

T13

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.ch.endress.com/T13

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% $t_r = 20$ s
- **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) 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 device with a barstock thermowell is a complete unit ready for use with various housing transmitter heads to meet the application and space requirements. 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

Explosions Proof US style
modular temperature assembly
for heavy duty applications
threaded 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

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

Max. immersion length on request

up to 22.5" (571 mm)
others on request

Material protection tube/ thermowell

316/ 316L
A105
others on request

Thermometer**Optional coating**available on request

Process connection

male thread:

NPT1/2"

NPT3/4"

NPT1"

weld in version

socket weld version

Tip shape

stepped

tapered

Surface roughness Ra32 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: 100 bar (1.450 psi)

depends on configuration

Accuracy

class A acc. to IEC 60751

class B acc. to IEC 60751

Response time

depending on configuration

63% rt = 20 s

Thermometer**Integration head transmitter**

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

Ex - approvals

FM XP DIP Class I,II,III Div. 1+2
FM XP NI DIP Class I,II,III Div. 1+2
CSA XP DIP Class I,II,III Div. 1+2
CSA XP NI DIP Class I,II,III Div. 1+2
FM/CSA XP DIP Class I,II,III Div. 1+2
FM/CSA XP NI DIP Class I,II,III Div1+2
CSA C/US XP, DIP I, II, III/1/A-G
cCSAus General Purpose

Certification

SIL (transmitter only)

More information www.ch.endress.com/T13