

7-65-13

OEM Pressure Sensor Differential Gage and Absolute Interchangeable Low Cost

Features

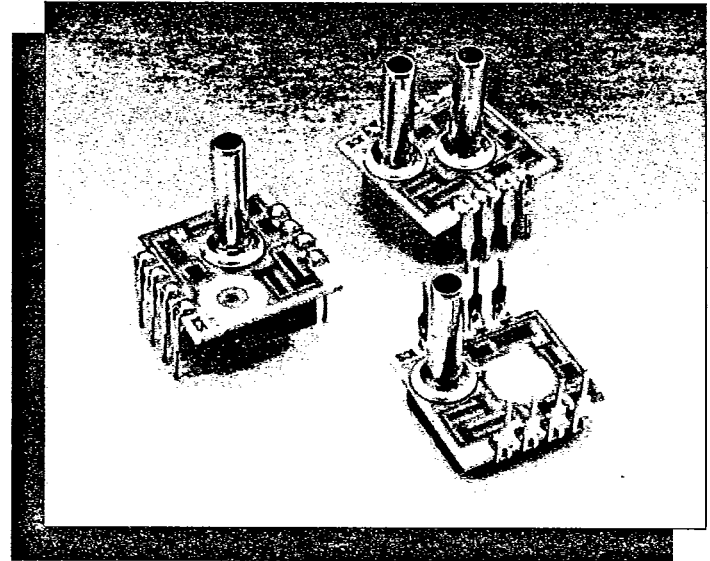
- Solid State Reliability
- $\pm 0.1\%$ Accuracy
- 100 mV Output Span
- PC Board Mountable
- Interchangeable
- Temperature Compensated
- DIP Package
- Second Source Availability
- Performance Graded
- Low Power
- Media Compatible

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	



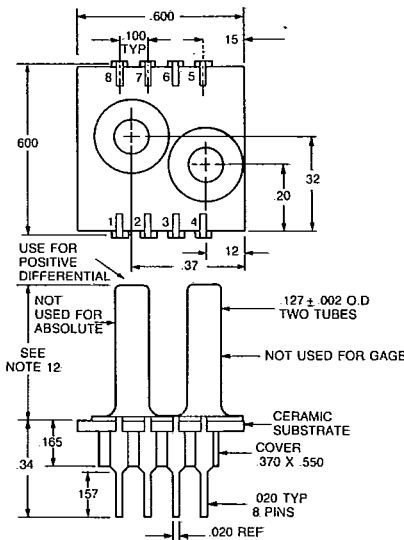
Description

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.

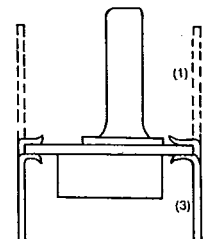
Integral temperature compensation is provided along with calibration over 0 to 50°C with laser trimmed resistors. An additional resistor is included to normalize pressure sensitivity variations by programming the gain of a differential amplifier, thus providing $\pm 1\%$ interchangeability along with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

T-65-13

Performance Specifications

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

PARAMETER	GRADE						UNITS	NOTES
	A			B				
	MIN	TYP	MAX	MIN	TYP	MAX		
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.

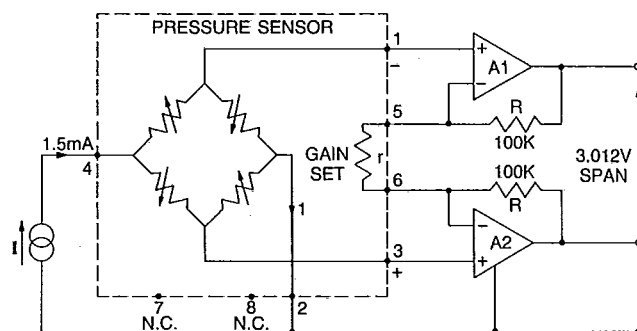
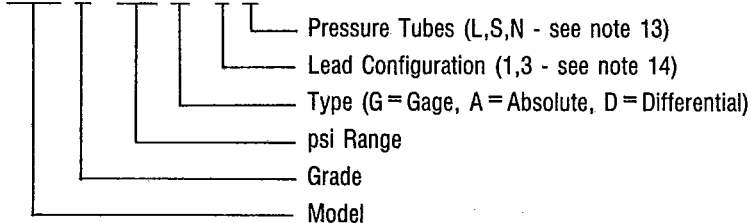


Figure 1.

Ordering Information

1210 B - 005 G - 3 S

**Represented By**

IC Sensors products are warranted against defects in material and workmanship for 12 months from date of shipment. Products not subjected to misuse will be repaired or replaced. THE FOREGOING IS IN LIEU OF ALL OTHER EXPRESSED OR IMPLIED WARRANTIES. IC Sensors reserves the right to make changes to any product herein and assumes no liability arising out of the application or use of any product or circuit described or referenced herein.



1701 McCarthy Blvd. Milpitas, California 95035 Fax (408) 434-6687 Telex 350066 Phone (408) 432-1800

M1210RO-8706 Printed in USA