Honeywell’s Precision Pressure Transducer (PPT) offers extraordinary value with high accuracy over a wide temperature range. The PPT combines proven silicon sensor technology with microprocessor-based signal conditioning to provide an extremely smart pressure transducer. Available in a compact, rugged design, the PPT has many software features that support a wide range of applications.

Specifications

**PERFORMANCE**
- Total Error Band: See Ordering Information
- Temperature Range: Operating: -40 to 85°C, Storage: -55 to 90°C
- Sample Rate: 8.33 ms to 51.2 min, minimum response delay 17 ms
- Resolution: Digital: Up to 0.001% FS, Analog: 1.22 mV steps (12 bits)
- Long Term Stability: 0.025%FS per year typical

**MECHANICAL**
- Pressure Units: atm, bar, cmwc, ftwc, hPa, inHg, inwc, kg/cm², KPa, mBar, mmHg, MPa, mwc, ps, user, lcom, pfs
- Media Compatibility: Suitable for non-condensing, non-corrosive, and non-combustible gases
- Weight: Approx. 5 oz (142 gm) without fittings

**ELECTRICAL**
- Output: RS-232 Digital with 0-5V Analog, RS-485 Digital with 0-5V Analog
- Power Requirements: Supply Voltage: 5.5 to 30 VDC, Operating Current: 35 mA maximum
- Baud Rate: User configurable between 1200 and 28800 bits/sec
- Bus Addressing: Address up to 89 units
- Connector: MIL-C-26482, Shell Size #10, 6-pin, #20 size

**ENVIRONMENTAL**
- Mechanical Shock: 1500G, 0.5 ms half sine, per MIL-STD-883D, M2002.3, Cond. B
- Thermal Shock: 24 1-hr cycles, -40 to 85°C
- Vibration: 0.5 in or 20G, 20-2000 Hz; per MIL-STD-883D, M2007.2, Cond. A
- Overpressure: 3X FS
- Burst Pressure: 3X FS
- EMC Directive: Compliant, Metal Connector Model Only
- RoHS: Non-Compliant

(1) Total Error is the sum of worst case linearity, repeatability, hysteresis, thermal effects and calibration errors over the operating temperature range. Full scale for differential ranges is the sum of + and - ranges. Calibration is traceable to NIST. (2) Exposure to overpressure will not permanently affect calibration or accuracy of unit. Burst pressure is the sum of the measured pressure plus the static pressure and exceeding it may result in media escape. (3) User configurable. (4) Recommended load impedance of 100 k-ohm or greater.

POTENTIAL APPLICATIONS
- Secondary Air Data
- Altimeters
- Engine Testing
- Flight Testing
- Meteorology
- Flow and Pressure Calibrators
- Instrumentation and Analytical Equipment
- Process Control
- Research and Development

FEATURES & BENEFITS
- HIGHLY ACCURATE
  Accuracy is guaranteed over the whole operating temperature range
- SIMPLIFIES SYSTEM DESIGN
  No additional signal compensation needed to gain the benefits of a very accurate sensor
- SMART, DIGITAL SENSING AND CONTROL
- EFFICIENT DATA ACQUISITION
  Network up to 89 units
- VERSATILE AND CONFIGURABLE
- Works with existing and new systems
- Optimizes Output
  User-configurable pressure units, sampling, update rate
- Flags Problems
  Internal diagnostics set flags, indicates errors
- USER SELECTABLE SOFTWARE FEATURES
  Baud Rate, Parity Setting, Continuous Broadcast, ASCII or Binary Output, Sensor Temperature Output (°C or °F), Deadband, Sensitivity, Tare Value, Configurable Analog Output
- ISO-9001, ISO-14001
### Ordering Information

<table>
<thead>
<tr>
<th>PPT PRECISION PRESSURE TRANSDUCER</th>
<th>Absolute</th>
<th>Gauge</th>
<th>Differential</th>
<th>Digital Total Error Band</th>
<th>Analog Total Error Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPT Full Scale Pressure Range</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0001</td>
<td>N/A</td>
<td>1 PSI</td>
<td>N/A</td>
<td>±(0.20%FS + 0.04% Abs. Reading)</td>
<td>±(0.24%FS + 0.04% Abs. Reading)</td>
</tr>
<tr>
<td>0001</td>
<td>N/A</td>
<td>N/A</td>
<td>±1 PSI</td>
<td>±(0.10%FS + 0.04% Abs. Reading)</td>
<td>±(0.12%FS + 0.04% Abs. Reading)</td>
</tr>
<tr>
<td>0002</td>
<td>N/A</td>
<td>2 PSI</td>
<td>±2 PSI</td>
<td>±(0.10%FS + 0.04% Abs. Reading)</td>
<td>±(0.12%FS + 0.04% Abs. Reading)</td>
</tr>
<tr>
<td>0005</td>
<td>N/A</td>
<td>5 PSI</td>
<td>±5 PSI</td>
<td>±(0.10%FS + 0.04% Abs. Reading)</td>
<td>±(0.12%FS + 0.04% Abs. Reading)</td>
</tr>
<tr>
<td>0010</td>
<td>N/A</td>
<td>10 PSI</td>
<td>±10 PSI</td>
<td>±0.10%FS Max.</td>
<td>±0.12%FS Max.</td>
</tr>
<tr>
<td>0015</td>
<td>15 PSI</td>
<td>N/A</td>
<td>N/A</td>
<td>±0.10%FS Max.</td>
<td>±0.12%FS Max.</td>
</tr>
<tr>
<td>0020</td>
<td>20 PSI</td>
<td>20 PSI</td>
<td>N/A</td>
<td>±0.10%FS Max.</td>
<td>±0.12%FS Max.</td>
</tr>
<tr>
<td>0050</td>
<td>50 PSI</td>
<td>N/A</td>
<td>N/A</td>
<td>±0.10%FS Max.</td>
<td>±0.12%FS Max.</td>
</tr>
</tbody>
</table>

**TYPE**

<table>
<thead>
<tr>
<th>P1 PRESSURE</th>
<th>P2 PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Absolute</td>
<td>N/A</td>
</tr>
<tr>
<td>G Gage</td>
<td>Reference</td>
</tr>
<tr>
<td>D Differential</td>
<td>+FS to –FS rel to P2</td>
</tr>
</tbody>
</table>

**P1 PRESSURE CONNECTION (ABSOLUTE, GAUGE, DIFFERENTIAL)**

- **F** Filter (blocks debris)
- **G** Stainless Swagelok™ (1/8 inch female)
- **K** Stainless Swagelok-compatible (1/8 inch male)
- **R** Brass barbed, right angle (1/8 inch ID tubing)
- **W** Brass barbed (1/8 inch ID tubing)
- **X** Brass Swagelok® (1/8 inch female)

**P2 PRESSURE CONNECTION (GAUGE, DIFFERENTIAL)**

- **F** Filter (blocks debris)
- **G** Stainless Swagelok® (1/8 inch female)
- **K** Stainless Swagelok-compatible (1/8 inch male)
- **R** Brass barbed, right angle (1/8 inch ID tubing)
- **W** Brass barbed (1/8 inch ID tubing)
- **X** Brass Swagelok® (1/8 inch female)
- **N** Not Applicable (Absolute)

**OUTPUTS**

- **2V** RS-232 digital, 0-5V analog
- **5V** RS-485 digital, 0-5V analog

**ELECTRICAL CONNECTION**

- **A** Plastic 6-pin connector
- **B** Metal 6-pin connector

**OPTIONS**

- **A** Demonstration Kit (RS-232 Only)
- **B** Mating Connector
- **C** Power Supply/Data Cable (RS-232 only)
- **E** Certificate of Conformance
- **F** Calibration Certificate

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**ESD (electrostatic discharge) sensitive device**

Damage may occur when subjected to high energy ESD. Proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

**EOS (electrical overstress) sensitive device**

Damage may occur when subjected to EOS. Do not exceed specified ratings to avoid performance degradation or loss of functionality.

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Honeywell reserves the right to make changes to improve reliability, function or design. Honeywell does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights nor the rights of others.

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**Find out more**

For more information on Honeywell’s Precision Pressure Transducers visit us online at www.pressuresensing.com.

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