



## DIFFERENTIAL

### Pressure Transducer

#### AST5300 | AST53ED | AST53EN

#### Overview

The AST5300 offers low differential pressure measurement ranges in high line pressure applications with excellent burst pressure capabilities. The AST5300 has no oil filled cavities and no internal o-rings to fail, making it ideal for food and beverage, oil & gas, pharmaceuticals, semiconductor industries and cold ambients.

#### Benefits

- ◆ ABS (American Bureau of Shipping) Approved
- ◆ Oil free - no containment issues
- ◆ Wide operating temperature
- ◆ Wide range of liquid & gas compatibility
- ◆ Compact size
- ◆ **Explosion Proof Rated (AST53ED)**
  - ✓ CSA30 Class I Zone 1 Group IIC
  - ✓ Class I Division 1 Groups A, B, C, D
  - ✓ Class II Division 1 Groups E, F and G
  - ✓ Class III Division 1
- ◆ **Non-Incendive Rated (AST53EN)**
  - ✓ CSA213 Class I Division 2 Groups A, B, C, D
  - ✓ ANSI/ISA 12.27.01 Single Seal Device

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### Applications

- ◆ Refrigeration
- ◆ Water Management
- ◆ Industrial OEM Equipment
- ◆ Oil & Gas Platforms
- ◆ Pressure Instrumentation
- ◆ Process Control
- ◆ Gas Compression & Storage
- ◆ Test Stands
- ◆ Oxygen Delivery Systems
- ◆ Hydrogen Fuel (316L)

### Performance @ 25°C (77°F) [% of FS]

<b>Line Pressure (Common)</b>	1,500 PSI, maximum (see page 2)
<b>Burst Pressure</b>	5,000 PSI, minimum
<b>Proof Pressure (5-10 PSID)</b>	500 PSI
<b>Proof Pressure (1 PSID)</b>	150 PSI ◆
<b>Linearity</b>	<± 0.2% BFSL
<b>Zero Offset</b>	<± 1.0%
<b>Span Tolerance</b>	<± 0.5%

### Environmental Data

#### Temperature

<b>Operating</b>	-40 to 85°C (-40° to 185°F)
<b>Storage</b>	-55 to 120°C (-67° to 248°F)
<b>Media</b>	-55 to 125°C (-67° to 257°F)
<b>Compensated Range</b>	-5 to 65°C (23° to 149°F)
<b>Total Thermal Error</b>	<±1.0% of FS (10 PSID) <±1.5% of FS (5 to 9 PSID) <±1.0% of FS (1 PSID) ◆

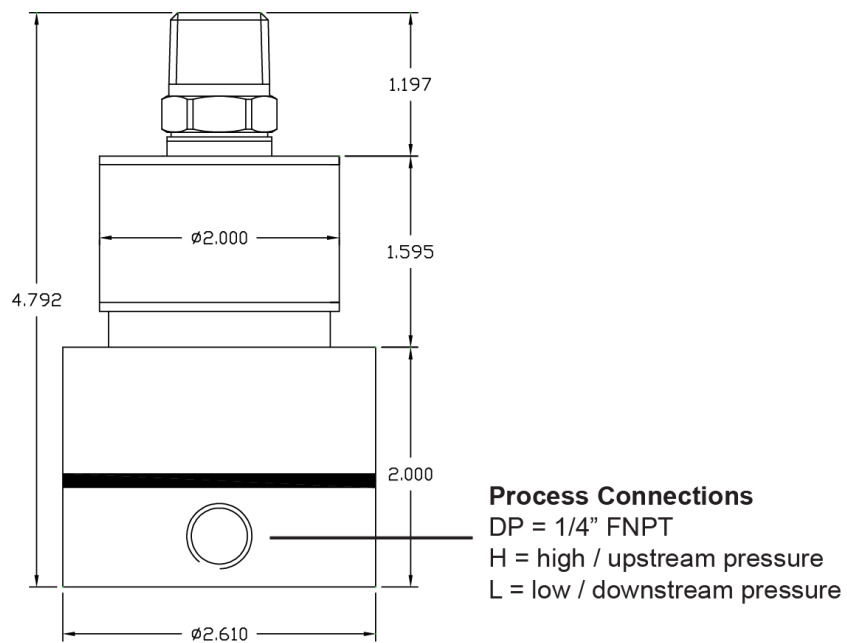
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### Electrical Data

<b>Output</b>	0-5V, 1-5V Three Wire	4-20mA	0.5-4.5V Ratiometric
<b>Excitation</b>	10-28VDC	10-28VDC	5VDC, reg
<b>Current Consumption</b>	<10mA	-	<10mA
<b>Output Load</b>	10k Ohms	0-800 Ohms	10k Ohms
<b>EMI / RFI Protection</b>	100V/m	100V/m	100V/m
<b>Reverse Polarity Protection</b>	Yes	Yes	Yes

### Dimensions



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## Ordering Information

<b>AST53</b>	<b>ED</b>	<b>DP</b>	<b>0010</b>	<b>P</b>	<b>4</b>	<b>W</b>	<b>8</b>	<b>000</b>
<b>Series Type</b>								
<b>Approval</b> ED= Explosion proof EN= Non-Incendive 00= OEM								
<b>Mounting / Pressure Connection</b> DP= Threaded Fittings (1/4" FNPT)								
<b>Differential Pressure</b> 0001= 1 PSI*      0008= 8 PSI 0005= 5 PSI      0009= 9 PSI 0006= 6 PSI      0010= 10 PSI 0007= 7 PSI								
<b>Pressure Unit</b> P= PSI								
<b>Output</b> 1= 0.5-4.5V ratiometric 2= 0-5V (3-wire) 3= 1-5V 4= 4-20mA								
<b>Electrical Connection (see table below)</b> Subject to Approval Type Selected								
<b>Wetted Material</b> 8= 316L & Inconel x750								
<b>Options</b> 00= No Special Options								

Electrical Connection Table		00	ED	EN
I	DIN 43650-A	*		*
M	Conduit, 4ft.	*		*
N	Conduit, 6ft.	*		*
R	6-Pin Bendix PT06	*		
T	Conduit, 18AWG, 24 in		*	
U	Conduit, 18AWG, 48 in		*	
W	Conduit, 18AWG, 2m		*	
Y	M12 4-Pin	*		

### Line Pressure

The line pressure specification is the maximum pressure the AST5300 can see without damage. Any pressure applied over the listed number will likely damage the transducer and will, at minimum, cause a permanent zero shift. Line pressure should be applied evenly to both ports during start up and shut down. [A Line pressure of 500 psi or less can be applied to one pressure port with the other port at 0psi and will not cause a zero shift of the output. Pressure above 500 PSI to one side may cause a temporary zero shift.]

To recover from a zero shift caused by negative over-pressure to "L" (low / downstream process connection) within the listed limits, apply a positive over-pressure "H" (high / upstream process connection) to 1,450 PSI for a duration of five minutes. Remove the over-pressure and check the zero with no pressure applied. If the zero has not recovered, repeat the positive over-pressure and recheck zero. If it has not recovered after the second try, the zero has been permanently shifted. Contact the factory.

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