

PS2000 Series

OEM silicon stainless steel pressure sensor

FEATURES

- 0...5 psi to 0...500 psi gage
-15...15 psi to -15...100 psi gage
0...15 psi to 0...500 psi absolute
- Calibrated and temperature compensated
- Small size
- Field interchangeable
- Reliable semiconductor technology

SERVICE

Pressure inlet: all media compatible with stainless steel 1.4401 (316)⁹

Housing: stainless steel, protection class IP65, according to DIN40050 respectively NEMA4X¹

SPECIFICATIONS

Maximum ratings

Supply voltage 15 V

Temperature limits
Storage -55°C to 100°C
Operating -40°C to 100°C
Compensated 0°C to 82°C

Humidity limits 0 - 98 %RH

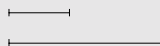
Vibration (5 Hz to 500 Hz) 10 g_{RMS}

Mechanical shock 50 g for 11 msec

Life min. 1 million cycles

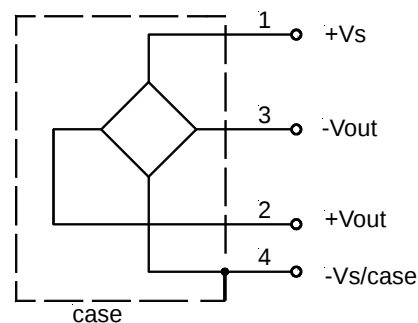
Insulation resistance at 50 V_{DC} min. 100 MΩ



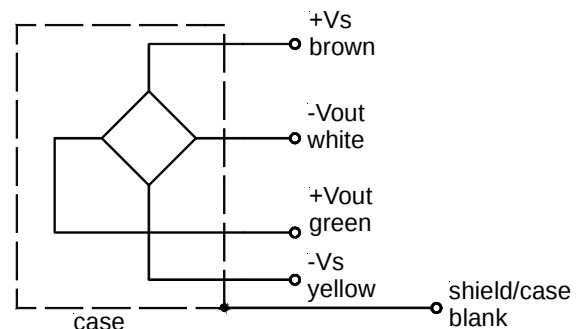
Scale:  1 cm
1 inch

ELECTRICAL CONNECTION

Connector version



Cable version



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PRESSURE RANGE SPECIFICATIONS

Part no.	Pressure range	Proof pressure ²	Burst pressure ³
PS2005G...	0 ... 5 psig	15 psig	25 psig
PS2010G...	0 ... 10 psig	30 psig	45 psig
PS2015(A,G)...	0 ... 15 psi	45 psi	75 psig
PS2015V...	-15 ... 15 psig	45 psig	75 psig
PS2030(A,G)...	0 ... 30 psi	90 psi	150 psi
PS2030V...	-15 ... 30 psig	90 psig	150 psig
PS2050(A,G)...	0 ... 50 psi	150 psi	250 psi
PS2100(A,G)...	0 ... 100 psi	300 psi	300 psi
PS2100V...	-15 ... 100 psig	300 psig	300 psig
PS2200(A,G)...	0 ... 200 psi	600 psi	1000 psi
PS2300(A,G)...	0 ... 300 psi	900 psi	1500 psi
PS2500(A,G)...	0 ... 500 psi	1200 psi	2400 psi

PERFORMANCE CHARACTERISTICS unless otherwise noted, $V_s = 10,00\text{ V}$, $t_{\text{amb}} = 25^\circ\text{C}$

Characteristics			Min.	Typ.	Max.	Unit
Zero pressure offset			-2	0	2	mV
Full scale span ⁴	PS2005G...		48	50	52	
	all other devices		98	100	102	
Non-linearity ⁵				±0.1	±0.3	%FSO
Pressure hysteresis ⁵				±0.015	±0.030	
Thermal effects (0°C to 82°C) ⁶	PS2005G...	Offset			±2.0	
		Span			±2.0	
	all other devices	Offset		±0.5	±1.0	
		Span		±0.5	±1.0	
Thermal hysteresis (0°C to 82°C)				±0.1	±0.3	
Repeatability				±0.010	±0.030	
Long term stability of offset and span ⁷				±0.1	±0.3	
Response time (10 % to 90 %) ⁸				0.1		ms
Input impedance			8.0	25	50	kΩ
Output impedance			3.0	4.5	6.0	
Common mode output voltage			0.3		5.0	V

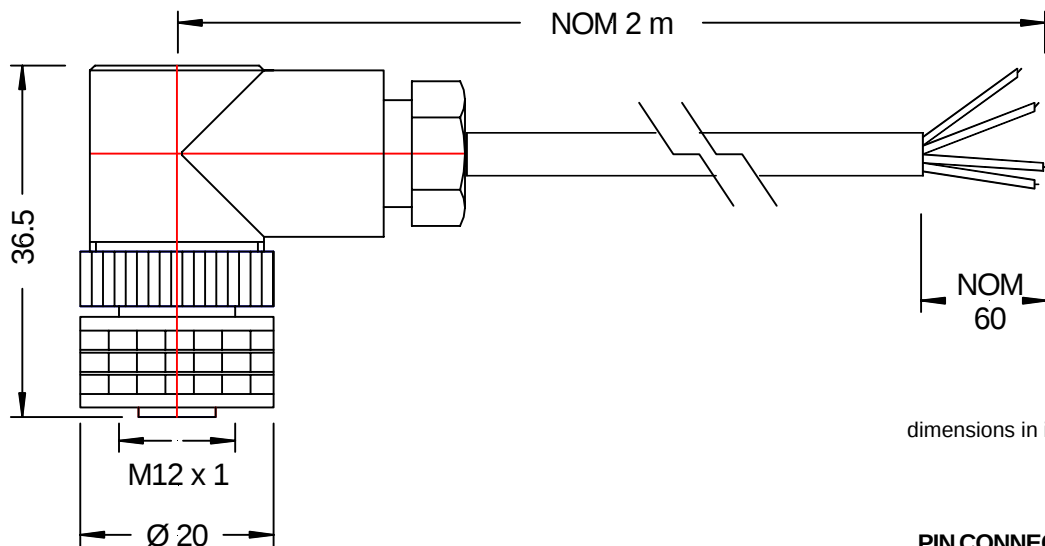
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Specification notes:

1. IP65 (NEMA4X) protection is given when the connector is locked. For proper function the gage port is vented to the atmosphere through the connector/cable assembly. Thus the cable end must have access to the ambient pressure.
2. The maximum pressure that can be applied without changing the transducer's performance or accuracy.
3. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer case.
4. Span is the algebraic difference between the output voltage at full scale pressure and the output at zero pressure. Span is ratiometric to the supply voltage
5. Linearity is based on **Best fit Straight Line**. Hysteresis is the maximum output difference at any point within the operating pressure range for increasing and decreasing pressure.
6. Maximum error band of the offset voltage or span over the compensated temperature range, relative to the 25°C reading.
7. Long term stability over a one year period.
8. Response time for step change from the zero pressure to the full scale pressure.
9. Other materials on special request. When using devices with optional nickel plated fittings, consider the media compatibility of the fittings also.

RECOMMENDED CABLE / CONNECTOR ACCESSORY (Included in delivery!)



dimensions in inches (mm)

for additional cable/connector assemblies
(for connector version PS...GA) use order number
ZK000106, other cable length on special request

PIN CONNECTION

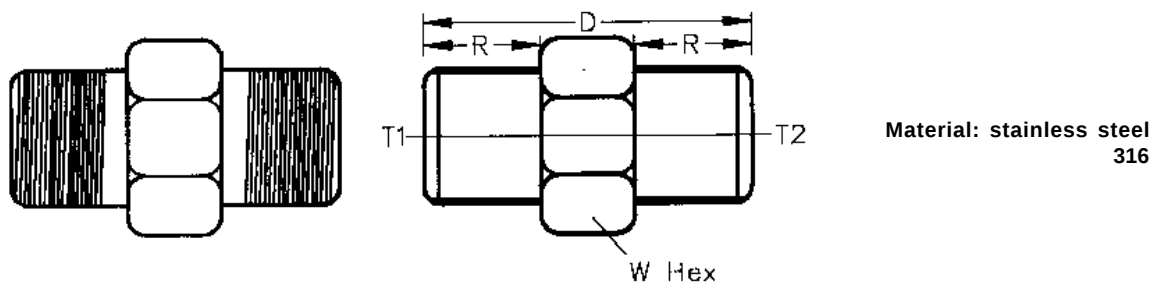
Pin	Flying lead end
1	brown
2	green
3	white
4	yellow
NC	shield

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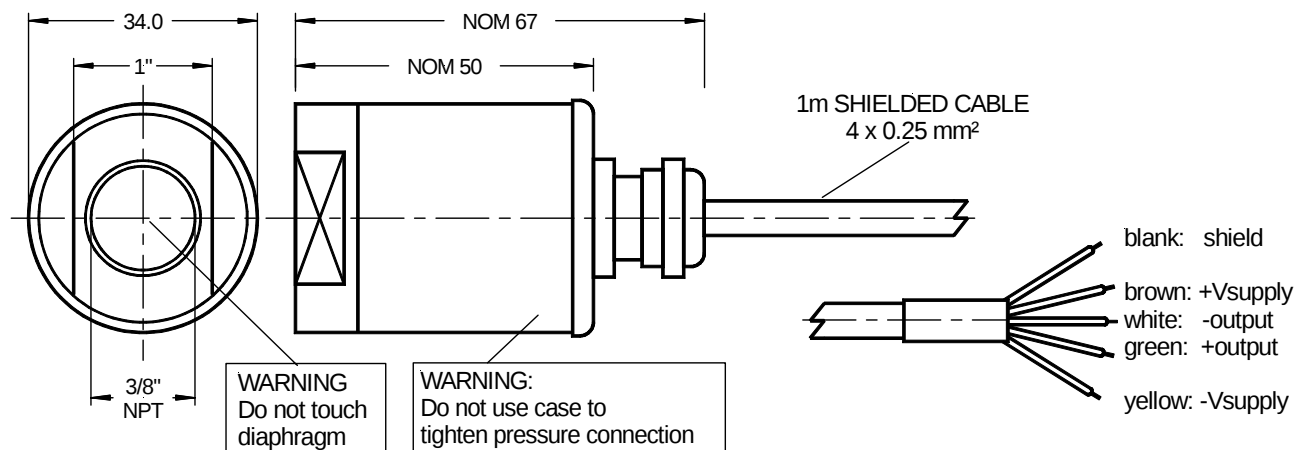
OPTIONAL PIPE FITTING DRAWINGS

Part No.	Thread		W Hex	D		R		Maximum working pressure (psig)
	Male T1	Male T2		in.	mm.	in.	mm.	
SFIT62	3/8 NPT	1/8 NPT	3/4	1.27	32.3	0.56/0.38	14.2/9.7	7200
SFIT64	3/8 NPT	1/4 NPT	3/4	1.45	37.0	0.56	14.2	7200
SFIT68	3/8 NPT	1/8 BSP	3/4	1.45	37.0	0.56	14.2	7200



OUTLINE DRAWING

Cable version
PS...GC



mass: typ. 190 g

dimensions in inches (mm)

ELECTRICAL CONNECTION

wire color	connection
blank	shield/case
brown	+Vs
white	-Vout
green	+Vout
yellow	-Vs

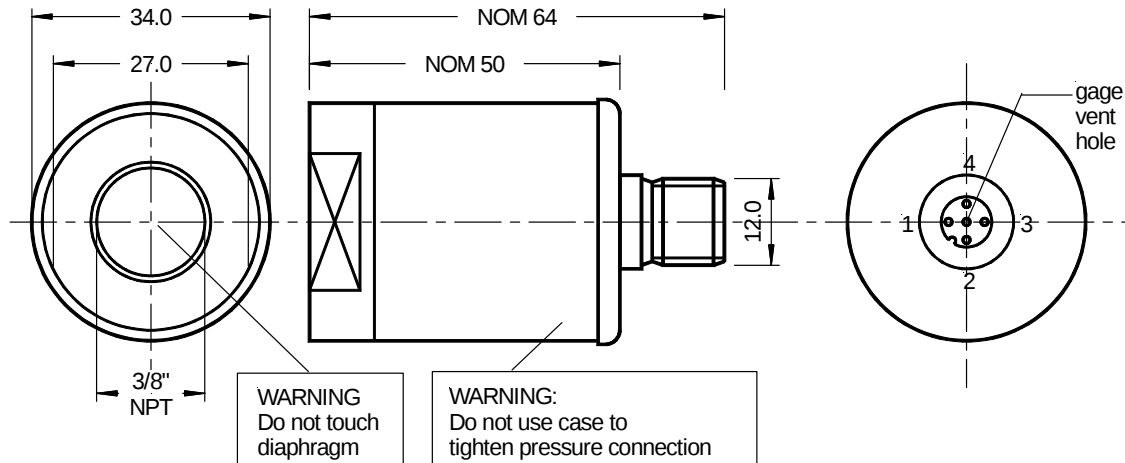
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OUTLINE DRAWING

Connector version

PS...GA



mass: typ. 190 g

dimensions in inches (mm)

ELECTRICAL CONNECTION

Pin	connection
1	+Vs
2	+Vout
3	-Vout
4	-Vs/case

ORDERING INFORMATION

PS2000 Series	PS2	XXX	X	X	Electrical connections A: connector version C: cable version
005: 0 ... 5 psi (gage only)					Pressure mode A: absolute pressure G: gage pressure V: vacuum/gage pressure
010: 0 ... 10 psi (gage only)					
015 ¹⁰ : 0 ... 15 psi					
030 ¹⁰ : 0 ... 30 psi					
050: 0 ... 50 psi					
100 ¹⁰ : 0 ... 100 psi					
200: 0 ... 200 psi					
300: 0 ... 300 psi					
500: 0 ... 500 psi					

Note 10: also available as vacuum/gage version

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