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/C0₂)

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.
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**

<table>
<thead>
<tr>
<th>Pressure Ranges</th>
<th>100</th>
<th>0 – 100 Bar</th>
<th>1500 P</th>
<th>0 - 1500 PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>160</td>
<td>0 – 160 Bar</td>
<td>3000 P</td>
<td>0 - 3000 PSI</td>
<td></td>
</tr>
<tr>
<td>250</td>
<td>0 – 250 Bar</td>
<td>4000 P</td>
<td>0 - 4000 PSI</td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>0 – 400 Bar</td>
<td>6000 P</td>
<td>0 - 6000 PSI</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>0 – 600 Bar</td>
<td>8000 P</td>
<td>0 - 8000 PSI</td>
<td></td>
</tr>
</tbody>
</table>

**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
2. 7/16 - 20 UNF-2A Per SAE J1926/2
3. 1/8 - 27 NPTF
4. 1/4 - 19 BSPT (R1/4)
5. 3/8 - 24 UNF-2A Per SAE J1926/2
6. 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)

Example: P5000 - 250 - 1B - 3 - S

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.

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**Technical Specifications**

- **Pressure Ranges:**
  - 0 - 70 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)
- **Total Error Band (TEB):** ±1.5% of Span between 0°C and +100°C
- **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:** < 5ms
- **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

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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.

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Don't see what you want? Call us at +1 (619) 710-2068 to customize this product to meet your application-specific needs!