

# Explosion-Proof



## AST46PT > Pressure / Temperature Transmitter



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
- ASIC Compensation
- Superb Temperature Performance
- Wide Operating Temperature
- Excellent Accuracy
- High Proof and Burst Pressure
- Available in Exotic Alloys (Consult Factory for Inconel 718 or Hastelloy C276)

### Applications

- Well Optimization
- Oil and Gas Pipelines
- Drilling Platforms
- Marine & Offshore
- CNG / Hydrogen Fill Stations
- Paint Booths
- Remote Telemetry Unit
- Cold Climate Drilling & Mining
- Panel Instrumentation

### 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	-20 to 70°C (-4 to 158°F)
TC Zero: <±0.5% FS	TC Span: <±0.5% 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*	<±0.1% BFSL
Accuracy (Temp.)*	±2%TEB
Stability (1 year)	±0.1% 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, \* For higher proof pressures, contact factory

### Electrical Data

Output	4-20mA	0-5V, 1-5V, 1-6V	0-10V, 1-10V	0.5-4.5V Ratiometric
Excitation	10-28VDC	10-28VDC	15-30VDC	5VDC, Regulated
Current Consumption	-	<10mA	<10mA	<10mA
Sampling Rate	400Hz	400Hz	400Hz	400Hz
Output Noise	<1mV, RMS	<1mV, RMS	<1mV, RMS	<1mV, RMS
Zero Offset	<±0.5% FS	<±0.5% FS	<±0.5% FS	<±0.5% FS
Span Tolerance	<±0.5% FS	<±0.5% FS	<±0.5% FS	<±0.5% FS
Output Load	0-800 Ohms@10-28VDC	5k Ohms, min.	5k Ohms, min.	5k Ohms, min.
Reverse Polarity Protection	Yes	Yes	Yes	Yes

## Ordering Information

AST46PT 1 A G 0500 P 3 T 1 H 000 -Z

**Series Type**

**Temperature Output**  
 1= -40 to 85°C (-40 to 185°F)  
 2= -40 to 125°C (-40 to 257°F)  
 3= 0 to 70°C (32 to 158°F)  
 4= -55 to 125°C (-67 to 250°F)  
 5= -18 to 93°C (0-200°F)

**Process Connection\***  
 A= 1/4" NPT 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**

**Pressure Unit**  
 B= Bar                      K= kg/cm<sup>2</sup>                      P= PSI

**Outputs**  
 1= 0.5-4.5V ratiometric                      4= 4-20mA  
 2= 0-5V    5= 0-10V  
 3= 1-5V    6= 1-6V  
     7= 1-10V

**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

**Failure State**  
 H= High    L= Low    N= None

**Options**  
 000= No Options

**Approval**  
 -Z= Add "-Z" for CRN Registered to ANSI/ASME B31.3. Contact factory for material, pressure, and process connection options.

### Pressure Ranges

Pressure PSI	0-1	Pressure Code Vented	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	0-100	Pressure Code Factory Sealed	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

### Wiring

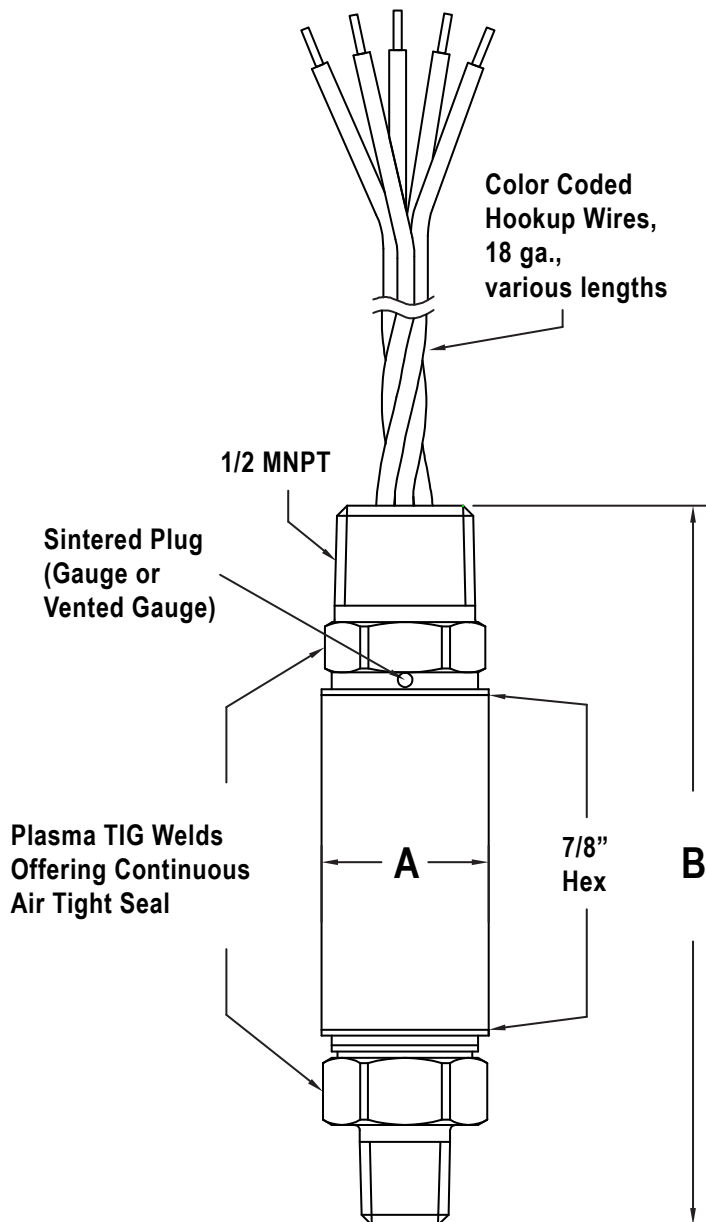
Output	Power Connections		Output Connections		Green	Length
	Red	Black	White	Blue		
Voltage	+V Supply	-V Supply	Pressure	Temp.	Case Ground	4.3" 4.68"
4-20mA	+Pressure	-Pressure	-Temp.	+Temp.	Case Ground	4.8" 5.18"
For U.S. installations, sensor case ground (green wire) must be bonded to ground according to Article 501 & 505 of the NEC.						

\*\*2.5 and 7.5 PSI units must be ordered in inches of H<sub>2</sub>O

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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"