iTHERM TMS11 MultiSens Linear Multipoint

Modular straight TC and RTD multipoint with primary thermowell

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

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: t50 = 21 s t90 = 52 s RTD: t50 = 42 s t90 = 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

More information and current pricing: [www.us.endress.com/TMS11](http://www.us.endress.com/TMS11)
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

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<tr>
<th>Thermometer</th>
<th>Measuring principle</th>
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<td>Resistance Temperature Detector</td>
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<th>Characteristic / Application</th>
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<tbody>
<tr>
<td>metric style</td>
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<td>imperial style</td>
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<td>easy-to-use</td>
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<td>suitable for hazardous areas</td>
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<td>process connection: flanged</td>
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<td>light chemical processes</td>
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<td>linear sensor distribution</td>
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<td>modular design</td>
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<td>replaceable sensors during operation</td>
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<thead>
<tr>
<th>Thermowell / protection tube</th>
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<td>with one primary thermowell (for replaceable sensors and increased mechanical protection)</td>
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<th>Insert / probe</th>
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<td>mineral insulated (MI) sensors in a primary thermowell</td>
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<tr>
<th>Outer diameter protection tube / Insert</th>
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<tr>
<td>48,3mm (1 1/2&quot;)</td>
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<td>60,3mm (2&quot;)</td>
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<td>76,1mm (2 1/2&quot;)</td>
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<td>88,9mm (3&quot;)</td>
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<th>Max. immersion length on request</th>
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<td>up to 15.000,00 mm (590&quot;)</td>
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Thermometer

**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 shape**
straight
**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 transmitter**
yes (4 ... 20 mA; HART; PROFIBUS PA; FOUNDATION FIELDBUS)
Ex - approvals
ATEX
IECEX
UL
FM
CSA

Certification
SIL (transmitter only)

More information [www.us.endress.com/TMS11](http://www.us.endress.com/TMS11)