



- 316L SS Pressure Sensor
- Small Profile
- 0 100mV Output
- Absolute and Gage

# RoHS

## DESCRIPTION

The 85 vacuum uncompensated pressure sensor is a small profile, media compatible, piezoresistive silicon pressure sensor packaged in a 316L stainless steel housing. The 85 vacuum uncompensated 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 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
- ±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	psia	psig
0 to 5	•	•
0 to 15	•	•
0 to 30	•	•
0 to 50	•	•
0 to 100	•	•
0 to 300	•	•
0 to 500	•	•

# PERFORMANCE SPECIFICATIONS

mbient Temperature: 25°C (unless otherwise PARAMETERS	. , MIN	ТҮР	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	3		
Repeatability		±0.02		%Span			
Bridge Resistance	3.8K		5.8K	Ω	4		
Thermal Hysteresis – Span	-0.25	±0.05	0.25	%Span	5		
Thermal Hysteresis – Offset	-0.25	±0.05	0.25	%Span	5		
Temperature Coefficient – Resistance	1.30K	1.51K	1.75K	PPM/°C	5		
Temperature Coefficient – Span	-1.45K	-1.25K	-1.0K	PPM/°C	5, 6		
Temperature Coefficient – Offset	-30		30	µV/V/°C	5		
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 Noice (10Hz to 1kHz)		1.0		uV p-p			
Response Time (10% to 90%)			0.1	Ms			
Insulation Resistance (50Vdc)	50M			Ω	7		
Pressure Overload			ЗX	Rated			
Pressure Burst			4X	Rated	8		
Operating Temperature	-40		+125	°C			
Storage Temperature	-55		+125	°C			
Media – Pressure Port	Liquids and Gas	Liquids and Gases compatible with 316L Stainless Steel					
Media – Reference Port	Compatible with	Compatible with Silicon, Pyrex, Gold, Fluorosilicone RTV and					

Compatible with Silicon, Pyrex, Gold, Fluorosilicone RTV and 316/316L Stainless Steel

#### Notes

1. Measured at vacuum for absolute (A) and at ambient for gage (G).

2. Best fit straight line. Non linearity is ±0.2% max for 5psiG devices.

3. Pressure hysteresis is min -0.1 to max 0.1 for 5psi absolute.

4. Bridge resistance is measured with both -E pins shorted together.

5. TC values are first order coefficients to a quadratic fit over a temperature range of -20 to +85°C (0 to +50°C for 5psi).

6. 5psiA is -1.7K ~ -1.0K ppm/°C.

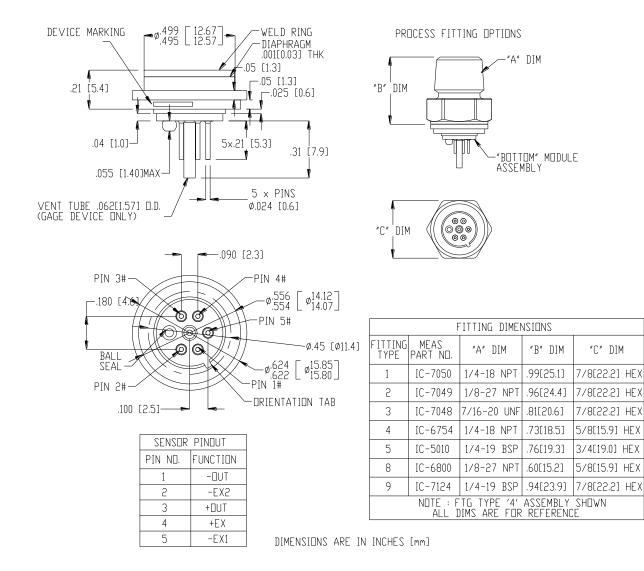
7. Between case and sending element.

8. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.

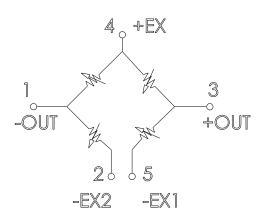


# 85 Uncompensated

### DIMENSIONS



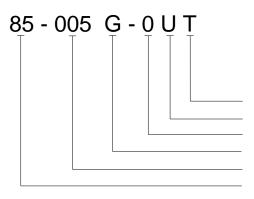
## CONNECTIONS







### **ORDERING INFORMATION**



### **NORTH AMERICA**

Measurement Specialties 45738 Northport Loop West Fremont, CA 94538 Tel: 1-800-767-1888 Fax: 1-510-498-1578 Sales: pfg.cs.amer@meas-spec.com

### EUROPE

Measurement Specialties (Europe), Ltd. 26 Rue des Dames 78340 Les Clayes-sous-Bois, France Tel: +33 (0) 130 79 33 00 Fax: +33 (0) 134 81 03 59 Sales: pfg.cs.emea@meas-spec.com

### ASIA

Vent (T = Tube, Blank = No Tube)

Type (A = Absolute, G = Gage)

Pressure Range

Model

Electrical (U = Open Bridge, Uncompensated) Fitting Type (0 = Weldable, See Fittings)

> Measurement Specialties (China), Ltd. No. 26 Langshan Road Shenzhen High-Tech Park (North) Nanshan District, Shenzhen 518057 China Tel: +86 755 3330 5088 Fax: +86 755 3330 5099 Sales: pfg.cs.asia@meas-spec.com

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