

# TEC420

## Thermocouple thermometer

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



More information and current pricing:

[www.de.endress.com/TEC420](http://www.de.endress.com/TEC420)

### 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
- Head transmitter with easy selection: Analog output 4 to 20 mA, HART®, PROFIBUS® PA or FOUNDATION Fieldbus™

### Specs at a glance

- **Accuracy** class 2 acc. to IEC 60584
- **Response time**  $t_{50} = 3 \text{ s}$   $t_{90} = 7 \text{ s}$
- **Max. process pressure (static)** at 20 °C: 20 bar (290 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) Type T: -40 °C ...400 °C (-40 °F ...752 °F)
- **Max. immersion length on request** up to 100.000,00 mm (3.937,01")

**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  
suitable for hazardous areas  
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**6,0 mm (0,24")

---

**Max. immersion length on request**up to 100.000,00 mm (3.937,01")

---

**Material protection tube/ thermowell**

1.4401 (316)  
Alloy 600 (2.4816)

---

**Process connection**depending on configuration

---

**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)  
Type T:  
-40 °C ...400 °C  
(-40 °F ...752 °F)

## Thermometer

---

**Max. process pressure (static)**

at 20 °C: 20 bar (290 psi)

---

**Accuracy**

class 2 acc. to IEC 60584

---

**Response time**

t50 = 3 s

t90 = 7 s

---

**Integration head transmitter**

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

---

**Ex - approvals**

ATEX

---

**Certification**

SIL (transmitter only)

---

More information [www.de.endress.com/TEC420](http://www.de.endress.com/TEC420)