

Differential Pressure Transducer



AST5300

AST53ED

AST53EN

ISO9001:2008



The AST5300 offers low DP ranges in high line pressure with excellent burst pressure capabilities. The DP 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

- Oil free - no containment issues
- Wide operating media temperature
- Wide range of media compatibility
- Compact size
- **Explosion Proof Rated**
 - 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**
 - CSA213 Class I Division 2 Groups A, B, C, D
 - ANSI/ISA 12.27.01 Single Seal Device

Applications

- Flow measurement - liquids and gases
- High Purity Gases
- Tank level monitoring
- Ballast measurement
- Filtration
- Cryogenics

Environmental Data

Temperature

Operating	-40 to 85°C (-40° to 185°F)
Storage	-55 to 120°C (-67° to 248°F)
Media	-55 to 125°C (-67° to 257°F)
Compensated Range	-5 to 65°C (23° to 149°F)
TC Zero	<± 0.5% (-5 to 65°C) of FS
TC Span	<± 0.5% (-5 to 65°C) of FS

Performance @ 25°C (77°F) [% of FS]

Line Pressure	1,500 PSI
Burst Pressure	5,000 PSI
Linearity	<± 0.2%
Stability	<± 0.5%
Zero Offset (10 to 30°C)	<± 1.0%
Zero Offset (-40 to 85°C)	<± 3.0%
Span Tolerance	<± 0.2%

Electrical Data

Output	0-5V, 1-5 Three Wire	4-20mA	0.5-4.5V Ratiometric
Excitation	10-28VDC	10-28VDC	5VDC, reg
Current Consumption:	5mA, typ	-	5mA, typ
Output Load:	10k Ohms	0-800 Ohms	10k Ohms
Reverse Polarity Protection	Yes	Yes	Yes

Ordering Information

AST53 **00** **DP** **0010** **P** **4** **M** **8** **000**

Series Type

Approval

00= OEM
ED= Explosion proof
EN= Non-Incendive

Mounting / Pressure Connection

DP= Threaded Fittings (1/4" FNPT)

Differential Pressure

0010= 10 PSI

Pressure Unit

P= PSI

Output

1= 0.5-4.5V ratiometric
2= 0-5V (3-wire)
3= 1-5V
4= 4-20mA

Electrical Connection (see table)

Subject to Approval Type Selected

Wetted Material

8= 316L & Inconel x750

Options

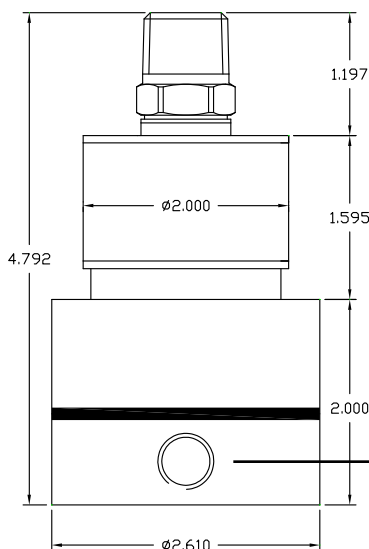
00= No Special Options

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	Turck M12 4-Pin Eurofast	*		

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.

Dimensional Data



Process Connections

DP = 1/4" FNPT

H = high / upstream pressure

L = low / downstream pressure