

TC88

Modular thermometer

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



More information and current pricing:

www.be.endress.com/TC88

Benefits:

- High degree of flexibility thanks to modular design with standard terminal heads as per DIN EN 50446 and customer-specific immersion lengths
- Variable total length in suitable thermowells thanks to compression fitting on extension neck
- 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 $t_{50} = 1 \text{ s}$ $t_{90} = 2 \text{ s}$
- **Max. process pressure (static)** at 20 °C: 500 bar (7.252 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, and is perfectly suited for use in the Chemical and Food & Beverages industry. 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
threaded process connection
with neck
to use with thermowell

Thermowell / protection tube

to use with thermowell

Insert / probe

mineral insulated (MI), flexible

Outer diameter protection tube / Insert

Insert Diameter

3,0 mm (0,12")

6,0 mm (0,24")

Max. immersion length on request

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

Material protection tube/ thermowell

1.4404 (316L)

1.4571 (316Ti)

Alloy 600

Optional coating

Not defined

Thermometer

Process connection

male thread:

G1/2"

NPT1/2"

M14x1.5

M18x1.5

Tip shape

straight

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: 500 bar (7.252 psi)

Accuracy

class 1 acc. to IEC 60584

Response time

depending on configuration

t50 = 1 s

t90 = 2 s

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

Thermometer

Ex - approvals

ATEX II

NEPSI

IECEX

NEPSI

EAC Ex

Certification

Gost Metrology

SIL (transmitter only)

More information www.be.endress.com/TC88