

## AST4310 Class 1 Div 2 Groups A, B, C, D Non-Incendive

### Media Isolated, Field Adjustable Pressure Sensor

#### OVERVIEW

The AST4310 is a media isolated, field adjustable pressure transmitter suitable for use in hazardous areas. Protected by a Viton O-ring, this transmitter's two potentiometers have the ability to adjust the zero and span output signals up to  $\pm 5\%$  [of the full scale pressure]. Additionally, the AST4310 offers access points through the housing of the transmitter in order to simplify adjustments after installation. Complete with a wide range of threads, pressure ranges and output signals, the AST4310 is the solution for pressure measurement when adjust ability is necessary.

#### BENEFITS

- UL/cUL 1604 Class 1 Div 2 Groups A, B, C, D
- High Strength Stainless Steel Construction
- No Oil, Welds or Internal O-rings
- Wide Operating Temperature Range
- Ranges from Vacuum to 10,000 PSI
- Low Static and Thermal Errors
- Unparalleled Price and Performance
- Compatible with Wide Range of Liquids and Gases
- EMI/RFI Protection

#### APPLICATIONS

- Refrigeration
- Industrial OEM Equipment
- Pressure Instrumentation
- Gas Compression & Storage
- Oxygen Delivery Systems
- Water Management
- Oil & Gas Platforms
- Process Control
- Test Stands
- Hydrogen Fuel (316L)

#### Electrical Data

<b>Output</b>	<b>4-20mA</b>	<b>1-5VDC, 1-6VDC</b>
Excitation	10-28VDC	10-28VDC
Output Impedance	>10k Ohms	<100 Ohms, Nominal
Current Consumption:	20mA, typ.	<10mA
Bandwidth	(-3dB): DC to 250 Hz	(-3dB): DC to 1kHz
Output Noise:	-	<2mV RMS
Zero Offset:	< $\pm 1\%$ of FS	< $\pm 1\%$ of FS
Span Tolerance:	< $\pm 2\%$ of FS	< $\pm 1.5\%$ of FS
Output Load:	0-800 Ohms@10-28VDC	10k Ohms, Min.
Reverse Polarity Protection	Yes	Yes

#### ZERO & SPAN ADJUSTABILITY



#### Performance @25°C (77°F)

Accuracy*	< $\pm 0.25\%$ BFSL
Stability (1 year)	$\pm 0.25\%$ FS, typ
Over range Protection	2X Rated Pressure
Burst Pressure	5X or 10,000 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	< $\pm 1.5\%$ of FS
TC Span	< $\pm 1.5\%$ of FS
<b>Other</b>	
Shock	100G, 11 msec, 1/2 sine
Vibration	10G peak, 20 to 2000 Hz.
EMI/RFI Protection:	Yes
Rating:	IP-66

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# Ordering information

**AST4310 A 00500 P 3 L 0 000**

## Series Type

## Process Connection

A=1/4" NPT Male

B=1/8" NPT Male

C=1/4" BSPP Male

I= 1/4" NPT Female

P=1/2" NPT Male

## Pressure Range

Insert pressure range code from chart

## Pressure Unit

B= Bar

K= kg/cm<sup>2</sup>

P= PSI

## Outputs

3= 1-5V

4= 4-20mA (2 wire loop powered)

## Electrical (Standard Conduit is 1/2-14 Male NPT)

L= Conduit fitting, Cable 2ft (0.6m)

M= Conduit fitting, Cable 4ft (1.2m)

N= Conduit fitting, Cable 6ft (1.8m)

P= Conduit fitting, Cable 10ft (3.0m)

## Wetted Material

0=17-4PH

1=316 L

## Options

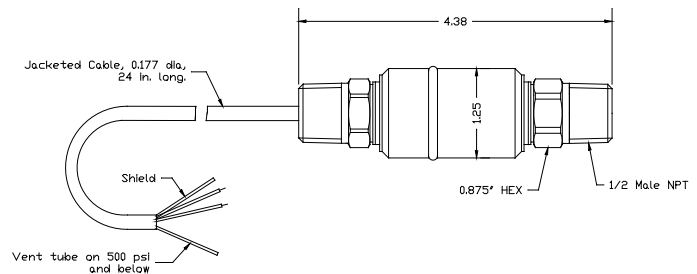
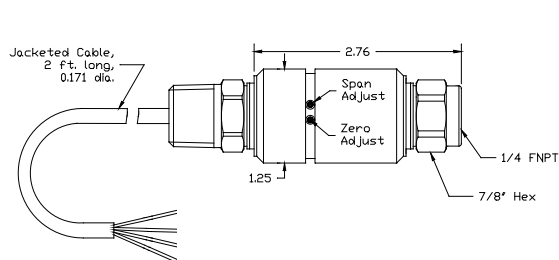
000= No special options

## Pressure Ranges\*

PSIG Measurement Range	Pressure Range Code	BARG Measurement Range	Pressure Range Code
-14.7 to 30**	V0030**	-1 to 2**	V0002**
0-25	00025	0-2	00002
0-50	00050	0-5	00005
0-100	00100	0-10	00010
0-200	00200	0-20	00020
0-250	00250	0-50	00050
0-300	00300	0-100	00100
0-500	00500	0-250	00250
0-1,000	01000	0-350	00350
0-1,500	01500	0-500	00500
0-2,500	02500	0-700	00700
0-3000	03000		
0-5,000	05000		
0-7,500	07500		
0-10,000	10000		

\*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.

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