

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 to Performance Ratio Delivers 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)

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:	<±2% 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	-	No



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

Ordering Information

AST4100 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 6= 1-6V
 3= 1-5V A= 10mV/V
 4= 4-20mA (2 wire loop powered)

Electrical*
 A=2 ft. (0.6m) } AST's standard
 B=4 ft. (1.2m) } cable is 24AWG
 C=6 ft. (1.8m)
 D=10 ft. (3.0m)

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

Options
 000=No special factory options

*Wiring information available at: <http://www.astensors.com/mediacenter.php>

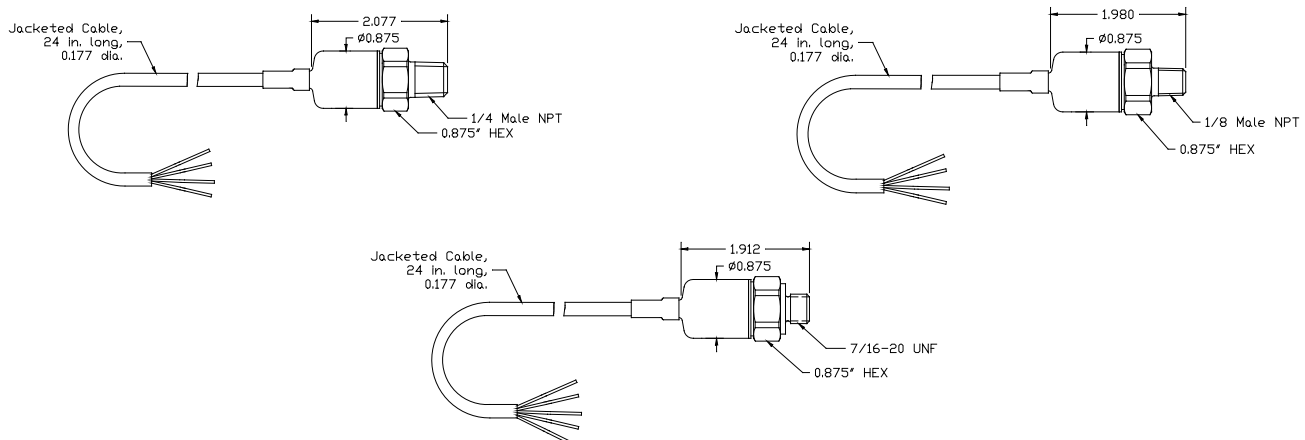
Pressure Ranges*

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 2500 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.