

P5000

Hermetically Sealed High Pressure Sensor



Typical Applications

Industrial

- Hydraulics
- Refrigeration Compressors
- Injection Molding
- Fuel Cells

Transportation

- CNG – Compressed Natural Gas
- LNG – Liquefied Natural Gas
- Vehicle Stability Control (VSC) Systems
- Gasoline & Diesel Direct Injection
- Power Steering
- Mobile A/C Systems (R744/CO₂)

Standard Full Scale Pressure Ranges

0-100, 0-160, 0-250, 0-400, 0-600 Bar
0-1000, 0-2000, 0-3000, 0-4000, 0-6000, 0-8000 PSI

Features

- Superior EMC Performance
- All Welded Stainless Steel Construction
- Hermetically Sealed
- High Vibration Tolerance
- Fault Tolerant Circuitry
- Temperature Compensated
- Amplified Linear Output
- Resistant to Chemical Attack

Description

The P5000 series of pressure sensors utilizes thin film strain gauge sensing technology that is paired with our custom ASIC to produce a stable, accurate output. The rugged stainless steel construction allows the sensor to be installed in harsh operating environments.

Using a 5 Vdc input, the sensors provide a 0.5 to 4.5 Vdc linear amplified output proportional to pressure. Internal temperature compensation provides an accurate, easy-to-use device. Specifically designed for high volume, OEM applications, the P5000's stainless steel sense element allows for extremely wide liquid or gaseous media compatibility.

Technical Specifications

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

Pressure Ranges:	0 - 100 through 0 - 600 Bar 0 - 1000 through 0 - 8000 PSI
Proof Pressure:	At least 1.5X (Dependent on range)
Burst Pressure:	At least 2X (Dependent on range)
Supply Voltage:	5.0 ± 0.25 Vdc
Supply Current:	5 mA (Max)
Output Voltage (Ratiometric):	0.5 to 4.5 Vdc
Ratiometricity:	1.5% of Span
Total Error Band (TEB):	±1.5% of Span between 0°C and +100°C 3% of Span below 0°C and above +100°C
Output Impedance:	< 100 Ω Max.
Operating Temperature:	-40°C to +140°C
Storage Temperature:	-40°C to +150°C
Service Life:	10 Million Full Pressure Cycles Min.
Vibration:	25 g's Random
Shock:	50 g's Minimum
Response Time:	< 5mSec
Housing Material:	Stainless Steel
Weight:	60 grams Max.
Electrical Termination:	See "How to Order"
Pressure Connection:	See "How to Order"
Recommended Interface Impedance:	25 kΩ Min. Resistance between Transducer Output and Ground in Parallel with 0.2 mF Max. Capacitance
Over-Voltage Protection:	26 Vdc
Reverse Polarity Protection:	-26 Vdc



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non-compliance can result in serious injury and/or damage to the equipment.

Warning: The product information contained in this catalogue is given purely as information and does not constitute a representation, warranty or any form of contractual commitment. Kavlico reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

© 2013 Kavlico. All rights reserved.

How to Order

Use this diagram, working top to bottom and left to right to construct your model number. An example is shown below. Custom OEM options are also available.

P5000 Hermetically Sealed High Pressure Sensor

Pressure Ranges

100	0 - 100 Bar	1000	0 - 1000 PSI
160	0 - 160 Bar	1500	0 - 1500 PSI
250	0 - 250 Bar	3000	0 - 3000 PSI
400	0 - 400 Bar	4000	0 - 4000 PSI
600	0 - 600 Bar	6000	0 - 6000 PSI
		8000	0 - 8000 PSI

External Seal

- 1B NBR Nitrile Butadiene (for port option 3, 12 and 13)
- 1G Aluminum Washer (for port options 6, 7, 8 and 9)
- 1X None (for port options 1, 4 and 11)

Pressure Connection (Port)

- 1 1/4 - 18 NPTF
- 3 7/16 - 20 UNF-2A PER SAE J1926/2
- 4 1/8 - 27 NPTF
- 6 STUD END DIN 3852-A-G1/4
- 7 STUD END DIN 3852-A-M10X1
- 8 STUD END DIN 3852-A-M12X1.5
- 9 STUD END DIN 3852-A-M14X1.5
- 11 1/4 - 19 BSPT (R1/4)
- 12 3/8 - 24 UNF-2A PER SAE J1926/2
- 13 9/16 - 18 UNF-2A PER SAE J1926/2

Electrical Connection

- C Packard Metri-Pack 150 Series
- H M12
- K 9.4 mm
- M 18 mm
- S Quad-Lok, without Mating Connector
- T Quad-Lok, with Mating Connector Assy (30.5cm Leads, 16 AWG)

P5000 - 250 - 1B - 3 - S

Example: P5000 - 250 - 1B3S

Description: P5000 Pressure Sensor, 0 - 250 Bar, NBR Nitrile Butadiene Seal, 7/16 - 20 UNF-2A Per SAE J1926/2 Pressure Connection, with Quad-Lok Electrical Connection, without Mating Connector

Don't see what you want?

Call us at +1 (619) 710-2068 to customize this product to meet your application-specific needs!