T53
Explosion proof TC thermometer, US style

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

More information and current pricing:
www.au.endress.com/T53

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** Standard acc. to ASTM E-230 Special acc. to ASTM E-230
- **Response time** depending on configuration 63% rt = 15,0 s
- **Max. process pressure (static)** Standard acc. to ASTM E-230 Special acc. to ASTM E-230
- **Operating temperature range** Type T: -270 °C ...370 °C (-454 °F ...698 °F) Type J: -210 °C ...720 °C (-346 °F ...1.328 °F) Type E: -270 °C ...820 °C (-454 °F ...1.508 °F) Type K: -270 °C ...1.150 °C (-454 °F ...2.102 °F) Type N: -270 °C ...1.150 °C (-454 °F ...2.102 °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. An 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
Thermocouple

Characteristic / Application
Explosion 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

Outer diameter protection tube / Insert
0,63" ...1,31" (15,88 mm ... 33,40 mm)

Thermometer

Max. immersion length on request
up to 22.5" (571 mm)

others on request

Material protection tube/ thermowell
316/316L

A105

others on request

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 Ra
32 µin (0.80 µm)

Thermometer

Operating temperature range

Type T:

-270 °C ...370 °C

(-454 °F ...698 °F)

Type J:

-210 °C ...720 °C

(-346 °F ...1.328 °F)

Type E:

-270 °C ...820 °C

(-454 °F ...1.508 °F)

Type K:

-270 °C ...1.150 °C

(-454 °F ...2.102 °F)

Type N:

-270 °C ...1.150 °C

(-454 °F ...2.102 °F)

Max. process pressure (static)

Standard acc. to ASTM E-230

Special acc. to ASTM E-230

Thermometer

Accuracy

Standard acc. to ASTM E-230

Special acc. to ASTM E-230

Response time

depending on configuration

63% rt = 15,0 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.au.endress.com/T53**