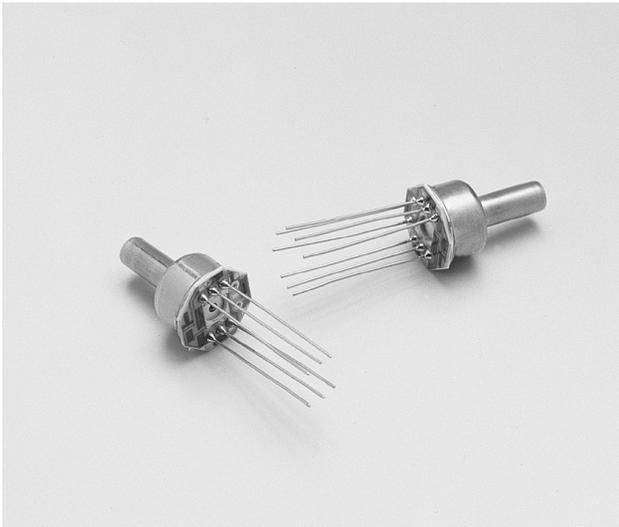


PC Board Mountable Pressure Sensor
0-100 mV Output
Gage and Absolute Pressure
Wide Temperature Range

- ▶ **Medical Instrumentation**
- ▶ **Calibration**
- ▶ **Process Control**
- ▶ **Factory Automation**
- ▶ **Air Flow Management**
- ▶ **Leak Detection**



DESCRIPTION

The Models 16 and 17 are high performance, temperature compensated, piezoresistive silicon pressure sensors packaged in TO-8 configurations. They provide excellent performance and long-term stability over wide temperatures.

Gage and absolute pressure ranges from 0-15 PSI to 0-250 PSI are available. Integral temperature compensation is provided over a range of -20°C to +85°C using laser-trimmed resistors. An additional laser-trimmed resistor is included in the Model 17 to normalize pressure sensitivity variations by programming the gain of an external differential amplifier. This provides sensitivity interchangeability of ±1%.

Please refer to the low pressure section for information on products with operating pressures less than 0-2 PSI. For an uncompensated sensor (Model 15) please contact the factory for additional information.

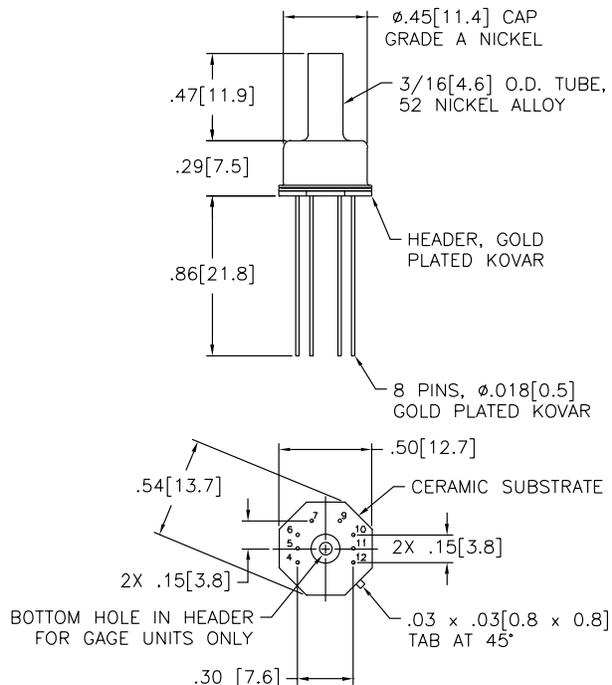
FEATURES

- ▶ TO-8 Package
- ▶ -20°C to +85°C Compensated Temperature Range
- ▶ ±0.1% Non-linearity
- ▶ ±0.5% Temperature Performance
- ▶ 1.0% Interchangeable Span (provided by gain set resistor)
- ▶ Solid State Reliability
- ▶ Low Power

STANDARD RANGES

Range	psig	psia
0 to 15	●	●
0 to 30	●	●
0 to 50	●	
0 to 100	●	
0 to 250	●	

DIMENSIONS



DIMENSIONS ARE IN INCHES [mm]

PERFORMANCE SPECIFICATIONS

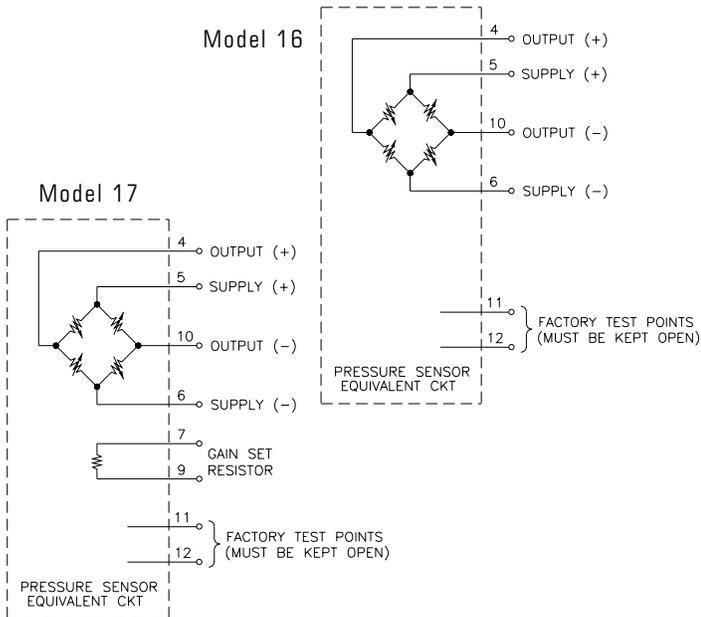
Supply Current: 1.5mA
 Ambient Temperature: 25°C (Unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Full Scale Output Span, (without gain set resistor)	75	100	150	mV	1
Zero Pressure Output			2	±mV	3
Pressure Non-linearity		0.05	0.1	±% Span	2
Pressure Hysteresis		0.01	0.1	±% Span	
Input Resistance	2500	3500	4500	Ω	
Temperature Error – Span		0.3	0.5	±% Span	3, 4
Temperature Error – Zero		0.1	0.5	±% Span	3, 4
Temperature Coefficient - Resistance		0.145		%/°C	4
Thermal Hysteresis – Zero		0.05		±% Span	4
Short Term Stability of Offset		0.05		±% Span	11
Short Term Stability of Span		0.05		±% Span	11
Long Term Stability of Offset		0.1		±% Span	12
Long Term Stability of span		0.1		±% Span	12
Supply Current	0.5	1.5	2.0	mA	5
Response Time (10% to 90%)		1.0		msec	6
Output Noise		1.0		μV p-p	7
Output Load Resistance	5			MΩ	8
Insulation Resistance (50 VDC)	50			MΩ	13
Pressure Overload			3X	Rated	9
Operating Temperature	-40°C to +125°C				
Storage Temperature	-50°C to +150°C				
Media	Non-corrosive Gases Compatible with Wetted Materials				
Weight	3 Grams				

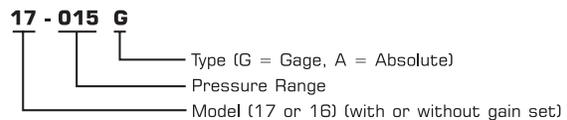
Notes

- Output span of unamplified sensor.
- Best Fit Straight Line.
- For Model 16 and 17, compensation resistors are an integral part of the sensor package; no additional external resistors are required. Pins 11 and 12 must be kept open. Model 17 is interchangeable only when used with a gain stage.
- Temperature range: -20°C to +85°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 500 psi maximum, whichever is less. 20 psi for 2 psi and 5 psi versions.
- Wetted materials are glass, ceramic, silicon, RTV, nickel.
- Normalized offset bridge voltage: 7 days.
- 1 year.
- Between case and sensing element.

CONNECTIONS



ORDERING INFORMATION



APPLICATION SCHEMATIC

