

iTHERM MultiSens Linear TMS11

Multipoint thermometer

Straight TC/RTD temperature profiling solution with primary thermowell for oil, gas and petrochemical applications



Benefits:

- Features a primary thermowell for superior mechanical strength and an easy replacement of individual inserts, which are available either with TC or RTD technology
- Easy integration with inserts according to standards as per IEC 60584, ASTM E230 and IEC 60751
- Electrical and Pressure Directive compliance for an easy and fast process integration
- High degree of customization thanks to a modular product design for maximum flexibility, easy installation and maintenance
- Compliance to various protection classes for use in hazardous areas
- Possibility to replace individual inserts, even during operation
- Continuous thermowell integrity monitoring thanks to a pressure port for maximum process safety

More information and current pricing:

www.endress.com/TMS11

Specs at a glance

- **Accuracy** class 1 acc. to IEC 60584 class Special ASTM E230 and ANSI MC 96.1 IEC60751 Class A IEC60751 Class AA
- **Response time** depending on configuration: TC: $t_{50} = 21$ s $t_{90} = 52$ s RTD: $t_{50} = 42$ s $t_{90} = 108$ s
- **Max. process pressure (static)** at 20 °C: 240 bar (3481 psi)
- **Operating temperature range** Type K: max. 1.070 °C (max. 1.958 °F) Type J: max. 520 °C (max. 968 °F) Type N: max. 1.100 °C (max. 2.012 °F) Pt100 WW: -200...600 °C (-328...1.112 °F) Pt100 TF: -50...400 °C (-58...752 °F)
- **Max. immersion length on request** up to 15.000,00 mm (590")

Field of application: The iTHERM TMS11 MultiSens Linear Multipoint thermometer for oil & gas and chemical applications can be customized for various scenarios in compliance with the highest safety standards. It increases process safety by monitoring the temperature on a high number of measuring points along a line using only a single process connection. Easy process integration reduces installation time and thus maximizes plant availability.

Features and specifications

Thermometer

Measuring principle

Resistance Temperature Detector

Characteristic / Application

metric style
imperial style
easy-to-use
suitable for hazardous areas
process connection: flanged
light chemical processes
linear sensor distribution
modular design
replaceable sensors during operation

Thermowell / protection tube

with one primary thermowell (for replaceable sensors and increased mechanical protection)

Insert / probe

mineral insulated (MI) sensors in a primary thermowell

Outer diameter protection tube / Insert

48,3mm (1 1/2")
60,3mm (2")
76,1mm (2 1/2")
88,9mm (3")

Thermometer**Max. immersion length on request**up to 15.000,00 mm (590")

Material protection tube/ thermowell

1.4401 (316)

1.4435 (316L)

1.4541 (321)

1.4845 (310L)

1.4301 (304)

1.4307 (304L)

Process connection

flange:

1 1/2 " ASME/ANSI B16.5 150

...900

2" ASME/ANSI B16.5 150

...900

3" ASME/ANSI B16.5 150

..900

DN40 EN/DIN 1092.1 PN10

...PN150

DN50 EN/DIN 1092.1 PN10

...PN150

DN80 EN/DIN 1092.1 PN10

...PN150

Tip shapestraight

Thermometer**Operating temperature range**

Type K:

max. 1.070 °C

(max. 1.958 °F)

Type J:

max. 520 °C

(max. 968 °F)

Type N:

max. 1.100 °C

(max. 2.012 °F)

Pt100 WW:

-200...600 °C

(-328...1.112 °F)

Pt100 TF:

-50...400 °C

(-58...752 °F)

Max. process pressure (static)at 20 °C: 240 bar (3481 psi)

Accuracy

class 1 acc. to IEC 60584

class Special ASTM E230 and ANSI MC 96.1

IEC60751 Class A

IEC60751 Class AA

Response time

depending on configuration:

TC:

t50 = 21 s

t90 = 52 s

RTD:

t50 = 42 s

t90 = 108 s

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

Thermometer

Ex - approvals

ATEX

IECEX

UL

FM

CSA

NEPSI

Certification

SIL (transmitter only)

More information www.endress.com/TMS11