

AST4500 & AST4510 Submersible Stainless Steel Media Isolated Pressure Sensor

CSA Approved For Hazardous Locations with Approved Barrier

Overview

The AST4500 and AST4510 submersible level sensors are approved to UL/cUL913 (CSA 157) Class I Div 1, Groups C and D for use in intrinsically safe areas with an approved barrier. For pressure ranges from 0-1 to 0-100 PSI that require a wide range of media compatibility, the submersible series is an excellent solution to level monitoring for indoor and outdoor applications. The AST4500 and AST4510 level sensors are completely sealed for submersion, yet vented through the cable to correct for barometric pressure changes. The welded housing is tested in-house via a helium leak tester to ensure proper protection. The conductors of the cable are also isolated from the outside environment to keep the sensor operational for long-term use. With a removable nose cone, the AST4500 and AST4510 series can be also be installed outside of the tank through a 1/4" NPT pipe connection. In this configuration, the sensor continuously monitors the tank level through a threaded connection outside the tank, yet remains fully submersible for applications with flood prone environments or severe wash-down conditions. Available with voltage or 4-20mA output signals, AST can provide a cost effective solution for level monitoring for a variety of 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*	< ±0.25% BFSL (< ±0.5% BFSL for 0-1 PSI)
Stability (1 year)	±0.25% FS, typical
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	<±1.5% of FS
TC Span	<±1.5% 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	4-20mA	1-5VDC
Excitation	10-28VDC	10-28VDC
Output Impedance	>10k Ohms	<100 Ohms, Nominal
Current Consumption	20mA, typical	<10mA
Bandwidth	(-3dB): DC to 250 Hz	(-3dB): DC to 1kHz
Output Noise	-	<2mV RMS
Zero Offset	<±1% of FS	<±1% of FS
Span Tolerance	<±2% of FS	<±1.5% of FS
Output Load	0-800 Ohms@10-28VDC	10k Ohms, min
Reverse Polarity Protection	Yes	Yes

