

TR13

Modular RTD thermometer

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



More information and current pricing:

www.in.endress.com/TR13

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
- Extension neck to protect the head transmitter from overheating
- Fast response time with reduced/tapered 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
- **Max. process pressure (static)** at 20 °C: 50 bar (725 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

flanged process connection

with neck

incl. thermowell / protection tube (metal)

usable with insert StrongSens

Thermowell / protection tube

welded protection tube

Insert / probe

mineral insulated (MI), flexible

Outer diameter protection tube / Insert

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**

1.4404 (316L)
1.4571 (316Ti)
Alloy C276 (2.4819)
Alloy 600 (2.4816)

Optional coating

Tantal
PTFE Teflon
PVDF

Process connection

flange:
DN15 PN40 B1 (EN1092)
DN15 PN40 C (EN1092)
DN25 PN20 B1 (EN1092)
DN25 PN40 C (EN1092)
DN25 PN50 B1 (EN1092)
DN25 PN100 B2 (EN1092)
DN40 PN40 B1(EN1092)
DN50 PN40 B1 (EN1092)
ASME 1" 150 RF (B16.5)
ASME 1" 300 RF (B16.5)

Tip shape

straight
reduced
tapered

Surface roughness Ra

1,6 µm (63,0 µin.)

Thermometer

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: 50 bar (725 psi)

Accuracy

class A acc. to IEC 60751

class AA acc. to IEC 60751

Response time

depending on configuration

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

Ex - approvals

ATEX II

ATEX IECEX

NEPSI

IECEX

EAC Ex

Certification

Gost Metrology

SIL (transmitter only)

More information www.in.endress.com/TR13