RTD Thermometer TMT162R

Benefits:
- Dual compartment housing
- Backlit display with large measured value, bar graph and fault condition indication
- Galvanic isolation 2 kV (sensor input to the output)
- Wide range of threaded thermowell connections available as standard
- Replaceable measuring insert comprising a mineral insulated tube (SS 316L/1.4404)
- Approvals for hazardous areas: Flameproof enclosure (Ex d), Intrinsic safety (Ex ia), Non-sparking (Ex nA); marine approval
- Aluminum or stainless steel housing, degree of protection IP67, NEMA 4x

Specs at a glance
- **Accuracy** class A acc. to IEC 60751 class AA acc. to IEC 60751
- **Response time** depending on configuration t50 = 4 s t90 = 8 s
- **Max. process pressure (static)** at 20 °C: 500 bar (7.252 psi)
- **Operating temperature range** PT 100: -200 °C ...600 °C (-328 °F ... 1.112 °F)
- **Max. immersion length on request** Not defined

Field of application: The robust thermometer is designed for use in demanding and safety relevant applications e.g. in the Chemical, Oil & Gas and Energy industry. The thermometer fulfills the corresponding safety requirements due to various certificates and tests. The use of a transmitter leads to higher accuracy and reliability in comparison to directly wired sensors.

Features and specifications

<table>
<thead>
<tr>
<th>Thermometer</th>
<th>Measuring principle</th>
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<tbody>
<tr>
<td><strong>Characteristic / Application</strong></td>
<td>US style metrical modular temperature assembly for heavy duty applications suitable for hazardous areas to use with thermowell backlit display</td>
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<tr>
<td><strong>Thermowell / protection tube</strong></td>
<td>to be used with thermowell</td>
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<tr>
<td><strong>Insert / probe</strong></td>
<td>mineral insulated (MI), flexible</td>
</tr>
<tr>
<td><strong>Outer diameter protection tube / Insert</strong></td>
<td>Insert Diameter 6,0 mm (0,24&quot;)</td>
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<tr>
<td><strong>Max. immersion length on request</strong></td>
<td>Not defined</td>
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<tr>
<td><strong>Material protection tube / thermowell</strong></td>
<td>Not defined</td>
</tr>
<tr>
<td><strong>Optional coating</strong></td>
<td>Not defined</td>
</tr>
<tr>
<td><strong>Process connection</strong></td>
<td>Thermowell connection male thread: G1/2&quot; NPT1/2&quot; NPT3/4&quot; cap nut: NPT1/2&quot; M24x1.5</td>
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<td><strong>Tip shape</strong></td>
<td>Not defined</td>
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## Thermometer

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<th><strong>Surface roughness Ra</strong></th>
<th>Not defined</th>
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| **Operating temperature range** | PT 100:  
-200 °C ... 600 °C  
(-328 °F ... 1.112 °F) |
| **Max. process pressure (static)** | at 20 °C: 500 bar (7.252 psi) |
| **Accuracy** | class A acc. to IEC 60751  
class AA acc. to IEC 60751 |
| **Response time** | depending on configuration  
t50 = 4 s  
t90 = 8 s |
| **Integration head transmitter** | yes (4 ... 20 mA; HART; PROFIBUS PA; FOUNDATION FIELDBUS) |
Thermometer

**Ex - approvals**
general purpose
ATEX II1G Ex ia IIC T6
ATEX II2G Ex d IIC T6, II2D
ATEX Ex d, Ex ia
ATEX II 3G Ex nA IIC T4/T5/T6
ATEX II1/2G Ex d IIC T6, II1/2D
ATEX Ex d, Ex ia
ATEX II1G Ex ia IIC T6
ATEX II2G Ex d IIC T6, II2D
ATEX II1/2G Ex d IIC T6, II1/2D
ATEX II1/2G Ex ia IIC T6, II1/2D Ex
EAC Ga/Gb Ex ia IIC, Ex ia IIIC Da/Db
EAC Ga/Gb Ex d IIC, Ex ta/tb IIIC Da/Db
EAC Ga/Gb Ex ia IIC, Ex ia IIIC Da/Db
EAC Ga/Gb Ex d IIC, Ex ta/tb IIIC Da/Db

**Certification**
Gost Metrology
Marine approval

More information [www.us.endress.com/TMT162R](http://www.us.endress.com/TMT162R)