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, 0-6000 PSI

Technical Specifications

Note: Performance Specifications with 5v ± 0.002 Vdc supply at 25°C

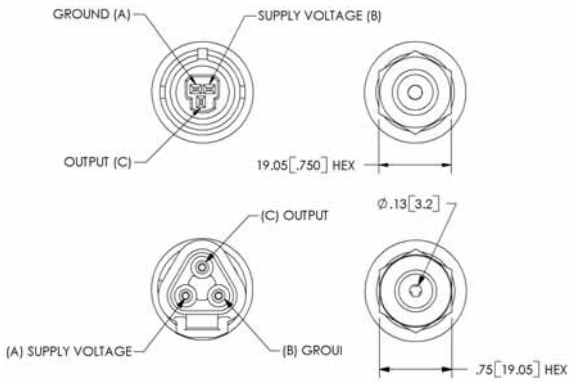
Pressure Ranges:	0-100 through 0-6,000 PSIA/PSIS
Proof Pressure:	See Table
Burst Pressure:	0-750 PSI is 3,750 PSI 0-1,000 through 0-6,000 is 15,000 PSI
Supply Voltage:	5.0 ±0.5 Vdc
Supply Current:	3 mA Max.
Output Voltage (Ratiometric):	0.5 to 4.5 Vdc
Voltage Ratiometricity:	±1.5% of Span Max.
Total Error Band:	±2% at -40°C to +125°C
Output Impedance:	< 100 Ohms
Operating Temperature:	-40°C to +125°C
Storage Temperature:	-40°C to +125°C
Service Life:	1,000,000 Full Pressure Cycles Min.
Vibration:	10G Sinusoidal from 10-2,000 Hz
Shock:	75G, ½ Sine Wave
Housing Material:	304L Stainless Steel
Weight:	3.0 oz. Max.
Electrical Termination:	See "How to Order"
Pressure Connection:	See "How to Order"
Recommended Interface Impedance:	25k Ohm Min. Resistance Between Transducer Output and Ground in Parallel with 0.2 mF Max. Capacitance
Over-Voltage Protection:	16 Vdc
Reverse Polarity Protection:	-6 Vdc

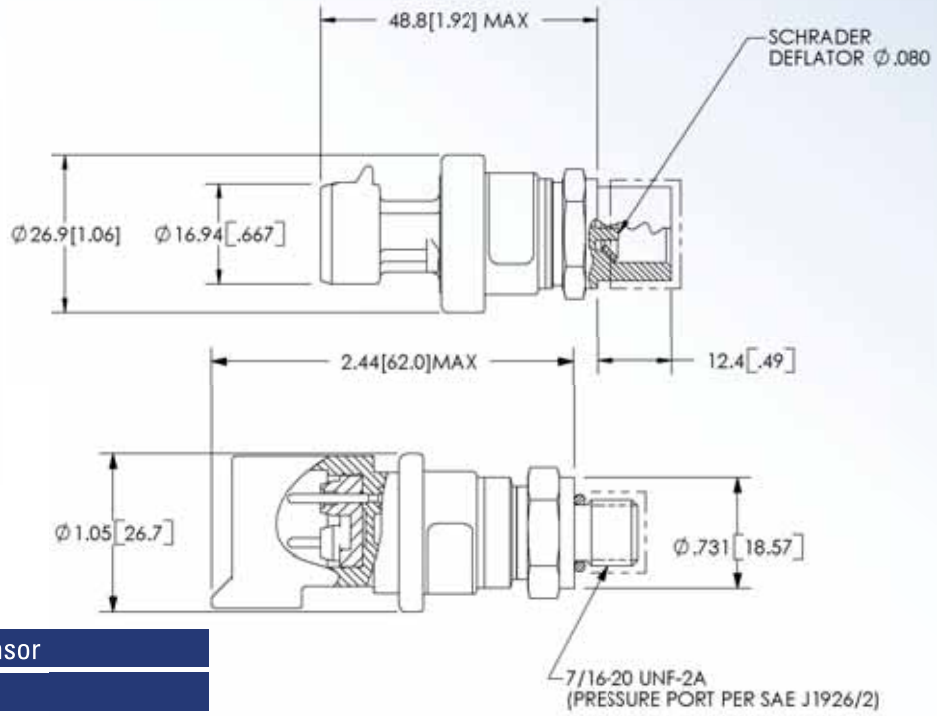
CST
CUSTOM SENSORS & TECHNOLOGIES

KAVLICO®

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
6000	0 - 6,000 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	¼" SAE Female Schrader Deflator
3	7/16-20 UNF SAE J1926/2
5	¼-18 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 ¼" 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.

14501 Princeton Avenue | Moorpark, CA 93021
Tel (805) 523-2000 | Fax (805) 523-7125
Web: www.kavlico.com | E-Mail: sales@kavlico.com