



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.

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)

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

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

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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)

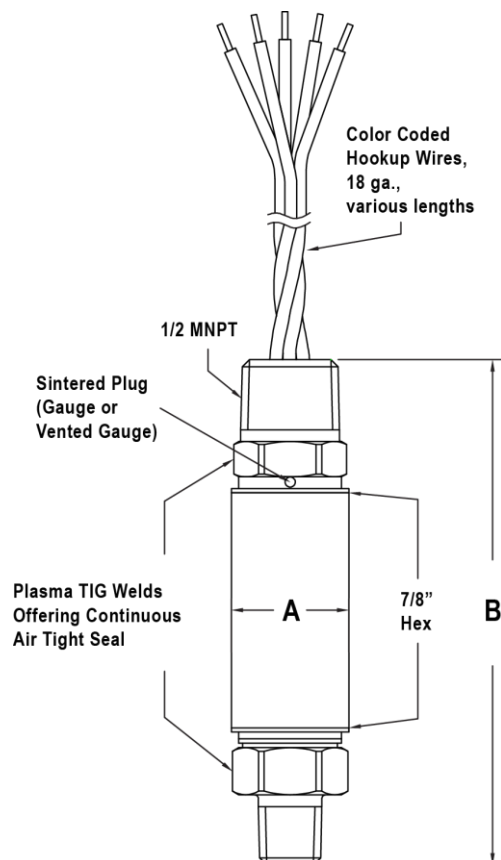
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ELECTRICAL DATA

Output	4-20mA	0-5V, 1-5V, 1-6V	0-10V, 1-10V	0.5-4.5V Ratiometric
Excitation	10-28V _{DC}	10-28V _{DC}	15-28V _{DC}	5V _{DC} , 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:	0-800Ω @10-28VDC	5kΩ _{MIN.}	5kΩ _{MIN.}	5kΩ _{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"
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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

Process Connection*

Code	Connection
A	1/4" NPT Male (≤10k psi)
I	1/4" NPT Female (≤15k psi)
P	1/2" NPT Male (≤15k psi)
W	F250C Female Autoclave (10k-20k psi)

Pressure Range [psi]

Code	Range (gauge)	Code	Range (Vent)
G 0001	0-1	0 0100	0-100
G 0069	0-2.5	0 0200	0-200
G 0005	0-5	0 0500	0-500
G 0208	0-7.5	0 1000	0-1000
G 0010	0-10	0 1500	0-1500
G 0015	0-15	0 2500	0-2500
G 0025	0-25	0 3000	0-3000
G 0050	0-50	0 5000	0-5000
G 0100	0-100	0 7500	0-7500
G 0200	0-200	1 000	0-10,000
G 0500	0-500	1 5000	0-15,000
G 1000	0-1000	2 000	0-20,000

G=Gauge Pressure ** V=Gauge (Vacuum Calibrated)**
 0=Sealed Gauge (<10k psi) 1=Sealed Gauge (10k - <20k psi) 2=Sealed Gauge (20k psi)

Pressure Units

B	bar
K	kg/cm ²
P	psi

Approval

-Z CRN Registered to ANSI/ASME B31.3. Contact Factory for material pressure and process connection options

Options

000 No Options

Failure State

H	High
L	Low
N	None

Wetted Materials

0	17-4PH
1	316L
2	Inconel 718
4	Hastelloy C276

Electrical

T	2ft. 18AWG wires
U	4ft. 18AWG wires
W	2meter 18AWG wires

Outputs

1	0.5–4.5V
2	0 5V
3	1–5V
4	4–20mA
5	0-10V (3-wire)
6	1-6V (3-wire+case connection)
G	1-10V

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