Intrinsically safe melt pressure transmitter for pressure measurement in hot media Series EMT4X2 2

Description
The intrinsically safe melt pressure transducer series EMT based on the proven melt pressure transmitter series MDT. The integrated, PTB-approved, 2-wire mAmp amplifier converts the process pressure into an proportional output signal. The 2-wire mAmp-amplifier technique is insensitive to noise and well suited for economical long cable runs.

Many of the features found in Dyniscos standard MDT-series have been incorporated into the EMT-series, including proven bonded strain gauge construction for stable operation, a flexible armored capillary between the amplifier housing and the rigid stem and a flush diaphragm. Another advantage is the electrical built-in calibration.

Features
- Intrinsically safe according Ex-safety class
  EEx ia IIC T5 up to 80 °C and EEx ia IIC T1-T4 up to 85 °C
- Installation for media temperature up to 400 °C
- Flexible capillary between rigid stem and housing
- Electrical built-in calibration

Technical Data / Operating Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure range</td>
<td>0 - 17 bar to 0 - 2000 bar</td>
</tr>
<tr>
<td>Accuracy</td>
<td>EMT422 2 ± 0.5 % f.s.v.</td>
</tr>
<tr>
<td></td>
<td>- up to 50 bar ± 1 % f.s.v.</td>
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<tr>
<td></td>
<td>EMT462 2 ± 1 % f.s.v.</td>
</tr>
<tr>
<td>Repeatability</td>
<td>EMT422 2 ± 0.1 % f.s.v.</td>
</tr>
<tr>
<td></td>
<td>- up to 50 bar ± 0.2 % f.s.v.</td>
</tr>
<tr>
<td></td>
<td>EMT462 2 ± 0.2 % f.s.v.</td>
</tr>
<tr>
<td>Resolution</td>
<td>infinite</td>
</tr>
<tr>
<td>Maximum overload</td>
<td>2 x pressure range</td>
</tr>
<tr>
<td></td>
<td>(without influencing operating data)</td>
</tr>
<tr>
<td>Burst pressure</td>
<td>6 x pressure range</td>
</tr>
<tr>
<td></td>
<td>max. 3000 bar</td>
</tr>
<tr>
<td>Material in contact with media</td>
<td>15-5 Mat. No. 1.4545</td>
</tr>
<tr>
<td>Power consumption</td>
<td>&lt; 20 mA</td>
</tr>
<tr>
<td>Zero balance</td>
<td>- 2 % / + 10 % of full scale</td>
</tr>
<tr>
<td></td>
<td>adjustable</td>
</tr>
<tr>
<td>Internal Shunt-Calibration</td>
<td></td>
</tr>
<tr>
<td>Isolation resistance</td>
<td>80 % of full scale ± 10 %</td>
</tr>
<tr>
<td></td>
<td>1000 MΩ at 50 V DC</td>
</tr>
</tbody>
</table>
**Temperature influence**

**Diaphragm**
- Max. Temperature: 400 °C
- Zero shift due to Temperature change:
  - EMT422 2 ± 0.2 bar / 10 °C
  - EMT462 2 ± 0.4 bar / 10 °C

**Housing**
- Max. Temperature: 85 °C
- Zero shift due to Temperature change:
  - ± 0.2 % f.s.v. / 10 °C
- Sensitivity shift due to temperature change:
  - EMT422 2 ± 0.1% f.s.v./10°C
  - -up to 50 bar ± 0.2% f.s.v./10°C
  - EMT462 2 ± 0.4% f.s.v./10°C

**Dimensions**

**EMT422 2 / EMT462 2**

**Accessories**

Ex-Power Supply, Cleaning Tool Kit, Machining Tool Kit

**Order specifications**

**Model**
- EMT422 2 = 0.5% Accuracy
- EMT462 2 = 1.0% Accuracy

**Mounting Thread**
- 1/2” = Gewinde 1/2” 20 UNF 2A
- M18 = Gewinde M18 x 1,5

**Pressure range**
- 17) = 0 - 17 bar
- 35) = 0 - 35 bar
- 50) = 0 - 50 bar
- 1C = 0 - 100 bar
- 2C = 0 - 200 bar
- 3,5C = 0 - 350 bar
- 5C = 0 - 500 bar
- 7C = 0 - 700 bar
- 1M = 0 - 1000 bar
- 1,4M = 0 - 1400 bar
- 2M = 0 - 2000 bar

1) only EMT422 2
2) M18 only

Conversion table psi/bar and inch/mm on page 181.

Options on page 183.