

AST4100 Compact



Stainless Steel Media Isolated Pressure Sensor

Overview

American Sensor Technologies, presents the AST4100 as a compact, price-competitive stainless steel pressure sensor. Compatible with a wide range of liquids and gases over pressure ranges up to 10,000 PSI, the AST4100 covers a diversified variety of applications. AST4100 sensors are available with outputs of 10mV/V, as well as high level outputs that utilize AST's proprietary Krystal Bond™ Technology.

Benefits

- High Strength Stainless Steel Construction
- No Oil, Welds or Internal O-rings
- (one piece sensing element)
- Wide Operating Temperature Range
- Ranges up to 10,000 PSI
- Low Static and Thermal Errors
- Price / Performance Deliver Value
- Compatible with Wide Range of Liquids and Gases
- UL/cUL 508 Approved

Applications

- Test Equipment
- Control Panels
- Hydraulic Systems
- Data Loggers
- HVAC/R Equipment
- Pneumatics
- Hydrogen Storage (316L SS)



Environmental Data

Temperature

| | |
|-----------|-----------------------------|
| Operating | -40 to 85°C (-40 to 185°F) |
| Storage | -40 to 100°C (-40 to 212°F) |

Thermal Limits

| | |
|-------------------|-------------------------|
| Compensated Range | 0 to 55°C (30 to 130°F) |
| TC Zero | <±1.5% of FS |
| TC Span | <±1.5% of FS |

Other

| | |
|---------------------|--------------------------|
| Shock | 100G, 11 msec, 1/2 sine |
| Vibration | 10G peak, 20 to 2000 Hz. |
| EMI/RFI Protection: | No |
| Rating: | IP-65 |

Performance @ 25°C (77°F)

| | |
|-----------------------|--------------------------------------|
| Accuracy* | < ±0.5% BFSL |
| Stability (1 year) | ±0.25% FS, typical |
| Over range Protection | 2X Rated Pressure |
| Burst Pressure | 5X or 20,000 PSI (whichever is less) |
| Pressure Cycles | > 100 Million |

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

Electrical Data

| Output | 4-20mA | 1-5VDC, 1-6VDC | 0-50mV (10mV/V) | 0.5-4.5V Ratiometric |
|-----------------------------|----------------------|--------------------|-------------------------|----------------------|
| Excitation | 10-28VDC | 10-28VDC | 5VDC, typical | 5VDC, regulated |
| Output Impedance | >10k Ohms | <100 Ohms, Nominal | 1100 Ohms, Nominal | <100 Ohms, Nominal |
| Current Consumption: | 20mA, typical | <10mA | <5mA | <10mA |
| Bandwidth | (-3dB): DC to 250 Hz | (-3dB): DC to 1kHz | (-3dB): DC to 5kHz, min | (-3dB): DC to 1kHz |
| Output Noise: | - | <2mV RMS | - | <2mV RMS |
| Zero Offset: | <±1% of FS | <±1% of FS | < ±2% of FS | <±1% of FS |
| Span Tolerance: | <±1.5% of FS | <±1.5% of FS | < ±2% of FS | <±1.5% of FS |
| Output Load: | 0-800 Ohms@10-28VDC | 10k Ohms, min | >1M Ohms | 10K Ohms, min |
| Reverse Polarity Protection | Yes | Yes | - | Yes |



Ordering Information

AST 4 100 A 00500 P 4 A 0 000

Series Type

Process Connection
 A=1/4" NPT Male
 B=1/8" NPT Male*
 C=1/4" BSPP Male
 F=7/16" - 20 UNF Male*

Pressure Range
 Insert 5-digit pressure range code

Pressure Unit
 B= Bar
 K= kg/cm2
 P= PSI

Outputs
 1= 0.5-4.5V ratiometric
 3= 1-5V
 4= 4-20mA (2 wire loop powered)

Electrical+
 A=2 ft. (0.6m)
 B=4 ft. (1.2m)
 C=6 ft. (1.8m)
 D=10 ft. (3.0m)

Wetted Material
 0=17-4PH
 1=316L

Options
 000=No special factory options

6= 1-6V
 A= 10mV/V

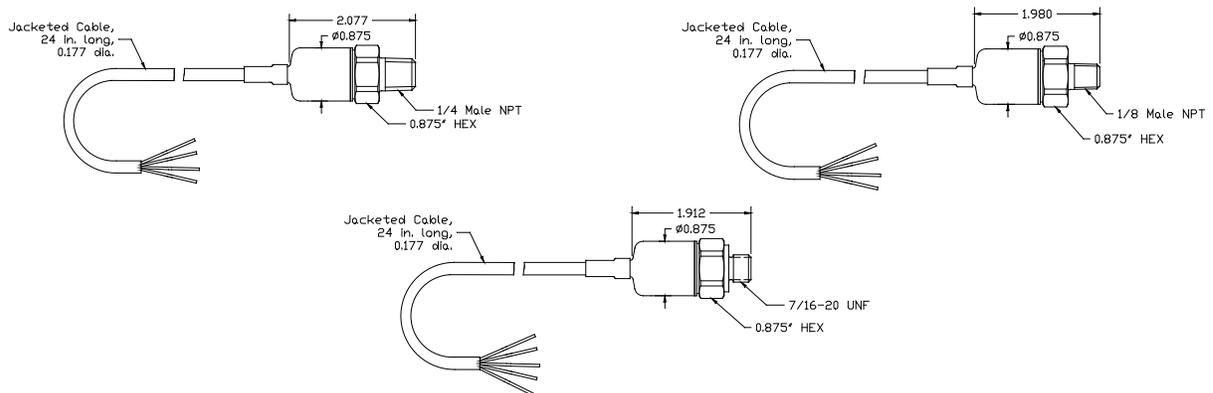
} AST's standard cable is 24AWG

Pressure Ranges*

| PSIG Measurement Range | Pressure Range Code | BARG Measurement Range | Pressure Range Code |
|------------------------|---------------------|------------------------|---------------------|
| -14.7 to 25** | V0025** | -1 to 2** | V0002** |
| 0-25 | 00025 | 0-2 | 00002 |
| 0-50 | 00050 | 0-5 | 00005 |
| 0-100 | 00100 | 0-7 | 00007 |
| 0-150 | 00150 | 0-10 | 00010 |
| 0-200 | 00200 | 0-20 | 00020 |
| 0-250 | 00250 | 0-35 | 00035 |
| 0-500 | 00500 | 0-50 | 00050 |
| 0-1,000 | 01000 | 0-70 | 00070 |
| 0-2,500 | 02500 | 0-100 | 00100 |
| 0-5,000 | 05000 | 0-250 | 00250 |
| 0-7,500 | 07500 | 0-350 | 00350 |
| 0-10,000 | 10000 | 0-500 | 00500 |
| | | 0-700 | 00700 |

*Typical ranges. All ranges between 0-25 PSI and 0-10,000 PSI available.
 **Compound ranges up to -14.7 to 500 PSI available. Please consult factory.

Dimensional Data



Warranty

Workmanship - AST, Inc. pressure transmitters have a limited one-year warranty to the original purchaser. AST, Inc. will replace or repair, free of charge, any defective transmitter. This warranty does not apply to any units that have been modified; misused, neglected or installed where the application exceeds published ratings. AST's sensors are made with pride in New Jersey, USA. If in the area please feel free to stop by for a visit!

Installation/Applications - The purchaser is responsible for media compatibility, functional adequacy, and correct installation of the transmitter.