



85

Vacuum uncompensated

SPECIFICATIONS

- **316L SS Pressure Sensor**
- **Small Profile**
- **0 - 100mV Output**
- **Vacuum Gage**

The 85 vacuum uncompensated pressure sensor is a small profile, media compatible, piezoresistive silicon pressure sensor packaged in a 316L stainless steel housing. The pressure sensor is offered in a weldable package or with a variety of threaded fittings such as 1/4 and 1/8NPT, 1/4BSP as well as other custom process fittings.

The 85 vacuum uncompensated is designed for OEM applications where compatibility with corrosive media is required. The sensing package utilizes silicon oil to transfer pressure from the 316L stainless steel diaphragm to the sensing element.

Please refer to the 85 compensated and constant voltage datasheets for more information on different features of the 85.

FEATURES

- Weldable and Threaded Process Fittings
- -40°C to +125°C Operating Temperature
- $\pm 0.1\%$ Pressure Non Linearity
- Solid State Reliability

APPLICATIONS

- Medical Instruments
- Process Control
- Fresh & Waste Water Measurements
- Partial Vacuum Gas Measurement
- Pressure Transmitters
- Tank Level Systems (RV & Industrial)

STANDARD RANGES

Range	psiv
0 to 15	•
0 to 30	•
0 to 50	•
0 to 100	•
0 to 300	•
0 to 500	•

PERFORMANCE SPECIFICATIONS

Supply Current: 1.5mA

Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Sensitivity	12		27	mV/V @Span	
Zero Pressure Output	-6.0		8.0	mV/V	1
Pressure Non Linearity	-0.1		0.1	%Span	2
Pressure Hysteresis	-0.05		0.05	%Span	
Repeatability		±0.02		%Span	
Bridge Resistance	3.8K		5.8K	Ω	3
Thermal Hysteresis – Span	-0.25	±0.05	0.25	%Span	4
Thermal Hysteresis – Offset	-0.25	±0.05	0.25	%Span	4
Temperature Coefficient – Resistance	1.30K	1.51K	1.75K	PPM/°C	4
Temperature Coefficient – Span	-1.65K	-1.25K	-1.0K	PPM/°C	4
Temperature Coefficient – Offset	-30		30	μV/V/°C	4
Long Term Stability – Span		±0.10		%Span/Year	
Long Term Stability – Offset		±0.10		%Span/Year	
Supply Current	0.5	1.5	2.0	mA	
Supply Voltage		5	9.5	V	
Output Noise (10Hz to 1kHz)		1.0		uV p-p	
Response Time (10% to 90%)		0.1		ms	
Insulation Resistance (50Vdc)	50M			Ω	5
Pressure Overload			3X	Rated	6
Pressure Burst			4X	Rated	7
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+125	°C	
Media – Pressure Port	Liquids and Gases compatible with 316/316L Stainless Steel				

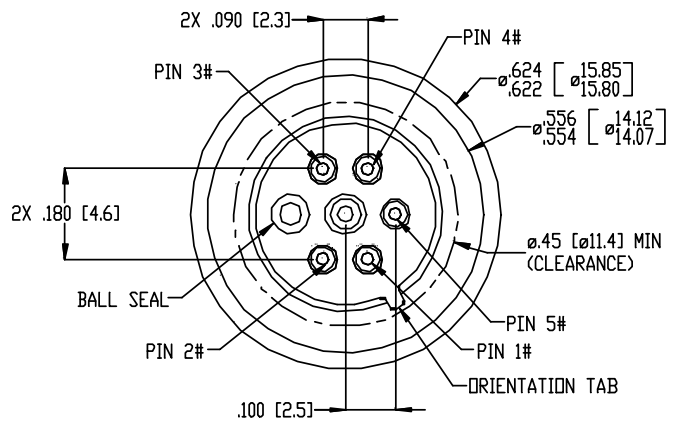
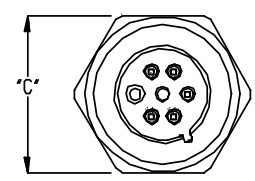
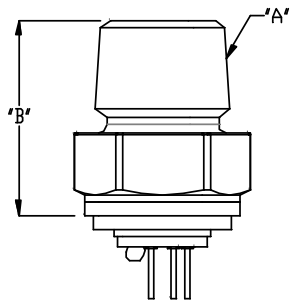
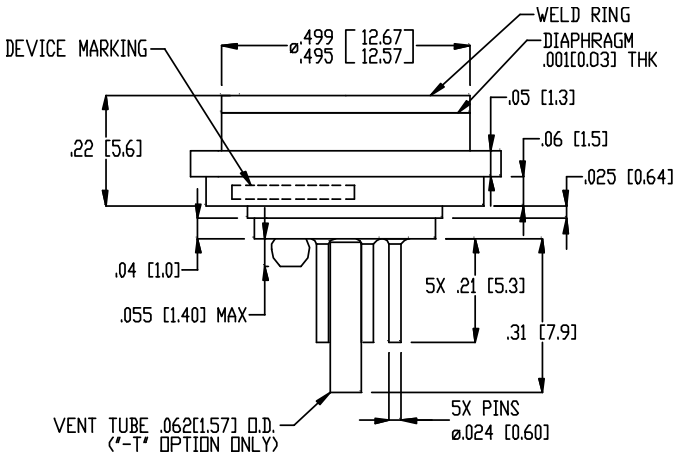
Notes

1. Measured at ambient.
2. Best fit straight line.
3. Bridge resistance is measured with both –E pins shorted together.
4. TC values are first order coefficients to a quadratic fit over a temperature range of -20 to +85°C.
5. Between case and sensing element.
6. The maximum pressure that can be applied without changing the transducer's performance or accuracy.
7. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.

Additional Notes

8. Testing:
 - 8.1 Units are not tested over temperature or pressure
 - 8.2 A final electrical test (@ 1.5mA) is performed to verify parts are electrically alive.
 - 8.3 All units are subjected to 100% drift test.

DIMENSIONS

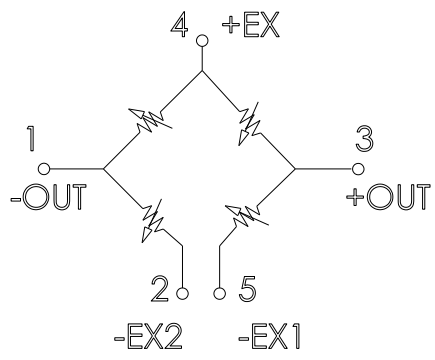


FITTING DIMENSIONS				
FITTING TYPE	MEAS PART NO.	'A' DIM	'B' DIM	'C' DIM
1	IC-7050	1/4-18 NPT	1.04[26.4]	7/8[22.2] HEX
2	IC-7049	1/8-27 NPT	1.01[25.7]	7/8[22.2] HEX
3	IC-7048	7/16-20 UNF	.86[21.8]	7/8[22.2] HEX
4	IC-6754	1/4-18 NPT	.78[19.8]	5/8[15.9] HEX
5	IC-5010	1/4-19 BSP	.81[20.6]	3/4[19.0] HEX
8	IC-6800	1/8-27 NPT	.65[16.5]	5/8[15.9] HEX
9	IC-7124	1/4-19 BSP	0.99[25.1]	7/8[22.2] HEX

NOTE: FTG TYPE '4' ASSEMBLY SHOWN
ALL DIMS ARE FOR REFERENCE

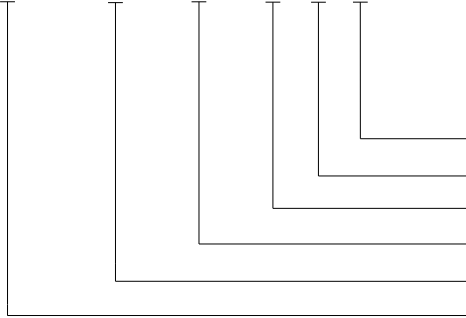
SENSOR PINDOUT	
PIN NO.	FUNCTION
1	-OUT
2	-EX2
3	+OUT
4	+EX
5	-EX1

CONNECTIONS



ORDERING INFORMATION

85 - 015 V - 0 U T



Vent (T = Tube, Blank = No Tube)
 Electrical (U = Open Bridge, Uncompensated)
 Fitting Type (0 = Weldable, See Fittings)
 Type (V = Vacuum Gage)
 Pressure Range
 Model

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