

Overview

The AST20HA is a digitally compensated pressure transducer / pressure transmitter that offers high performance over temperature. Krystal Bond™ Technology alone offers excellent non-linearity and non-repeatability performance. When it is combined with the most advanced electronics, the AST20HA steps into its own league of high performance pressure sensing at an affordable price.

Benefits

- Asic Compensation
- ABS (American Bureau of Shipping) Approved
- 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



Performance @ 25°C (77°F)

Accuracy	< ± 0.1% BFSL*
Stability (1 year)	± 0.1% FS, typical
Proof Pressure	2X Rated Pressure, standard**
Burst Pressure	5X or 50,000 PSI, whichever is less
Pressure Cycles	> 100 Million

* Accuracy includes non-linearity, hysteresis & non-repeatability
**For higher proof pressures, contact factory

Environmental Data

Temperature	
Operating	-40 to 85°C (-40 to 185°F)
Storage	-50 to 125°C (-58 to 250°F)
Thermal Limits	
Compensated Range	0-70°C (30 to 158°F)
TC Zero	< ± 0.5% FS
TC Span	< ± 0.5% FS
Other	
Shock	100G, 10msec, 1/2 sine
Vibration	10G peak, 20 to 2000Hz
EMI/RFI Protection:	Yes
Rating:	IP-66

Electrical Data

Output	4-20mA	0-5V, 1-5V, 1-6V	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	400Hz	400Hz	400Hz	400Hz
Output Noise:	< 1mV, RMS	< 1mV, RMS	< 1mV, RMS	< 1mV, RMS
Zero Offset	< ± 0.5% FS	< ± 0.5% FS	< ± 0.5% FS	< ± 0.5% FS
Span Tolerance	< ± 0.5% FS	< ± 0.5% FS	< ± 0.5% FS	< ± 0.5% FS
Output Load:	0-800 Ohms@10-28-VDC	5k Ohms, min.	5k Ohms, min.	5k Ohms, min.
Reverse Polarity Protection	Yes	Yes	Yes	Yes

Ordering Information

AST20HA A 05000 P 4 E 0 H 000

Series Type

Process Connection*

- A = 1/4" Male NPT
- B = 1/8" Male NPT
- C = 1/4" Male BSPP
- E = 9/16"-18 UNF Male [SAE6]
- F = 7/16"-20 Male UNF [SAE4]
- K = 7/16"-20 Female UNF [SAE4]
- M = 3/8"-24 UNF Male [SAE3]
- W= F250C Female Autoclave

Pressure Range

Insert pressure from chart

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)
- 6= 1-6V
- G= 1-10V

Electrical (Wiring information available at: <http://www.astensors.com/wiring.php>)

- A= 2 ft.(0.6m)
- B= 4 ft.(1.2m)
- C= 6 ft.(1.8m)
- D= 10 ft.(3.0m)
- E= Mini DIN 43650
- I= DIN 43650-A
- R= 6- Pin Bendix
- Y= Turck M12 4-Pin Eurofast

Wetted Material**

- 0=17-4PH
- 1=316 L
- 2= Inconel 718 (Consult factory on availability)

Failure State

- H= High
- L= Low
- N= None

Options

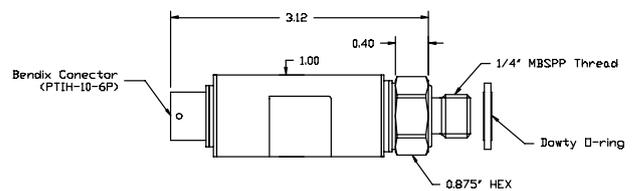
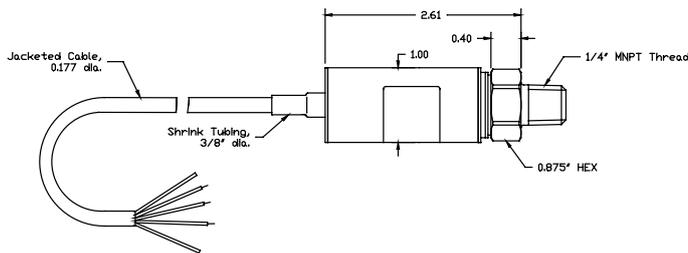
000= No Special Options

PSIG Measurement	Pressure Code	BARG Measurement	Pressure Code
-14.7 to 25*	V0025*	-1 to 2*	V0002*
0-25	00025	0-2	00002
0-50	00050	0-5	00005
0-100	00100	0-7	00007
0-150	00150	0-10	00010
0-200	00200	0-20	00020
0-250	00250	0-35	00035
0-500	00500	0-50	00050
0-1,000	01000	0-70	00070
0-2,500	02500	0-100	00100
0-3,000	03000	0-250	00250
0-5,000	05000	0-350	00350
0-7,500	07500	0-500	00500
0-10,000	10000	0-700	00700
0-15,000	15000	0-1,000	01000
0-20,000	20000	0-1,400	01400
0-30,000	30000	0-2,000	02000
0-45,000	45000	0-3,000	03000

All ranges between 0-25 PSI and 0-45,000 PSI available. *Compound ranges up to -14.7 to 500 PSI available. Please consult factory.

*7/16"-20 Male UNF [SAE4] and 1/8" NPT Male not available under 50PSI (1/8" NPT Male not available in 316L)
F250C Female Autoclave is the only option for 10,000 to 20,000PSI, not available in 316L
**316L available up to 10,000 PSI

Dimensional Data



Warranty

Workmanship - AST, Inc. pressure transmitters have a limited one-year warranty to the original purchaser. AST, Inc. will replace or repair, free of charge, any defective transmitter. This warranty does not apply to any units that have been modified; misused, neglected or installed where the application exceeds published ratings. AST's sensors are made with pride in New Jersey, USA. If in the area please feel free to stop by for a visit!

Installation/Applications - The purchaser is responsible for media compatibility, functional adequacy, and correct installation of the transmitter.