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
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.
### Dimensions

![Diagram of connector and threaded connections](image)

<table>
<thead>
<tr>
<th>Connector Options</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN 43650 C</td>
<td>E</td>
</tr>
<tr>
<td>DIN 43650 A</td>
<td>I</td>
</tr>
<tr>
<td>6 Pin Bendix</td>
<td>R</td>
</tr>
<tr>
<td>M12x1</td>
<td>Y</td>
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<table>
<thead>
<tr>
<th>Threaded Connections</th>
<th>Letter</th>
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<tbody>
<tr>
<td>1/4&quot; NPT Male</td>
<td>A</td>
</tr>
<tr>
<td>1/8&quot; NPT Male</td>
<td>B</td>
</tr>
<tr>
<td>1/2&quot; NPT Male</td>
<td>P</td>
</tr>
<tr>
<td>F250C Female Autoclave</td>
<td>W</td>
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</table>
## Ordering Information

<table>
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<tr>
<th>AST20PT</th>
<th>1</th>
<th>A</th>
<th>00500</th>
<th>P</th>
<th>3</th>
<th>E</th>
<th>1</th>
<th>H</th>
<th>000</th>
</tr>
</thead>
</table>

### 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
- F= 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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