

# AST4900 High Purity



## Media Isolated Pressure Sensor

### Overview

The AST4900 is a media isolated pressure sensor intended for the measurement of liquids and gases in high purity applications. Utilizing Krystal Bond™ Technology, each sensor is free of oil-fill, welds and internal O-rings, all of which eliminate the risk of system contamination. This one-piece design also promotes high cyclical life, high shock and vibration capability and will maintain long-term stability, even in extreme conditions.

### Benefits

- ◆ All 316L High Strength Stainless Steel Construction
- ◆ No Oil, Welds, or Internal O-rings
- ◆ Wide Operating Temperature Range
- ◆ UL/cUL508 Approved
- ◆ CE EN61326 Certified

### Applications

- ◆ Gas Panels and Manifolds
- ◆ Test Stands
- ◆ Semiconductor Equipment
- ◆ Gas Pipeline Instrumentation
- ◆ Data Loggers
- ◆ Pressure Instrumentation



### Performance @ 25°C (77°F)

Accuracy*	< ±0.25% 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

### Environmental Data

<b>Temperature</b>	
Operating	-40 to 85°C (-40 to 185°F)
Storage	-40 to 100°C (-40 to 212°F)
<b>Thermal Limits</b>	
Compensated Range	0 to 55°C (30 to 130°F)
TC Zero	<±1.5% of FS
TC Span	<±1.5% of FS
<b>Other</b>	
Shock	100G, 11 msec, 1/2 sine
Vibration	20G peak, 20 to 2400 Hz.
EMI/RFI Protection:	Yes
Rating:	IP-66

### Electrical Data

Output	4-20mA	Voltage (.25-5V, 1-5V, 1-6V)	0.5-4.5V Ratiometric
Excitation	10-28VDC	10-28VDC	5VDC, regulated
Output Impedance	-	<100 Ohms, Nominal	<100 Ohms, Nominal
Current Consumption:	25mA, typical	<10mA	<10mA
Bandwidth	(-3dB): DC to 250 Hz	(-3dB): DC to 1kHz	(-3dB): DC to 1kHz
Output Noise:	-	<2mV RMS	<2mV RMS
Zero Offset:	<±1% of FS	<±1% of FS	<±1% of FS
Span Tolerance:	<±2% of FS	<±1.5% of FS	<±2% of FS
Output Load:	0-800 Ohms@10-28VDC	10k Ohms, min	10K Ohms, min
Reverse Polarity Protection	Yes	Yes	No

## Ordering Information

**AST4900 N 00500 B 3 E 1 000**

**Series Type**

**Process Connection**

A=1/4" NPT Male  
N=1/4" VCR Male

**Pressure Range**

Insert 5-digit pressure range code

**Pressure Unit**

B= Bar  
K= kg/cm<sup>2</sup>  
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<sup>†</sup>**

A=2 ft. (0.6m)                      D=10 ft. (3.0m)  
B=4 ft. (1.2m)                      E=Mini DIN 43650  
C=6 ft. (1.8m)                      R=6 Pin Bendix Connector

**Wetted Material**

1=316L  
2=Inconel 718 (Limited Availability)

**Options**

000= No special options

### Pressure Ranges\*

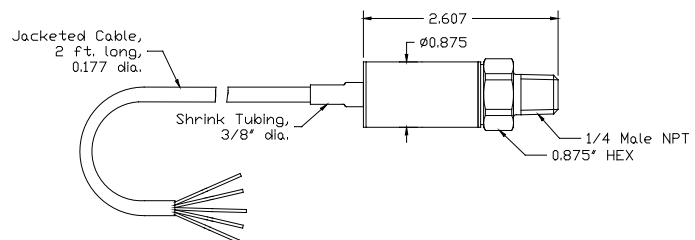
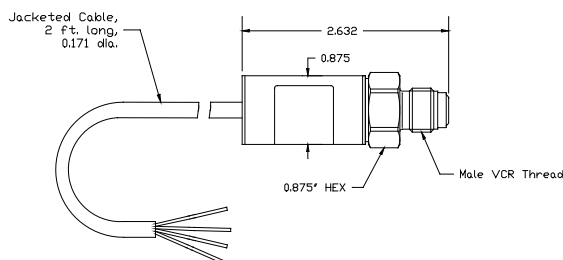
PSIG Measurement Range	Pressure Range Code	BARG Measurement Range	Pressure Range Code
-14.7 to 25**	V0025**	-1 to 2**	V0002**
0-25	00025	0-2	00002
0-50	00050	0-5	00005
0-100	00100	0-7	00007
0-150	00150	0-10	00010
0-200	00200	0-20	00020
0-250	00250	0-35	00035
0-500	00500	0-50	00050
0-1,000	01000	0-70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

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

## 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.