

# T14

## Explosion proof Pt100 thermometer, US style

Safe monitoring of process temperatures in challenging applications e. g. in the Oil & Gas industry



More information and current pricing:

[www.de.endress.com/T14](http://www.de.endress.com/T14)

### Benefits:

- FM/CSA XP Class I, Div. 1 approved temperature assemblies for maximum safety
- 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, thermowell and transmitter assembly for a complete point solution
- All iTEMP transmitters provide long term stability  $\leq 0.05\%$  per year

### Specs at a glance

- **Accuracy** class A acc. to IEC 60751 class B acc. to IEC 60751
- **Response time** depending on configuration 63% rt = 20 s
- **Max. process pressure (static)** at 20 °C: 500 bar (7.252 psi) depends on configuration
- **Operating temperature range** PT100 WW: -200 °C ... 600 °C (-328 °F ... 1.112 °F) PT100 TF: -50 °C ... 200 °C (-58 °F ... 392 °F)
- **Max. immersion length on request** up to 22.5" (571 mm) others on request

**Field of application:** The robust thermometer is designed for use in demanding and safety relevant applications e.g. in Chemical, Oil & Gas and Energy industry. Harsh environments, corrosive substances and highest pressures can be handled by the use of robust thermowells and

special materials. A optional head transmitter with all common communication protocols makes the device ready to use with enhanced measurement accuracy and reliability compared to directly wired sensors. Flexible configuration possible.

## Features and specifications

### Thermometer

#### Measuring principle

Resistance Temperature Detector

#### Characteristic / Application

Explosion Proof US style  
modular temperature assembly  
for heavy duty applications  
flanged process connection  
with extension  
incl. thermowell

#### Thermowell / protection tube

bar stock (drilled)

#### Insert / probe

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

#### Outer diameter protection tube / Insert

7/8" (22,23 mm)  
17/16" (26,99 mm)

#### Max. immersion length on request

up to 22.5" (571 mm)  
others on request

#### Material protection tube/ thermowell

316/316L  
others on request

#### Optional coating

Available on request

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## Thermometer

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### Process connection

flange:

ASME 1" 150 RF (B16.5)

ASME 1" 300 RF (B16.5)

ASME 1" 600 RF (B16.5)

ASME 1" 900/1500 RF (B16.5)

ASME 1,5" 150 RF (B16.5)

ASME 1,5" 300 RF (B16.5)

ASME 1,5" 600 RF (B16.5)

ASME 1,5" 900/1500 RF (B16.5)

ASME 2" 150 RF (B16.5)

ASME 2" 300 RF (B16.5)

ASME 2" 600 RF (B16.5)

ASME 2" 900/1500 RF (B16.5)

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### Tip shape

straight

tapered

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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)

PT100 TF:

-50 °C ... 200 °C

(-58 °F ... 392 °F)

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### Max. process pressure (static)

at 20 °C: 500 bar (7.252 psi)

depends on configuration

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### Accuracy

class A acc. to IEC 60751

class B acc. to IEC 60751

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**Thermometer****Response time**

depending on configuration

63% rt = 20 s

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

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**Ex - approvals**

FM XP

CSA XP

FM/CSA XP

CSA GP

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**Certification**SIL (transmitter only)

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