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.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 ≤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

Thermometer

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)

Tip shape

straight
tapered

Surface roughness Ra

32 µin. (0.80 µm)

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. process pressure (static)

at 20 °C: 500 bar (7.252 psi)
depends on configuration

Accuracy

class A acc. to IEC 60751
class B acc. to IEC 60751

Thermometer

Response time

depending on configuration
63% rt = 20 s

Integration head transmitter

yes (4 ... 20 mA; HART; PROFIBUS PA; FOUNDATION FIELDBUS)

Ex - approvals

FM XP
CSA XP
FM/CSA XP
CSA GP

Certification

SIL (transmitter only)

More information **www.endress.com/T14**