

- PC Board Mountable Pressure Sensor
- 0-100 mV Output
- Current Excitation
- Gage and Differential
- Temperature Compensated

# RoHS

### DESCRIPTION

The 1210 1psi 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 0-50  $^{\circ}$ 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%.

Please refer to the 1210 standard datasheet for information on products with operating pressures greater than 1psi. For voltage excitation, please refer to the Model 1220.

### **FEATURES**

- Dual-in-Line Package
- 1.0% Interchangeable Span (provided by gain set resistor)
- ±0.3% Non Linearity
- Solid State Reliability

### APPLICATIONS

- Medical Instruments
- Airspeed Measurement
- Process Control
- Factory Automation
- Leak Detection

### **STANDARD RANGES**

Range	psid	psig	Port Styles
0 to 1	•	•	S, L, N, B*

\*Barb port styles are only available in lead configuration type 3. See Ordering Information.



## PERFORMANCE SPECIFICATIONS

#### Supply Current: 1.5 mA

Ambient Temperature: 25 °C (unless otherwise specified)

	PRESSURE F	RANGE 0 – 1 psi			
PARAMETERS	MIN	ТҮР	MAX	UNITS	NOTES
Full Scale Output Span	50	100	150	mV	1
Zero Pressure Output (Offset)	-2.0		2.0	mV	
Pressure Non Linearity	-0.3		0.3	%Span	2
Pressure Hysteresis	-0.1	±0.01	0.1	%Span	
Input/Output Resistance	1800		6500	Ω	
Temperature Error – Span	-1.0	±0.5	1.0	%Span	3
Temperature Error – Zero	-1.0	±0.5	1.0	%Span	3
Thermal Hysteresis – Zero		±0.1		%Span	3
Long Term Stability (Offset & Span)		±0.2		%Span/year	
Supply Current	0.5	1.5	2.0	mA	4
Response Time (10% to 90%)		1.0		mSec	5
Output Noise		1.0		μV p-p	6
Output Load Resistance	2			MΩ	7
Insulation Resistance (50Vdc)	50			MΩ	
Pressure Overload			10	psi	
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+150	C	
Media	Non-Corrosive I	Dry Gases Compa	atible with wetted r	naterials	8
Weight	3 grams				

#### Notes

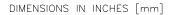
- 1. Output span of unamplified sensor.
- 2. Best fit straight line.
- 3. Temperature range: 0 ℃ to 50 ℃ with reference to 25 ℃.
- 4. Guarantees input/output ratiometricity for span.
- 5. For a zero-to-full scale pressure step change.
- 6. 10Hz to 1kHz.
- 7. Prevents increase of TC-Span due to output loading.
- 8. Wetted materials: glass, ceramic, silicon, fluorosilicone, nickel, gold and aluminum.

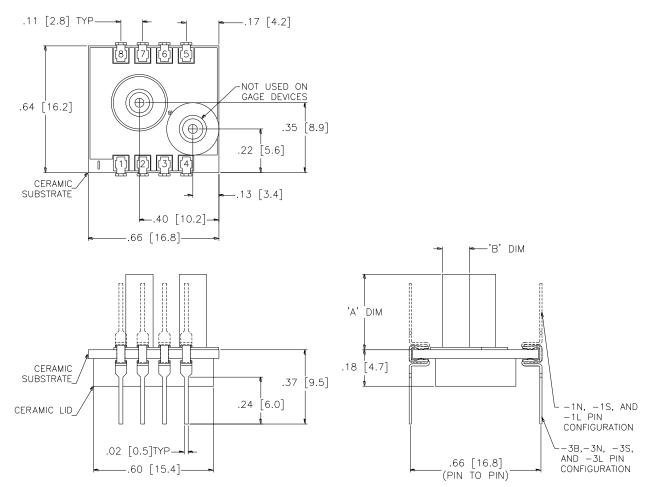
#### **Additional Notes**

Soldering leads pins: 250 °C for 5 seconds, maximum.



## **DIMENSIONS (TUBE VERSION)**





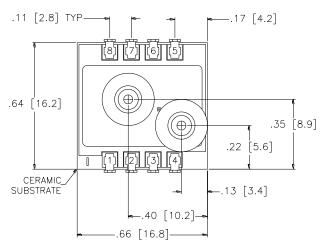
VENT TUBE DIMENSIONS				
MODEL	'A' DIM	'B' DIM		
1N/3N	N/A	N/A		
1L/3L	.490±.005 [12.45±0.13]	ø.127±.005 [ø3.23±0.13]		
1S/3S	.325±.005 [8.26±0.13]	ø.125±.005 [ø3.18±0.13]		

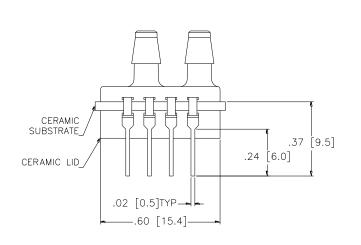
PAD NO	FUNCTION	
1	-OUT	
2	-EX	
3	+OUT	
4	+EX	
5,6	GAIN	
7,8	TEST	

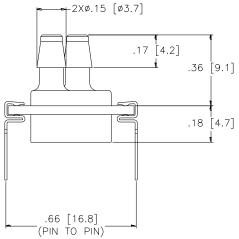


## **DIMENSIONS (BARB VERSION)**

### DIMENSIONS IN INCHES [mm]



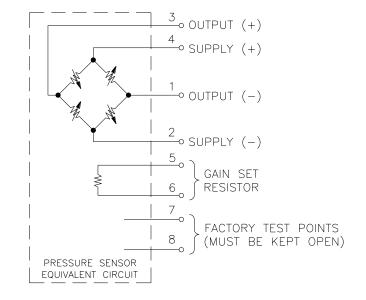




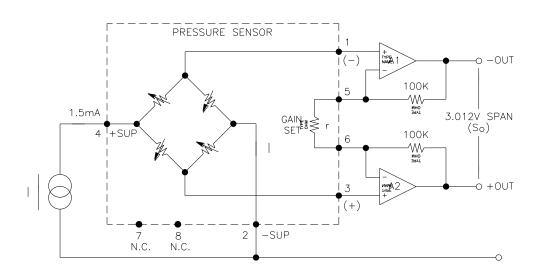
PAD NO	FUNCTION	
1	-OUT	
2	-EX	
3	+OUT	
4	+EX	
5,6	GAIN	
7,8	TEST	



## CONNECTIONS

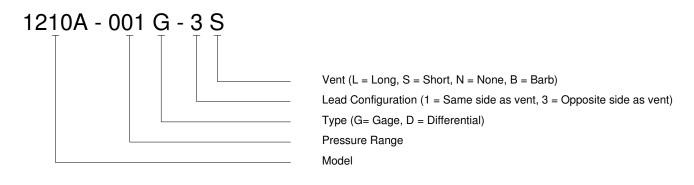


## **APPLICATION SCHEMATIC**





## **ORDERING INFORMATION**



\*Barb vent port style only available in lead configuration type 3.

### **NORTH AMERICA**

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#### ASIA

Measurement Specialties (China), Ltd. No. 26 Langshan Road Shenzhen High-Tech Park (North) Nanshan District, Shenzhen 518057 China Tel: +86 755 3330 5088 Fax: +86 755 3330 5099 Sales: pfg.cs.asia@meas-spec.com

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