

AST20HA *Industrial ASIC*



Stainless Steel Media Isolated Pressure Sensor

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 ASIC, the AST20HA steps into its own league of high performance pressure sensing at an affordable price.

Benefits

- Asic Compensation
- Temperature Performance
- Real Time Thermal Compensation
- Real Time Linearity Correction
- Turndown Capability
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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 20,000 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@10-28VDC	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 range from chart

Pressure Unit

B= Bar K= kg/cm² P= PSI

Outputs

- 1= 0.5-4.5V ratiometric
- 3= 1-5V
- 5= 0-10V(3 wire)
- G= 1-10V
- 2= 0-5V(3 wire)
- 4= 4-20mA
- 6= 1-6V

Electrical[†]

- A = 2 ft.(0.6m)
- E = Mini DIN 43650
- S = 4- Pin Bendix
- B = 4 ft.(1.2m)
- I = DIN 43650-A
- V = Mini DIN 43650B (9.4mm)
- C = 6 ft.(1.8m)
- R = 6- Pin Bendix
- Y = Turck M12 4-Pin Eurofast
- D = 10 ft.(3.0m)

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

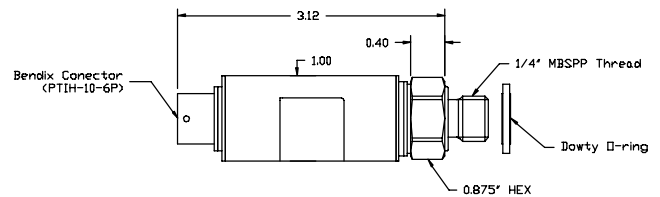
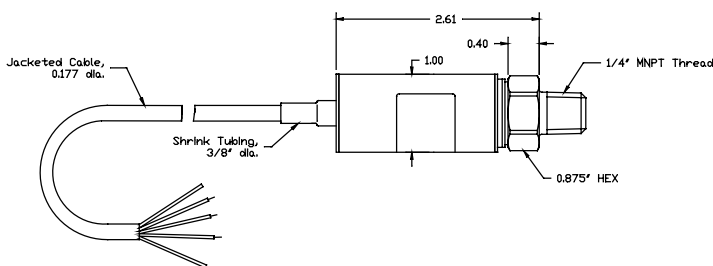
PSIG Measurement Range	Pressure Range Code	BARG Measurement Range	Pressure Range Code
-14.7 to 25**	V0025**	-1 to 2**	V0002**
0-25	00025	0-2	00002
0-50	00050	0-5	00005
0-100	00100	0-7	00007
0-150	00150	0-10	00010
0-200	00200	0-20	00020
0-250	00250	0-35	00035
0-500	00500	0-50	00050
0-1,000	01000	0-70	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

Typical ranges. All ranges between 0-25 PSI and 0-20,000 PSI available.
**Compound ranges up to -14.7 to 500 PSI available. Please consult factory.

* Not available under 50PSI (1/8" NPT Male not available in 316L)

† Wiring information available at: <http://www.astensors.com/mediacenter.php>

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.