



EXPLOSION-PROOF

High Accuracy 0.1% Pressure Transducer AST46HA

Overview

Applying digital compensation, the AST46HA offers top performance over a wide temperature range. Where other sensor technologies will freeze or boil, the AST46HA uses a one piece stainless steel sensor to offer continuous operation.

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
- ◆ Exotic Alloys Available (consult factory for Inconel 718 or Hastelloy C276)

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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

Performance @ 25°C (77°F)

Accuracy	<±0.1% BFSL (includes non-linearity, hysteresis & non-repeatability, for higher proof pressures contact factory)
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	-20 to 70°C (-4 to 158°F)
TC Zero	<±0.5% of FS
TC Span	<±0.5% 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)

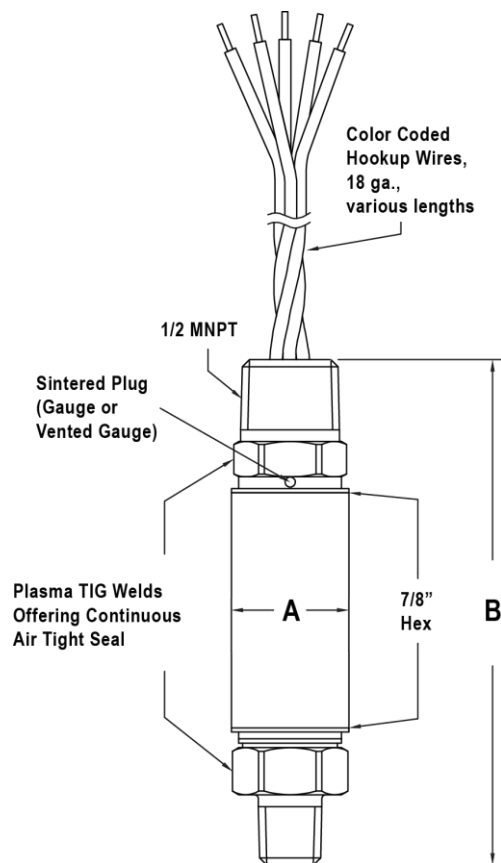
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Electrical Data

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

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

AST46HA **A** **1** **0000** **P** **3** **T** **1** **H** **000** **-Z**

Series Type

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** 1= Sealed Gauge up 10,000 to 19,999 PSI
 V= Gauge Pressure (Vacuum Calibrated)** 2= Sealed Gauge 20,000 PSI
 0= Sealed Gauge up to 9,999 PSI

** Not suitable for Class II

Insert Pressure Code

Pressure PSI	Pressure Code	Vented	Pressure PSI		Pressure Code	Vented
			Pressure Code	Vented		
0-1	G	0001	0-100	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 4= 4-20mA (loop powered + case connection) 6= 1-6V (3 wire + case connection)
 2= 0-5V (3 wire) 5= 0-10V (3 wire) G= 1-10V
 3= 1-5V (3 wire + case connection)

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

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.

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

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