

TR24 Modular RTD thermometer

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



More information and current pricing:

www.us.endress.com/TR24

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 tip form
- Types of protection for use in hazardous locations: Intrinsic safety (Ex ia), non-sparking (Ex nA)
- Head transmitter with easy selection: Analog output 4 to 20 mA, HART®, PROFIBUS® PA or FOUNDATION Fieldbus™

Specs at a glance

- **Accuracy** class A acc. to IEC 60751 class AA acc. to IEC 60751
- **Response time** depending on configuration $t_{50} = 2\text{ s}$ $t_{90} = 5\text{ s}$
- **Max. process pressure (static)** at 20 °C: 40 bar (580 psi)
- **Operating temperature range** PT 100: -200 °C ...500 °C (-328 °F ...932 °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
process connection as compression fitting
without neck

Thermowell / protection tube

without (not intended to use with thermowell)

Insert / probe

mineral insulated (MI), flexible

Outer diameter protection tube / Insert

3,0 mm (0,12")

6,0 mm (0,24")

Max. immersion length on request

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

Material protection tube/ thermowell

1.4404 (316L)

Process connection

compression fitting:

G1/2"

NPT1/2"

weld in version

Tip shape

straight

reduced

Surface roughness Ra

Not defined

Thermometer

Operating temperature range

PT 100:
-200 °C ...500 °C
(-328 °F ...932 °F)

Max. process pressure (static)

at 20 °C: 40 bar (580 psi)

Accuracy

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

Response time

depending on configuration
t₅₀ = 2 s
t₉₀ = 5 s

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 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
NEPSI Ex nA IIC T6

Certification

Gost Metrology
SIL (transmitter only)

More information www.us.endress.com/TR24