

# TH13

## Modular RTD thermometer, US style

### Best in class temperature measurement technology for general applications



More information and current pricing:

[www.casc.endress.com/TH13](http://www.casc.endress.com/TH13)

#### 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  $\leq 0.05\%$  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
- **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

#### Measuring principle

Resistance Temperature Detector

#### Characteristic / Application

US style  
modular temperature assembly  
threaded process connection  
process connection as weld in version  
with extension  
incl. thermowell

#### Thermowell / protection tube

bar stock (drilled)

#### Insert / probe

mineral insulated (MI), flexible  
PTFE-insulated, rigid

#### Outer diameter protection tube / Insert

3/4" (19,05 mm)  
1" (25,40 mm)  
17/16" (26,99 mm)  
15,88 mm ...33,40 mm  
(0,63" ...1,31")

#### Max. immersion length on request

up to 24" (609 mm)  
others on request

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**Thermometer****Material protection tube/ thermowell**

316/316L  
A105  
AlloyC276  
others on request

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**Optional coating**

Available on request

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**Process connection**

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

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**Tip shape**

reduced  
tapered  
straight

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**Surface roughness Ra**

32 µin (0.80 µm)

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**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)

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## Thermometer

**Max. process pressure (static)**

at 20 °C: 100 bar (1.450 psi)

depends on configuration

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**Accuracy**

class AA acc. to IEC 60751

class A acc. to IEC 60751

class B acc. to IEC 60751

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**Response time**

depending on configuration

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

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**Ex - approvals**

transmitter only

FM IS

CSA IS

FM/CSA IS

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**Certification**

SIL (transmitter only)

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