

1220

Standard

SPECIFICATIONS

- ◆ **PC Board Mountable Pressure Sensor**
- ◆ **0-50 mV Output**
- ◆ **Voltage Excitation**
- ◆ **Gage, Absolute, and Differential**
- ◆ **Temperature Compensated**

FEATURES

- ◆ Dual-in-Line Package
- ◆ 0°C to 50°C Compensated Temperature Range
- ◆ ±0.1% Non-Linearity
- ◆ 1.0% Interchangeable Span (provided by current set resistor)
- ◆ Solid State Reliability

APPLICATIONS

- ◆ Medical Instruments
- ◆ Airspeed and Altitude Measurements
- ◆ Process Control
- ◆ Factory Automation
- ◆ Vacuum Measurement
- ◆ Handheld Calibrators

The 1220 is a temperature compensated, piezoresistive silicon pressure sensor packaged in a dual-in-line configuration and intended for cost sensitive applications where excellent performance and long-term stability are required.

When using the 1220 with a fixed voltage reference and current set resistor as shown in the application schematic, a span of 50mV and 1% interchangeability can be achieved. Integral temperature compensation is provided over a range of 0-50°C using laser-trimmed resistors. Gage, absolute, and differential pressure ranges from 0-2 psi to 0-100 psi are available. Multiple lead and tube configurations are available for specific applications.

Please refer to the 1220 1psi datasheet for low pressure applications. For current excitation, please refer to the Model 1210.

STANDARD RANGES

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

PERFORMANCE SPECIFICATIONS

Supply Voltage: See application schematic

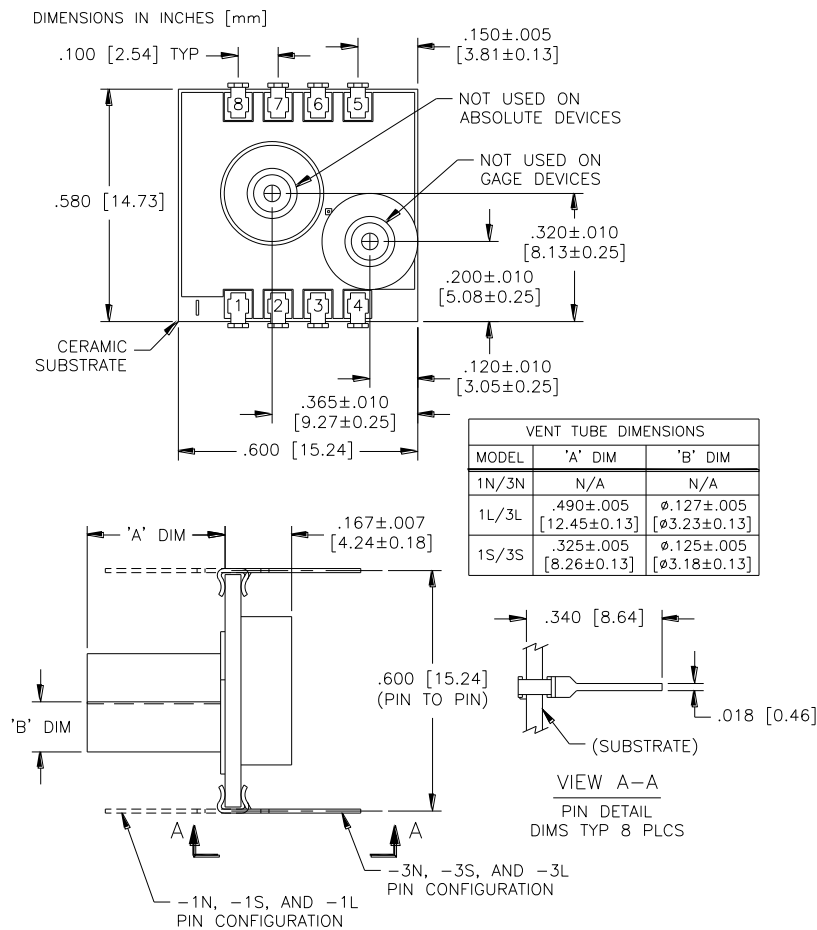
Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span	49.5	50	50.5	mV	1
Zero Pressure Output	-2		2	mV	
Pressure Non Linearity	-0.1	±0.05	0.1	%Span	2
Pressure Hysteresis	-0.1	±0.01	0.1	%Span	
Input Resistance	2500	4400	6000	Ω	
Output Resistance		4200		Ω	
Temperature Error – Span	-0.5	±0.3	0.5	%Span	3
Temperature Error – Zero	-0.5	±0.1	0.5	%Span	3,8
Temperature Coefficient-Resistance		.15		%/°C	3
Thermal Hysteresis – Zero		±0.05		%Span	3
Short Term Stability (Offset & Span)		±0.05		% Span	4
Long Term Stability (Offset & Span)		±0.10		% Span	5
Supply Voltage Reference		1.235		V	
Response Time (10% to 90%)		1.0		ms	6
Output Noise (10Hz to 1kHz)		1.0		μV p-p	
Pressure Overload			3X	Rated	7
Compensated Temperature	0		50	°C	
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+150	°C	
Weight		3		grams	
Solder Temperature			250°C Max 5 Sec.		
Weight		Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Ceramic, Nickel, Gold, and Aluminum			

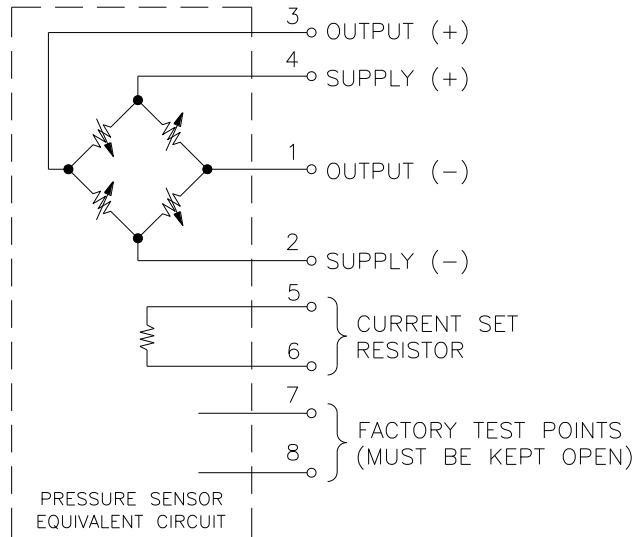
Notes

1. Refer to application schematic.
2. Best fit straight line.
3. Maximum temperature error between 0°C and 50°C with respect to 25°C. For 2psi devices, Temperature Error -- Zero is ±1.25%.
4. Short term stability over 7 days with constant current and temperature.
5. Long term stability over a one year period with constant voltage and temperature.
6. For a zero-to-full scale pressure step change.
7. 2X maximum for 100 psi device.

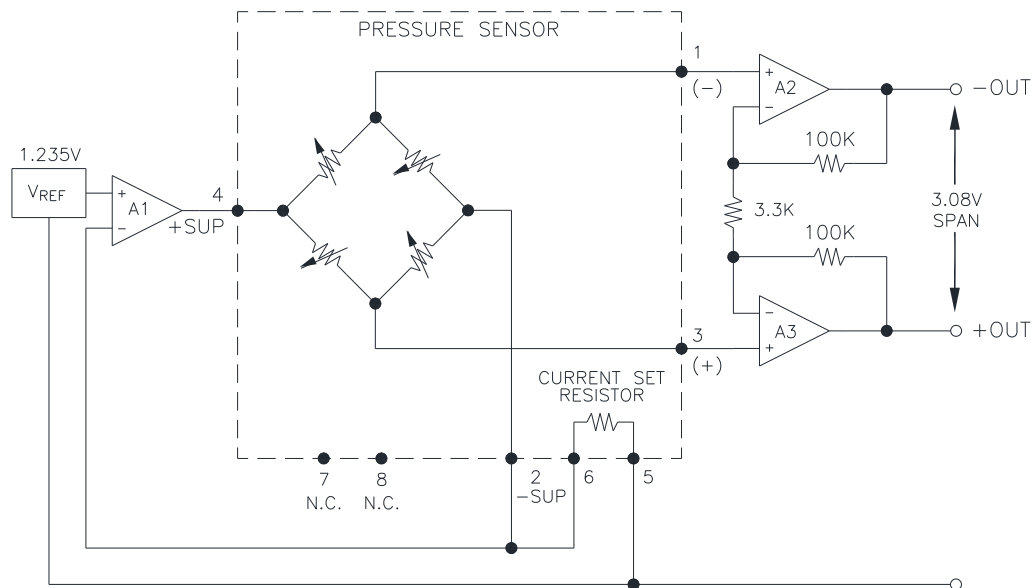
DIMENSIONS



CONNECTIONS



APPLICATION SCHEMATIC



ORDERING INFORMATION

1220A – 030 A – 3 B

Pressure Range [psi]	
	002*
	005*
	015
	030
	050
	100

*Gage and Differential Only

Pressure Type	
G	Gage
A	Absolute
D	Differential

Electrical	
L	Long Tube
S	Short Tube
N	No Tube
B	Barb Tube

Lead Configuration	
1	Same Side as Vent Tube
3	Opposite Side as Vent Tube

NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
Tel: 800-522-6752
customercare.frmt@te.com

EUROPE

Measurement Specialties (Europe), Ltd.,
a TE Connectivity Company
Tel: 800-440-5100
customercare.bevx@te.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Tel: 0400-820-6015
mailto:customercare.shzn@te.com

TE.com/sensorsolutions

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