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.

**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
  - 0-5V analog and either RS-232 or RS-485 digital output
- 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

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

ISO-9001, ISO-14001
### SPECIFICATIONS

| PERFORMANCE |  |
|-------------|  |
| **Total Error Band**<sup>(1)</sup> | See Ordering Information |
| **Temperature Range** | Operating: -40 to 85°C, Storage: -55 to 90°C |
| **Sample Rate**<sup>(3)</sup> | 8.33 ms to 51.2 min, minimum response delay 1.7 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**<sup>(3)</sup> | atm, bar, cmwc, ftwc, hPa, inHg, inwc, kg/cm2, KPa, mBar, mmHg, MPA, mwc, psi, 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**<sup>(3)</sup> | 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**<sup>(3)</sup> | User configurable between 1200 and 28800 bits/sec |
| **Bus Addressing**<sup>(3)</sup> | Address up to 89 units |
| **Connector** | Plastic: Mini-Con-X(R) Harsh Environment 6-pin circular connector, Metal: 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**<sup>(2)</sup> | 3X FS |
| **Burst Pressure**<sup>(2)</sup> | 3X FS |
| **EMC Directive** | Compliant, Metal Connector Model Only |
| **RoHS** | Non-Compliant |

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<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

<sup>(3)</sup> User configurable.
**PPT PRECISION PRESSURE TRANSDUCER**

**ORDERING INFORMATION**

### FULL SCALE PRESSURE RANGE

<table>
<thead>
<tr>
<th></th>
<th>Absolute</th>
<th>Gauge</th>
<th>Differential</th>
<th>Digital Total Error Band(^{(1),(2)})</th>
<th>Analog Total Error Band(^{(1),(2)})</th>
</tr>
</thead>
<tbody>
<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>N/A</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>TYPE</th>
<th>P1 PRESSURE</th>
<th>P2 PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Absolute</td>
<td>N/A</td>
</tr>
<tr>
<td>G</td>
<td>Gauge</td>
<td>Reference</td>
</tr>
<tr>
<td>D</td>
<td>Differential</td>
<td>+FS to -FS rel. to P2</td>
</tr>
</tbody>
</table>

### PRESSURE CONNECTION

#### P1 PRESSURE (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)
- **N**: Not Applicable (Absolute)

#### P2 PRESSURE (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)\(^{(2)}\)
- **B**: Standard Plastic Mating Connector\(^{(3)}\)
- **C**: Power Supply/Data Cable (RS-232 Only)\(^{(4)}\)
- **E**: Certificate of Conformance
- **F**: Calibration Certificate

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\(^{(1)}\) Tighter accuracy available on some models. Consult factory.
\(^{(2)}\) Demonstration kit includes unit, power supply/data cable (120V), demonstration software, and user manual.
\(^{(3)}\) Metal Mating Connectors can be purchased from many electronics distributors, generic P/N is MS3116F10-6S for MIL-DTL-26482H compliant parts (not RoHS-compliant); RoHS-compliant versions are also available.
\(^{(4)}\) RoHS-compliant.
**OPTIONS**

Option B

Option C\(^{(1)}\):
Plastic

Option C\(^{(1)}\):
Metal

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**PPT DIMENSIONS**

- **Mounting Holes:** 4 Places
- **#4-40 x \(0.500\) (1.27)**

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**STD** | **METAL** | **SIGNAL NAME**
---|---|---
1 | A | RS-232(TX)/RS-485 (B)
2 | B | RS-232(RX)/RS-485 (A)
3 | C | Case Ground
4 | D | Common Ground (GD)
5 | E | DC Power In
6 | F | Analog Output

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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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For more information
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