



## 1210

## 1psi

## **SPECIFICATIONS**

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

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°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  $\pm 1\%$ .

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*

<sup>\*</sup>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 RANGE 0 – 1 psi					
PARAMETERS	MIN	TYP	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			ΜΩ	7
Insulation Resistance (50Vdc)	50			ΜΩ	
Pressure Overload			10	psi	
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+150	°C	
Media	Non-Corrosive	Dry Gases Comp	atible with wetted r	materials	8
Weight	3 grams				

### Notes

- 1. Output span of unamplified sensor.
- 2. Best fit straight line.
- 3. Temperature range: 0°C to 50°C with reference to 25°C.
- 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.

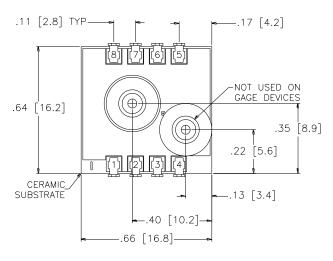
Wetted materials: glass, ceramic, silicon, fluorosilicone, nickel, gold and aluminum

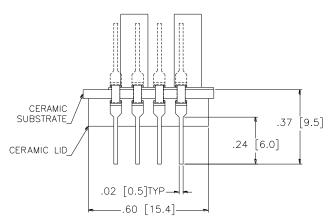
### **Additional Notes**

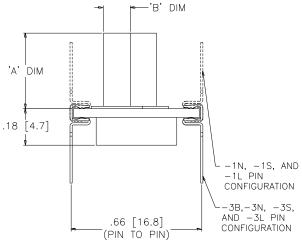
Soldering leads pins: 250°C for 5 seconds, maximum.

# **DIMENSIONS (TUBE VERSION)**

## DIMENSIONS IN INCHES [mm]





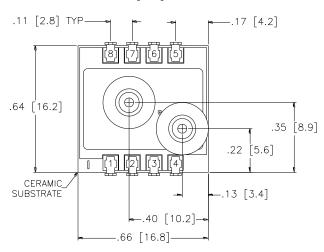


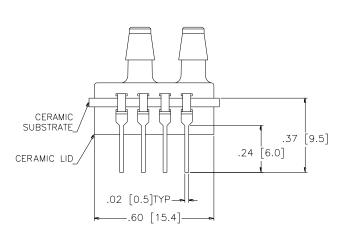
VENT TUBE DIMENSIONS				
MODEL	'A' DIM	'B' DIM		
1N/3N	N/A	N/A		
1L/3L	.490±.005 [12.45±0.13]	ø.127±.005 [ø3.23±0.13]		
1S/3S	.325±.005 [8.26±0.13]	ø.125±.005 [ø3.18±0.13]		

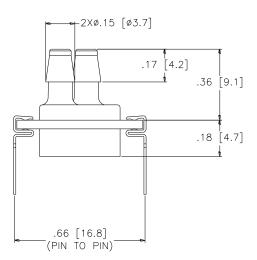
PAD NO	FUNCTION	
1	-OUT	
2	-EX	
3	+OUT	
4	+EX	
5,6	GAIN	
7,8	TEST	

# **DIMENSIONS (BARB VERSION)**

DIMENSIONS IN INCHES [mm]

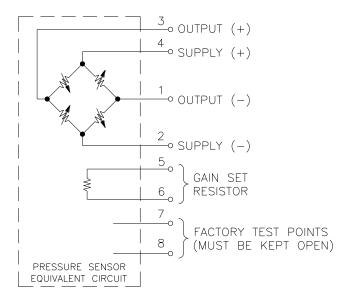




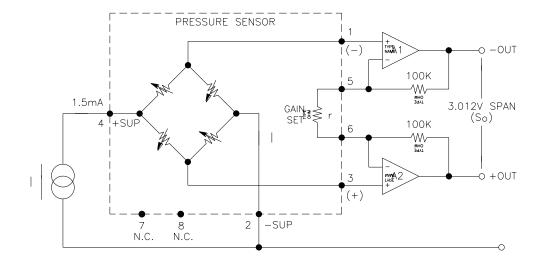


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1	-OUT	
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5,6	GAIN	
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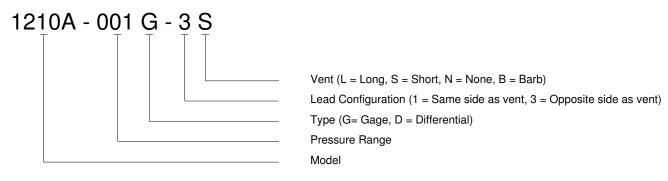
## **CONNECTIONS**



# **APPLICATION SCHEMATIC**



## **ORDERING INFORMATION**



<sup>\*</sup>Barb vent port style only available in lead configuration type 3.

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