Pi600DD Pressure Sensor with Display

Key Features:
• Ranges 0-50mbar up to 0-700bar
• Outputs: Volts / mA
• Sealed to IP65
• Accuracy: <±0.25%/FS (0.1% option)
• 1 or 2 PNP Switch Outputs
• Gauge or Absolute Versions
• 4 Digit Red LED Display
• 1 or 2 Set-Points
• Excellent Chemical and Abrasion Resistance
• Rugged Construction
• UKAS Traceable Calibration Certificate Included (UKAS Laboratory Certificate Optional)
• 3 Year Warranty

The Pi600DD series of pressure sensors with an integrated display are designed for measurement of gas and liquid pressures where local monitoring and control is required. The Pi600DD provides a local 4-digit readout of the measured pressure in your preferred engineering units. Typical applications include: Hydraulics, Pneumatics, Agriculture, Marine, Sewage, Gas, Medical, Chemical, Food Processing, Barometers.

Pressure ranges between 0-50mbar and 0-700bar are available in gauge or absolute (Minimum absolute range 0-500mbar) models with a wide choice of electrical output signals to meet operational requirements.

Constructed from stainless steel with a ceramic diaphragm (316 Stainless Steel diaphragm below 500mbar), the Pi600DD series of transducers are extremely rugged yet of compact design. As standard a G¼” male process connection is offered along with a wide variety of alternatives and custom connections can also be provided.

In addition, we can offer complete customisation to suit your application, contact our technical sales team.

Why not take a look at our battery powered pressure sensor with display.

Options:
• Interim Pressure Ranges
• Manufacturing Materials - Manufactured from Different Materials for Different Application, compatibility (316 St/Steel or High Grade Duplex St/Steel)
• Improved Accuracy (NL&H): <±0.10%/span BFSL
• Improved Accuracy (TZS): <±0.02% or <0.01%/span/°C (Thermal Zero Shift)
• Supplied with Instrumentation and Calibrated as a complete system with traceable certificate

Applications:
• Hydraulics
• Pneumatics
• Agriculture
• Marine
• Sewage
• Gas
• Medical Technology
• Chemical
• Food Processing
• Barometers
## Specification:

<table>
<thead>
<tr>
<th>Input Pressure Range</th>
<th>Nominal Pressure Range</th>
<th>Bar (gauge, absolute or sealed gauge)</th>
<th>0.5</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>20</th>
<th>50</th>
<th>100</th>
<th>250</th>
<th>400</th>
<th>600</th>
<th>700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compound Ranges</td>
<td>Bar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permissible Overpressure</td>
<td>Bar</td>
<td></td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>20</td>
<td>40</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>650</td>
<td>880</td>
<td>880</td>
</tr>
<tr>
<td>Burst Pressure</td>
<td>Bar</td>
<td></td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>12</td>
<td>25</td>
<td>50</td>
<td>120</td>
<td>250</td>
<td>500</td>
<td>650</td>
<td>880</td>
<td>880</td>
</tr>
</tbody>
</table>

*<±0.1% / FS (BFSL) accuracy not possible in this range*

### Output Signal & Supply Voltage

<table>
<thead>
<tr>
<th>Wiring System</th>
<th>Output</th>
<th>Supply Voltage</th>
<th>Input Current</th>
<th>Input Resistance</th>
<th>Output Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>P642DD</td>
<td>2 – wire</td>
<td>4 – 20 mA</td>
<td>16 – 32 Vdc</td>
<td>&lt;500</td>
<td>&lt;500</td>
</tr>
<tr>
<td>P6010DD</td>
<td>3 - wire</td>
<td>0 – 10 Vdc</td>
<td>21 – 32 Vdc</td>
<td>&lt;500</td>
<td>&lt;500</td>
</tr>
</tbody>
</table>

### Performance

- **Accuracy (non-linearity, hysteresis, repeatability)**: % Full Scale Output
  - P642DD: <±0.25% / FS (BFSL)
  - P6010DD: <±0.1% / FS (BFSL) optional

- **Zero Balance**: ±% of Rated Output
  - <1.0

- **Setting Errors (offsets)**: Zero & Full Scale, <±0.5% / FS

- **Permissible Load**:
  - 2-wire: Rmax = [(VS – VS min) / 0.02] Ω
  - 3-wire: Rmin = 10 kΩ

- **Influence Effects**:
  - Supply Effects: Voltage Outputs = <±0.005 % FS / 1V
  - Load Effect: 4-20mA = <0.05 % FSO / kΩ

- **Warm-Up Time (amplified versions only)**: ms
  - 2 typ.

### Permissible Temperatures & Thermal Effects

- **Media Temperature**: ºC
  - -20ºC to +135ºC (150ºC with integrated cooling element)

- **Ambient Temperature**: ºC
  - -20ºC to +80ºC

- **Storage Temperature**: ºC
  - -40ºC to +125ºC

- **Compensated Temperature Range**: ºC
  - +20ºC to +80ºC

- **Thermal Zero Shift (TZS)**: % / FS / ºC
  - <±0.04 (standard)
  - <±0.02 (option)
  - <±0.01 (option)

- **Thermal Span Shift (TSS)**: % output / ºC
  - <±0.015% / ºC

### Electrical Protection

- **Reverse Polarity Protection**: No damage but also no function

### Mechanical Stability

- **Shock**: 100 g / 11 ms

### Materials

- **Housing & process connection**: 303 Stainless Steel
  - 316L Stainless Steel (optional)
  - High Grade DUPLEX Stainless Steel UNS S31803 (optional)

- **‘O’ ring seals**: Viton
  - NBR/Nitrile (optional)
  - EPDM (optional)
  - Chemraz (optional)

- **Diaphragm**: 1bar> = Ceramic Al₂O₃, 96 % / <1bar = 316L St/StSteel

### Misc

- **Weight**: grams
  - Approx... 250

- **Installation position**: Any

- **Operational Life**: Pressure Cycles
  - > 100 x 10⁶

- **Environmental Protection**: IP65 (IP40 on versions below 500mbar)
Dimensions (mm):

DIN Connector Version

M12x1 5-Pin Connector Version

Associated Products:

- FUSION Large Digital Display
- T24 Wireless Telemetry Range
- Intuitive4-L Panel-Mount Indicator
- Intuitive4-P Process Input Panel Mount Indicator
## Ordering Codes:

<table>
<thead>
<tr>
<th>Product Family</th>
<th>Electrical Output</th>
<th>Electrical Connection / ATEX Certification</th>
<th>Pressure Range</th>
<th>Accuracy (Non-Linearity &amp; Hysteresis)</th>
<th>Zero Temperature Compensation (TZS)</th>
<th>Process Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pi6--DO</td>
<td>42</td>
<td>LP</td>
<td>10barg</td>
<td>A</td>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>2</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Continued on next page
### Ordering Codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pi642DDLP-10barg-A4AV-00-000</td>
<td>Pi6</td>
</tr>
<tr>
<td>P</td>
<td>G¼” Male DIN 3852 with 150°C Integrated Cooling Coil</td>
</tr>
<tr>
<td>Q</td>
<td>G½” Male DIN 3852 with 150°C Integrated Cooling Coil</td>
</tr>
<tr>
<td>R</td>
<td>¼” NPT Male with 150°C Integrated Cooling Coil</td>
</tr>
<tr>
<td>S</td>
<td>9/16 UNF Internal (no bleed hole)</td>
</tr>
<tr>
<td>T</td>
<td>1/4” NPT Female</td>
</tr>
<tr>
<td>U</td>
<td>G1/4” Male DIN 3852 in Hastelloy C276 (MOQ = 10 pieces)</td>
</tr>
<tr>
<td>V</td>
<td>G1/4” Male in PEEK (Polyether Ethyl Ketone)</td>
</tr>
</tbody>
</table>

#### O-Ring Material

<table>
<thead>
<tr>
<th>Code</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>Viton (FKM)</td>
</tr>
<tr>
<td>N</td>
<td>Nitrile (NBR)</td>
</tr>
<tr>
<td>E</td>
<td>EPDM (Ethylene Propylene Diene Monomer)</td>
</tr>
<tr>
<td>C</td>
<td>Chemraz (Perfluoroelastomer)</td>
</tr>
</tbody>
</table>

#### Cable Length (in metres)

<table>
<thead>
<tr>
<th>Code</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>None</td>
</tr>
<tr>
<td>01</td>
<td>1 metre</td>
</tr>
</tbody>
</table>

#### Specials Code

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>No Special Requirements</td>
</tr>
<tr>
<td>010</td>
<td>Cleaned for Oxygen Service</td>
</tr>
</tbody>
</table>

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**Request Pricing**