TR66
Explosion-proof Pt100 Thermometer

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

More information and current pricing:
www.endress.com/TR66

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
- Fast response time with reduced/tapered tip form
- High degree of flexibility thanks to modular design with standard terminal heads as per DIN EN 50446 and customer-specific immersion lengths
- Marine approval

Specs at a glance

- **Accuracy** class A acc. to IEC 60751 class AA acc. to IEC 60751
- **Response time** depending on configuration
- **Max. process pressure (static)** at 20 °C: 500 bar (7.252 psi)
- **Operating temperature range** PT100 TF StrongSens: -50 °C ...500 °C (-58 °F ...932 °F) PT100 WW: -200 °C ...600 °C (-328 °F ...1.112 °F) PT100 TF: -50 °C ...400 °C (-58 °F ...752 °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
Resistance Temperature Detector

Characteristic / Application
US style metric
modular temperature assembly
for heavy duty applications
suitable for hazardous areas
suitable for high process pressures
threaded process connection
with neck
incl. thermowell / protection tube (metal)

Thermowell / protection tube
bar stock (drilled)

Insert / probe
mineral insulated (MI), flexible

Outer diameter protection tube / Insert
20 mm (0,79")
24 mm (0,94")
25 mm (0,98")

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

Material protection tube/ thermowell
1.4401 (316)
1.4404 (316L)
1.4571 (316Ti)
AlloyC276
Alloy600

Thermometer

Optional coating

Not defined

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

tapered

Surface roughness Ra

1,6 µm (63,0 µin.)

Operating temperature range

PT100 TF StrongSens:
-50 °C ...500 °C
(-58 °F ...932 °F)
PT100 WW:
-200 °C ...600 °C
(-328 °F ...1.112 °F)
PT100 TF:
-50 °C ...400 °C
(-58 °F ...752 °F)

Max. process pressure (static)

at 20 °C: 500 bar (7.252 psi)

Thermometer

Accuracy

class A acc. to IEC 60751
class AA acc. to IEC 60751

Response time

depending on configuration

Integration head transmitter

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

Ex - approvals

ATEX II
IECEx
NEPSI
EAC Ex
Explosion proof

Certification

Gost Metrology
SIL (transmitter only)
Marine approval

More information **www.endress.com/TR66**