

Safety Instructions

iTHERM MultiSens Slim TMS21

Multipoint thermometer

O/1 Ex ia IIC T6...T1 Ga/Gb X

Ex ia IIIC T85°C...T450°C Da/Db X



iTHERM MultiSens Slim TMS21

Multipoint thermometer

Table of contents

About this document 3

Associated documentation 3

Supplementary documentation 3

Certificates and declarations 3

Manufacturer address 3

Safety instructions 4

Safety Instructions: Installation of intrinsic safety 5

Safety instructions: Installation of Dust ignition protection 5

Safety instructions: Specific conditions of use 5

Temperature tables 6

Electrical data 7

About this document

The document number of these Safety Instructions (XA) must match the information on the nameplate.

Associated documentation

To commission the device, please observe the Operating Instructions pertaining to the device:

www.endress.com/<product code>, e.g. iTHERM TMS21

Supplementary documentation

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:

www.endress.com/Downloads

Certificates and declarations**EAC certificate**

The device meet the fundamental health and safety requirements for the design and construction of devices and protective systems intended for use in potentially explosive atmospheres.

- Certification body: TOO/Ж ШС "Т-Стандарт"
- Certificate number: EAЭC KZ 7500525.01.01.01936

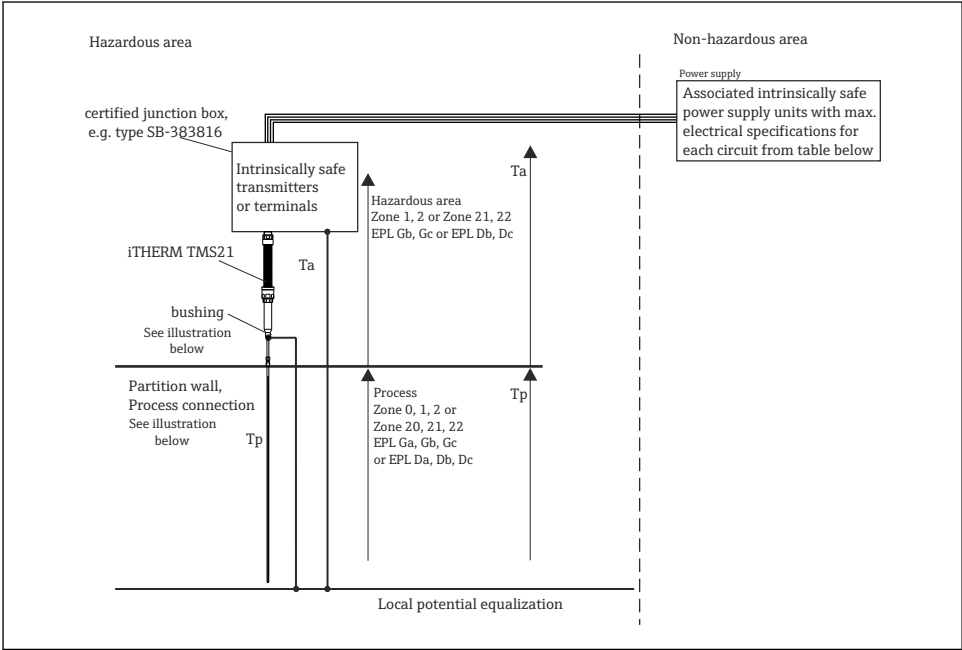
Affixing the certificate number certifies conformity with the following standards:

- GOST 31610.0 : 2019 (IEC 60079-0 : 2017)
- GOST 31610.11 : 2014 (IEC 60079-11 : 2011)
- GOST 31610.26 : 2016 (IEC 60079-26 : 2014)

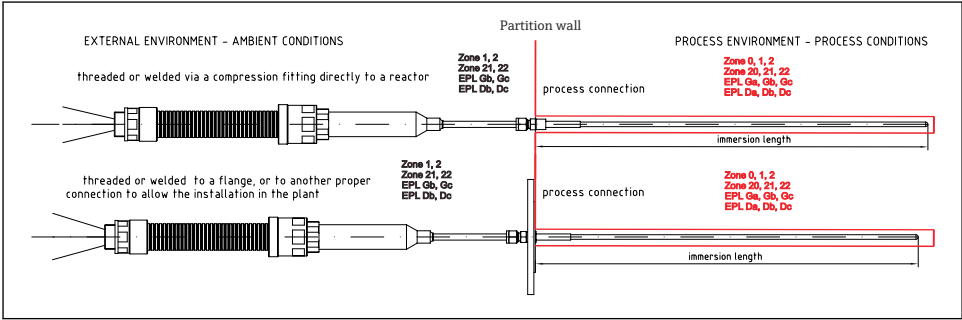
Manufacturer address

Endress+Hauser Wetzer GmbH + Co. KG
Obere Wank 1
87484 Nesselwang, Germany

Safety instructions



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**Safety
Instructions:
Installation of
intrinsic safety**

- Comply with the installation and safety instructions in the Operating Instructions.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations (e.g. EN/IEC 60079-14).
- Observe the safety instructions for the used transmitters.
- The iTHERM TMS21's sensors are not isolated to the metallic sheath in conformance with GOST 31610.11 (IEC/EN 60079-11) chapter 6.3.13, therefore the iTHERM TMS21's sensors shall be supplied by an intrinsically safe circuit with a galvanic isolation.
- If the equipment is mounted across the boundary between an area requiring EPL Ga and a less hazardous area, install the iTHERM TMS21 in a manner that the process connection will fulfill requirements of clause 4.3 of GOST 31610.26 (IEC/EN 60079-26).

**Safety
instructions:
Installation of
Dust ignition
protection**

- These instructions concern the required enclosure, accessories and supply cables in final application.
- Comply with the installation and safety instructions in the Operating Instructions.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations (e.g. EN/IEC 60079-14).
- For ambient temperatures higher than +70 °C, use suitable heat-resisting cables or wires, cable entries and sealing facilities for Ta +5 K above surrounding.

 WARNING**Explosive atmosphere**

- ▶ In an explosive atmosphere, when voltage is supplied, do not open the device or any enclosure connected to it in order to avoid impacting the IP grade (required for the installation)

**Safety
instructions:
Specific
conditions of use**

- The iTHERM TMS21 and final enclosure shall be connected to the same local potential equalization.
- When install the iTHERM TMS21 in conjunction with a junction box, the enclosure and its accessories (e.g. cable gland with barrier) shall be certified providing a degree of protection of at least IP54 according to GOST 31610.0 (IEC/EN 60079-0).
- The mechanical construction of sensors' thermowell and reinforcement tube complies with a partition wall in accordance with GOST 31610.26 (IEC/EN 60079-26) clause 4.1.3.2. For those constructive variants where the material thickness is less than 1 mm, the user shall ensure that the material shall not be subject to environmental conditions which may adversely affect the partition wall.

Temperature tables

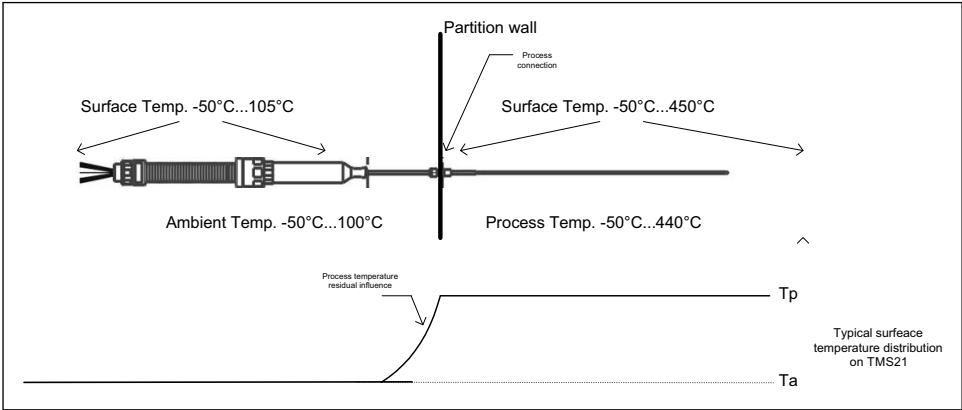
The dependency of the ambient and process temperature upon the temperature class/ maximum surface temperature for each sensing element:

Sensor Type	Temperature class/ Maximum surface temperature	Tp (process) - Maximum allowed process temperature (sensor)	Ta (ambient temperature) - Maximum allowed ambient temperature cable/bushing
K, J, N, E	T1/T450 °C	-50 to +440 °C	-50 to +100 °C
	T2/T300 °C	-50 to +290 °C	-50 to +100 °C
	T3/T200 °C	-50 to +195 °C	-50 to +100 °C
	T4/T135 °C	-50 to +130 °C	-50 to +100 °C
	T5/T100 °C	-50 to +95 °C	-50 to +95 °C
	T6/T85 °C	-50 to +80 °C	-50 to +80 °C

 WARNING

Ambient temperature

- It shall be verified, taking into account the worst case process and ambient temperatures of the application, that the temperature at cable/bushing does not exceed the maximum allowed surface temperature.



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Electrical data

Supply circuit: in type of protection intrinsic safety Ex ia IIC, for connection to a certified intrinsically safe circuit for each sensor circuit with following maximumvalues:

U _i	I _i	P _i	C _i	L _i
9 V	26 mA	50 mW	10 nF	50 µH

Type of protection (EAC)	Type
0/1 Ex ia IIC T6...T1 Ga/Gb X Ex ia IIIC T85 °C...T450 °C Da/Db X	iTHERM TMS21



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