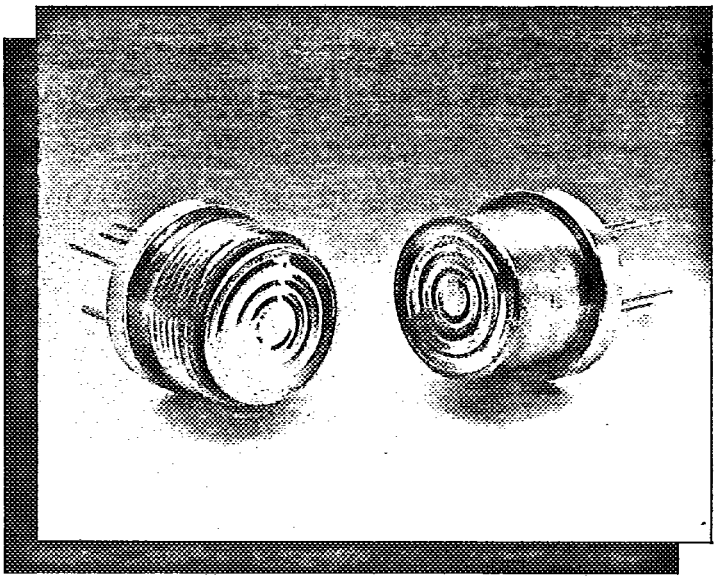
SENSORS

Model 80

T-65-13

OEM High Pressure Sensor Sealed Gage and Absolute Stainless Steel Diaphragm 100 mV Output Span



Features

- Iso-Pressure Structure
- Solid State Reliability
- Flush Diaphragm
- Ratiometric
- ±0.5% Accuracy
- Low Noise
- Infinite Resolution
- Low Cost
- Serialized

Typical Applications

- Hydraulic Servo Controls
- Pressure Transmitters
- Smart Valves
- Tank Levels
- Machine Tools
- Refrigeration
- Air Conditioning
- Food Processing

Standard Ranges

0 to 300 psis	0 to 300 psia
0 to 500 psis	0 to 500 psia
0 to 1000 psis	0 to 1000 psia
0 to 3000 psis	0 to 3000 psia
0 to 5000 psis	0 to 5000 psia

Description

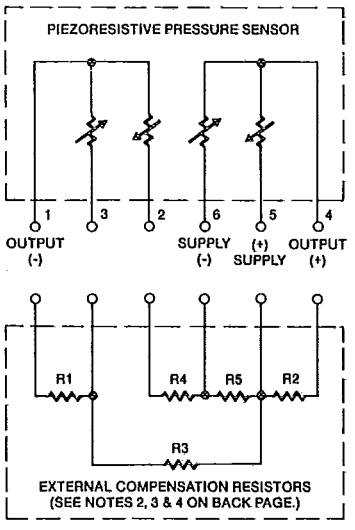
The Model 80 is a media compatible, solid state pressure sensor that is intended for use in high pressure OEM applications where long term stability must be combined with low cost.

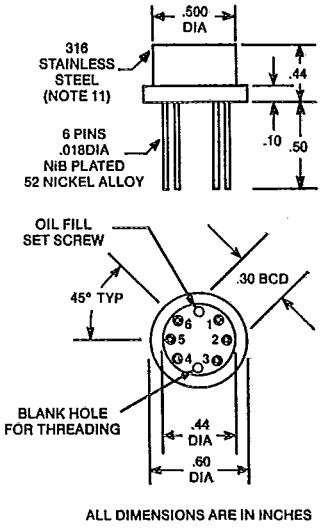
The Iso-Pressure 316 stainless steel housing structure utilizes an oil column to couple a diffused, piezoresistive sensor to a convoluted, flush 316 stainless steel diaphragm that can be interfaced with most harsh media.

Temperature compensation and calibration over 0-50°C is accomplished with the addition of only 3 external resistors, the values of which are included with each sensor. An optional ceramic compensation board is also available.

One performance grade is available in both sealed gage and absolute pressure from 0-300 psi to 5000 psi. Each sensor is individually serialized.

Connections/Dimensions





ALL DIMENSIONS ARE IN INCHES

Model 80

Performance Specifications

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

PARAMETER	Model 80 MIN	TYP	MAX	UNITS	NOTES
Full-Scale Output Span		100		mV	2
Zero Pressure Output			5	±mV	2,3,5
Static Accuracy			0.5	±%Span	6
Input & Output Resistance	4000	4500	6000	Ω	
Temperature Coefficient-Span			1.0	±%Span	1,2,3
Temperature Coefficient-Zero			1.0	±%Span	1,2,3
Supply Current		1.5	2.0	mA	7
Output Load Resistance	2			MΩ	8
Insulation Resistance (50 VDC)	50			MΩ	
Pressure Overload			3X	Rated	9
Operating Temperature	-40°C to +100°C				
Storage Temperature	-55°C to +125°C				
Media	Compatible with 316 Stainless Steel				
Weight	12 grams				

Notes

1. Temperature Range: 0-50°C in reference to 25°C.
2. With external resistors (R_1 or R_2), (R_3 or R_4) and R_5 included in circuit on front page. If R_1 is required then R_2 is left open ($R_2 = \infty$) and vice versa. If R_3 is required then R_4 is a short ($R_4 = 0$) and vice versa. See Application Note TN-002.
3. A computer printout is supplied with each sensor detailing the values of the 3 required external resistors along with open and short information for the other two locations.
4. Also available is a thick film ceramic substrate that contains the specific external resistors, trimmed to the correct value for compensation, and fits directly over the 6 electrical pins for customer soldering. If this is desired in lieu of the computer printout, order Model 83 instead of Model 80.
5. Measured at vacuum for absolute (A) and one standard atmosphere for sealed gage (S).
6. Includes repeatability, pressure hysteresis and linearity (best fit straight line).
7. Guarantees output/input ratiometricity.
8. Prevents increase of TC-Span due to output loading.
9. 3X or 7,500 psi maximum, whichever is less.
10. See Models 81, 84, 151 or 154 Series for low pressure requirements.
11. Case is threaded (9/16-32). Non-threaded cases are available for the 300 psi and 500 psi pressure ranges. Use an "N" designation when ordering non-threaded cases.

Ordering Information

80 - 300 S N

- N — No case threads (see note 11)
- S — Type (S=Sealed Gage, A=Absolute)
- 300 — psi Range
- 80 — Model (see note 4)

Represented By

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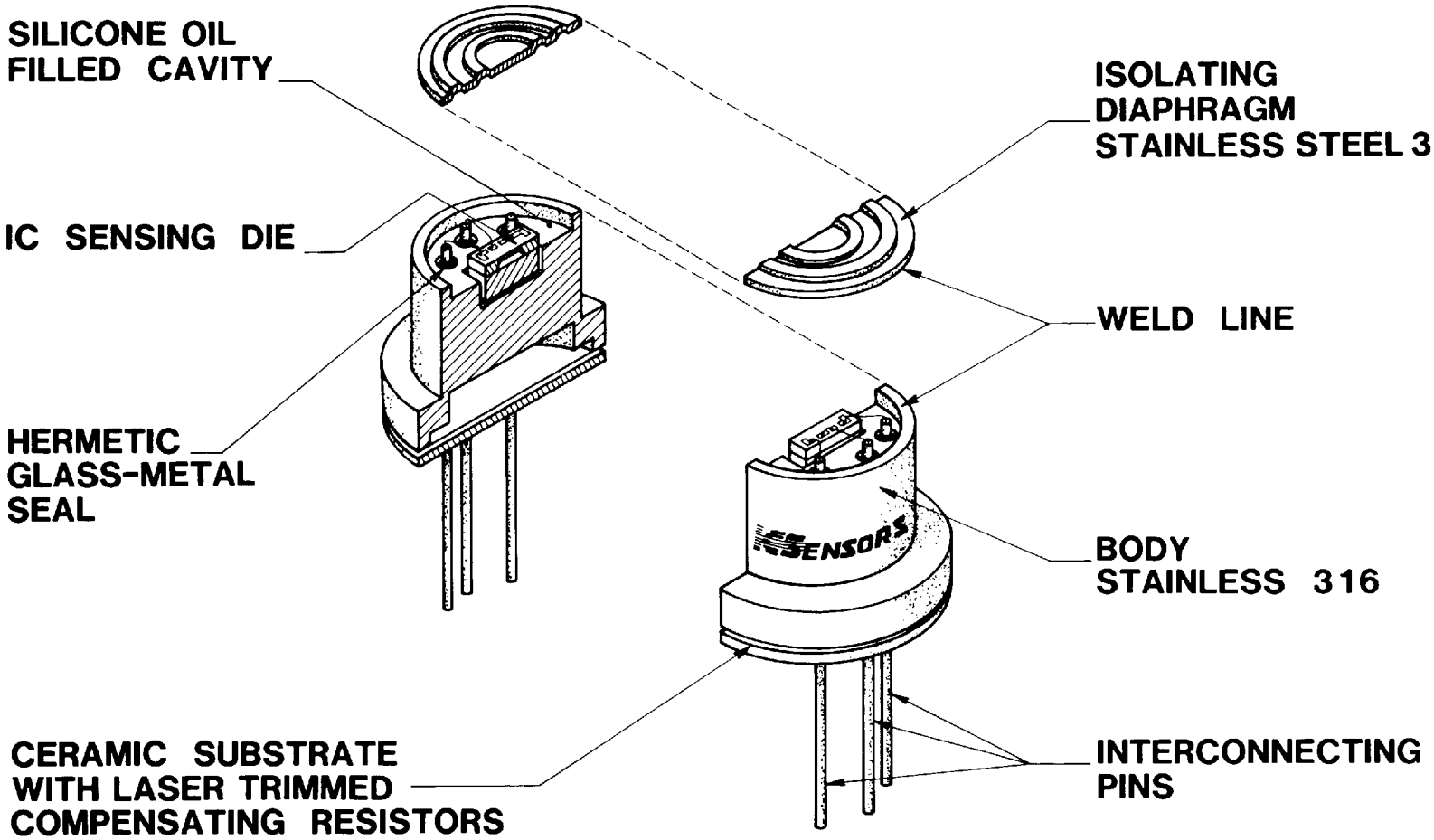

MODEL 80 PRESSURE SENSOR

Milpitas, California