

iTHERM MultiSens Flex TMS01

Multipoint thermometer

Direct contact TC/RTD temperature profiling solution with 3D-bendable sensors for oil, gas and petrochemical applications



Benefits:

- Easy-to-use device with modular and flexible design, ready to be installed either for direct contact measurements or by means of sensor-dedicated protecting tubes. The device can also be installed in thermowells already in place
- Infinite layouts of 3D sensors distribution for any desired process monitoring configuration
- High degree of customization thanks to a modular product design for easy installation, process integration and maintenance
- High degree of insert process compatibility as per standard IEC 60584, ASTM E230 and IEC 60751
- On-board electronic heat protection for highest product durability
- Compliance to different types of protection for use in hazardous locations for easy process integration

More information and current pricing:

www.endress.com/TMS01

Specs at a glance

- **Accuracy** class 2 acc. to IEC 60584 ASTM E230 and ANSI MC 96.1
- **Response time** depending on configuration: TC: $t_{50} = 2$ s $t_{90} = 5$ s RTD: $t_{50} = 0,8$ s $t_{90} = 2$ s
- **Max. process pressure (static)** at 20 °C: 100 bar (1450 psi)
- **Operating temperature range** Type K: max. 1.150 °C (max. 2.102 °F) Type J: max. 920 °C (max. 1.688 °F) Type N: max. 1.150 °C (max. 2.102 °F) Type T: max. 370 °C (max. 698 °F)
- **Max. immersion length on request** up to 30.000,00 mm (1181")

Field of application: By complying with the highest safety standards, iTHERM TMS01 can be customized for various applications. Bendable into a 3D layout, it provides a complete temperature profile just by using one nozzle. The device is configurable with or without thermowells for optimal response times, mechanical strength or sensors replaceability. It is available either with TC or RTD technology or with our iTHERM StrongSens.

Features and specifications

Thermometer

Measuring principle

Resistance Temperature Detector

Characteristic / Application

metric style
easy-to-use
suitable for hazardous areas
flanged process connection
light chemical processes
3D sensors distributions
modular design
replaceable sensors during shutdown

Thermowell / protection tube

without (for direct contact sensors type)
with (for replaceable sensors)
with (for increased mechanical protection)
Multi-thermowells, each one dedicated to a sensor

Insert / probe

mineral insulated (MI), flexible
mineral insulated (MI), flexible, with its own thermowell

Outer diameter protection tube / Insert

6,0 mm (0,24")
8,0 mm (0,31")
10,29 mm (1/8")

Thermometer**Max. immersion length on request**up to 30.000,00 mm (1181")

Material protection tube/ thermowell

1.4401 (316)

1.4435 (316L)

1.4541 (321)

1.4550 (347)

Alloy 600 (2.4816)

Process connection

flange:

2" ASME/ANSI B16.5 150

...600

3" ASME/ANSI B16.5 150

..600

4" ASME/ANSI B16.5 150

...600

6" ASME/ANSI B16.5 150

...600

8" ASME/ANSI B16.5 150

...600

DN80 EN/DIN 1092.1 PN10

...PN100

DN100 EN/DIN 1092.1 PN10

...PN100

DN125 EN/DIN 1092.1 PN10

...PN100

DN150 EN/DIN 1092.1 PN10

...PN100

DN200 EN/DIN 1092.1 PN10

...PN100

Tip shapestraight

Thermometer

Operating temperature range

Type K:
max. 1.150 °C
(max. 2.102 °F)

Type J:
max. 920 °C
(max. 1.688 °F)

Type N:
max. 1.150 °C
(max. 2.102 °F)

Type T:
max. 370 °C
(max. 698 °F)

Max. process pressure (static)

at 20 °C: 100 bar (1450 psi)

Accuracy

class 2 acc. to IEC 60584
ASTM E230 and ANSI MC 96.1

Response time

depending on configuration:

TC:
t₅₀ = 2 s
t₉₀ = 5 s

RTD:
t₅₀ = 0,8s
t₉₀ = 2s

Integration head transmitter

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

Thermometer

Ex - approvals

ATEX

UL

FM

CSA

NEPSI

Certification

SIL (transmitter only)

More information www.endress.com/TMS01