

TC66

Explosion-proof TC Thermometer

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



More information and current pricing:

www.endress.com/TC66

Benefits:

- Types of protection for use in hazardous locations: Intrinsic safety (Ex i.a.), flameproof (Ex d), non-sparking (Ex nA)
- High degree of insert compatibility and design as per DIN 43772
- Extension neck to protect the head transmitter from overheating
- High degree of flexibility thanks to modular design with standard terminal heads as per DIN EN 50446 and customer-specific immersion lengths

Specs at a glance

- **Accuracy** class 1 acc. to IEC 60584
- **Response time** depending on configuration $t_{50} = 3$ s $t_{90} = 7$ s
- **Max. process pressure (static)** at 20 °C: 500 bar (7.252 psi)
- **Operating temperature range** Type K: -40 °C ...1.100 °C (-40 °F ...2.012 °F) Type J: -200 °C ...750 °C (-328 °F ...1.382 °F)
- **Max. immersion length on request** up to 5.000,00 mm (196,85")

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

Features and specifications

Thermometer**Measuring principle**Thermocouple

Characteristic / Application

US style

modular temperature assembly

for heavy duty applications

suitable for hazardous areas

with neck

incl. thermowell / protection tube (metal)

Thermowell / protection tubebar stock (drilled)

Insert / probemineral insulated (MI), flexible

Outer diameter protection tube / Insert

20 mm (0,79")

24 mm (0,94")

25 mm (0,98")

Max. immersion length on requestup to 5.000,00 mm (196,85")

Thermometer

Material protection tube/ thermowell

1.4401 (316)

1.4404 (316L)

1.4571 (316Ti)

Alloy C276

Alloy 400

Optional coating

Not defined

Thermometer

Process connection

male thread:

NPT3/4"

NPT1"

flange:

ASME 1" 150 RF (B16.5)

ASME 1" 300 RF (B16.5)

ASME 1" 600 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 2" 300 RF (B16.5)

ASME 2" 600 RF (B16.5)

Tip shape

straight

tapered

Surface roughness Ra1,6 μm (63,0 $\mu\text{in.}$)

Thermometer

Operating temperature range

Type K:

-40 °C ...1.100 °C

(-40 °F ...2.012 °F)

Type J:

-200 °C ...750 °C

(-328 °F ...1.382 °F)

Max. process pressure (static)

at 20 °C: 500 bar (7.252 psi)

Accuracy

class 1 acc. to IEC 60584

Response time

depending on configuration

t50 = 3 s

t90 = 7 s

Integration head transmitteryes (4 ... 20 mA; HART; PROFIBUS PA; FOUNDATION
FIELDBUS)

Thermometer

Ex - approvals

ATEX II

IECEX

NEPSI

EAC Ex

Explosion proof

Certification

Gost Metrology

SIL (transmitter only)

More information www.endress.com/TC66