

P250/P251

Sealed Industrial Pressure Sensors



Description

The P250/P251 sealed industrial pressure sensors are based upon Kavlico's oil-filled piezo-resistive (PRT) sensing technology with the latest state-of-the-art ASIC. Rugged by design, these highly reliable sensors have a 304L welded stainless steel housing and isolation diaphragm and are well suited for a broad range of media including air, fluids, and gases that are stainless steel compatible. The sensors provide a linear amplified output proportional to pressure of 0.5 to 4.5 Vdc.

The P250/P251 package design has a wide variety of both electrical and process connector options to suit application-specific requirements. The sensors have an extremely high overpressure capability.

The P250/P251 sensors deliver a cost-effective solution without compromising on performance or reliability.

Features

- Wet & Dry Media
- Excellent Long Term Stability
- One Million Cycle Life Expectancy
- Welded Stainless Steel Construction
- High Overpressure Capability
- Temperature Compensated
- Superior EMI/RFI Rejection

Applications

- Refrigerant Control & Recovery
- Pumps & Compressors
- Process Controls
- Water Management
- Autoclaves
- Hydraulic Systems
- Test & Monitoring Equipment



Standard Full Scale Pressure Ranges

Low Pressure:

P250: 0-6, 0-7, 0-10, 0-16, 0-25, 0-40 and 0-50 BAR

P251: 0-100, 0-150, 0-200, 0-250, 0-300, 0-500 and 0-600 PSI

High Pressure:

P250: 0-100, 0-200, 0-250 and 0-400 BAR

P251: 0-1,500, 0-3,000, 0-4,000 and 0-5,000 PSI

Technical Specifications

Note: Performance Specifications with $5v \pm 0.002$ Vdc supply at 25°C

Pressure Ranges:	0-100 through 0-5,000 PSI Absolute or Sealed Gage 0-6 through 0-400 BAR	Output Impedance:	<100 Ω
Proof Pressure:	2x Full Scale Output (FSO)	Operating Temperature:	-15°C to +125°C
Burst Pressure:	258 BAR for Low BAR Pressure Ranges 1,034 BAR for High BAR Pressure Ranges 3,750 PSI for Low PSI Pressure Ranges 15,000 PSI for High PSI Pressure Ranges	Storage Temperature:	-40°C to +125°C
Supply Voltage:	5.0 \pm 0.250 Vdc	Service Life:	20 Million Full Scale Pressure Cycles
Supply Current:	5mA Max.	Vibration:	100G Sinusoidal fro 10 to 200 Hz
Output Voltage:		Shock:	75 G's ½ Sine Wave
Full Pressure:	4.50 \pm 0.08 Vdc	Response Time:	<2mS
Zero/Null Pressure:	0.50 \pm 0.08 Vdc	Housing Material:	304 Stainless Steel (Main Body)
Linearity Error:	\pm 0.5% of Span	Weight:	80 grams Max.
Total Error Band (TEB):	\pm 2% of Span (-15°C to +85°C)	Electrical Termination:	See "How to Order"
		Pressure Connection:	See "How to Order"
		Recommended Interface Impedance:	Min. Load 25 k Ω
		Over-Voltage Protection:	36V
		Reverse Polarity Protection:	-32V



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How to Order

P250		P251	
Pressure Ranges		Pressure Ranges	
6	0-6 BAR	100	0-100 PSI
7	0-7 BAR	150	0-150 PSI
10	0-10 BAR	200	0-200 PSI
16	0-16 BAR	250	0-250 PSI
25	0-25 BAR	300	0-300 PSI
40	0-40 BAR	500	0-500 PSI
50	0-50 BAR	600	0-600 PSI
100	0-100 BAR	1500	0-1,500 PSI
200	0-200 BAR	3000	0-3,000 PSI
250	0-250 BAR	4000	0-4,000 PSI
400	0-400 BAR	5000	0-5,000 PSI

Reference

A Absolute
S Gage

External O-Ring (Supplied for Straight Thread Only)

B Nitrile Butadiene (NBR)
D Fluorocarbon (FPM)
X None

Pressure Connection (Port)

1 Stud End 1/4" -18 NPT
2 Port 7/16-20 UNF-2A with Schrader Deflator (1/4" SAE Female Flare)
3 Stud End 7/16-20 UNF-2A (SAE J1926-2)
4 Stud End 1/8-27 NPT
5 Port G 1/4"
6 Stud End G 1/4"
7 Stud End M10x1
8 Stud End M12x1.5
9 Stud End M14x1.5
10 Port M10x1.25 with Schrader Deflator

Built-in Electrical Connector

A Packard Connector with Mating Connector and 35cm Leads
C Packard Connector
D M12 with Mating Connector, Straight
E M12 with Mating Connector, Right Angle
F M12 Connector Kit, Right Angle, without Wires
G M12 Connector Kit, Straight, without Wires
H M12 without Mating Connector
J 9.4mm, DIN EN 175301-803 Micro-mini with Mating Connector
K 9.4mm, DIN EN 175301-803 Micro-mini without Mating Connector
L 18mm, DIN EN 175301-803 with Mating Connector
M 18mm, DIN EN 175301-803
N 2.5 Meter Cable Connector Assy, 3 Lead Wires, 18 AWG

P250 50 A B 1 A

Example: P250-50A-B1A

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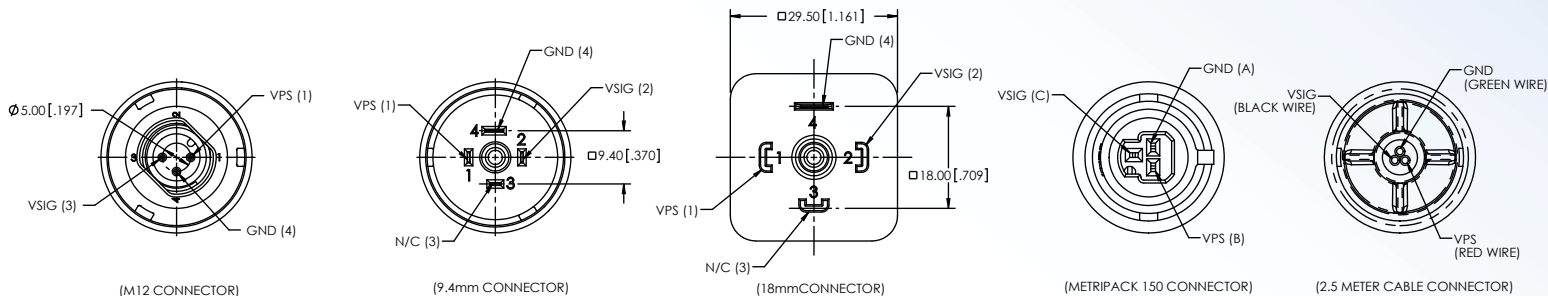
Contact Kavlico for accuracy options, custom packaging, alternative pressure ranges, pressure connections or other OEM or application specific requirements.



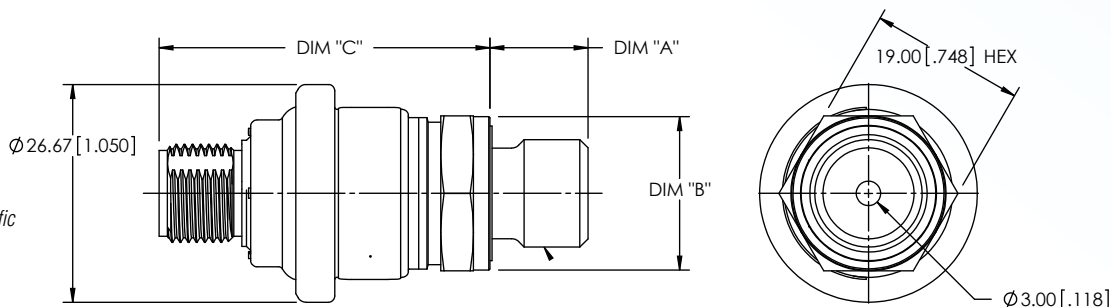
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Outline Drawings



Dimension "A" = 15.8 mm (Max)
 Dimension "B" = 50.4 mm (Max)
 Dimension "C" = 18.8 mm
 (Please consult factory for dimensions of specific configurations.)



LOW PRESSURE, M12 CONNECTOR SHOWN

Mating Connectors *(Mating Connector Kits not Shown)*

