

## PPT2 Next Generation Precision Pressure Transducer

Highly Accurate Over a Wide Temperature Range

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

(1) Accuracy 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. Pressure range 1psi gauge has digital accuracy of  $\pm 0.15\%$  FS maximum; analog accuracy of  $\pm 0.18\%$  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.

### POTENTIAL APPLICATIONS

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

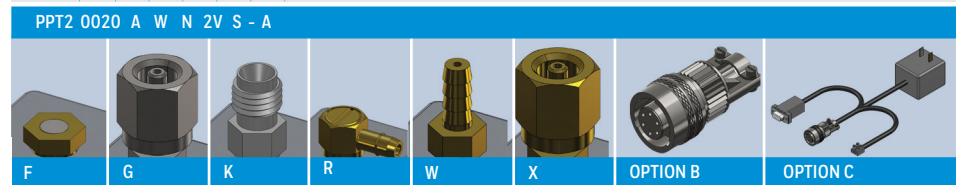
### FEATURES & BENEFITS

- **HIGHLY ACCURATE**  
 $\pm 0.075\%$ 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**

# PPT2 Specifications

## Ordering Information

PRECISION PRESSURE TRANSDUCER				
PPT2	Full Scale Pressure Range	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 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>		<b>PRESSURE CONNECTION (ABSOLUTE, GAUGE, DIFFERENTIAL)</b>		
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>		<b>PRESSURE CONNECTION (GAUGE, DIFFERENTIAL)</b>		
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			



### Find out more

For more information on Honeywell's Precision Pressure Transducers visit us online at [www.pressuresensing.com](http://www.pressuresensing.com). Customer Service Email: [quotes@honeywell.com](mailto:quotes@honeywell.com)

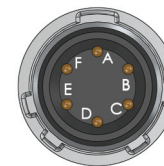
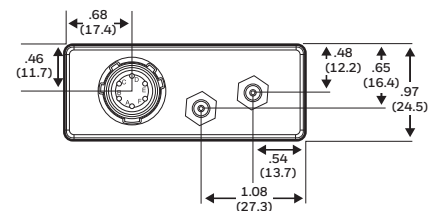
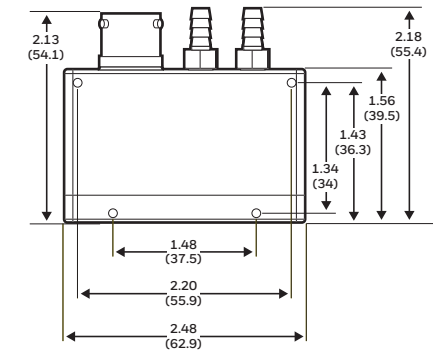
- (1) Pressure range 1psi gauge has digital accuracy of ±0.15% FS maximum; analog accuracy of ±0.18% FS maximum.
- (2) See application note AN106 "Mechanically Mounting the PPT2 in Legacy PPT Applications", at [www.pressuresensing.com](http://www.pressuresensing.com).

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## 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

### 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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