

316 SS Pressure Sensor 0-100 mV Output Gage, Sealed Gage and Absolute Temperature Compensated

- ▶ Medical Instruments
- ▶ Process Control
- ▶ Waste Water Management
- ▶ Refrigeration/Compressors
- ▶ Pressure Transmitters
- ▶ Level Systems



DESCRIPTION

The Model 154 is a media compatible, compensated, piezoresistive silicon pressure sensor packaged in a 316 stainless steel housing. The sensing package utilizes silicone oil to transfer pressure from the 316 stainless steel diaphragm to the sensing element.

The Model 154 is designed for low pressure applications and is intended to be secured in place with an O-ring. A ceramic substrate is attached to the package that contains laser-trimmed resistors for temperature compensation and offset correction. An additional laser-trimmed resistor is included which can be used to adjust sensitivity variations by setting the gain of an external differential amplifier to within $\pm 1\%$ interchangeability.

Alternatives include cap-ring Models 84 or 86, $\frac{1}{4}$ NPT Model 96, and flush mount Models 83 and 85. High pressure sensors are also available.

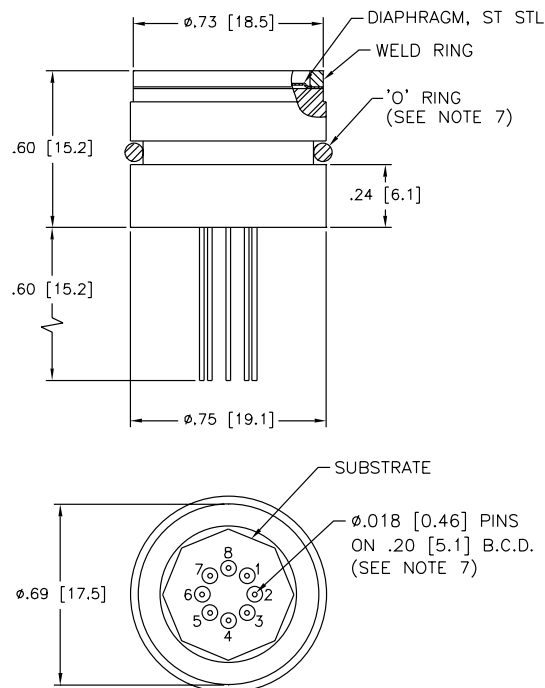
FEATURES

- ▶ O-Ring Mount
- ▶ $\pm 0.25\%$ Pressure Non-linearity
- ▶ $\pm 1.0\%$ Temperature Performance
- ▶ 1.0% Interchangeable Span (provided by gain set resistor)
- ▶ Solid State Reliability
- ▶ Low Power

STANDARD RANGES

Range	psig	psis	psia
0 to 5	●		
0 to 15	●	●	●
0 to 30	●	●	●
0 to 50	●	●	
0 to 100	●		
0 to 300	●		

DIMENSIONS



DIMENSIONS ARE IN INCHES [mm]

PERFORMANCE SPECIFICATIONS

Supply Current: 1.5mA

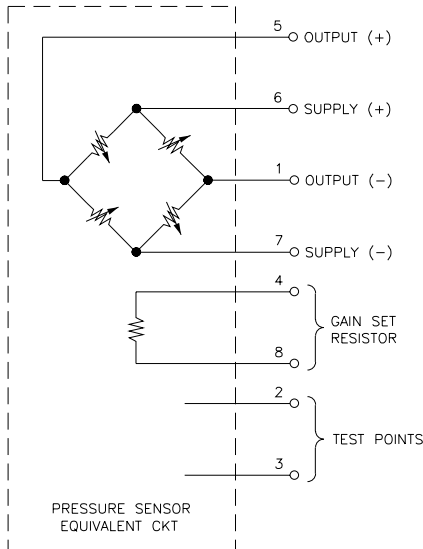
Ambient Temperature: 25°C (Unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Full Scale Output Span	50	100	200	mV	
Zero Pressure Output		1	2	mV	1, 2
Static Accuracy			0.25	±% Span	3
Input & Output Resistance		5000	6000	Ω	
Temperature Error – Span			1.0	±% Span	1, 4
Temperature Error – Zero			1.0	±% Span	1, 4
Supply Current	0.5	1.5	2.0	mA	6
Output Load Resistance	5			MΩ	
Insulation Resistance (50 VDC)	50			MΩ	
Pressure Overload			3X	Rated	5
Operating Temperature	-10°C to +80°C				
Storage Temperature	-40°C to +125°C				
Media	Compatible with 316 Stainless Steel				
Weight	24 Grams				

Notes

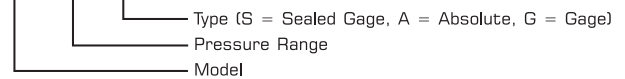
1. The Model 154 compensation resistors are an integral part of the sensor package. No additional resistors are required. This model is interchangeable only when used with a gain stage.
2. Measured at vacuum for absolute (A), ambient pressure for gage (G) and one standard atmosphere for sealed gage (S).
3. Includes repeatability, pressure hysteresis, and pressure non-linearity (best fit straight line).
4. Temperature range: 0-50°C in reference to 25°C.
5. 20 psi for 5 psi version; 3X or 450 psi, whichever is less, for other versions.
6. Guarantees input/output ratiometricity.
7. O-ring dimensions: I.D. 0.614" x 0.070".
8. For Amplified output circuits see Application Note TN003.

CONNECTIONS



ORDERING INFORMATION

154 - 005 - G



CONSTANT VOLTAGE SUPPLY

