PRECISION
Pressure Transducer / Transmitter
AST20HA

Overview
The AST20HA is a digitally compensated precision 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 advanced electronics, the AST20HA steps into its own league of high performance pressure sensing at an affordable price.

Benefits
- Digital ASIC Compensation
- Superb Temperature Performance
- Real Time Thermal Compensation
- Real Time Linearity Correction
- Turndown Capability
- Pressures up to 45,000 PSI
- ABS (American Bureau of Shipping) Approved
Applications

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

Performance @ 25°C (77°F)

**Accuracy**<br>\(< \pm 0.1\% \text{ BFSL} (< \pm 0.2\% \text{ BFSL over 15,000 PSI})\)<br>(Accuracy includes non-linearity, hysteresis & non-repeatability)

**Stability (1 year)**<br>\(\pm 0.1\% \text{ FS, typical}\)

**Proof Pressure**<br>2X Rated Pressure, Standard<br>(For higher proof pressures, contact factory)

**Burst Pressure**<br>5X or 50,000 PSI (whichever is less)

**Pressure Cycles**<br>\(> 100\) Million

Environmental Data

**Temperature**

**Operating**<br>-40 to 85°C (-40 to 185°F)

**Storage**<br>-50 to 125°C (-58 to 257°F)

0-100% relative humidity, non-condensing

**Thermal Limits**

**Compensated Range**<br>0-70°C (30 to 158°F)

**TC Zero**<br>\(< \pm 0.5\% \text{ of FS}\)

**TC Span**<br>\(< \pm 0.5\% \text{ of FS}\)

**Other**

**Shock**<br>100G, 11 msec, 1/2 sine

**Vibration**<br>10G peak, 20 to 2000Hz

**EMI/RFI Protection:**<br>Yes

**Rating:**<br>IP-66, min
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
- **Output Noise**: < 1mV, RMS, < 1mV, RMS, < 1mV, RMS
- **Zero Offset**: < ±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
- **Output Load**: 0-800 Ohms@10-28VDC, 5k Ohms, Min.
- **Reverse Polarity Protection**: Yes, Yes, Yes

Dimensions
## Ordering Information

**AST20HA**

<table>
<thead>
<tr>
<th>Series Type</th>
<th>A</th>
<th>05000</th>
<th>P</th>
<th>4</th>
<th>E</th>
<th>0</th>
<th>H</th>
<th>000</th>
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### Process Connection
- **A** = 1/4" NPT Male
- **B** = 1/8" NPT Male**
- **C** = 1/4" BSPP Male
- **E** = 9/16" -18 UNF Male [SAE6]**
- **F** = 7/16" -20 UNF Male [SAE4]**
- **P** = 1/2" NPT Male***
- **W** = F250C Female Autoclave****

**Not available under 50PSI (1/8" NPT Male 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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