



EXPLOSION-PROOF

Standard Pressure Transducer AST4600

Overview

Constructed with a simple-yet-rugged design, the AST4600 Explosion-Proof Pressure Transducer/Transmitter stands up to a variety of applications where price and performance are critical.

Factory Sealed Gauge Pressure Transducer

- Pressures from 100 to 20,000 PSI
- CSA approved for use in hazardous areas including:
 - ✓ UL1203/FM3615 Class I Zone 1 Group IIC
 - ✓ Class I Div 1 Groups A, B, C, D Explosionproof
 - ✓ Class II Div 1 Groups E, F, G Dust Ignition-proof

Vented Gauge Pressure Transducer

- Pressures from 1 to 1,000 PSI Gauge
- CSA approved for use in hazardous areas including:
 - ✓ Class I Zone 1 Group IIC
 - ✓ Class I Div 1 Groups A, B, C, D Explosionproof

Benefits

- ATEX / IECEx: Class I, Zone 1, Ex d IIC T5 Gb (Ta = -40°C to 85°C)
- ANSI/ISA-12.27.01.2003 Certified “Single Seal” (no secondary seal required)
- ABS (American Bureau of Shipping) Approved
- All Stainless Steel Construction | Rugged Design Withstands Harsh Environments
- Wide Operating Temperature | Low Static and Thermal Errors
- Suitable for High Shock and Vibration Applications
- Available in Exotic Alloys (Consult Factory for Inconel 718 or Hastelloy C276)

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Applications

- Industrial OEM & Hydrogen Equipment
- Natural Gas Compressors
- Refrigeration
- Pipe Line Instrumentation
- Marine & Offshore
- Pressure Instrumentation
- Oil Platforms
- Well Head Pressure
- Power Generation
- Mining Applications
- Energy & Water Management

Performance @ 25°C (77°F)

Accuracy	< ±0.25% BFSL <±0.5% from 7,500 up to 20,000 PSI (includes non-linearity, hysteresis & non-repeatability)
Stability (1 year)	±0.25% FS, typical
Over Range Protection	2X Rated Pressure, Minimum
Burst Pressure	5X or 50,000 PSI (whichever is less)
Pressure Cycles	>100 Million

Environmental Data

Temperature

Operating Ambient	-40 to 85°C (-40 to 185°F)
Operating Media	-55 to 125°C (-65 to 250°F)
Storage	-55 to 105°C (-67 to 221°F)

0-100% relative humidity, non-condensing

Thermal Limits

Compensated Range 0 to 55°C (32 to 132°F)

TC Zero	<±1.5% of FS
TC Span	<±1.5% of FS

Other

Shock	EN 60068-2-27
Vibration	EN 60068-2-6, 60068-2-64, and IEC 68-2-32
EMI/RFI Protection:	Yes
Rating:	IP-65 (vented), IP-66(factory sealed)

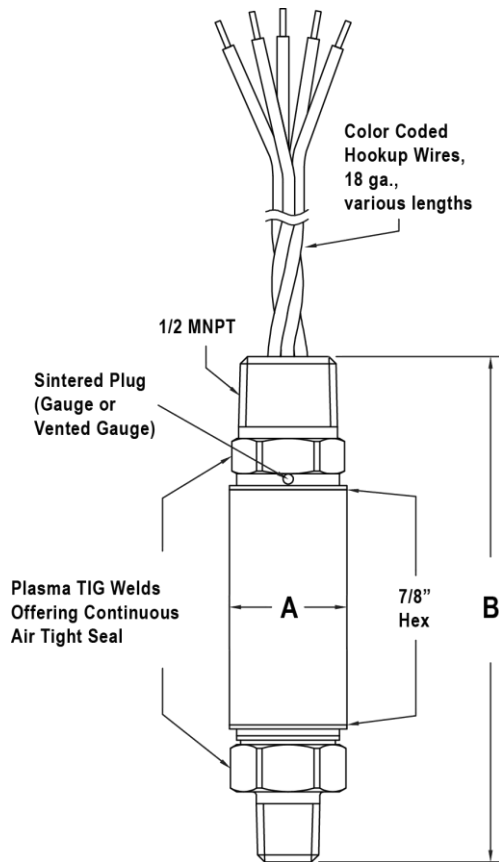
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Electrical Data

Output	4-20mA	1-5VDC, 1-6VDC	0.5-4.5V ratiometric
Excitation	10-28VDC	10-28VDC	5VDC regulated
Output Impedance	>10k Ohms	<100 Ohms, Nominal	<100 Ohms, Nominal
Current Consumption:	25mA, typical	5mA, typical	<10mA
Bandwidth	(-3dB): DC to 250 Hz	(-3dB): DC to 1kHz	(-3dB): DC to 1kHz
Output Noise	-	<2mV RMS	< 2mV RMS
Zero Offset:	<±1% of FS	<±1% of FS	<±1% of FS
Span Tolerance:	<±2% of FS	<±1.5% of FS	<±1.5% of FS
Output Load:	0-800 Ohms@10-28VDC	5k Ohms, Min.	10K Ohms, Min.
Reverse Polarity Protection	Yes	Yes	Yes

Dimensions



Model Series	Body Diameter "A"	Overall Length "B"
AST4600	0.875"	3.64"
AST46HA	1"	4.3"
AST46PT (4-20mA)	1"	4.8"
AST46PT (Voltage)	1"	4.3"
AST46SW	1"	4.8"

Wiring				
Output	Red	Black	White	Green
Voltage	+V Supply	-V Supply	Output	Case Ground
4-20mA	+V Supply	-V Supply	Not Used	Case Ground

For U.S. installations, sensor case ground (green wire) must be bonded to ground according to Article 501 & 505 of the NEC.

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Ordering Information

AST4600	A	1	0000	P	4	T	1	000	-Z
Series Type									
Process Connection*									
A= 1/4" NPT Male (up to 10,000 PSI)			F= 7/16"-20 UNF Male (up to 10,000 PSI)						
I= 1/4" NPT Female (up to 15,000 PSI)			P= 1/2" NPT Male (up to 15,000 PSI)						
W= F250C Female Autoclave (10,000 to 20,000 PSI)									
<small>* for other ports contact factory, "W" not available in 316L</small>									
Pressure Range									
G= Gauge Pressure**			V= Gauge Pressure (Vacuum Calibrated)**						
0= Sealed Gauge up to 9,999 PSI			1= Sealed Gauge up 10,000 to 19,999 PSI						
2= Sealed Gauge 20,000 PSI									
<small>** Not suitable for Class II</small>									
Insert Pressure Code									
Pressure PSI	0-1	Pressure Code Ventted	G	0001	Pressure PSI	0-100	Pressure Code Ventted	0	0100
	0-2.5++		G	0069		0-200		0	0200
	0-5		G	0005		0-500		0	0500
	0-7.5++		G	0208		0-1,000		0	1000
	0-10		G	0010		0-1,500		0	1500
	0-15		G	0015		0-2,500		0	2500
	0-25		G	0025		0-3,000		0	3000
	0-50		G	0050		0-5,000		0	5000
	0-100		G	0100		0-7,500		0	7500
	0-200		G	0200		0-10,000		1	0000
0-500	G	0500	0-15,000	1	5000				
0-1,000	G	1000	0-20,000	2	0000				
Pressure Unit									
B= Bar K= kg/cm2 P= PSI									
Outputs									
1= 0.5-4.5V ratiometric 3= 1-5V 4= 4-20mA (2 wire loop powered) 6= 1-6V									
Electrical									
T= 2ft. 18 AWG wires U= 4ft. 18 AWG wires W= 2 Meter 18 AWG wires									
Wetted Material (consult factory on availability of Inconel 718 and Hastelloy C276)									
0= 17-4PH 1= 316L 2= Inconel 718 4= Hastelloy C276									
Options									
000= No Options 588= 0.5-2.5V non-ratiometric (3-5VDC)									
Approval									
Insert code from approvals chart below [Leave blank for standard approvals (see front page for details)]									
-SL	IEC 61508 - SIL2 (4-20mA only)								
-Y	IEC 61508 - SIL2 (4-20mA only) + CRN								
-Z	CRN Registered to ANSI/ASME B31.3. Contact factory for material, pressure, and process connection options.								

Note: CSA approved products require case/earth ground electrical connection. See wiring installation sheet for further details

NORTH AMERICA

American Sensor Technologies, Inc. (AST),
a TE Connectivity company
450 Clark Drive
Mount Olive, NJ 07828 USA
Tel +1 973 448 1901
Fax +1 973 448 1905
info@astsensors.com

ASIA

Hong Kong Sensor Technologies (HKST),
a TE Connectivity company
Unit No. 2 on 24/F., Perfect Industrial
Building, No. 31 Tai Yau Street,
San Po Kong, Kln., Hong Kong
Tel 852 2242 5048
info@hkstsensors.com

TE.com/sensorsolutions

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