LOW PRESSURE
Intrinsically Safe Transducer
AST44LP

Overview
The AST44LP is a stainless steel pressure transducer with a wide variety of options. With 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.

Benefits
- Class I Div 1 Intrinsically Safe Groups C, D when installed with an approved barrier
- ATEX / IECEx: Class I Zone 0 Exia IIB T4 Ga (Ta = -40°C to +80°C)
- High Strength Stainless Steel Construction
- No Internal O-rings
- Wide Operating Temperature
- Pressures from 0-1 to 0-15 PSI
- Low Static and Thermal Errors
- Unparalleled Price and Performance
- Compatible with Wide Variety of Liquids and Gases

Applications
- Industrial OEM Equipment
- HVAC/R Equipment
- Water Management and External Tank Levels
- Control Panels
- Pneumatics and Hydraulic Systems
- Vapor Recovery
- Data Loggers
LOW PRESSURE
AST44LP Intrinsically Safe Pressure Transducer / Transmitter

Performance @ 25°C (77°F)

Accuracy < ±0.25% BFSL (<±0.5% for 0-1 PSI)
Stability (1 year) ±0.25% FS, typical
Over Range Protection 2X Rated Pressure, Minimum
Burst Pressure 5X or 75 PSI (whichever is less)
Pressure Cycles >100 Million

Environmental Data

Temperature
Operating -40 to 80°C (-40 to 176°F)
Storage -40 to 100°C (-40 to 212°F)
0-100% relative humidity, non-condensing

Thermal Limits
Compensated Range 0 to 55°C (32 to 132°F)
TC Zero <±1.5% of FS
TC Span <±1.5% of FS

Other
Shock EN 60068-2-27
Vibration EN 60068-2-6, 60068-2-64, and IEC 68-2-32
EMI/RFI Protection: Yes
Rating: IP-66, min

Electrical Data

Output 4-20mA 1-5VDC, 1-6VDC
Excitation 10-28VDC 10-28VDC
Output Impedance >10k Ohms <100 Ohms, Nominal
Current
20mA, typical
5mA, typical
Consumption:
Bandwidth (-3dB): DC to 250 Hz (-3dB): DC to 1kHz
Output Noise - <2mV RMS
Zero Offset: <±1% of FS <±1% of FS
Span Tolerance: <±2% of FS <±1.5% of FS
Output Load: 0-800 Ohms@10-28VDC 10k Ohms, Min.
Reverse Polarity Protection Yes Yes
Dimensions
**UL Approved Barrier Installation / A01657**

Class I, Div 1, Groups C,D,E Class I, Zone 0 & Group IIB & IIC 4.20mA output

**CSA Approved Barrier Installation / A08949**

Class I, Div 1, Groups A,B,C,D Class I, Zone 0, Class I, Zone 0 & Group IIB, IIC 4.20mA output

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The transducers listed below are designed for installation in EITHER Class I, Division I, Group C,D,E; Class I, Zone 0 & Group IIB & IIC or Class I, Division I, Groups A,B,C,D; Class I, Zone 0 & Group IIB & IIC locations when connected to Associated Apparatus as described in note 1.

**Entity Parameters**

- **Models**: AST4400, AST4400L, AST4500, AST4510, AST4520
- **Class I, Div 1, Groups C,D,E; Class I, Zone 0 & Group IIB & IIC**
- **Inputs**: up to 1000 psig
- **Output**: 4-20mA
- **Vmax**: 28 V

Model AST4400

<table>
<thead>
<tr>
<th>Class</th>
<th>Div</th>
<th>Groups</th>
<th>Class I, Zone 0 &amp; Group IIB, IIC</th>
<th>Class I, Zone 0 &amp; Group IIB, IIC</th>
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<tr>
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<td>4-20mA with integral connector</td>
<td>4-20mA with integral connector</td>
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<td>All EXCEPT 4-20mA with integral connector</td>
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<td>Pmax = 655 mV</td>
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<td>Imax = 93 mA</td>
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<td>Li = 0 uH</td>
<td>Li = 0 uH</td>
</tr>
</tbody>
</table>

1. The following conditions must be satisfied:

   - **VOC or Uo (Vmax)**
   - **Cs or Co (Ci + Ic)**
   - **Ic or Io (Ci)**
   - **Ps (M P applicable)**

2. Control room apparatus shall not generate in excess of 250V (Vmax).

3. Canadian installations should be in accordance with Canadian Electrical Code, Part I, U.S. installations should be in accordance with Article 504 in the National Electrical Code, ANSI/NFPA 70.

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**Entity Parameters**

- **Models**: AST4400, AST4400L, AST4500, AST4510, AST4520
- **Class I, Div 1, Groups A,B,C,D; Class I, Zone 0 & Group IIB, IIC**
- **Inputs**: up to 1000 psig
- **Output**: 4-20mA
- **Vmax**: 28 V

Model AST4400L

Class I, Div 1, Groups A,B,C,D; Class I, Zone 0 & Group IIB, IIC 4.20mA output

1. For installation in accordance with Fig. 2, barrier must be a CSA Certified, Single Channel grounded Shunt-Base Zone Barrier or a Single Channel Isolating Barrier.

2. For installations in accordance with Figs. 1 and 3, one dual-channel or two single-channel barriers may be used, where in either case, both channels have been certified for use together with combined entity parameters.

3. The following conditions must be satisfied:

   - **VOC or Uo (Vmax)**
   - **Cs or Co (Ci + Ic)**
   - **Ic or Io (Ci)**
   - **Ps (M P applicable)**

4. Maximum non-hazardous area voltage must not exceed 250 V.

5. Canadian installations should be in accordance with Canadian Electrical Code, Part I, U.S. installations should be in accordance with Article 504 in the National Electrical Code, ANSI/NFPA 70.

6. A grounding method is not provided by the manufacturer as part of the integral design of the Transducer. For units which are connected through a grounded shunt zone safety barrier, ensure that the transducer is mounted to a surface which is at the same potential as the barrier ground.

7. See user manual for installation conditions.
# Ordering Information

<table>
<thead>
<tr>
<th>AST44LP Series Type</th>
<th>A</th>
<th>00005</th>
<th>P</th>
<th>4</th>
<th>E</th>
<th>1</th>
<th>000</th>
<th>-ss</th>
</tr>
</thead>
</table>

**Process Connection**
- A= 1/4" NPT Male
- I= 1/4" NPT Female**
- C= 1/4" BSPP Male
- P= 1/2" NPT Male

**Pressure Range**
Insert 5-digit pressure range code (example: 0-1 PSI = 00001)
Ranges between 0-1 PSI and 0-15 PSI available.

**Pressure Unit**
- B= Bar
- K= kg/cm²
- P= PSI

**Outputs**
- 3= 1.5V
- 4= 4-20mA (2 wire loop powered)
- 6= 1-6V

**Electrical**
- A= 2 ft. (0.6m)
- B= 4 ft. (1.2m)
- C= 6 ft. (1.8m)
- D= 10 ft. (3.0m)
- E= Mini DIN 43650C
- F= Packard Metripack 150 3-Pin
- I= DIN 43650A
- L= Conduit, Cable 2 ft. (0.6 m)
- M= Conduit, Cable 4 ft. (1.2 m)
- N= Conduit, Cable 6 ft. (1.8 m)
- P= Conduit, Cable 10 ft. (3 m)
- R= 6- Pin Bendix
- Y= M12x1
- 4 = Mini-Fast (CSA Only)

**Wetted Material**
- T= 316L
- 4= Hastelloy C276

**Options**
- 000= No Options
- 588= 0.5-2.5V non-ratiometric (3-5VDC)

**Approval**
Insert code from approvals chart below [Leave blank for UL ANSI/ISA 12.12.01 Class I Div 1 Intrinsically Safe Groups C, D (formerly UL913)]

| -ss | CSA1257 Class I Div 1 Grps C,D Intrinsically Safe, ANSI/ISA 12.27.01 Single Seal and ATEX/IECEx Exia IIC Class I, Zone 0, T4 |

Note: CSA approved products require case/earth ground electrical connection. See wiring installation sheet for further details.

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American Sensor Technologies, Inc. (AST), a TE Connectivity Company
Tel: 1 800-522-6752 (option 2)
Email: customercare.motive@te.com

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**TE.com/sensorsolutions**

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