American Sensor Technologies
Your sensor business partner...

AST44LP *Class 1 Div 1 IS Groups C, D with Approved Barrier*

Low Pressure Stainless Steel Media Isolated Pressure Sensor

RoHS COMPLIANT LEAD FREE

OVERVIEW

The AST44LP is a media isolated stainless steel pressure sensor with a wide variety of options. In addition to its rugged construction and the best price-to-performance ratio in the industry, the AST44LP is the solution for low pressure measurement in Intrinsically Safe areas.

NOW WITH DIN43650A!

BENEFITS

- **UL/cUL 913 (CSA 157)** Class 1 Div 1 Groups C,D when installed with an approved barrier
- High Strength Stainless Steel Construction
- No Welds or Internal O-rings
- Wide Operating Temperature Range
- Ranges from 0-5 to 0-15 PSI
- Low Static and Thermal Errors
- Unparalleled Price and Performance
- Compatible with Wide Range of Liquids and Gases
- EMI/RFI Protection

APPLICATIONS

- Industrial OEM Equipment
- Water Management
- Pneumatics
- Vapor Recovery
- External Tank Levels
- HVAC/R Equipment
- Control Panels
- Hydraulic Systems
- Data Loggers

Performance @25°C (77°F)	
Accuracy*	< ±0.25% BFSL
Stability (1 year)	±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	
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:	Yes
Rating:	IP-66

Electrical Data				
Output	**4-20mA**	**1-5VDC, 1-6VDC**	**0-50mV**	**0.5-4.5V Ratiometric**
Excitation	10-28VDC	10-28VDC	5VDC,typ	5VDC,reg
Output Impedance	>10k Ohms	<100 Ohms, Nominal	1100 Ohms, Nominal	<100 Ohms, Nominal
Current Consumption:	20mA, typ.	<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

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Ordering Information

AST44LP A 00005 P 4 E 1 000

Series Type

Process Connection
A=1/4" NPT Male
F=7/16" - 20 UNF Male

Pressure Range
Insert pressure range from chart

Pressure Unit
H= Inches H_2O
P= PSI

Outputs
1= 0.5-4.5V ratiometric
3= 1-5V
4= 4-20mA (2 wire loop powered)
6= 1-6V
A= 10mV/V

Electrical
A= 2Ft.(0.6m)
B= 4Ft.(1.2m)
C= 6Ft.(1.8m)
D= 10Ft.(3.0m)
E= Mini DIN 43650C
F= Packard Metripack 150
I= DIN 43650A
L= Conduit, Cable 2ft
M= Conduit, Cable 4ft
N= Conduit, Cable 6ft
P= Conduit, Cable 10ft
R= 6 Pin Bendix

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

Options
000 -No special options

Pressure Ranges*

Gage PSIG	Pressure Range Code
0-5	00005
0-7.5	00208*
0-10	00010
0-15	00015

*7.5 PSI Sensor must be ordered in inches of H_2O.

Barrier Installation

AST Drawing #A01657

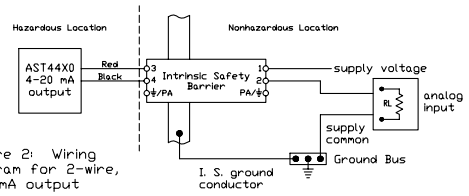


Figure 2: Wiring diagram for 2-wire, 4-20mA output

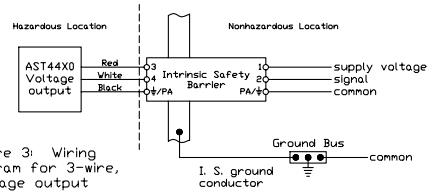


Figure 3: Wiring diagram for 3-wire, Voltage output

The transducers listed below are designed for installation in a Class I, Division 1, Groups C and D, Division 1 hazardous location when connected to Associated Apparatus as described in note 1.

Entity Parameters
Vmax = 28Vdc
Imax = 175mA
Ci = 0.44uf
Li = 0

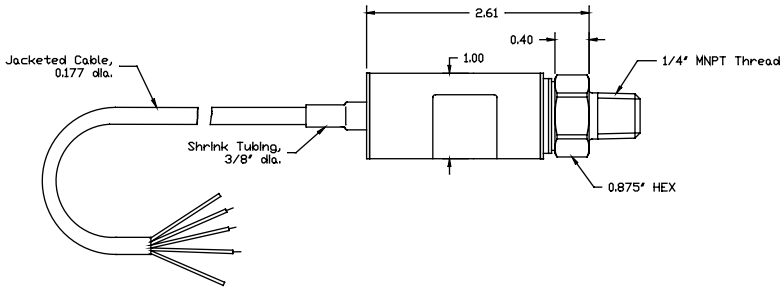
Imax is the total current available from the Associated Apparatus under any condition.

Notes:
1. Associated Apparatus shall provide intrinsically safe connections which meet the following parameters.
Voc or Vt ≤ Vmax Ca ≥ Ci + Cleads
Isc or It ≤ Imax La ≥ Li + Lleads

2. Control Room apparatus shall not generate in excess of 250V (Umax).

3. Installation should be in accordance with Article 504 in the National Electrical Code, ANSI/NFPA 70.

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.

www.astsensors.com