AST45PT *Pressure & Temperature Submersible Sensor*

Stainless Steel Media Isolated

Overview

The AST45PT is a dual sensor for the measurement of pressure and temperature. For pressure ranges from 0-5 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 Range
- Ranges up to 100 PSI
- Low Static and Thermal Errors
- Unparalleled Price and Performance
- Rugged Design
- Survives Harsh Environments
- Compatible with Wide Range of Liquids
- EMI/RFI Protection

Applications

- Ground Water Level Measurement
- Earthen & Concrete Dams
- Liquid Tanks
- Gasoline & Diesel Fuel Tanks
- Irrigation
- Waste Water Canals

Performance @ 25°C (77°F)

Accuracy (Pressure)*	< ±0.25% of FS BFSL
Accuracy (Temp.)*	< ±1.0% of FS BFSL
Over range Protection	2X Rated Pressure
Burst Pressure	5X or 1,250 PSI (whichever is less)
Pressure Cycles	> 50 Million

* Accuracy includes non-linearity, hysteresis & non-repeatability

Environmental Data

Temperature	
Operating	-40 to 85°C (-40 to 185°F)
Storage	-40 to 100°C (-40 to 212°F)
Thermal Limits	
Compensated Range	0 to 55°C (30 to 130°F)
TC Zero	<±1.0% of FS
TC Span	<±1.0% of 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	**Pressure 4-20mA⁺**	**Temperature 4-20mA**
Excitation	10-28VDC	10-28VDC
Current Consumption:	20mA max	20mA max
Bandwidth	(-3dB): DC to 250 Hz	-
Zero Offset:	<±1% of FS	<±1% of FS
Span Tolerance:	<±2% of FS	<±2% of FS
Output Load:	0-800 Ohms @10-28VDC	0-800 Ohms @10-28VDC
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.

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Ordering Information

AST45PT	1	L	00005	P	4	X	1	N	065

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)

Configuration Interface
L = Cone (Removable)

Pressure Range
Insert 5-digit pressure range code

Pressure Unit
H= Inches H2O P = PSI

Outputs+
4 = 4-20mA

Electrical
C = 6 ft. (1.8 m)
D = 10 ft. (3 m)
X = Optional Length (see options)

Wetted Material
1 = 316L / 304 SS/ Hytrel Cable

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

Options Cable Lengths:
140= 15 ft. (4.6 m) 004= 35 ft. (10.7 m) 003= 100 ft. (30.5 m)
075= 20 ft. (6.1 m) 130= 40 ft. (12.2 m) 050= 150 ft. (45.7 m)
074= 25 ft. (7.6 m) 065= 50 ft. (15.2 m)

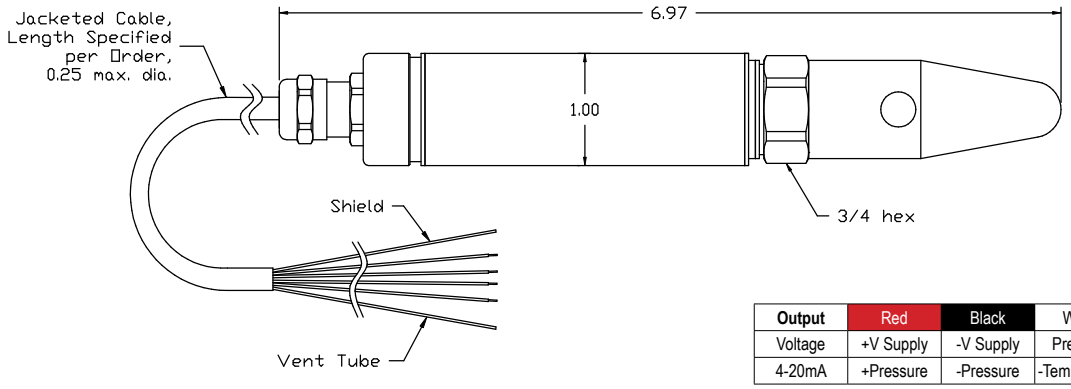
+contact factory for other outputs

Pressure Ranges

Gage PSIG	Pressure Range Code
0-100	00100
0-50	00050
0-30	00030
0-20	00020
0-15	00015
0-10	00010
0-7.5	00208*
0-5	00005
0-2.5	00069*
0-1	00001

*2.5 and 7.5 PSI Sensor must be ordered in inches of H_2O.

Dimensional Data



Output	Red	Black	White	Green
Voltage	+V Supply	-V Supply	Pressure	Temperature
4-20mA	+Pressure	-Pressure	-Temperature	+Temperature

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. All units returned for warranty evaluation must be thoroughly cleaned and free of process residue prior to shipment. Units that are not properly cleaned will be discarded and warranty service will be denied. This warranty does not apply to any units that have been modified; misused, neglected or installed where the application exceeds published ratings. AST45PT is not recommended for use with hydrogen. 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. The nose cone is installed on the sensor with Loctite®. To remove, hold the sensor by the hex with a wrench. Put a screwdriver through both holes of the nose cone and turn counterclockwise. The level sensor will have a 1/4" NPT Male pressure port.