

# iTHERM TMS21 MultiSens Slim Multipoint

Low invasive bendable TC multipoint thermometer for Petrochemical and Chemical applications



More information and current pricing:

[www.us.endress.com/TMS21](http://www.us.endress.com/TMS21)

## Benefits:

- High number of measuring points in a small diameter
- Low invasiveness temperature profiling probe
- Easy mounting and cabling

## Specs at a glance

- **Accuracy** class 2 acc. to IEC 60584 ASTM E230 and ANSI MC 96.1
- **Response time**  $t_{50} = 3 \text{ s}$   $t_{90} = 9 \text{ s}$
- **Max. process pressure (static)** at 20 °C: 90 bar (1305 psi)
- **Operating temperature range** Type K: -270 °C ...1.100 °C (-454 °F ...2.012 °F) Type J: -210 °C ...760 °C (-346 °F ...1.382 °F) Type N: -270 °C ...1100 °C (-454 °F ...2.012 °F) Type E: -40 °C ...870 °C (-40 °F ...752 °F)
- **Max. immersion length on request** up to 13.000,00 mm (511,81")

**Field of application:** Specially designed for applications where small size of the probe and light weight are crucial. The TMS21 can be highly customized due to its versatility. It can monitor the temperature on a very high number of points along a line just by using one process connection. It is composed of several low diameters thermocouples protected by one overall primary tube thermowell. Two different product configurations are available, with or without flexible upper thermowell-hose (for axial centering).

## Features and specifications

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**Thermometer****Measuring principle**Thermocouple

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**Characteristic / Application**

metric style  
imperial style  
easy-to-use  
suitable for hazardous areas  
compression fitting as process connection  
without neck  
light chemical processes

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**Thermowell / protection tube**without (not intended to use with thermowell)

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**Insert / probe**mineral insulated (MI), flexible

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**Outer diameter protection tube / Insert**

6,0 mm (0,24")  
3,2 mm (0,126")  
8,0 mm (0,31")  
9,5 mm (0,37")  
6,35 mm (1/4")

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**Max. immersion length on request**up to 13.000,00 mm (511,81")

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**Material protection tube/ thermowell**

1.4401 (316)  
1.4435 (316L)  
1.4571 (316Ti)  
1.4541 (321)  
1.4550 (347)  
Alloy 600 (2.4816)

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## Thermometer

### Process connection

Compression fitting threaded 1/4"

Compression fitting threaded 1/2"

Compression fitting threaded 3/4"

Compression fitting threaded 1"

Flange as an accessory

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### Tip shape

straight

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### Operating temperature range

Type K:

-270 °C ...1.100 °C

(-454 °F ...2.012 °F)

Type J:

-210 °C ...760 °C

(-346 °F ...1.382 °F)

Type N:

-270 °C ...1100 °C

(-454 °F ...2.012 °F)

Type E:

-40 °C ...870 °C

(-40 °F ...752 °F)

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### Max. process pressure (static)

at 20 °C: 90 bar (1305 psi)

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### Accuracy

class 2 acc. to IEC 60584

ASTM E230 and ANSI MC 96.1

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### Response time

t50 = 3 s

t90 = 9 s

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### Integration head transmitter

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

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Thermometer

**Ex - approvals**

IECEX  
IECEX ATEX  
ATEX

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**Certification**

SIL (transmitter only)

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