



PRESSURE LOW

Differential Transmitter AST5100

Overview

The AST5100 Wet - Wet Differential Pressure transmitter is your accurate pressure sensing device for low differential pressure. With a differential pressure range as low as 0 to 5" water column (12.5mbar), this product can be used to measure flow across an orifice, differential across a filter, tank level, or gauge pressure. Using LVDT technology and AST's advanced electronics, the AST5100 delivers accurate, repeatable measurements.

Benefits

- ◆ Accurate Low Pressure Measurement
- ◆ Excellent Repeatability
- ◆ Wide Range of Liquids and Gases including:
 - ✓ Water
 - ✓ Natural Gas
 - ✓ Hydrocarbon Fuels
 - ✓ Air
 - ✓ Non-Corrosive Gases

LOW

AST5100 Low Pressure Differential Transmitter

Applications

- ◆ Liquid Level Control including Bubbler systems
- ◆ Climate Control
- ◆ Energy Management
- ◆ Air-fuel Ratio including Measurement for Furnaces
- ◆ Vapor Recovery
- ◆ Leak Detection
- ◆ Air or liquid Filtration
- ◆ Flow Measurement

Wetted Materials

- ◆ Nickel Alloy 52, Ni-Span C, Viton, 304 Stainless Steel, Aluminum 6061, RoHS Solder, Loctite 680 (meets NSF61)

Installation Guidelines

The AST5100 must be mounted on a flat surface within $\pm 15^\circ$ to the ideal 0° plane to maintain specifications. Do not over tighten the pressure connections or insert any objects in P1 or P2 to avoid damaging the sensing element. When using isolation valves, both should be mounted close to the sensor. For liquid level and wet applications, install bleed screw adapters close to P1 and P2 so that trapped air can be purged if needed. For optimum performance, always make sure pressure is equalized within the pressure range chart ranges. The AST5100 has asymmetric protection on P1 and P2.

Performance @ 25°C (77°F)

Accuracy	< $\pm 1.0\%$ FS (Accuracy includes non-linearity, hysteresis & non-repeatability)
Stability (1 year)	$\pm 0.5\%$ FS, typical
Burst Pressure	2000 PSI
Pressure Cycles	> 100,000 Cycles

Environmental Data

Temperature

Operating	-40 to 80°C (-40 to 176°F)
Storage	-40 to 100°C (-40 to 212°F)

0-100% relative humidity, non-condensing

Thermal Limits

Compensated Range 0 to 55°C (32 to 131°F)

TC Zero	< $\pm 1.5\%$ of FS
TC Span	< $\pm 1.5\%$ of FS

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Electrical Data

Output	4-20mA	0-5V Three Wire
Excitation	10-28VDC	10-28VDC
Output Impedance with Input Voltage Charge	-	< 0.1% from 10 to 32 VDC
Current Consumption:	-	< 10mA
Bandwidth	5Hz	5Hz
Output Noise	< 0.0035mA, RMS	< 1mV RMS
Zero Offset:	< $\pm 1\%$ FS	< $\pm 1\%$ FS
Span Tolerance:	< $\pm 1.5\%$ FS	< $\pm 1.5\%$ FS
Output Load:	0-800 Ohms@10-28 VDC	5k Ohms, Min.
Reverse Polarity	Yes	Yes

Dimensions



