

# AST2000 Hydrogen ASIC Pressure Sensor



**316L Stainless Steel, Media Isolated Pressure Sensor for Hydrogen Applications**

## Overview

The AST2000 series is now available for hydrogen pressure sensing applications. Tested to a variety of hydrogen and automotive standards, the AST2000 series combines the best mechanical design for hydrogen measurement with high performance digital compensation.

## Benefits

- One Piece design
- All 316L wetted material for optimal compatibility
- No Oil-filled Cavities leave no chance of containment
- Non-welded diaphragm eliminates leak paths and weak points
- Digitally Compensated

## Applications\*

- PEM Fuel Cells
- Hydrogen Storage
- Hydrogen Filling Stations
- Test Stands

\* Learn more about Hydrogen pressure measurement ([Hydrogen Applications](#))

## Approvals

- EIHP
- CE EN61326



TUV Approval Files	Pressure Range	Burst Pressure
07-01820/1-TUV	20 Bar	600 Bar
07-01820/2-TUV	448 Bar, 500 Bar, 700 Bar, 900 Bar	2800 Bar

Performance @ 25°C (77°F)	
Accuracy*	< ±0.5% BFSL
Stability (1 year)	±0.25% FS, typical
Over range Protection	2X Rated Pressure
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 125°C (-40 to 250°F)
<b>Thermal Limits</b>	
Compensated Range	-10 to 70°C (14 to 148°F)
Thermal Error	+/- 2% of FS (+/- 1% OF FS Optional)
<b>Other</b>	
Shock	100G, 11 msec, 1/2 sine
Vibration	20G peak, 20 to 2400 Hz.
EMI/RFI Protection:	Yes
Rating:	IPX6K

Electrical Data	
<b>Output</b>	<b>0.5-4.5V ratiometric</b>
Excitation	5VDC regulated
Output Impedance	<100 Ohms, Nominal
Current Consumption:	<10mA
Bandwidth	-(3dB): DC to 3kHz
Output Noise:	<2mV RMS
Zero Offset	+/-0.5% of FS
Span Tolerance	+/-0.5% of FS
Output Load:	10K Ohms, Min.
Reverse Polarity Protection	No

## Ordering Information

**AST2000      F      00500      B      1      F      1      000**

**Series**

**Pressure Ports**

F= 7/16-20 UNF Male [SAE 4]

M= 3/8-24 UNF Male [SAE 3]

**Pressure Range**

00020= 20 Bar

00448= 448 Bar

00500= 500 Bar

00700= 700 Bar

00900= 900 Bar

**Pressure Unit**

B= Bar

**Output**

1 = 0.5-4.5V ratiometric [5VDC supply]

**Electrical**

F= Packard Metripack 150

**Wetted Material**

1= 316L

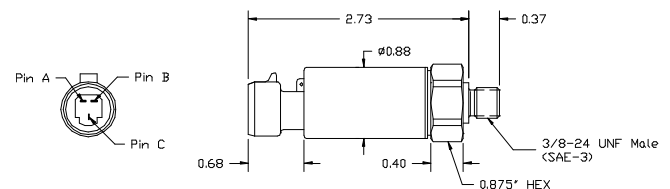
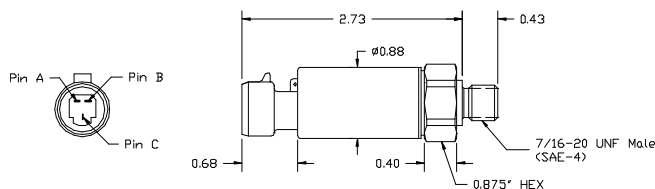
**Options**

000= No Options

379= Hydrogen Accuracy Package (+/- 1% of FS)

417= Hydrogen Accuracy Package (+/- 1% of FS) with Stainless Steel Snubber

## 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.