

# TC15

## Modular TC thermometer

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



More information and current pricing:

[www.cz.endress.com/TC15](http://www.cz.endress.com/TC15)

### 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 i.a.), 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 1 acc. to IEC 60584
- **Response time** depending on configuration
- **Max. process pressure (static)** at 20 °C: 400 bar (5.802 psi)
- **Operating temperature range** Type K: -40 °C ... 1.100 °C (-40 °F ... 2.012 °F) Type J: -40 °C ... 750 °C (-40 °F ... 1.382 °F)
- **Max. immersion length on request** up to 30.000,00 mm (1.181,10")

**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**

Thermocouple

---

**Characteristic / Application**

metric style  
modular temperature assembly  
universal range of application  
suitable for hazardous areas  
suitable for high process pressures  
flanged 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**

18,0 mm (0,71")

24,0 mm (0,94")

---

**Max. immersion length on request**

up to 30.000,00 mm (1.181,10")

---

**Material protection tube/ thermowell**

1.0460 (A105)

1.4571 (316Ti)

1.7335 (13CrMo4-5; F-11)

Alloy C276 (2.4819)

Duplex SAF 2205 (1.4462)

Titan Gr2 (3.7035 )

---

**Optional coating**

Not defined

---

## Thermometer

**Process connection**

weld in version

flange:

DN25 PN40 B1 (EN1092)

DN40 PN40 B1(EN1092)

DN50 PN40 B1 (EN1092)

ASME 1" 150 RF (B16.5)

ASME 1" 300 RF (B16.5)

**Tip shape**

tapered

**Surface roughness Ra**

0,8 µm (31,5 µin.)

**Operating temperature range**

Type K:

-40 °C ... 1.100 °C

(-40 °F ...2.012 °F)

Type J:

-40 °C ...750 °C

(-40 °F ...1.382 °F)

**Max. process pressure (static)**

at 20 °C: 400 bar (5.802 psi)

**Accuracy**

class 1 acc. to IEC 60584

**Response time**

depending on configuration

**Integration head transmitter**

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

FIELDBUS)

Thermometer

**Ex - approvals**

ATEX II

NEPSI

IECEX

EAC Ex

---

**Certification**

Gost Metrology

SIL (transmitter only)

---

More information [www.cz.endress.com/TC15](http://www.cz.endress.com/TC15)