TH13
Modular RTD thermometer, US style

Best in class temperature measurement technology for general applications

Benefits:
- High flexibility due to modular assembly with standard terminal heads and customized immersion length
- One Source shopping for temperature measurement solutions. World class transmitter with integrated sensor offering for heavy process industry applications. Remove and install straight out of the box!
- Improved galvanic isolation on most devices (2 kV)
- Simplified model structure: Competitively priced, offers great value. Easy to order and reorder. A single model number includes sensor and transmitter assembly for a complete point solution
- All iTEMP® transmitters provide long term stability ≤ 0.05 % per year
- Fast response time with reduced/tapered tip form
- Head transmitter with easy selection: Analog output 4 to 20 mA, HART®, PROFIBUS® PA or FOUNDATION Fieldbus™

Specs at a glance
- **Accuracy** class AA acc. to IEC 60751 class A acc. to IEC 60751 class B acc. to IEC 60751 depending on configuration
- **Response time** depending on configuration
- **Max. process pressure (static)** at 20 °C: 100 bar (1.450 psi) depends on configuration
- **Operating temperature range** PT100 WW: -200 °C ... 600 °C (-328 °F ... 1.112 °F) StrongSens: -50 °C ... 500 °C (-58 °F ... 932 °F) PT100 TF: -50 °C ... 200 °C (-58 °F ... 392 °F)
- **Max. immersion length on request** up to 24" (609 mm) others on request

Field of application: The robust device with a barstock thermowell is a complete unit ready for use with various housing transmitter heads to
meet the application and space requirement needs. The unit offers enhanced measurement accuracy and reliability. A variety of process connections, dimensions, and materials (like 316L SS and Hastelloy C276) offer flexible application possibilities.

### Features and specifications

#### Thermometer

<table>
<thead>
<tr>
<th>Measuring principle</th>
<th>Resistance Temperature Detector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristic / Application</td>
<td>US style modular temperature assembly threaded process connection process connection as weld in version with extension incl. thermowell</td>
</tr>
<tr>
<td>Thermowell / protection tube</td>
<td>bar stock (drilled)</td>
</tr>
<tr>
<td>Insert / probe</td>
<td>mineral insulated (MI), flexible PTFE-insulated, rigid</td>
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<tr>
<td>Outer diameter protection tube / Insert</td>
<td>3/4&quot; (19,05 mm) 1&quot; (25,40 mm) 17/16&quot; (26,99 mm) 15,88 mm ...33,40 mm (0,63&quot; ...1,31&quot;)</td>
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<td>Max. immersion length on request</td>
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</table>
Thermometer

Material protection tube/ thermowell
316/316L
A105
AlloyC276
others on request

Optional coating
Available on request

Process connection
male thread:
NPT1/2"
NPT3/4"
NPT1"
weld in version
socket weld version
1"

Tip shape
reduced
tapered
straight

Surface roughness Ra
32 μin (0.80 μm)

Operating temperature range
PT100 WW:
-200 °C ... 600 °C
(-328 °F ... 1.112 °F)
StrongSens:
-50 °C ... 500 °C
(-58 °F ... 932 °F)
PT100 TF:
-50 °C ... 200 °C
(-58 °F ... 392 °F)
**Thermometer**

**Max. process pressure (static)**
- at 20 °C: 100 bar (1.450 psi)
- depends on configuration

**Accuracy**
- class AA acc. to IEC 60751
- class A acc. to IEC 60751
- class B acc. to IEC 60751

**Response time**
- depending on configuration

**Integration head transmitter**
- yes (4 ... 20 mA; HART; PROFIBUS PA; FOUNDATION FIELDBUS)

**Ex - approvals**
- transmitter only
  - FM IS
  - CSA IS
  - FM/CSA IS

**Certification**
- SIL (transmitter only)

More information [www.us.endress.com/TH13](http://www.us.endress.com/TH13)