

P4000

Sealed High Pressure & Refrigeration Sensors

Description

The P4000 series of pressure sensors incorporates a stainless steel isolation diaphragm and welded construction to withstand harsh environments. The sensor uses piezo-resistive sensing technology and is paired with our custom ASIC to produce a stable, accurate output.

Using a 5 Vdc input, the sensors provide a 0.5 to 4.5 Vdc output proportional to pressure. Internal temperature compensation provides an accurate, easy to use device.

The rugged construction of the P4000 series is specifically designed to withstand high over-pressure spikes and provide compatibility with a wide range of process media including refrigerants and hydraulic oils.

Features

- Welded Stainless Steel Construction
- Isolation Diaphragm
- Absolute or Sealed Gage Reference
- Low Power Consumption
- High Vibration Tolerance
- Outstanding EMI/RFI Protection
- Amplified Linear Output
- Temperature Compensated

Applications

- On & Off-Highway Vehicle Hydraulic Systems
- Pressurized Tools
- Instruments
- Pneumatic Controls
- Refrigerant Control & Recovery



Standard Pressure Ranges

- 0-100, 0-200, 0-300, 0-500, 0-750 PSI
- 0-1,000, 0-1,500, 0-2,000, 0-3,000, 0-4,000 PSI

Technical Specifications

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

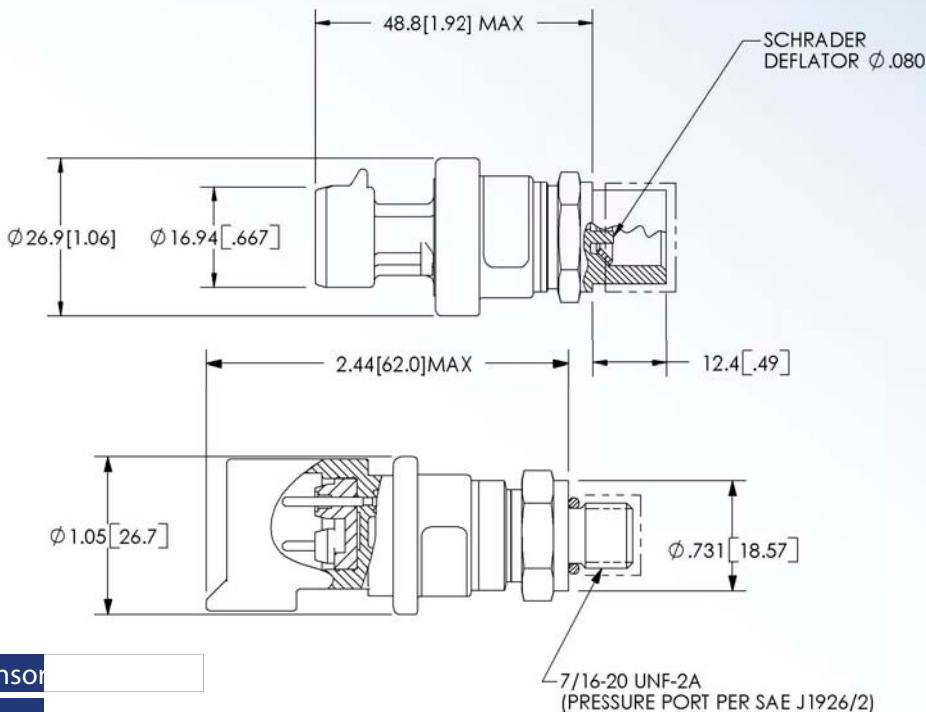
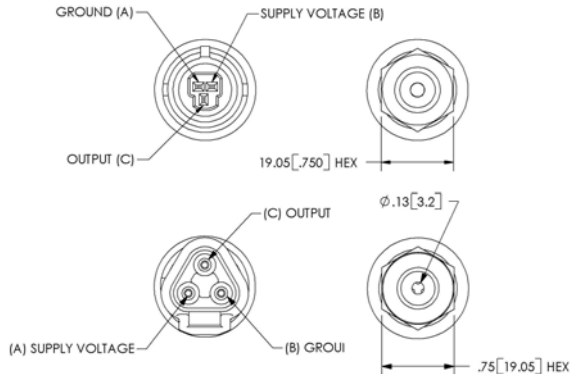
Pressure Ranges:	0-100 through 0-4,000 PSIA/PSIG	Shock:	75G, 1/2 Sine Wave
Proof Pressure:	See Table	Housing Material:	304L Stainless Steel
Burst Pressure:	0-750 PSI is 3,750 PSI	Weight:	3.0 oz. Max.
Supply Voltage:	0-1,000 through 0-4,000 is 15,000 PSI	Electrical Termination:	See "How to Order"
Supply Current:	5.0 \pm 0.5 Vdc	Pressure Connection:	See "How to Order"
Output Voltage (Ratiometric):	3 mA Max.	Recommended Interface Impedance:	25k Ohm Min. Resistance Between Transducer Output and Ground in Parallel with 0.2 mF Max. Capacitance
Voltage Ratiometricity:	0.5 to 4.5 Vdc	Over-Voltage Protection:	16 Vdc
Total Error Band:	\pm 1.5% of Span Max.	Reverse Polarity Protection:	-6 Vdc
Output Impedance:	\pm 2% at -40°C to $+125^\circ\text{C}$		
Operating Temperature:	< 100 Ohms		
Storage Temperature:	-40 $^\circ\text{C}$ to $+125^\circ\text{C}$		
Service Life:	-40 $^\circ\text{C}$ to $+125^\circ\text{C}$		
Vibration:	1,000,000 Full Pressure Cycles Min.		
	10G Sinusoidal from 10-2,000 Hz		



P4000

Sealed High Pressure & Refrigeration Sensors

Outline Drawings



How to Order

A typical order number has six codes, separated by one hyphen.

P4000 Sealed High Pressure & Refrigeration Sensor

Pressure Ranges & Proof Pressure

100	0 - 100 PSI -----300 PSI
200	0 - 200 PSI -----900 PSI
300	0 - 300 PSI -----900 PSI
400	0 - 400 PSI -----1,500 PSI
500	0 - 500 PSI -----1,500 PSI
750	0 - 750 PSI -----1,500 PSI
1000	0 - 1,000 PSI -----3,000 PSI
1500	0 - 1,500 PSI -----5,000 PSI
2000	0 - 2,000 PSI -----5,000 PSI
3000	0 - 3,000 PSI -----8,000 PSI
4000	0 - 4,000 PSI -----8,000 PSI

Reference

- A Absolute
- S Sealed Gage

Seal Material (External O-Ring)

- A None
- B Nitrile (pressure port option 3 only)

Pressure Connection

- 1 1/8-27 NPT
- 2 1/4" SAE Female Schrader Deflator
- 3 7/16-20 UNF SAE J1926/2
- 5 1/4-18 NPT

Electrical Connector

- AA Built-in Packard
- BA Built-in Deutsch

Example: P4000 - 1000 A A 2 AA

0-1,000 PSIA Sensor, No External O-Ring with a 1/4" SAE Female Port and Built-in Packard Connector

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

Although possible applications for our product(s) and other statements are presented herein, Kavlico is not expert in the user's technical field and therefore does not warrant the suitability of its product(s) for the user's applications. Therefore, Kavlico will not accept any liability and provides no guarantee, responsibility, or warranties of any kind concerning the suitability or related to the use of its product(s) for the user's applications.

Additionally, Kavlico will not be liable and provides no guarantee, responsibility, or warranties of any kind concerning the suitability or related to the use of its product(s) for the life support market or to be used in life support systems, safety or emergency systems, critical care applications, human implantation, aviation, nuclear facilities or systems or any other applications where product failure could lead to injury to persons, loss of life, harm to the environment, or catastrophic property damage.

Kavlico warrants that its products will be free from defective materials and workmanship for a period of one (1) year from date of delivery to the original purchaser and that its products will conform to Kavlico's specifications or standards. Any product found to be defective will be replaced or repaired at the sole option of Kavlico.

Note: Kavlico reserves the right to change its specifications at any time without notice. Kavlico is not an expert in the customer's technical field and therefore does not warrant the suitability of its product for the application selected by the customer.

Kavlico products are manufactured or covered by one or more of the following patents: 1,799,995, 4,735,098, 4,924,702, 4,967,071, 4,974,117, 5,020,377, 5,233,875, 5,275,054, 5,315,877, 5,329,819, 5,349,864, 5,349,865, 5,349,867, 5,369,989, 5,415,036, 5,528,930, 5,540,086, 5,553,502, 5,576,251, 5,578,843, 5,656,780, 5,824,889, 5,907,278, 5,923,952, 5,929,498, 5,929,754, 5,935,189, 6,008,113, 6,041,658, 6,148,674, 6,178,829, 6,211,558 B1, 6,279,407, 6,297,733, 6,311,566, 6,351,132 B1, 6,404,184 B1, 6,495,388 B1, 6,505,398 B2, 6,553,812 B2, 6,564,642 B2, 6,581,468 B2, 6,583,631 B2, 6,584,853 B2, 6,605,904 B1, 6,683,464 B2 with other U.S. and foreign patents pending.



14501 Princeton Avenue | Moorpark, CA 93021
Tel (805) 523-2000 | Fax (805) 523-7125

Web: www.kavlico.com | E-Mail: sales@kavlico.com