



EXPLOSION-PROOF

Pressure Transducer with Display

AST46DS

Overview

AST46DS explosion proof pressure transducer 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.

Benefits

- ♦ Explosion Proof: Class I & II Division 1 / 2 Groups A, B, C, D, E, F, G
- ♦ Class III Division 1 & 2
- ♦ ATEX and IECEx Ex d IIC
- ♦ ANSI/ISA 12.27.01-2003 Single Seal Approved
- ♦ ABS (American Bureau of Shipping) Approved
- ♦ Display Units: PSI | Bar | kpa | Mpa | kg/cm2 | in WC | Volts | mA

Applications

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

Performance @ 25°C (77°F)

| | |
|------------------------------|--|
| Error Tolerance | < ±0.25% BFSL |
| 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 |

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) |

0-100% relative humidity, non-condensing

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 Outdoors; Type 4X Rated

Pollution Degree 2 (interior of enclosure)

**Measurement
(Installation)
Category** I

Altitude 2000m

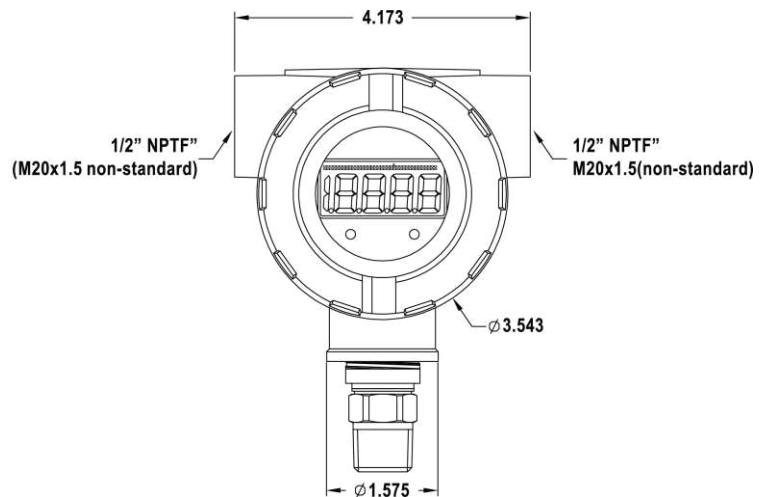
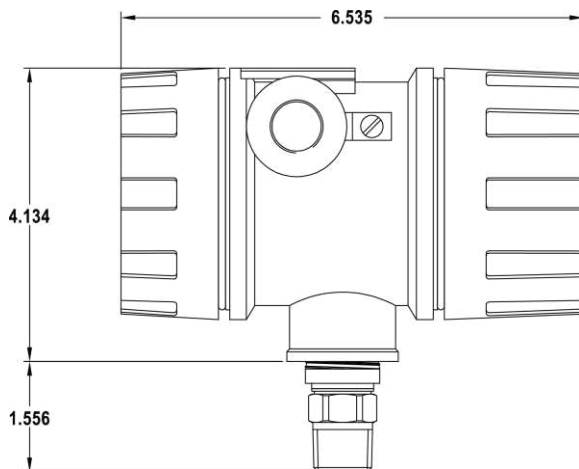
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Electrical Data

| | | |
|-----------------------------|--------------------|--------------------|
| 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 |

Dimensions



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Ordering Information

| | | | | | | | | | |
|--|--------|---------------|----------|------|------------------|-------------|---------------------|-----|------|
| AST46DS | P | G | 0500 | P | 3 | 2 | 1 | 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) | | | | | | | | | |
| Pressure Range G= Gauge Pressure* V= Gauge Pressure (Vacuum Calibrated)* 0= Sealed Gauge up to 9,999 PSI 1= Sealed Gauge up to 19,999 PSI 2= Sealed Gauge 20,000 PSI | | | | | | | | | |
| Insert Pressure Code | | | | | | | | | |
| PSIG Measurement | 0-1 | Pressure Code | G | 0001 | PSIG Measurement | -14.7 to 25 | Pressure Code Ventd | V | 0025 |
| | 0-2.5+ | | G | 0069 | | -14.7 to 30 | | V | 0030 |
| | 0-5 | | G | 0005 | | -14.7 to 50 | | V | 0050 |
| | 0-7.5+ | | G | 0208 | | 0-25 | | G | 0025 |
| | 0-10 | | G | 0010 | | 0-50 | | G | 0050 |
| | 0-15 | | G | 0015 | | 0-100 | | G | 0100 |
| | | | | | | 0-200 | | G | 0200 |
| | | | | | | 0-500 | | 0 | 0500 |
| | | | | | | 0-1,000 | | 0 | 1000 |
| | | | | | | 0-3000 | | 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 | | | | |
| Pressure Unit B= Bar K= kg/cm ² P= PSI H= Inches H ₂ O | | | | | | | | | |
| Outputs 3= 1-5V 4= 4-20mA (2 wire loop powered) | | | | | | | | | |
| Electrical 2= Terminal Blocks (1/2" FNPT Conduit Connections - standard) | | | | | | | | | |
| Wetted Material (consult factory on availability of Inconel 718 and Hastelloy C276) 0= 17-4PH 1= 316L** 2= Inconel 718** 4= Hastelloy C276** | | | | | | | | | |
| 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. | | | | | | | | | |

*Not suitable for Class II; Sensing element corrects for barometric pressure through base sensor assembly. **NACE MR0175/ISO 15156 compatible material

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