

# Next Generation Precision Pressure Transducer

Highly Accurate Over a Wide Temperature Range

## 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

±0.0375%FS total accuracy over 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

#### Easy Interface

Connects to PC via communication ports

### Versatile and Configurable

#### Works with existing and new systems

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

#### Handles most dry gas media

#### 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), Deadband, Sensitivity, Tare Value, Configurable Analog Output

CE Qualified

ISO-9001, ISO-14001



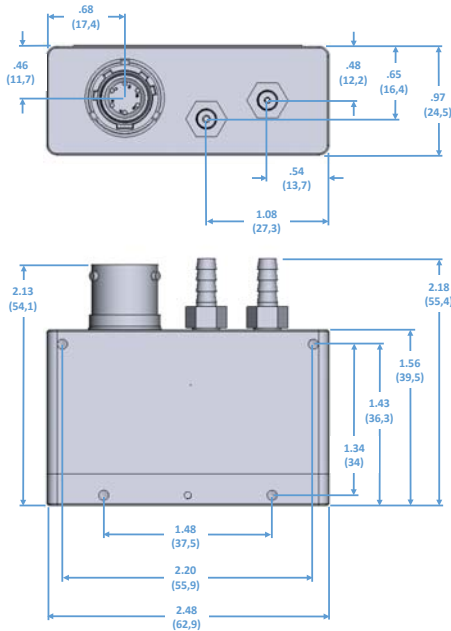
Honeywell's Next Generation Precision Pressure Transducer (PPT2) combines proven silicon sensor technology with microprocessor-based signal conditioning to provide an extremely smart pressure transducer. Available in a compact, rugged design, the PPT2 has many software features that support a wide range of digital and analog applications.

## Specifications

Performance	
<b>Total Error Band</b> <sup>(1) (2)</sup>	Digital: ±0.0375% FS Typ., ±0.075% FS Max. Analog: ±0.045% Typ., ±0.09% FS Max.
<b>Temperature Range</b>	Operating: -40 to 85°C Standard (S), -55 to 110°C Extended (E) Storage: -50 to 100°C Standard (S), -60 to 125°C
<b>Reading Rate</b> <sup>(4)</sup>	1000 readings/sec to 42.67min/reading
<b>Resolution</b>	Digital: Up to 0.001% FS, Analog: 0.1mV typical (15+ bits)
<b>Minimum Response Delay</b>	2 ms
<b>Long Term Stability</b>	0.025%FS max per year typical
Mechanical	
<b>Pressure Units</b> <sup>(4)</sup>	atm, bar, cmwc, ftwc, hPa, inHg, inwc, kg/cm <sup>2</sup> , Kpa, mBar, mmHg, Mpa, mwc, psi, user, pfs
<b>Media Compatibility</b>	Suitable for non-condensing, non-corrosive, and non-combustible gases
<b>Weight</b>	4.4 oz. (125 gm) without fittings
Electrical	
<b>Output</b> <sup>(4) (5)</sup>	RS-232 Digital with 0-5V Analog, RS-485 Digital with 0-5V Analog
<b>Power Requirements</b>	Supply Voltage: 6.0 to 34 VDC, Operating Current: 50 mA maximum
<b>Baud Rate</b> <sup>(4)</sup>	1200, 2400, 4800, 9600, 14400, 19200, 28800, 38400, 57600, 115200
<b>Bus Addressing</b> <sup>(4)</sup>	Address up to 89 units
<b>Connector</b>	ML-C-26482, Shell Size #10, 6-pin, #20 size
Environmental	
<b>Overpressure</b> <sup>(3)</sup>	3X FS, maximum 600psi
<b>Burst Pressure</b> <sup>(3)</sup>	3X FS, maximum 700psi
<b>EMC Directive</b>	Compliant
<b>RoHS</b>	Compliant

(1) Accuracy is the sum of worst case linearity, repeatability, hysteresis, thermal effects and calibration errors over the operating temperature range. Typical is the average of absolute value of errors at all pressures and temperatures. Full scale for differential ranges is the sum of + and - ranges. Pressure range 1psi gauge has digital accuracy of ±0.075% FS typical, ±0.15% FS maximum; analog accuracy of ±0.09% FS typical, ±0.18% FS maximum. Calibration is traceable to NIST. (2) Tighter accuracy available on some models - consult factory. (3) 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. (4) User configurable. (5) Recommended load impedance of 100 k-ohm or greater.

## Dimensions<sup>(2)</sup>



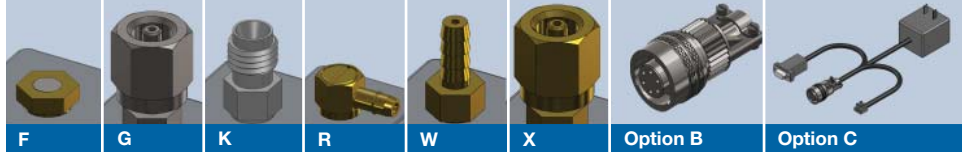
### Signal Name

- A RS-232 (TD) / RS-485 (B)
- B RS-232 (RD) / RS-485 (A)
- C Case Ground
- D Common Ground
- E DC Power In
- F Analog Output

## Ordering Information

Precision Pressure Transducer				
<b>PPT2</b>	<b>Full Scale Pressure Range</b>	Absolute	Gauge	Differential
	0001	N/A	1 PSI <sup>(1)</sup>	±1 PSI
	0002	N/A	2 PSI	±2 PSI
	0005	N/A	5 PSI	±5 PSI
	0010	N/A	10 PSI	±10 PSI
	0015	15 PSI	N/A	N/A
	0020	20 PSI	20 PSI	±20 PSI
	0050	50 PSI	50 PSI	±50 PSI
	0100	100 PSI	100 PSI	±100 PSI
	0300	300 PSI	300 PSI	±300 PSI
	0500	500 PSI	500 PSI	±500 PSI
	<b>Type</b>	<b>P1 Pressure</b>	<b>P2 Pressure</b>	
	A Absolute	0(vacuum) to FS	N/A	
	G Gauge	Reference to FS	Reference	
	D Differential	+FS to -FS rel. to P2	+FS to -FS rel. to P1	
	<b>P1</b>	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)		
	<b>P2</b>	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)		
	<b>Outputs</b>			
	2V	RS-232 digital, 0-5V analog		
	5V	RS-485 digital, 0-5V analog		
	<b>Operating Temperature Range</b>			
	S	Standard: -40 to 85°C		
	E	Extended: -55 to 110°C		
	<b>Options</b>			
	B	Mating Connector (See Below)		
	C	Power Supply/Data Cable (RS-232 only, See Below)		
	E	Certificate of Conformance		
	F	Calibration Certificate		

PPT2 0020 A W N 2V S - A



(1) Pressure range 1psi gauge has digital accuracy of ±0.075% FS typical, ±0.15% FS maximum; analog accuracy of ±0.09% FS typical, ±0.18% FS maximum.

(2) See application note AN106 "Mechanically Mounting the PPT2 in Legacy PPT Applications", at [www.pressuresensing.com](http://www.pressuresensing.com).

**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.

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](http://www.pressuresensing.com).  
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