HAMMER UNION - 1502
Pressure Transmitter

Overview

The hammer union pressure transmitter is a US manufactured pressure transmitter with Weco™ process connections. Offered with 4-20mA output signals, this design features high shock and vibration resistance, with testing up to 1000G. Pressure is measured from an Inconel 718 sensing element using MEMS silicon based strain gages to produce accurate repeatable measurements. The cage design allows for protection of both the connector and mating connector. The modular enclosure allows for simple factory replacement of the transmitter at a fraction of the cost of the whole assembly.

Performance @ 25°C (77°F)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>&lt;±0.5% BFSL</td>
</tr>
<tr>
<td>(Accuracy includes non-linearity, hysteresis &amp; non-repeatability)</td>
<td></td>
</tr>
<tr>
<td>Stability (1 year)</td>
<td>±0.25% FS, typical</td>
</tr>
<tr>
<td>Over Range Protection</td>
<td>2X Rated Pressure, Minimum</td>
</tr>
<tr>
<td>Burst Pressure</td>
<td>5X or 40,000 PSI (whichever is less)</td>
</tr>
<tr>
<td>Pressure Cycles</td>
<td>&gt;100 Million</td>
</tr>
</tbody>
</table>

Environmental Data

Temperature

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>-40 to 80°C (-40 to 176°F)</td>
</tr>
<tr>
<td>Storage</td>
<td>-40 to 100°C (-40 to 212°F)</td>
</tr>
<tr>
<td></td>
<td>0-100% relative humidity, non-condensing</td>
</tr>
</tbody>
</table>

Thermal Limits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensated Range</td>
<td>0 to 55°C (32 to 132°F)</td>
</tr>
<tr>
<td>TC Zero</td>
<td>&lt;±1.5% of FS</td>
</tr>
<tr>
<td>TC Span</td>
<td>&lt;±1.5% of FS</td>
</tr>
</tbody>
</table>

Other

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shock</td>
<td>1,000g, 0.5ms half sine wave</td>
</tr>
<tr>
<td>Vibration</td>
<td>EN 60068-2-6, 60068-2-64, and IEC 68-2-32</td>
</tr>
<tr>
<td>EMI/RFI Protection</td>
<td>Yes</td>
</tr>
<tr>
<td>Rating</td>
<td>IP-66, min</td>
</tr>
</tbody>
</table>

Benefits

- Modular design
- Cage protection for connector and mating cable
- Inconel 718 sensing element
- SIL2 available
- Easy to carry
- Non-clogging port
- Available in Intrinsically Safe, Non-Incendive, and Explosion-proof packages
**Electrical Data**

- **Output**: 4-20mA
- **Excitation**: 10-28VDC
- **Output Impedance**: >10k Ohms
- **Current**: 20mA, typical
- **Bandwidth**: (-3dB): DC to 250 Hz
- **Zero Offset**: <±1% of FS
- **Span Tolerance**: <±2% of FS
- **Output Load**: 0-800 Ohms@10-28VDC
- **Reverse Polarity Protection**: Yes

**Dimensions**

- CSA Approved Barrier Installation | A08949

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Entity Parameters

**Hazardous Location**

- **Non-Hazardous Location**

1. For installation in accordance with Fig. 2, barrier must be a CSA Certified, Single Channel grounded Shunt-Disable 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
   - Vac or Vi ≤ Vmax
   - Cu or Co ≥ D = 2 cable
   - Po = Pu = Pi if applicable

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

5. Canadian installations should be in accordance with Canadian Electrical Code, Part 1. US installations should be in accordance with Article 504 in the National Electrical Code, ANSI/NFPA 71.

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, a solid safety barrier, ensure that the transducer is mounted to a surface which is at same potential as the barrier ground.

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

**AST4400**

**Series Type**
- AST4300= Class I Div 2 Non-Incendive
- AST4400= Class I Div 1 IS Groups C, D with barrier
- AST4600= Class I Div 1 Explosion-proof

**Process Connection**
- X = Special - See option codes

**Pressure Range**

<table>
<thead>
<tr>
<th>Pressure Code</th>
<th>6,000</th>
<th>10,000</th>
<th>15,000</th>
<th>20,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI Measurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PSI Measurement**
- 06000
- 10000
- 15000
- 20000

**Pressure Unit**
- B= Bar
- P= PSI

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

**Electrical**
- R= 6- Pin Bendix (PT06A) (see Option 601)
- Y= M12x1

**Wetted Material**
- 2= Inconel 718 Sensor / 316L SS

**Options**
- 600= Weco™ 1502 Cage Assembly
- 601= Weco™ 1502 Cage Assembly, Bendix A=V, B=-V, D and F=Case Ground

**Approval**
- -SS= CSA Certified, ANSI/ISA 12.27.01 Single Seal and ATEX/IECEx (AST4300 / AST4400)
- -SL= Same as -SS + SIL2 Certification

WECO is a registered trademark of FMC Technologies, Inc. For complete approvals by series, contact factory.

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