Explosion-Proof

AST4600 > Standard Pressure Transducer

Constructed with a simple-yet-rugged design, the AST4600 Explosionproof 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
- Wide Operating Temperature
- Low Static and Thermal Errors
- Rugged Design Withstands Harsh Environments
- Suitable for High Shock and Vibration Applications
- Available in Exotic Alloys (Consult Factory for Inconel 718 or Hastelloy C276)

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

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 (30 to 130°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)

Performance @ 25°C (77°F)

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

** Accuracy includes non-linearity, hysteresis & non-repeatability*

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

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)
** for other ports contact factory, "W" not available in 316L*

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
*** Not suitable for Class II*

Insert Pressure Code (example: 0-500 PSI = 0500)

Pressure Unit
B= Bar K= kg/cm^2 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+
0= 17-4PH 1= 316L 2= Inconel 718 4= Hastelloy C276
+ Consult factory on availability of Inconel 718 and 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 appovals (see front page for details)]

Pressure Ranges+

Pressure PSI	Pressure Code Vented	
0-1	G	0001
0-2.5++	G	0069
0-5	G	0005
0-7.5++	G	0208
0-10	G	0010
0-15	G	0015
0-25	G	0025
0-50	G	0050
0-100	G	0100
0-200	G	0200
0-500	G	0500
0-1,000	G	1000

Pressure PSI	Pressure Code Factory Sealed	
0-100	0	0100
0-200	0	0200
0-500	0	0500
0-1,000	0	1000
0-1,500	0	1500
0-2,500	0	2500
0-3,000	0	3000
0-5,000	0	5000
0-7,500	0	7500
0-10,000	1	0000
0-15,000	1	5000
0-20,000	2	0000

++2.5 and 7.5 PSI units must be ordered in inches of H_2O

Approvals

-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

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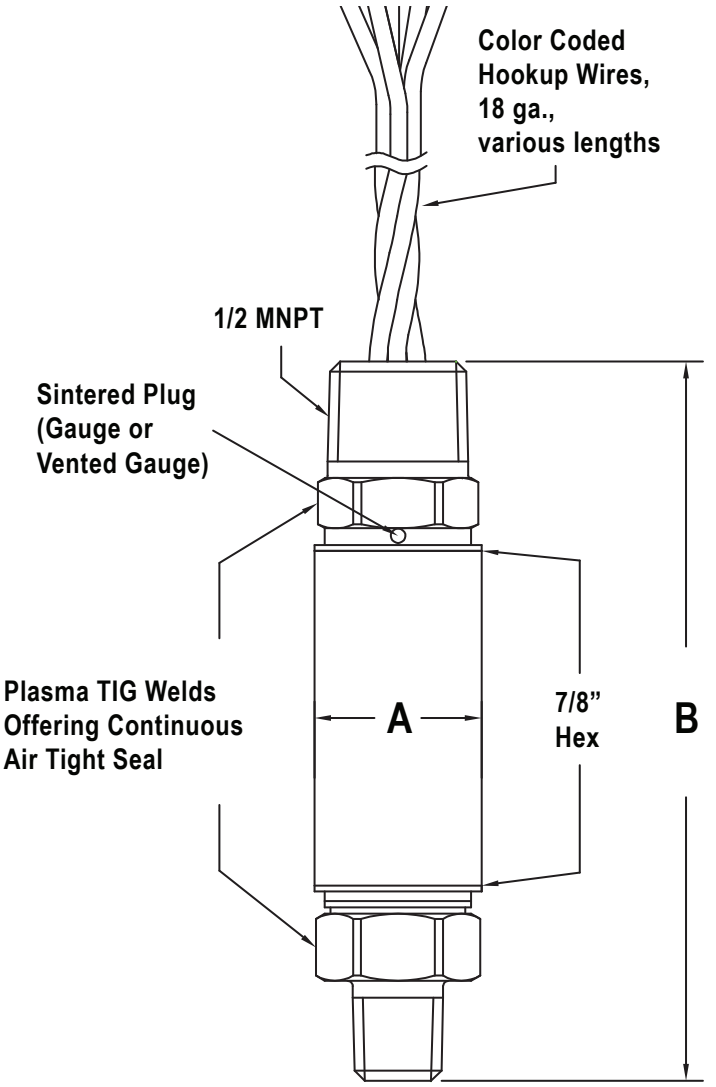

Model Series	Body Diameter	Overall Length
	"A"	"B"
AST4600	0.875"	3.64"
AST46HA	1"	4.3"
AST46PT (4-20mA)	1"	4.8"
AST46PT (Voltage)	1"	4.3"
AST46SW	1"	4.8"

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.