

MODEL 1220 Low Pressure



PC Board Mountable Pressure Sensor

0-1 PSI

0-50 mV Output

Low Cost

Temperature Compensated

DESCRIPTION

The Model 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. The 1220 is a fixed voltage referenced, current set version, designed for 1% interchangeability to provide a 50 mV span at 1 PSI.

Integral temperature compensation is provided over a range of 0-50°C using laser-trimmed resistors. An additional laser-trimmed resistor is included to

adjust the gain of an external differential amplifier. This provides sensitivity interchangeability of $\pm 1\%$.

The sensing element used in the low pressure Model 1220 includes a double bossed design that produces a sensor output of 100 mV (typical) at 1 PSI.

The 1220 is also available in ranges up to 0-100 PSI. For a compensated sensor using a gain set resistor as opposed to a current set resistor, please refer to the Model 1210.



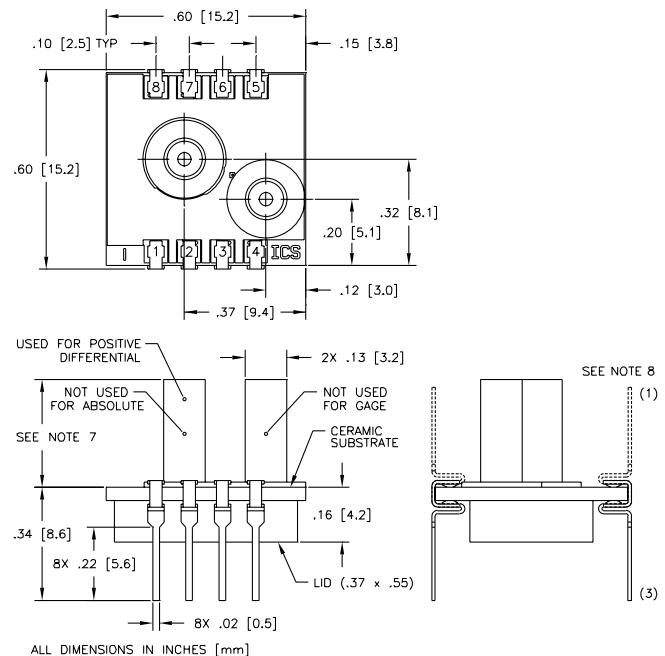
FEATURES

- ◆ Dual-in-line Package
- ◆ $\pm 0.3\%$ Non-linearity
- ◆ 1.0% Temperature Performance (typical)
- ◆ 1.0% Interchangeable Span (provided by current set resistor)
- ◆ Temperature Compensated
- ◆ Solid State Reliability
- ◆ Low Power

APPLICATIONS

- ◆ Medical Instruments
- ◆ Air Flow Measurement
- ◆ HVAC
- ◆ Process Control
- ◆ Factory Automation
- ◆ Leak Detection

dimensions



Standard Ranges

Range	psi
0 to 1	•



MODEL 1220 Low Pressure

performance specifications

Supply Current: See application schematic

Ambient Temperature: 25°C (Unless otherwise specified)

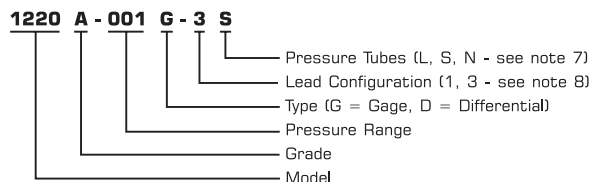
PRESSURE RANGE 0 -1 psi

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Full Scale Output Span	49.5	50	50.5	mV	1
Zero Pressure Output			2	±mV	2
Pressure Non-linearity		0.2	0.3	±%Span	3
Pressure Hysteresis		0.01	0.05	±%Span	
Input & Output Resistance	2500	4400	6000	□	
Temperature Error - Span		0.5	1.0	±%Span	4
Temperature Error - Zero		0.5	1.0	±%Span	4
Thermal Hysteresis - Zero		0.1		±%Span	4
Response Time (10% to 90%)		1.0		mS	5
Output Noise		1.0		µV p-p	6
Output Load Resistance	2			M□	
Insulation Resistance (50 VDC)	50			M□	
Long Term Stability		0.2		±%Span/yr	
Pressure Overload			10	psi	
Operating Temperature	-40°C to +125°C				
Storage Temperature	-50°C to +150°C				
Media	Non-Corrosive Gases Compatible with Wetted Materials				9
Weight	3 Grams				

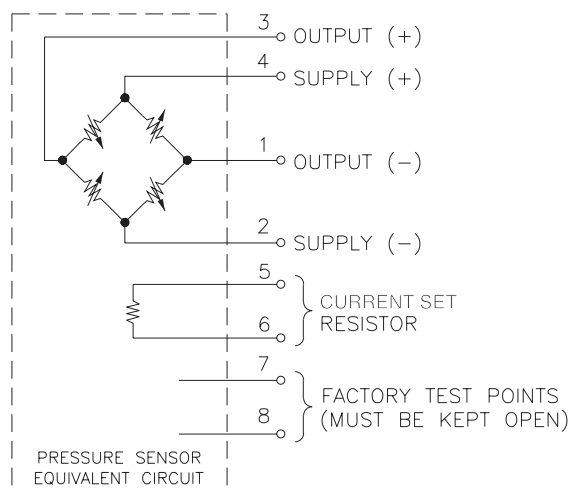
Notes

- Output span of unamplified sensor.
- Compensation resistors are in an integral part of the sensor package; no additional external resistors are required.
- Best Fit Straight Line.
- Temperature range: 0-50°C in reference to 25°C.
- For a zero-to-full scale pressure step change.
- 10 Hz to 1kHz.
- 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 Dimensions drawing for lead configurations.
- Wetted materials are glass, ceramic, silicon, RTV, nickel, gold, and aluminum.

ordering information



connections



application schematic

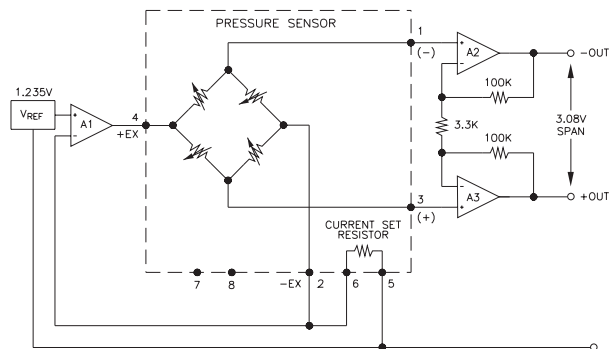


FIGURE 1: CURRENT SET CIRCUIT

Distribuidor

Brasil e América do Sul

CONTATO

Endereço

Rua Sete de Setembro, 2671 - Centro
13560-181 - São Carlos - SP - Brasil

Telefone

+55 (16) 3371-0112

Fax

+55 (16) 3372-7800

Internet

www.metrolog.net
metrolog@metrolog.net



Metrolog Controles de Medição