

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

Applications

- Aerospace
- Analytical Instruments
- Hydraulics
- Hydrogen*
- Labs / Metrology
- Medical
- Military
- Test Stands

*Consult Factory for media compatibility



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	1-5V	1-6V, 1-10V	0.5-4.5V Ratiometric
Excitation	10-28VDC	10-28VDC	15-30VDC	5VDC, Regulated
Current Consumption:	-	< 10mA	< 10mA	< 10mA
Bandwidth	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

Ordering Information

AST20HA A 05000 P 4 E 0 000

Pressure Ranges*

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]

Pressure Range

Insert pressure range from chart

Pressure Unit

B= Bar
 K= kg/cm²
 P= PSI

Outputs

1= 0.5-4.5V ratiometric 4 = 4-20mA
 3= 1-5V G = 1-10V

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

Options

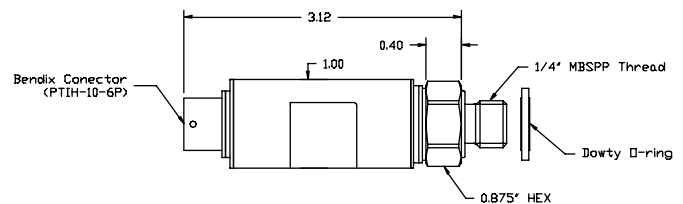
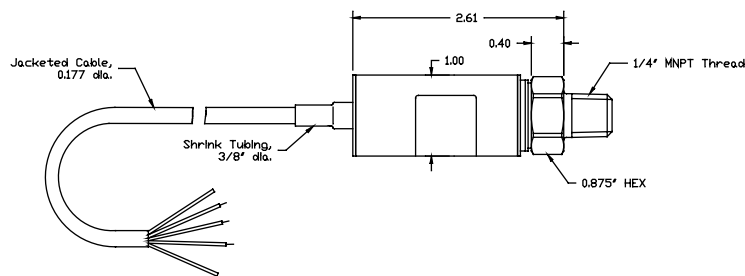
000= No Special Options

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

*Typical ranges. All ranges between 0-25 PSI and 0-10,000 PSI available. **Compound ranges up to -14.7 to 2500 PSI available. Please consult factory.

* 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.