



PRECISION

Pressure & Temperature Transmitter AST20PT

Overview

The AST20PT is a digitally compensated pressure and temperature dual output transmitter, offering measurements from a single process point, reducing process penetration points and leaks. Krystal Bond™ Technology alone offers excellent non-linearity and non-repeatability performance. When it is combined with the ASIC, the AST20PT steps into its own league of high performance pressure sensing at an affordable price.

Benefits

- ◆ ASIC Compensation
- ◆ Superb Temperature Performance
- ◆ Real Time Thermal Compensation
- ◆ Real Time Linearity Correction
- ◆ Turndown Capability

Applications

- ◆ Aerospace
- ◆ Analytical Instruments
- ◆ Hydraulics
- ◆ Hydrogen (Consult factory for media compatibility)
- ◆ Labs / Metrology
- ◆ Medical
- ◆ Military
- ◆ Test Stands

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AST20PT Precision Pressure & Temperature Transmitter

Performance @ 25°C (77°F)

Accuracy (Pressure)	< ±0.1% BFSL (< ±0.2% BFSL over 15,000 PSI) (Accuracy includes non-linearity, hysteresis & non-repeatability)
Accuracy (Temp.)	±2%TEB (Accuracy includes non-linearity, hysteresis & non-repeatability)
Stability (1 year)	±0.1% FS, typical
Proof Pressure	2X Rated Pressure, standard (For higher proof pressures, contact factory)
Burst Pressure	5X or 50,000 PSI (whichever is less)

Environmental Data

Temperature

Operating Ambient	-40 to 85°C (-40 to 185°F)
Operating Media	-55 to 125°C (-67 to 257°F)
Storage	-50 to 125°C (-58 to 257°F)

0-100% relative humidity, non-condensing

Thermal Limits

Compensated Range	0-70°C (32 to 158°F)
TC Zero	< ± 0.5% FS
TC Span	< ± 0.5% FS

Other

Shock	100G, 11 msec, 1/2 sine
Vibration	10G peak, 20 to 2000 Hz.
EMI/RFI Protection:	Yes
Rating:	IP-66

Electrical Data

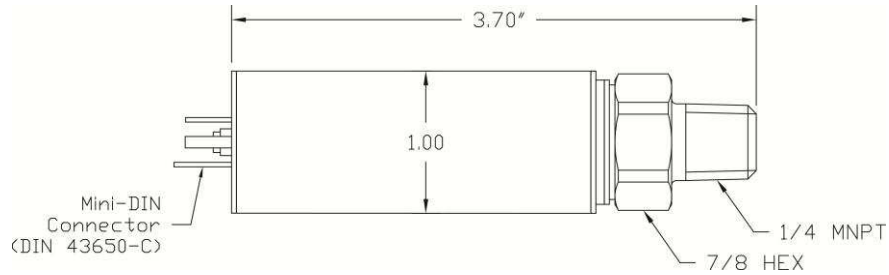
Output	4-20mA+	0-5V, 1-5V	0-10V, 1-10V	0.5-4.5V Ratiometric
Excitation	10-28VDC	10-28VDC	15-30VDC	5VDC, regulated
Current Consumption:	-	< 10mA	< 10mA	< 10mA
Sampling Rate	400 Hz	400 Hz	400 Hz	400 Hz
Output Noise	< 1mV, RMS	< 1mV, RMS	< 1mV, RMS	< 1mV, RMS
Zero Offset:	< ±0.5% of FS	< ±0.5% of FS	< ±0.5% of FS	< ±0.5% of FS
Span Tolerance:	< ±0.5% of FS	< ±0.5% of FS	< ±0.5% of FS	< ±0.5% of FS
Output Load:	0-800 Ohms@10-28VDC	5k Ohms, Min.	5k Ohms, Min.	5K Ohms, Min.
Reverse Polarity Protection	Yes	Yes	Yes	Yes

+For units with loop-powered 4-20mA output, the pressure loop must be powered or the temperature output will not operate.

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Dimensions



Connector Options	Letter
DIN 43650 C	E
DIN 43650 A	I
6 Pin Bendix	R
M12x1	Y

Threaded Connections	Letter
1/4" NPT Male	A
1/8" NPT Male	B
1/2" NPT Male	P
F250C Female Autoclave	W

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Ordering Information

AST20PT	1	A	00500	P	3	E	1	H	000
Series Type									
Temperature Output Range 1= -40 to 85°C (-40 to 185°F) 2= -40 to 125°C (-40 to 250°F) 3= 0 to 70°C (30 to 158°F) 4= -55 to 125°C (-65 to 250°F) 5= -18 to 93°C (0-200°F)									
Process Connection A = 1/4" NPT Male B = 1/8" NPT Male** P = 1/2" NPT Male*** W = F250C Female Autoclave**** ** Not available under 50PSI, not available in 316L *** Pressures up to 15,000 PSI **** Pressures from 10,000 to 45,000 PSI, not available in 316L									
Pressure Range Insert 5-digit pressure range code (example: 0-100 PSI = 00100) Ranges between 0-25 PSI and 0-45,000 PSI available. Compound pressure up to -14.7 to 500 PSI.									
Pressure Unit B= Bar K= kg/cm2 P= PSI									
Outputs 1= 0.5-4.5V ratiometric 2= 0-5V(3 wire) 3= 1-5V 4= 4-20mA 5= 0-10V(3 wire) G= 1-10V									
Electrical A= 2 ft.(0.6m) B= 4 ft.(1.2m) C= 6 ft.(1.8m) D= 10 ft.(3.0m) E= Mini DIN 43650C I= DIN 43650A R= 6- Pin Bendix Y= M12x1									
Wetted Material 0=17-4PH 1=316 L (available up to 10,000 PSI) 2= Inconel 718 (consult factory on availability)									
Fail Condition N= Not Specified H= Fail High L= Fail Low									
Options (contact factory for additional options) 000= No Options									

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