

PPTR



PPTE



### Precision Pressure Transducer Explosion Proof (PPTE)

The PPTE is an explosion-proof version of the PPTR. Built with the ruggedness of the PPTR, the PPTE is an excellent choice to be used in applications where protection in hazardous locations is critical. The PPTE has been tested and approved by FM Approvals and CSA International.

#### Applications

- Process control
- Chemical refineries
- Oil and gas
- Paper and pulp

#### PPTE Features and Benefits

<b>Accuracy</b>
±0.1% FS typical error over -40 to 85°C
<b>Pressure range</b>
Standard full-scale pressure ranges up to 3000 psi
<b>Pressure type</b>
Absolute and gauge
<b>Flexible</b>
Communicate to PC with either RS-232 or RS-485 digital interface.
<b>Analog</b>
0 – 5 VDC
<b>Networkable</b>
RS-232 in daisy-chain configuration or RS-485 in multi-drop configuration.
<b>Smart</b>
Over 30 software features
<b>Certification</b>
FM, CSA, Class I, Div I, Groups B,C,D, Class II/III, Div I, Groups E,F,G, Temp T6, Max Ambient = 70°C, Type 4X

#### Find out more

To learn more visit [www.honeywell.com/pressuresensing](http://www.honeywell.com/pressuresensing) or call us at 1-800-323-8295

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### Precision Pressure Transducer Ruggedized (PPTR)

The PPTR provides a rugged transducer for use in harsh environments. While maintaining all of the PPT's many benefits, the PPTR is designed with an isolation diaphragm, which offers pressure sensing solutions for both gaseous and liquid media applications. It's hermetically-sealed, stainless steel construction eliminates humidity effects and provides excellent emission and immunity protection. Tested to high vibration, thermal and mechanical shock standards, the PPTR is an excellent choice for any tough application

The PPTR now has a submersible connector option available for use in the harsh environments of liquid measurements. It provides accuracy of ±0.07% FS total band error over the temperature range of -4 to 60°C.

#### Applications

- Process control
- Engine test stands
- Flight test
- Manufacturing test stations
- Laboratory and medical instruments
- Water depth
- Instrumentation and analytical equipment
- Remotely operated underwater vehicles (ROV)

#### PPTR Features and Benefits

<b>Accuracy</b>
±0.1% FS typical error over -40 to 85°C; ±0.07% FS total band error over -4 to 60°C for submersible option
<b>Pressure Range</b>
Standard full-scale pressure ranges up to 3000 psi
<b>Pressure type</b>
Absolute and gauge, (submersible available in absolute only)
<b>Flexible</b>
Communicate to PC with either RS-232 or RS-485 digital interface.
<b>Analog</b>
0 – 5 VDC
<b>Networkable</b>
RS-232 in daisy-chain configuration or RS-485 in multi-drop configuration.
<b>Smart</b>
Over 30 software features
<b>Construction</b>
Hermetically sealed

### Honeywell Aerospace Plymouth

Under one facility, Honeywell Aerospace Plymouth provides both a state-of-the-art semiconductor foundry and design engineering services for a single customer interface to create, produce, and deliver leading pressure transducer solutions according to your specifications. Honeywell has the capability to develop customized pressure transducer solutions in addition to our offering of standard products to meet specific customer needs.

#### Ask us about Honeywell's additional advanced sensor solutions

- Magnetic Sensors and Magnetometers
- Accelerometers
- Thermal Switches

# Pressure Transducers and Barometers



OUTSTANDING STABILITY AND ACCURACY OVER TEMPERATURE

## Product Catalog



# Honeywell Delivers Advanced Pressure Transducers and Barometer Solutions



Honeywell's Precision Pressure Transducers and Barometers are among the most accurate, stable sensor based pressure products for a variety of industries. We provide a highly effective combination of technology, flexibility and size to perform reliably in extreme conditions. The ability to provide exceptionally accurate pressure readings over a wide temperature range, coupled with many advanced features and a compact rugged design, makes Honeywell's precision pressure transducers among the highest value, versatile solutions available. Our transducers and barometers are designed to function optimally in a wide variety of environments whether on land, sea or in the air.

We build all Honeywell products with our Total Quality Management (TQM) commitment, which means we do more than just supply products for your needs – we understand customer needs and aim to exceed expectations. Plus, all our products are backed by Honeywell, recognized as a global leader in sensor manufacturing, technology and quality.

## Transducers with a Smart Sensor Design

Honeywell combines forty years of experience in world leading, silicon piezoresistive pressure sensors with advanced technology to offer digital, networkable pressure transducers with unparalleled accuracy.

Honeywell's patented smart sensor is the heart of our transducers and barometers, gathering and translating pressure into stable, accurate readings. We designed our sensors using a micro-electro-mechanical system (MEMS) silicon die with integrated piezoresistive strain gauges to perform exceptionally in even rugged environments. Our transducers integrate powerful microprocessors, standard bus interface electronics and many software features to allow you to customize them to fit a variety of applications. This flexibility enables analog as well as digital output readings. You benefit from the Honeywell quality, expertise and innovation to provide the highest level of precise pressure readings under all conditions.



## Honeywell Precision Barometer (HPB)

Based on Honeywell's proven pressure sensor technology, the HPB provides a high-value solution for accurate and stable barometric pressure measurements. If you are seeking attributes such as ruggedness, size or stability, the HPB provides it all.

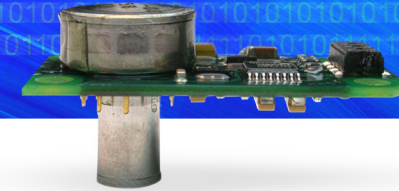
Meteorology applications require a barometer with longevity to withstand extreme environments while measuring barometric pressure on data buoys, weather balloons or weather stations. The HPB's two-tiered accuracy selection,  $\pm 0.4/\pm 0.8$  hPa (mbar) from  $-40$  to  $85^\circ\text{C}$ , offers you the choice of two valuable solutions based on the application. Construction of the HPB, coupled with precision sensor technology, enables the HPB to provide highly accurate readings over a wide temperature range.

For altimeter readings, the model HPA is an altimeter variant of the HPB, with range from 0 to 17.6 psia, providing two-tiered accuracy of  $\pm 0.03\%$  FS and  $\pm 0.06\%$  FS maximum from  $-40$  to  $85^\circ\text{C}$ . You receive the same quality of benefits as the HPB for altimeter-based needs.

## Applications

- Remote meteorological stations
- Data buoys
- Environmental data logging
- General meteorology
- Altimeters
- Airborne measurements
- Airports

HPB Features and Benefits
<b>Accuracy</b> $\pm 0.4$ hPa (mbar) maximum error over $-40$ to $85^\circ\text{C}$ (HPA: $\pm 0.03\%$ FS error over $-40$ to $85^\circ\text{C}$ )
<b>Pressure range</b> 500-1200 hPa (mbar) for HPB and 0-17.6 psia for HPA
<b>Lightweight and Small</b> 142 grams in weight and 1.5 in x .975 in x 1.8 in (3.8 x 2.5 x 4.6 cm)
<b>Output</b> Available with either RS-232, RS-485 or TTL digital outputs Stability: $\pm 0.02\%$ per year maximum



## Integrated Pressure Transducer (IPT)

Designed with high performance and size in mind, the IPT provides a size-sensitive, high-accuracy solution in an industry-standard SPI digital format.

Applying coefficients stored in the on-board EEPROM to the normalized IPT pressure and temperature output yields highly accurate and stable pressure readings.

The IPT is intended for integration into a wide variety of applications that require high accuracy over a wide temperature range of  $-40$  to  $85^\circ\text{C}$ . Accuracy ranges from  $\pm 0.04\%$  Full Scale (FS) for absolute pressure to  $\pm 0.10\%$  FS for gauge and differential pressure.

## Applications

- Air Data Computers
- Altimeters
- Cabin Air Pressure
- Engine Test Systems
- Flight Test Systems
- Flow and Pressure Calibrators
- Instrumentation and Analytical Equipment
- Research and Development

IPT Features and Benefits
<b>Accuracy</b> (from $-40$ to $85^\circ\text{C}$ ): $\pm 0.04\%$ FS, absolute $\pm 0.10\%$ FS, gauge/differential $\pm 0.20\%$ FS, 1 psi gauge
<b>Pressure range</b> Standard full-scale pressure ranges up to 50 psi
<b>Pressure type</b> Absolute, gauge and differential
<b>Lightweight and Small</b> Less than 10 grams in weight and 1.4 in x .75 in x .71 in (3.6 x 1.9 x 1.8 cm) (absolute); 1.4 in x .75 in x .98 in (gauge/differential) (3.6 x 1.9 x 2.5 cm)



## Smart Pressure Transducer (LG1237)

The Honeywell LG1237 is a smart absolute pressure transducer designed to provide extremely precise and stable pressure measurements. This compact device combines a piezoresistive pressure sensor with a microprocessor and digital signal processing to give users an accurate, easy-to-use, smart transducer able to withstand high levels of acceleration, vibration and shock.

Lightweight and rugged, the LG1237 performs accurately and consistently for pressure ranges up to 1000 psia. You benefit because we combine the sensor, high-speed digital processing and compensation algorithms that provide accuracy and stability over temperature extremes (better than  $\pm 0.05\%$  FS over  $55$  to  $125^\circ\text{C}$ ) and the long life of the device.

## Applications

- Jet engines
- Avionics
- Flight test
- Engine test cells
- Meteorology
- Instrumentation and analytical equipment

LG1237 Features and Benefits
<b>Accuracy</b> Achieves better than $\pm 0.05\%$ FS over a wide temperature range
<b>Pressure range</b> Standard full-scale pressure ranges up to 1000 psia
<b>Temperature range</b> $-55$ to $125^\circ\text{C}$



## Precision Pressure Transducer (PPT)

For accurate pressure readings, the PPT is designed with proven silicon sensor technology and microprocessor-based signal conditioning to provide an extremely powerful pressure transducer. Digital correction and compensation algorithms enable the PPT to achieve accuracy of  $\pm 0.05\%$  FS output between a temperature range of  $-40$  to  $85^\circ\text{C}$ .

The PPT can be used as a simple analog-output transducer or as an addressable digital transducer with either an RS-232 or RS-485 output to communicate direct to computers or other transducers.

The CE-marked PPT provides enhanced emission and immunity protection. In addition to complying with international regulations, it provides EMI protection, surge protection and a metal, six-pin military connector.

## Applications

- Avionics
- Flight testing
- Meteorology
- Engine test cells
- Flow and pressure calibrators
- Instrumentation and analytical equipment
- Medical and laboratory equipment
- Process control

PPT Features and Benefits
<b>Accuracy</b> $\pm 0.05\%$ FS typical error over $-40$ to $85^\circ\text{C}$
<b>Pressure range</b> Standard full-scale pressure ranges up to 500 psi
<b>Pressure type</b> Absolute, gauge and differential
<b>Digital</b> Communicate to PC with either RS-232 or RS-485 digital interface.
<b>Analog</b> 0 – 5 VDC
<b>Networkable</b> RS-232 in daisy-chain configuration or RS-485 in multi-drop configuration
<b>Flexible</b> Over 30 software features
<b>Lightweight and Small</b> 142 grams in weight and 1.5 in x .975 in x 1.8 in (3.8 x 2.5 x 4.6 cm)