

13



43

13 AND 43

1psi

SPECIFICATIONS

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

The 13 and 43 are temperature compensated, piezoresistive silicon pressure sensors packaged in a TO-8 configuration. It provides excellent performance and long-term stability.

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 ±1%.

Please refer to the 13 and 43 standard datasheets for information on products with operating pressures greater than 1 psi.

FEATURES

- TO-8 Package
- 0ºC to 50ºC Compensated
- Temperature Range
- ±0.3% Non-Linearity
- 1.0% Interchangeable Span
- (provided by gain set resistor)
- Solid State Reliability

APPLICATIONS

- Medical Instruments
- Process Control
- Factory Automation
- Leak Detection
- Level Detection

STANDARD RANGES

Range	psig
0 to 1	•

PERFORMANCE SPECIFICATIONS

Supply Current: 1.5mA
Ambient Temperature: 25°C (unless otherwise specified)

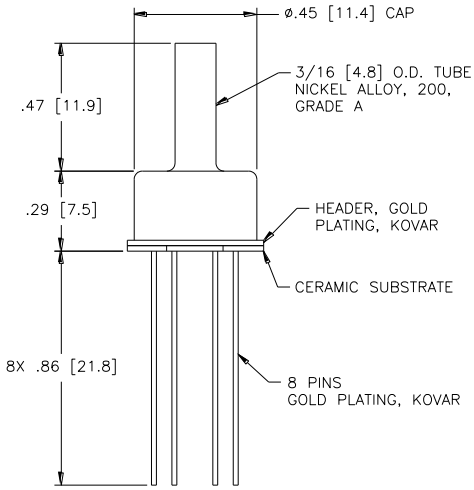
	PRESSURE RANGE 0 – 1 psi				
PARAMETERS	**MIN**	**TYP**	**MAX**	**UNITS**	**NOTES**
Span	65	100	150	mV	1
Zero Pressure Output	-2		2	mV	
Pressure Non Linearity	-0.3	±0.2	0.3	%Span	2
Pressure Hysteresis	-0.05	±0.01	0.05	%Span	
Input & Output Resistance	2500	4400	6000	Ω	
Temperature Error – Span	-1.0	±0.5	1.0	%Span	3
Temperature Error – Zero	-1.0	±0.5	1.0	%Span	3
Thermal Hysteresis – Zero		±0.1		%Span	3
Supply Current		1.5	2.0	mA	
Response Time (10% to 90%)		1.0		mS	4
Output Noise (10Hz to 1kHz)		1.0		µV p-p	
Insulation Resistance (50 Vdc)	50			MΩ	5
Long Term Stability (Offset & Span)		±0.2		%Span	6
Pressure Overload			10	psi	
Compensated Temperature	0		50	°C	
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+150	°C	
Weight			3	grams	
Solder Temperature	250ºC Max 5 Sec.				
Media	Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Gold, Nickel, and Aluminum				

Notes

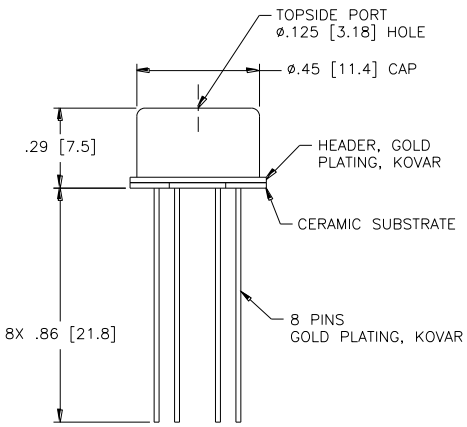
1. Ratiometric to supply current.
2. Best fit straight line.
3. Maximum temperature error between 0°C and 50°C with respect to 25°C.
4. For a zero-to-full scale pressure step change.
5. Minimum distance between case and pins.
6. Long term stability over a one year period with constant current and temperature.

DIMENSIONS

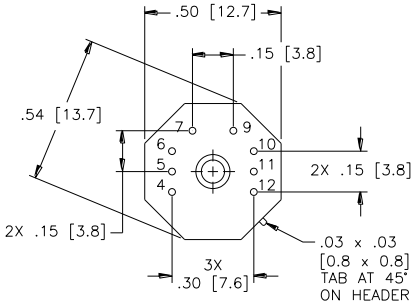
DIMENSIONS ARE IN INCHES [mm]



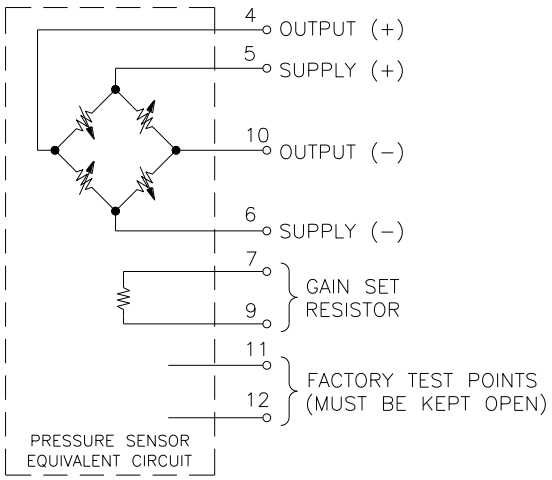
MODEL 13



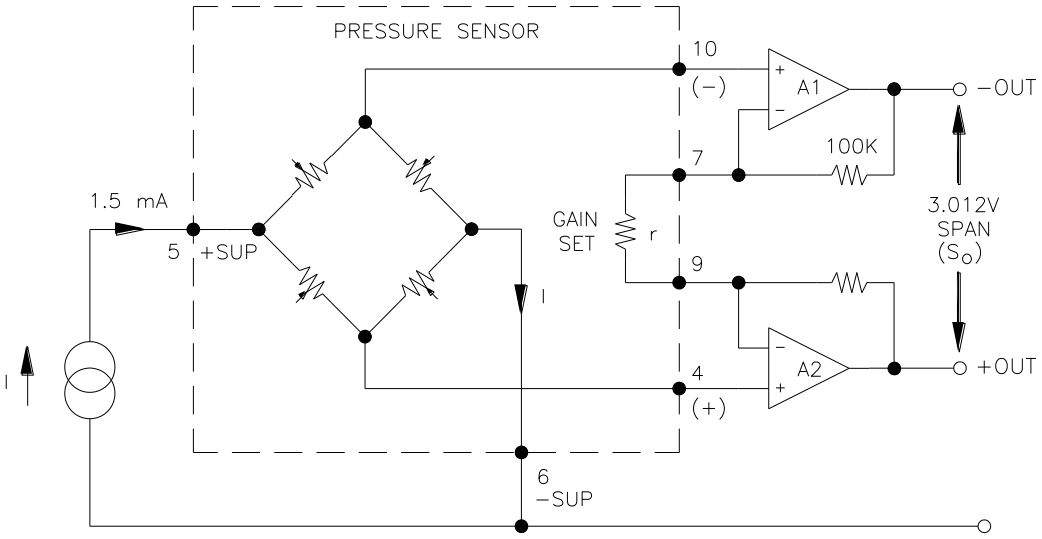
MODEL 43



CONNECTIONS



APPLICATION SCHEMATIC



APPLICATION SCHEMATIC

ORDERING INFORMATION

13A – 001 G

Pressure Range [psi]
001

Pressure Type	
G	Gage

43A – 001 G

Pressure Range [psi]
001

Pressure Type	
G	Gage

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