TH52
US style thermocouple sensor, cable probe

Cost efficient TC sensor designed for use in many process and laboratory applications

More information and current pricing:
www.endress.com/TH52

Benefits:

- 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.
- Improved galvanic isolation on most devices (2 kV)
- One source shopping for temperature measurement solutions. Remove and install straight out of the box!
- 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** 63% rt = 0.3 s
- **Max. process pressure (static)** at 20°C: 40 bar (580 psi)' depends on configuration
- **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 96" (2438 mm) others on request

Field of application: The thermocouple cable probe is easy to install and provide a high operational safety due to reliable and accurate temperature measurement in common processes. The probe is used in many process and laboratory applications such as heat exchangers, furnaces or dryers. Without additional thermowell the probe sheath is

directly in contact with the process medium. This enables the cable probe to detect rapid temperature changes fast and accurate.

Features and specifications

Thermometer

Measuring principle
Thermocouple

Characteristic / Application
US style

cable probe

process connection as compression fitting

Thermowell / protection tube
without (not intended to use with thermowell)

Insert / probe
mineral insulated (MI), flexible

Outer diameter protection tube / Insert
1/16" (1,59 mm)

1/8" (3,18 mm)

3/16" (4,76 mm)

1/4" (6,35 mm)

Max. immersion length on request
up to 96" (2438 mm)

others on request

Thermometer

Material protection tube/ thermowell
316

Alloy 600

Optional coating
Not applicable

Process connection
compression fitting:

NPT1/8"

NPT1/4"

Tip shape
straight

Surface roughness Ra
nicht definiert

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)

at 20°C: 40 bar (580 psi)'
depends on configuration

Thermometer

Accuracy

Standard acc. to ASTM E-230

Special acc. to ASTM E-230

Response time

63% rt = 0.3 s

Integration head transmitter

Not applicable

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