

TR11

Modular RTD thermometer

Comprehensive and common temperature measurement technology for almost all branches of industry



More information and current pricing:

www.cz.endress.com/TR11

Benefits:

- High degree of flexibility thanks to modular design with standard terminal heads as per DIN EN 50446 and customer-specific immersion lengths
- High degree of insert compatibility and design as per DIN 43772
- Fast response time with reduced/tapered tip form
- Types of protection for use in hazardous locations: Intrinsic safety (Ex i.a.), non-sparking (Ex nA)
- Head transmitter with easy selection: Analog output 4 to 20 mA, HART®, PROFIBUS® PA or FOUNDATION Fieldbus™
- 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: 75 bar (1088 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 10.000,00 mm (393,70")

Field of application: The high modular and robust thermometer finds its use in several applications in almost all industries. 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. A variety of process connections, dimensions and materials offer flexible application possibilities.

Features and specifications

Thermometer

Measuring principle

Resistance Temperature Detector

Characteristic / Application

metric style

modular temperature assembly

universal range of application

suitable for hazardous areas

threaded process connection

without neck

incl. thermowell / protection tube (metal)

can be used with StrongSens insert

Thermowell / protection tube

welded protection tube

Insert / probe

mineral insulated (MI), flexible

Outer diameter protection tube / Insert

8,0 mm (0,31")

9,0 mm (0,35")

11,0 mm (0,43")

12,0 mm (0,47")

14,0 mm (0,55")

15,0 mm (0,59")

Max. immersion length on request

up to 10.000,00 mm (393,70")

Thermometer

Material protection tube/ thermowell

1.4401 (316)
1.4404 (316L)
1.4571 (316Ti)

Optional coating

Not defined

Process connection

male thread:

G3/8"
G1/2"
G3/4"
NPT1/2"
NPT3/4"
M20x1.5

Tip shape

straight
reduced
tapered

Surface roughness Ra

Not defined

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: 75 bar (1088 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 II1D Ex ia IIIC, II1G Ex ia IIC T6
ATEX II1/2D Ex ia IIIC, II1G Ex ia IIC T6
ATEX IECEX II1/2D Ex ta/tb IIIC Da/Db
ATEX II1G Ex ia IIC T6
ATEX II 3 G Ex nA IIC T6, II3D
NEPSI Ex ia IIC T6, Ex iaD 20 T85-T450
IECEX Ex ia IIC T6 Ga/Gb
EAC Ex ia IIC T6 Ga + DIP
NEPSI Ex nA IIC T6

Certification

Gost Metrology
SIL (transmitter only)
Marine approval

More information www.cz.endress.com/TR11