

## DP86 Non-Silicone Oil



- 316L SS
- Wet/Wet Differential
- Low Pressure

### DESCRIPTION

The DP86 non-silicone oil differential pressure sensor is a double-sided, media compatible, piezoresistive silicon pressure sensor packaged in a 316L stainless steel housing. The DP86 non-silicone is designed for o-ring mounting.

The DP86 non-silicone oil is designed for high performance, low pressure applications where differential pressure measurement is required at low temperature. The stainless steel package makes it suitable for use in liquids and corrosive environments. The non-silicone oil affords reliable operation down to -55°C and is exceptional for applications where silicone oil is restricted.

Please refer to the DP86, uncompensated, constant current and constant voltage (fittings and cable design) for more information on different features of the DP86.

### FEATURES

- O-Ring Mount
- Up to -55°C to +100°C Operating Range
- Up to ±0.1% Pressure Non Linearity
- Solid State Reliability
- Low Pressure

### APPLICATIONS

- Level Controls
- Tank Level Measurement
- OEM Equipment
- Corrosive Fluids and Gas Measurement Systems
- Flow Measurements

### STANDARD RANGES

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

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## PERFORMANCE SPECIFICATIONS

Supply Current: 1.5mA

Ambient Temperature: 25°C (unless otherwise specified)

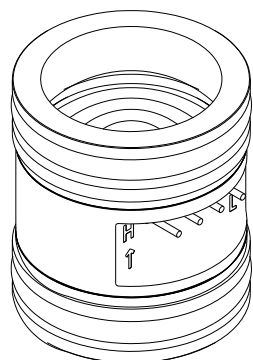
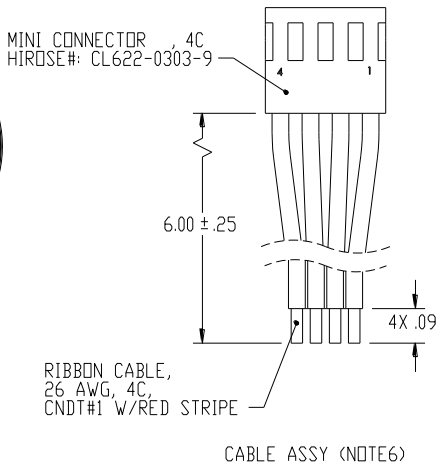
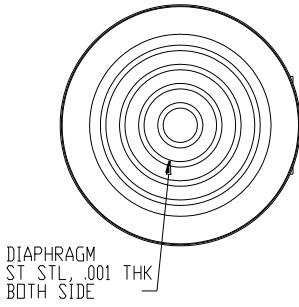
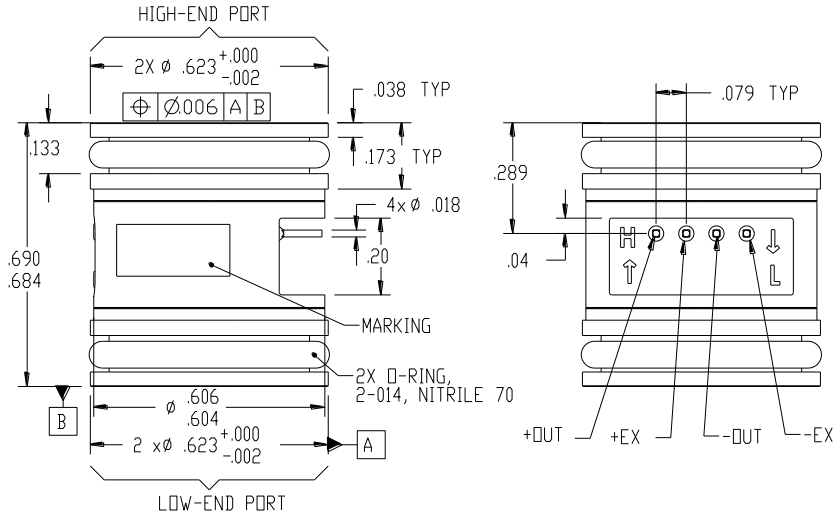
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Sensitivity	13.2	20	26.5	mV/V@FS	
Zero Pressure Output	-6		8	mV/V	1
Pressure Non Linearity	-0.10		0.10	%Span	2
Pressure Hysteresis	-0.05		0.05	%Span	
Input/Output Resistance	3800	4400	5800	Ω	
Temperature Coefficient – Span	-1450	-1250	-1000	ppm/°C	3
Temperature Coefficient – Offset		1		uV/V/°C	3
Temperature Coefficient – Resistance	1300	1510	1750	ppm/°C	3
Thermal Hysteresis – Span	-0.25		0.25	%Span	3
Thermal Hysteresis – Offset	-0.25		0.25	%Span	3
Line (Common Mode) Pressure			1000	psi	
Line Pressure Effect on Zero			0.5	%Span/1Kpsi	
Pressure Overload			3X	Rated	4
Pressure Burst			4X	Rated	5
Operating Temperature	-55		+100	°C	6
Storage Temperature	-55		+125	°C	6
Vibration (10~2000Hz)			20	G	
Insulation Resistance (50Vdc)	50			MΩ	7
Output Load Resistance	5			MΩ	7
Supply Voltage		5	9.5	V	
Supply Current			1.5	mA	
Voltage Breakdown			500	Vrms	9
Endurance (FS@ 25°C)		1,000,000		Cycles	9
Media Compatibility – Pressure Port	All fluids and gases compatible with 316 Stainless Steel & Nitrile				

### Notes

1. Measured at ambient.
2. Best fit straight line
3. Over the temperature range -20°C to +85°C with respect to 25°C.
4. For high-end port, rated or 1000psi whichever is less; for low-end port, rated or 150psi whichever is less.
5. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.
6. Max temp for cable and connector is -20°C to +105°C.
7. Between case and sensing element.
8. Load resistance to reduce measurement errors due to output loading.
9. At dry air.

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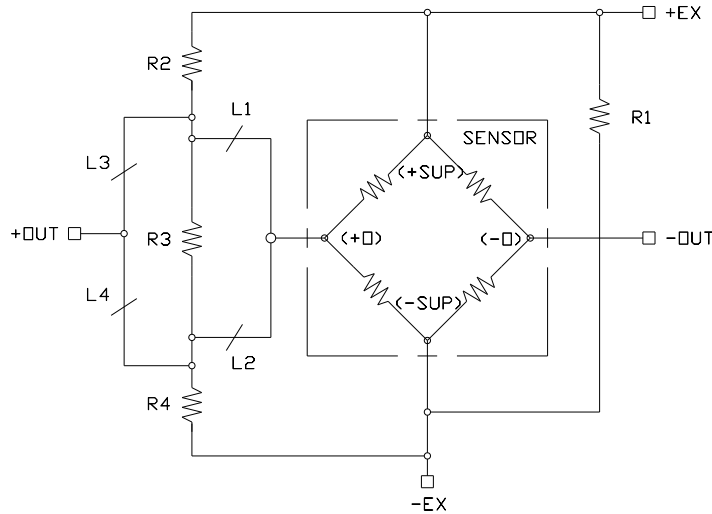
DIMENSIONS



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## COMPENSATION SCHEMATIC

(Sensors can be compensated using the schematic to get improved performance. A calibration data sheet is included with each unit that provides measured values along with resistor values that will achieve the calculated compensated performance.)



## ORDERING INFORMATION

This is a custom product. Please contact factory for 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](mailto: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](mailto:pfg.cs.emea@meas-spec.com)

### ASIA

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](mailto:pfg.cs.asia@meas-spec.com)

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