line configuration. It is intended for cost sensitive applications where excellent performance and long-term stability are required.

Integral temperature compensation is provided over a range of 0-60°C using laser-trimmed resistors. An additional laser-trimmed resistor is included to normalize pressure sensitivity variations by programming the gain of an external differential amplifier. This provides sensitivity interchangeability

of ±1%. Differential pressure ranges from 0-5 inH2O to 0-10 inH2O are available. Multiple lead and tube

Configurations are also available for customizing the package for specific applications.

Please refer to the medium pressure section for information on products with operating pressures of 0-2 PSI and greater, and refer to the low pressure section for 0-1 PSI products.



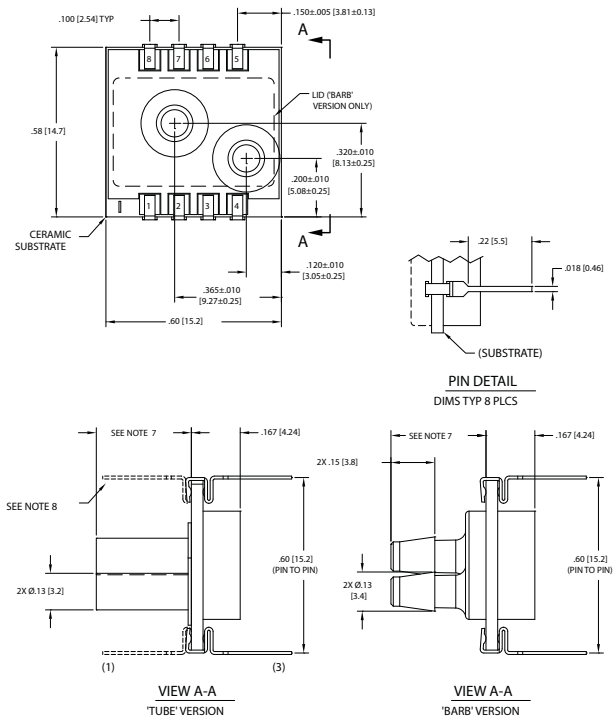
FEATURES

- ◆ Dual-in-line Package
- ◆ Ceramic Barbed Ports Option
- ◆ ±0.5% Non-linearity
- ◆ ±1.0% Temperature Performance
- ◆ 1.0% Interchangeable Span (provided by gain set resistor)
- ◆ Solid State Reliability
- ◆ Low Power

APPLICATIONS

- ◆ Sleep Apnea
- ◆ Respirators/Ventilators
- ◆ Air Duct Flow
- ◆ Medical Instrumentation

dimensions



Standard Ranges

Range **inH2O D**

0 to 5
0 to 10

measurement

SPECIALTIES

MODEL 1210 Sub PSI Pressure

performance specifications

Supply Current: 1.5 mA

Ambient Temperature: 25°C (Unless otherwise specified)

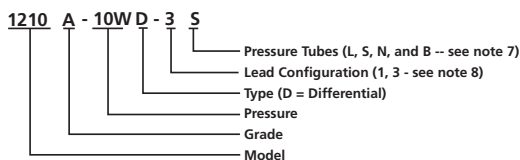
PRESSURE RANGE 0 -5 & 10 inH2O

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Full Scale Output Span	25	50	75	mV	1
Zero Pressure Output			2	±mV	2
Pressure Non-linearity		0.2	0.5	±%Span	3
Pressure Hysteresis		0.01	0.25	±%Span	
Input & Output Resistance	1800	3600	4500	Ω	
Temperature Error - Span		0.5	1.0	±%Span	4
Temperature Error - Zero		0.5	1.25	±%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			200	inH2O	
Operating Temperature	-20°C to +85°C				
Storage Temperature	-40°C to +125°C				
Media	Non-Corrosive Dry Gases Compatible with Wetted Materials				
Weight	3 Grams				

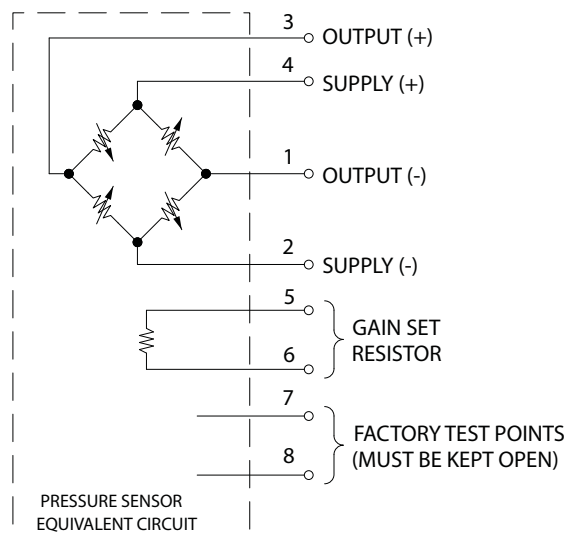
Notes

1. Output span of unamplified sensor.
2. Compensation resistors are an integral part of the sensor package; no additional external resistors are required.
3. Best Fit Straight Line.
4. Temperature range: 0-60°C in reference to 25°C.
5. For a zero-to-full scale pressure step change.
6. 10 Hz to 1kHz.
7. Tube length: L=490 ± 5 mil, S=325 ± 5 mil, N=no tube. Ceramic barb ports available in B=325 ± 5 mil. length.
8. Lead pins can either be in the same or the opposite direction as the pressure tube. See Dimensions drawing for lead configurations.
9. Wetted materials are glass, ceramic, silicon, RTV, nickel, gold, and aluminum.
10. Contact factory for any customization for OEM application.

Ordering Information



Connections



Application Schematic

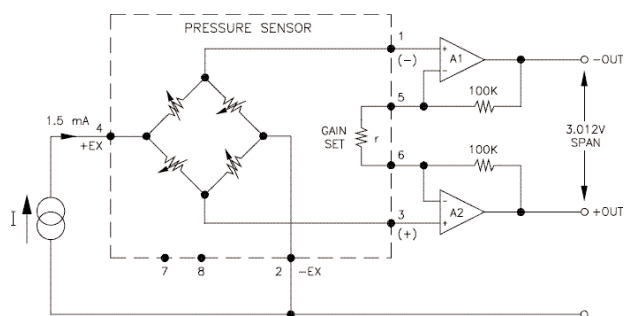


FIGURE 1: GAIN SET CIRCUIT