

Explosion-Proof Pressure Transducer / Transmitter with Display

AST46DS

CSA Certified: Class I & II Division 1 & 2 | Class III

ISO9001:2008



AST46DS explosion proof pressure transducers features the latest advances in transducer technology. With a power supply as low as an 8VDC and low current consumption, the AST46DS can operate in remote areas with minimal power. The re-zeroing function, allows for field calibration in a safe environment to further enhance well site or system readings. Pressure ranges are available up to 20,000 PSI; these explosion-proof pressure transducers and transmitters are designed for all common oil and gas pressures from shallow to deep wells.

- Explosion Proof: Class I & II Division 1 Groups A, B, C, D, E, F, G
- Non-Incendive: Class I & II Division 2 Groups A, B, C, D, E, F, G
- Class III Division 1 & 2
- ANSI/ISA 12.27.01-2003 Single Seal Approved
- Display Units: PSI | Bar | kpa | Mpa | kg/cm² | in WC | Volts | mA

Environmental Data

Temperature

Operating	-40 to 85°C (-40 to 185°F)
Display Operating	-30 to 80°C (-22 to 176°F)
Storage	-55 to 105°C (-67 to 221°F)

Thermal Limits

Compensated Range	0 to 55°C (30 to 130°F)
TC Zero	<±1.0% of FS
TC Span	<±1.0% of FS

Other

Shock	100G, 11 msec, 1/2 sine
Vibration	10G peak, 20 to 2000 Hz.
EMI/RFI Protection:	Yes
Enclosure Rating:	Suitable for Outdoor Use; Type 4X Rated
Pollution Degree	2 (interior of enclosure)
Measurement (Installation) Category	I
Altitude	2000m

Benefits

- Low current consumption voltage output
- Re-zero push-button functionality
- Display pressure units or output signal
- Accurate, repeatable sensor technology
- Rugged design withstands harsh outdoor environments
- Available in exotic alloys
- High quality, NEMA 4X case and finish withstands salt spray and outdoor environments

Applications

- SCADA systems
- Wellhead systems
- Compressor systems and stations
- Pipeline instrumentation
- Power generation equipment
- Offshore platforms
- Oil and gas pressure monitoring
- Test systems

Performance @ 25°C (77°F)

Accuracy*	< ±0.25% BFS
Stability (1 year)	±0.25% FS, typical
Over Range Protection	2X Rated Pressure
Burst Pressure	5X Rated Pressure or 45,000 PSI, whichever is less
Pressure Cycles	> 100 Million

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

Electrical Data

Output	4-20mA	1-5VDC
Excitation	8-28VDC	8-28VDC
Output Impedance	>10k Ohms	<100 Ohms, Nominal
Current Consumption:	25mA, typical	2mA, typical
Bandwidth	(-3dB): DC to 1kHz	(-3dB): DC to 1kHz
Output Noise:	-	<2mV RMS
Zero Offset:	<± 0.5% of FS	<± 0.5% of FS
Span Tolerance:	<± 1.0% of FS	<± 1.0% of FS
Output Load:	0-800 Ohms@8-28VDC	5k Ohms, Min.
Reverse Polarity Protection	Yes	Yes

Ordering Information

AST46DS **P** **G** **0500** **P** **3** **2** **1** **000**

Series Type

Process Connection

A= 1/4" NPT Male
I= 1/4" NPT Female
P= 1/2" NPT Male
W= F250C Autoclave Female

Pressure Reference

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

Pressure Range

Insert - 4 digit pressure code

Pressure Unit

B= Bar K= kg/cm² P= PSI H=Inches H₂O

Outputs

3= 1-5V (3 Wire + Case Connection)
4= 4-20mA (Loop Powered + Case Connection)

Electrical

2= Terminal Blocks (1/2" FNPT Conduit Connections - standard)

Sensor Material

0= 17-4PH 2= Inconel 718 (contact factory for availability)**
1= 316L** 4= Hastelloy C276 (contact factory for availability)**

Options

000= No Options

*Not suitable for Class II

**NACE MR0175/ISO 15156 compatible material

Low Pressures

PSIG Measurement	Pressure Code
0-1	G0001
0-2.5	G0069
0-5	G0005
0-7.5	G0208
0-10	G0010
0-15	G0015

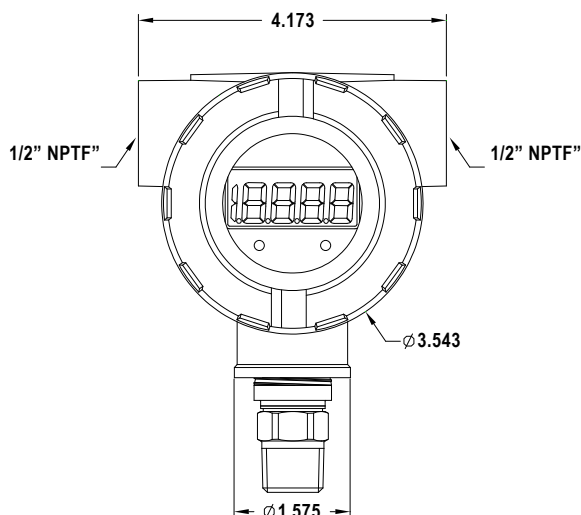
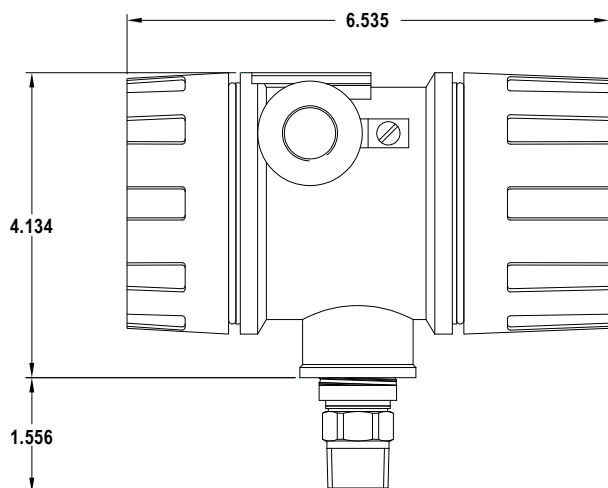
2.5 and 7.5 PSI Sensor must be ordered in inches of H₂O. Pressures from 0-1 to 0-15PSI are not suitable for hydrogen. 316L and Hastelloy C276 are the only material options.

High Pressures

PSIG Measurement	Pressure Code
0-25	G0025
0-50	G0050
0-100	G0100
0-200	G0200
0-500	00500
0-1,000	01000
0-3000	03000
0-5,000	05000
0-7,500	07500
0-10,000	10000
0-15,000	15000
0-20,000	20000

For pressure 10,000 PSI and up, use pressure reference digit to specify first number. Example, AST46DSP15000P4X1000 = 15,000 PSI pressure range. Display for 20,000 PSI pressure range has maximum reading of 19,999 PSI.

Dimensional Data



For warranty information, please visit: www.astensors.com