Honeywell

(EQualified ISO-9001

ISO-14001

Precision Pressure Transducer PPT

±0.05%

Accuracy from -40 to 85°C

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.

APPLICATIONS:

- Secondary Air Data \triangleright
- Altimeters 6
- **Engine Testing** \triangleright
- Flight Testing \geq
- Meteorology \triangleright
- Flow and Pressure Calibrators \geq
- Instrumentation and Analytical Equipment \geq
- Process Control
- Research and Development \triangleright

Many Software Features



FEATURES AND BENEFITS

- High Accuracy ±0.05% FS typical accuracy from -40 to 85°C
- Smart, Digital Sensing and Control
- Versatile and Configurable

- Simplifies System Design No additional signal compensation needed to gain the benefits of a very accurate sensor.
- Efficient Data Acquisition Connect up to 89 units on a multidrop bus using built-in RS-485 capability. Easy Interface - Directly connects to PC via communication ports. Closes the Loop - Smart PPT makes control decisions.

Precision Pressure Transducer
Jan 21

DAXN2VA

- Works with existing and new systems. All units have 0-5V analog and either RS-232 or RS-485 digital outputs. Handles most dry gas media. Optimizes Output - User-configurable pressure units, sampling, update rate. Flags Problems - Internal diagnostics set flags, provide alarms.
- 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

SPECIFICATIONS

Derfermence Crecifications (1)
Performance Specifications ^w
I otal Error Band: (from -40 to 85°C)
Digital: ±0.05% FS Typ., ±0.10% FS Max. ⁽²⁾
Analog: ±0.06% FS Typ., ±0.12% FS Max. ⁽²⁾
Temperature: ±1°C (at sensing element)
Temperature Range:
Operating -40 to 85°C (-40 to 185°F)
Storage: -55 to 90°C (-67 to 194°F)
Sample Rate ⁽⁵⁾ : 8.33ms to 51.2 min
Resolution:
Digital: Up to 0.0011% FS
Analog: 1.22mV steps (12 bits)
Response Delay:
(1000/undate rate) +1ms_minimum 17ms
Long Torm Stability ⁽⁷⁾ : 0.025% ES may par year
Machanical Spacifications
mechanical Specifications
Pressure Ranges and Type:
See Ordering Information
Pressure Units ⁽⁶⁾ : atm, bar, cmwc, ftwc, hPa, inHg,
inwc, kg/cm ² , KPa, mBar, mmHg, MPa, mwc, psi,
user, Icom, pfs
Static Pressure (Differential Only) :
≤ 150psi: no effect on accuracy of PPT
> 150psi; out of spec, returns spec ≤ 150psi
Media Compatibility: Suitable for non-condensing.
non-corrosive and non-combustible cases
PPTR available for other cases and fluids
Weight: 5 oz (1/2 gm) without fittings
Electrical Specifications
Output:
Dec 222 Digital $w/0.5$ / Applog ⁽⁵⁾
RS-252 Digital w/0-5V Analog ⁽⁵⁾
RS-485 Digital W/0-5V Analog [®]
Power Requirements:
Supply Voltage: 5.5 to 30 VDC
Operating Current: Standard: 17-30mA; CE: 13-25mA
Baud Rate ⁽⁵⁾ : 1200, 2400, 4800, 9600,
14400, 19200, 28800
Bus Addressing ⁽⁵⁾ : Address up to 89 units
Environmental Features ⁽³⁾
Overpressure: 3x FS, maximum 600psi
Burst Pressure: 3x FS, maximum 700psi
Mechanical Shock: 1500G, 0.5ms half sine
Temp Shock: 24 1-bour cycles -40 to 85°C
Vibration: 0.5 in or 20 G's 20 Hz $= 2$ K Hz
(1) Accuracy is the sum of worst case linearity, repeatability,
n/etoroele thormal offorte and calibration offore trom $-/11$ to
Proceedings and calibration ends normal at all
85°C. Typical is the average of absolute value of errors at all
85°C. 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 first gauge has
45 Sec. 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 +0.10% ES typical +0.20% ES maximum
\pm 85°C. 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 \pm 0.10% FS typical, \pm 0.20% FS maximum, analog accuracy of \pm 0.12% FS typical, \pm 0.24% FS maximum,
\pm 85°C. 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 \pm 0.10% FS typical, \pm 0.20% FS maximum; analog accuracy of \pm 0.12% FS typical, \pm 0.24% FS maximum. Calibration is traceable to NIST. (2)Tighter accuracy available
40 cm solution of 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 $\pm 0.10\%$ FS typical, $\pm 0.20\%$ FS maximum; analog accuracy of $\pm 0.12\%$ FS typical, $\pm 0.24\%$ FS maximum. Calibration is traceable to NIST. (2)Tighter accuracy available on some models. Consult factory. (3) Exposure to
\pm SS°C. 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 $\pm 0.10\%$ FS typical, $\pm 0.20\%$ FS maximum; analog accuracy of $\pm 0.12\%$ FS typical, $\pm 0.20\%$ 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
spectrum and energy and characteristic for the series of the series of the solute 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 $\pm 0.10\%$ FS typical, $\pm 0.20\%$ FS maximum; analog accuracy of $\pm 0.12\%$ FS typical, $\pm 0.24\%$ 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
spectral state 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 $\pm 0.10\%$ FS typical, $\pm 0.20\%$ FS maximum; analog accuracy of $\pm 0.12\%$ FS typical, $\pm 0.24\%$ 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.

B. Vibration tested per MIL-STD-883D, M2007.2, Cond. A. (4) CE Mark version recommended for installations with EMI. CE Mark version tested to show compliance with European EMC Directive per IEC 61326. See www.pressuresensing.com for information on test levels and results (5) User configurable. (6) Demonstration kit includes unit, power supply/data cable (120V), demonstration software, and user manual. (7) Beyond max. total error band when continuously powered at 25±10°C, <90%RH and 28 to 32 inHg atmospheric pressure.

CASE OUTLINE



(1.17)

ORDERING INFORMATION PPT

Precision Pressure Transducer												
FULL SCALE PRESSURE RANGE												
	1	Abs	olut	te	Ga	uge	Differentia	al				
0001		n/a			11	PSI ⁽¹⁾	±1 PSI					
0002	2	n/a			21	PSI	±2 PSI					
0005	5	n/a			5 I	PSI	±5 PSI					
0010)	n/a		10	PSI	±10 PSI						
0015	5	15 PSI		n/a	а	n/a						
0020	20 PSI			20	PSI	±20 PSI						
0050	0 50 PSI 5			50	PSI	±50 PSI						
0100	00 100 PSI 1			10	10 PSI	±100 PS	1					
0300)	300	P5		30		±300 PS	1				
0000) 	500	195	I	50	0 251	±500 PS		D2 Drees			
			bee	luto			Pressure	: :	PZ Press	ure		
	Ĝ	Gauga				Ro Ro	ference to F	,	Reference	۵		
	п	Differential			al	1\C	S to _FS rel 1	to P2	+FS to _I	e FS rel tr	P1	
	0	P1		RESS		F CON	NECTION	012				
				Abso	olute	Gauq	e. Differentia	1				0
		w		Bras	s ba	rbed (1	/8 inch ID tul	oing)			Nn	X
	X Brass Swagelok TM (1/8 inch female)										all a	
		R Brass barbed, right angle (1/8 inch ID tubing)										
												E
		P2 PRESSURE CONNECTION										
		Gauge, Differential										
		W Brass barbed (1/8 inch ID tubing)										
		X Brass Swagelok (1/8 inch female)										
		E Filter (blocks debris)										
			Γ Γ Πιει (DIOUNS GEDIIS) Δhsolute									
		N Not Ar				policat	le					
				OU	TPL	JTS						
				2V	F	RS-232	digital, 0-5V	analog				
		5V R				RS-485	digital, 0-5V	analog				
					EL	ECTR	ICAL CONFI	GURAT	ION AND	CONNE	CTION	(4)
	A Standard, 6-pin plastic connector											
		В				CE N	/lark, 6-pin m	etal cor	nector			
						OPTI	ONS	(5)				
						A D	Demonstration	n Kit ^(o) (RS-232 or	nly)		
						BN	Aating Conne	ctor (Se	e Below)		0	
							ower Supply	/Data C	able (RS-2	232 only,	See	
04.00				014		Delow	/)					
0100	A	vv	N	20	A	-A						
Star	ndar	d	С	E Mar	ĸ		Standard			CE Mark		
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Find out more

For more information on Honeywell's Precision Pressure Transducers visit us online at www.pressuresensing.com or contact us at 1-800-601-3099 (International: 1-602-365-3099). Customer Service Email: D&Sorders@honeywell.com.

PPT

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