

OEM Pressure Sensor Differential Gage and Absolute Interchangeable Low Cost

Features

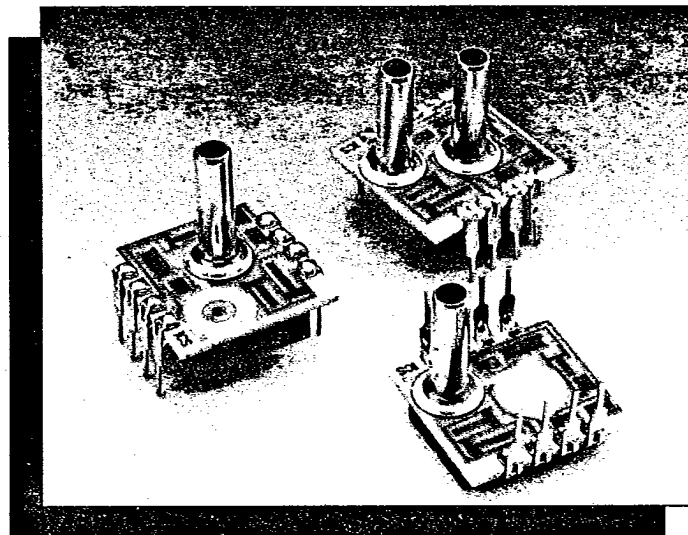
- Solid State Reliability
- $\pm 0.1\%$ Accuracy
- 100 mV Output Span
- PC Board Mountable
- Interchangeable
- Temperature Compensated
- DIP Package
- Performance Graded
- Low Power
- Media Compatible

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 psia
0 to 5 psig	0 to 5 psid	0 to 15 psia
0 to 15 psig	0 to 15 psid	0 to 30 psia
0 to 30 psig	0 to 30 psid	
0 to 50 psig	0 to 50 psid	
0 to 100 psig	0 to 100 psid	



Description

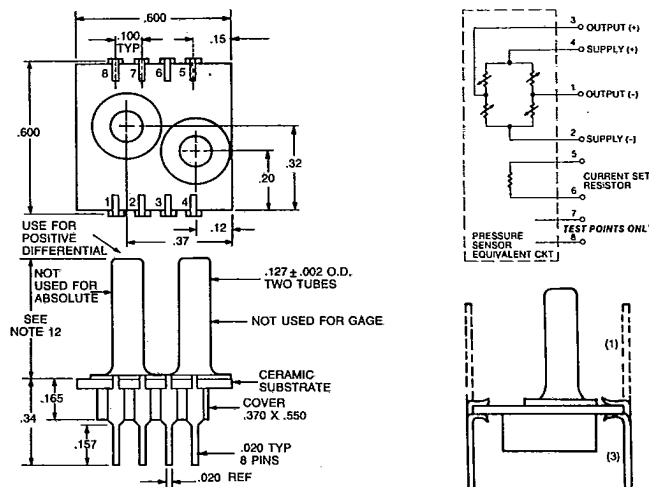
The Model 1220 is a general purpose, solid-state, piezoresistive pressure sensor packaged in a dual-in-line configuration and is intended for use where excellent long-term stability, high volume, and low cost are required.

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 setting the current drive to the sensor bridge with a fixed voltage supply, thus providing $\pm 1\%$ interchangeability prior to amplification.

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.

Custom designs can be done for supply voltages ranging from 0.37V to 7.0V. Various lead and pressure tube configurations are available for customizing the package for specific applications.

Connections/Dimensions



ALL DIMENSIONS IN INCHES

 (1), (3) LEAD CONFIGURATION
SEE NOTE 14

Model 1220

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	50	100	150	50	100	150	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		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 20-60 mV for Grade A and Grade B.
- Output span of unamplified sensor.
- Compensation resistors are an integral part of the sensor package; no additional external resistors are required. Pins 7 and 8 must be kept open. Model 1220 is interchangeable. An example circuit is shown in Figure 1.
- 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 1 kHz.
- Prevents increase of TC-Span due to output loading.
- 3X or 200 psi maximum, whichever is less. 20 psi for 2 psi and 5 psi versions.
- 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 configurations.

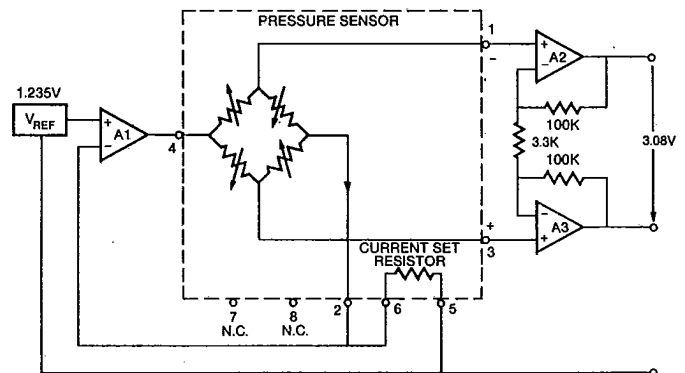
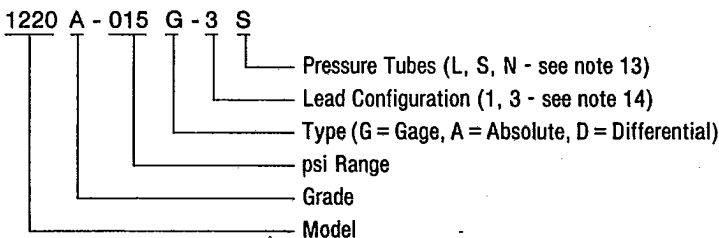


Figure 1. Constant Voltage Supply

Ordering Information



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