

7-65-13

OEM Pressure Sensor Differential Gage and Absolute Interchangeable Low Cost

Features

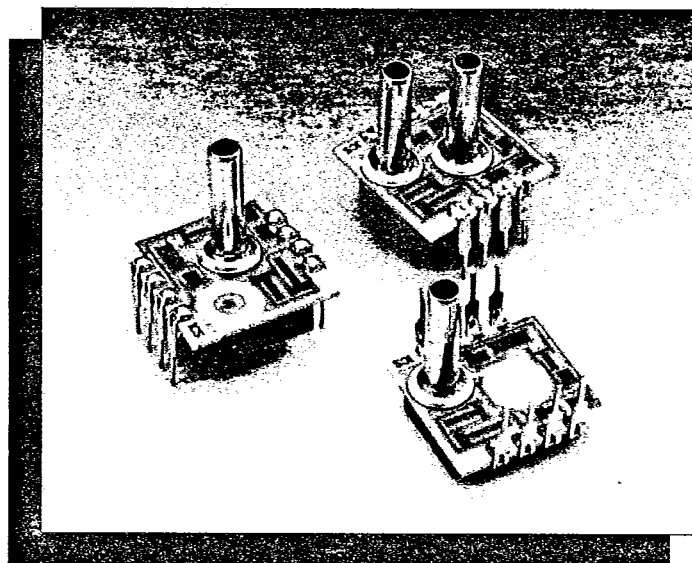
- Solid State Reliability
- $\pm 0.1\%$ Accuracy
- 100 mV Output Span
- PC Board Mountable
- Interchangeable
- Temperature Compensated
- DIP Package
- Second Source Availability
- Performance Graded
- Low Power
- Media Compatible

Typical Applications

- Medical Instruments
- Automotive
- Process Control
- Factory Automation
- Liquid Level
- Air Flow Measurement
- Water Management
- Avionics
- Leak Detection
- Spirometers

Standard Ranges

0 to 2 psig	0 to 2 psid	
0 to 5 psig	0 to 5 psid	0 to 5 psia
0 to 15 psig	0 to 15 psid	0 to 15 psia
0 to 30 psig	0 to 30 psid	0 to 30 psia
0 to 50 psig	0 to 50 psid	
0 to 100 psig	0 to 100 psid	



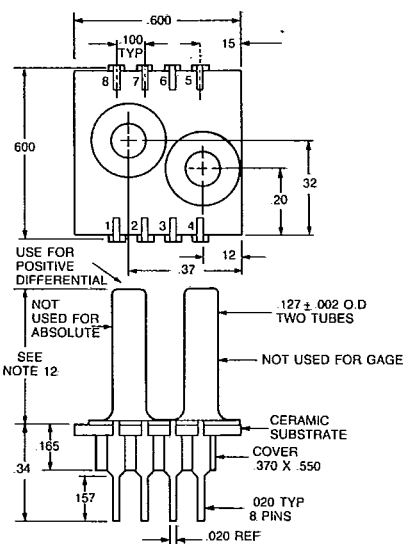
Description

The Model 1210 is a general purpose, solid-state, piezoresistive pressure sensor packaged in a dual-in-line configuration and is intended for use where excellent long-term stability, high volume, and low cost are required.

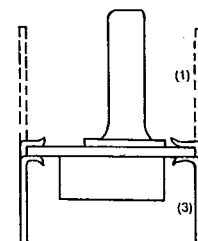
Integral temperature compensation is provided along with calibration over 0 to 50°C with laser trimmed resistors. An additional resistor is included to normalize pressure sensitivity variations by programming the gain of a differential amplifier, thus providing $\pm 1\%$ interchangeability along with high level output.

Two performance grades are available in gage, absolute and differential pressure from 0-2 psi to 0-100 psi. The gage version has a wide range of both liquid and gas media compatibility. Various lead and pressure tube configurations are available for customizing the package for specific applications.

Connections/Dimensions



Lead	Connection
1	OUT -
2	I -
3	OUT +
4	I +
5,6	Gain Set Resistor
7,8	No Connection



(1), (3)-LEAD CONFIGURATION
SEE NOTE 14

ALL DIMENSIONS IN INCHES

Model 1210

I C SENSORS INC 95 DE 4677375 0000127 0

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Performance Specifications

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

PARAMETER	GRADE							
	A			B				
	MIN	TYP	MAX	MIN	TYP	MAX	UNITS	NOTES
Full Scale Output Span	75	100	150	50	100	200	mV	1,2,3
Zero Pressure Output			2			2	± mV	3
Linearity		0.05	0.1			0.25	± % Span	4
Pressure Hysteresis		0.01	0.1			0.1	± % Span	
Input & Output Resistance	2500	4400	6000		4400	6000	Ω	
Temperature Coefficient - Span		0.3	0.5			1.0	± % Span	3,5
Temperature Coefficient - Zero		0.1	0.5			1.0	± % Span	3,5
Temperature Coefficient - Resistance		0.22			0.22		%/°C	5
Thermal Hysteresis - Zero		0.1			0.2		± % Span	5
Supply Current		1.5	2.0		1.5	2.0	mA	6
Response Time (10% to 90%)		1.0			1.0		mS	7
Output Noise		1.0			2.0		μV p-p	8
Output Load Resistance	2			2			MΩ	9
Insulation Resistance (50 VDC)	50			50			MΩ	
Long Term Stability		0.2			0.5		± %Span/yr	
Pressure Overload			3X			3X	Rated	10
Operating Temperature	- 40 °C to + 125 °C							
Storage Temperature	- 55 °C to + 150 °C							
Media	Liquids and Gases Compatible With Wetted Materials							11
Weight	3 Grams							

Notes

- For 2 psi, output span is 30-60 mV for Grade A, 30-100 mV for Grade B.
- Output span of unamplified sensor.
- Compensation resistors are in an integral part of the sensor package; no additional external resistors are required. Pins 7 and 8 must be kept open. Model 1210 is interchangeable only when used with a gain stage as shown in Figure 1; see Application Note TN-003.
- Best Fit Straight Line.
- Temperature range: 0-50°C in reference to 25°C.
- Guarantees input/output ratiometricity.
- For a zero-to-full scale pressure step change.
- 10 Hz to 1kHz.
- Prevents increase of TC-Span due to output loading.
- 3X or 200 psi maximum, whichever is less.
- Wetted materials are glass, ceramic, silicon, RTV, Nickel.
- Soldering of lead pins: 250°C for 5 seconds maximum.
- 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 drawing on Front Page for lead configuration.

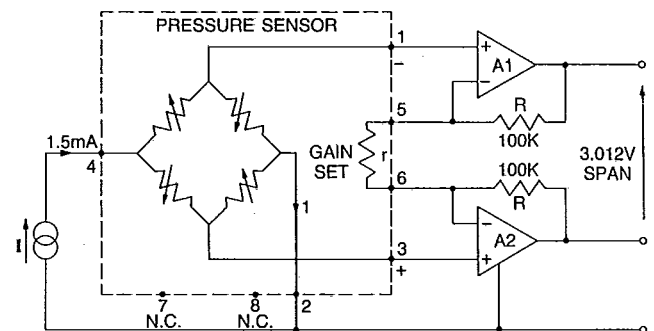
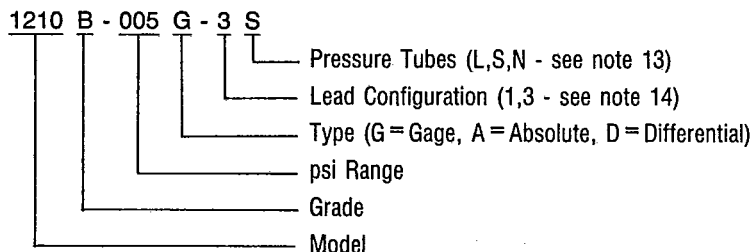


Figure 1.

Ordering Information**Represented By**

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