XPR30 SERIES
Ultraminiature Pressure Transducer

- Flush Diaphragm, All-Titanium Construction
- Full Scale Range from 0-5 bar to 0-100 bar
- Low Profile, Diameter 3 mm, Length 9 mm
- Low Installation Torque Sensitivity
- Ideally Suited for Hostile Environments
- High Bandwidth

The XPR30 is a ultraminiature pressure transducer with a temperature compensation module integrated into the output cable. The diameter is only 3 mm and the length 9 mm.

The all-titanium construction and flush diaphragm allow the XPR30 to withstand most corrosive liquids.

The XPR30’s sensing element is fitted with a fully temperature compensated Wheatstone bridge equipped with high stability micro-machined silicon strain gauges which optimize performance, especially at low ranges and frequencies.

With many years of experience as a designer and manufacturer of sensors, FGP Sensors has the expertise to customize and/or design sensors for specific uses and testing environments. To meet your needs we also offer complete turnkey systems. Our conditioning electronics can power the sensor, amplify the electronic signal, and display the data digitally. A turnkey measurement system arrives with matched components, formatted, calibrated and ready for your immediate use.

Mounting example
Thermal and mechanical strains are not transmitted to the diaphragm. This results in a highly stable zero.
Recommended bore hole diameter: Ø3 +0.15 +0.05

Photographs non contractual. All specifications are nominal. They are subject to change without notice and assume correct loading of the device. 05/06/2006
Technical Specifications

Range (F. S.)
0-5, 0-10, 0-20, 0-35, 0-50 and 0-100 bar, gauge

Over-range
Without Damage : 2 x F.S.
Without Destruction : 5 x F.S.

Accuracy
Linearity : ±0.35% F.S. (±0.5% for 5 bar model)
Hysteresis : ±0.25% F.S.
Repeatability : ±0.2% F.S.

Temperature Range
Operating Temperature Range (OTR) : -40 to 120 °C
Compensated Temperature Range (CTR) : 0 to 60 °C
Zero Shift in CTR : <3.5% F.S. / 60 °C (<7% for 5 bar model) (1)
Sensitivity Shift in CTR : <2.5% of reading / 60 °C (1)

Electrical Characteristics

<table>
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<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Supply Voltage</td>
<td>10 Vdc</td>
</tr>
<tr>
<td>F.S. Output 5 bar model</td>
<td>30mV</td>
</tr>
<tr>
<td>F.S. Output &gt;5 bar model</td>
<td>100 mV</td>
</tr>
<tr>
<td>Zero Offset</td>
<td>&lt;±15 mV</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>1500 Ω</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>500 to 800 Ω</td>
</tr>
<tr>
<td>Insulation under 50 Vdc</td>
<td>≥100 MΩ</td>
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</tbody>
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Electrical Termination
Teflon wires (AWG36), standard length 1 m with compensation module at the end
Shielded Ø1.2 mm Teflon cable, 4 wires (AWG36), standard length 1m behind compensation module

Mechanical Characteristics
Material : Body and flush diaphragm in titanium, laser welded
Resonance Frequency : 200 kHz to 500 kHz
Sealing ring : Nitrile, other material possible
Protection Index : IP 50

Product References

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<th>Transducer</th>
<th>Full Scale Range (F. S.)</th>
<th>Option(s)</th>
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</table>
| XPR30      | 20 ET1                   | ET1 : CTR -20 to 100 °C
|            |                          | LC"X" : Additional wire length in m (front of module)
|            |                          | LC"XM" : Additional cable length in m (rear of module) |

"X" = Custom value

(1) at stabilised temperature

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