SUBMERSIBLE
Pressure & Temperature Transmitter
AST45PT

Overview
The AST45PT is a combined pressure and temperature transmitter for accurate liquid level measurement.

For pressure ranges from 0-1 to 100 PSI that require a wide range of media compatibility, the AST45PT submersible series is an excellent solution to monitor level and temperature for indoor and outdoor applications.

Benefits
- High Strength Stainless Steel Construction
- No Internal O-rings
- Wide Operating Temperature
- Pressures up to 100 PSI
- Low Static and Thermal Errors
- Unparalleled Price and Performance
- Rugged Design
- New Conduit Fitting at Electrical Connection
- Compatible with Wide Variety of Liquids
- EMI/RFI Protection
Applications

- Ground Water Level Measurement
- Earthen & Concrete Dams
- Liquid Tanks
- Irrigation
- Environmental Sites
- Building Automation Controls
- Waste Water Canals

Performance @ 25°C (77°F)

Accuracy (Pressure)  
< ±0.25% of FS BFSL  
(Accuracy includes non-linearity, hysteresis & non-repeatability)

Accuracy (Temp.)  
< ±1.0% of FS BFSL  
(Accuracy includes non-linearity, hysteresis & non-repeatability)

Over Range Protection

- 2X Rated Pressure
- Burst Pressure 5X or 1,250 PSI (whichever is less)
- Pressure Cycles > 50 Million

Environmental Data

Temperature

- Operating Ambient -40 to 85°C (-40 to 185°F)
- Storage -40 to 100°C (-40 to 212°F)

0-100% relative humidity, non-condensing

Thermal Limits

- Compensated Range 0-55°C (32 to 131°F)
- TC Zero < ±1.5% FS
- TC Span < ±1.5% FS

Other

- Shock 100G, 11 msec, 1/2 sine
- Vibration 10G peak, 20 to 2000 Hz.
- EMI/RFI Protection: Yes
- Rating: IP-68
**Electrical Data**

- **Output:** 4-20mA+ 1-5V
- **Excitation:** 10-28VDC 10-28VDC
- **Current Consumption:** < 10mA
- **Sampling Rate:** 400 Hz 400 Hz
- **Output Noise:** < 1mV, RMS < 1mV, RMS
- **Zero Offset:** < ±0.5% of FS < ±0.5% of FS
- **Span Tolerance:** < ±0.5% of FS < ±0.5% of FS
- **Output Load:** 0-800 Ohms@10-28VDC 5k Ohms, Min.
- **Reverse Polarity Protection:** Yes Yes

> For units with loop-powered 4-20mA output, the pressure loop must be powered or the temperature output will not operate.

**Dimensions**

<table>
<thead>
<tr>
<th>Output</th>
<th>Red</th>
<th>Black</th>
<th>Green</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>+V Supply</td>
<td>-V Supply</td>
<td>Temperature</td>
<td>Pressure</td>
</tr>
<tr>
<td>4-20mA</td>
<td>+Pressure</td>
<td>-Pressure</td>
<td>+Temperature</td>
<td>-Temperature</td>
</tr>
</tbody>
</table>
Ordering Information

AST45PT

Series Type

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
L= Cone (removable)

Pressure Range
Insert 5-digit pressure range code from chart

<table>
<thead>
<tr>
<th>Pressure Code</th>
<th>Feet of Water Column @ 4°C (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>00010</td>
<td>230.67</td>
</tr>
<tr>
<td>00050</td>
<td>115.33</td>
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<tr>
<td>00100</td>
<td>69.20</td>
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<tr>
<td>00150</td>
<td>46.13</td>
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<tr>
<td>00200</td>
<td>34.58</td>
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<tr>
<td>00250</td>
<td>23.07</td>
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<tr>
<td>00300</td>
<td>17.30</td>
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<tr>
<td>00350</td>
<td>11.53</td>
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<tr>
<td>00400</td>
<td>6.77</td>
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<tr>
<td>00450</td>
<td>3.31</td>
</tr>
</tbody>
</table>

Pressure Unit
H= Inches H2O
P= PSI

Outputs
3= 1-5V
4= 4-20mA

Electrical
N= Conduit fitting, Cable 6 ft.
P= Conduit fitting, Cable 10 ft.
X= Optional Length (see options)

Wetted Material
1= 316L / 304 / Hytrel (cable) / Kynar (cord grip)

Fail Condition
N= Not Specified
H= Fail High
L= Fail Low

Options
140= 15 ft. (4.6 m)
075= 20 ft. (6.1 m)
074= 25 ft. (7.6 m)
004= 35 ft. (10.7 m)
065= 50 ft. (15.2 m)
003= 100 ft. (30.5 m)
050= 150 ft. (45.7 m)