XA01423T/09/EN/03.24-00
71665235
2024-07-10

Safety Instructions
iTEMP TMT188

Temperature transmitter

0Ex ia IIC T6...T4 X
1Ex ia IIC T6...T4 Gb X

Endress+Hauser
People for Process Automation

iTEMP TMT188

Temperature transmitter

Table of contents

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. TMT188

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: ТОО/Ж ШС "Т-Стандарт"
- Certificate number: ЕАЭС KZ 7500525.01.01.01840

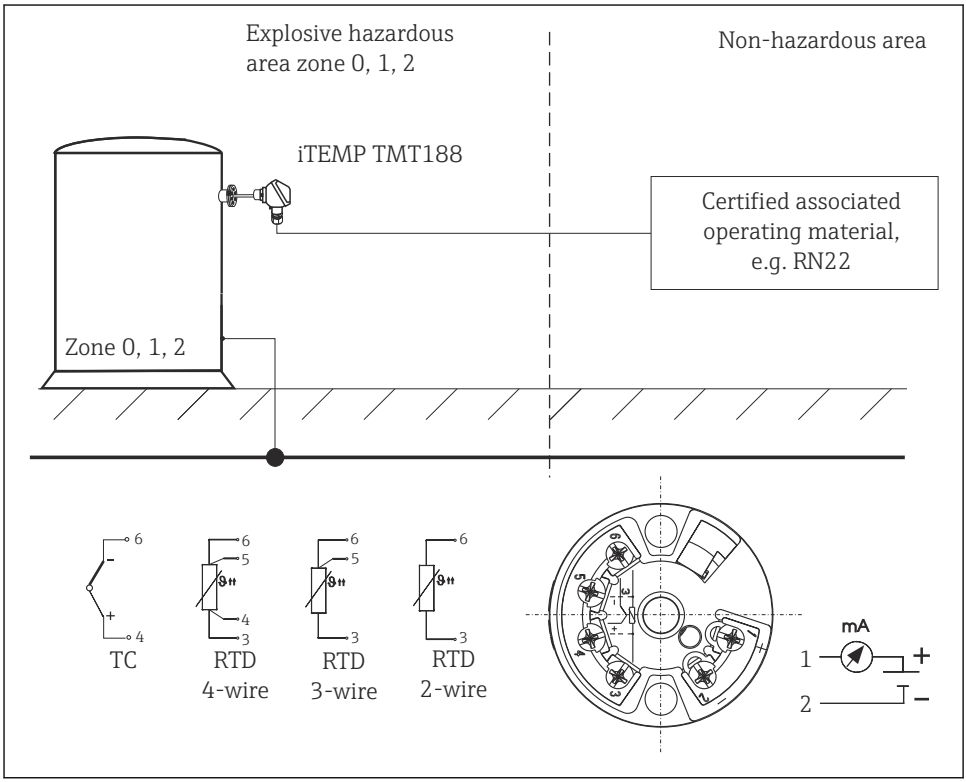
Affixing the certificate number certifies conformity with the following standards:

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

Manufacturer address

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

Safety instructions



1 Installation of the head transmitter

Safety instructions: Installation

- 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).
- Setting up the head transmitter (only TMT181 is possible) is only allowed to be done in a nonhazardous area.
- Instrumentation used for setting up must not exceed a voltage of U_m = 30 V, this can, for example, be achieved by using battery powered laptops. Setting up with a mains powered PC U_m = 253 V can only be done when using an approved adapter with barrier, e.g. TXU10-AA.
- When installing the unit note that the housing ingress protection classification IP 20 to EN 60529 is upheld.

Safety instructions: Zone 1 and Zone 2

This device can, according to the manufacturer, be operated in Zone 1 (II 2G) or Zone 2 (II 3G). The current circuit can be fed into the Zone 0 (II 1G) area. Conforms to description II 2(1)G.

Safety instructions: Zone 0

These instructions are only valid if the unit is to be installed directly in the Zone 0 (II 1G) area.

- Explosive moisture/air mixtures are only allowed to occur under atmospheric conditions:
  - −20 °C ≤ Ta ≤ +60 °C
  - 0.8 bar ≤ p ≤ 1.1 bar

  If there is no explosive mixture present or the additional measures according to EN 1127-1 are upheld the unit can also be operated outside the atmospheric conditions according to the manufacturers specification.
- The restricted ambient temperatures as per EN 1127-1 6.4.2 must be observed (see following table).
- The power circuit to be supplied must meet the specifications for explosion protection Ex ia IIC (EN/IEC 60079-14 12.3).
- The devices can only be used in fluids if the process-wetted materials are sufficiently resistant to such fluids.
- If the entire device is operated in Zone 0, the compatibility of the device materials with the fluids has to be ensured. (Housing: polycarbonate (PC), potting: polyurethane (PUR)).
- The temperature transmitter must be installed in such a way that electrostatic charge cannot occur, e.g. installation in grounded metallic head or grounded housing.

Temperature tables

Type	Temperature class	Ambient temperature zone 1, 2	Ambient temperature Zone 0
iTEMP TMT188	T6	−40 °C = Ta = +55 °C	−20 °C = Ta = +40 °C
	T5	−40 °C = Ta = +70 °C	−20 °C = Ta = +50 °C
	T4	−40 °C = Ta = +85 °C	−20 °C = Ta = +60 °C

Electrical connection data

Type iTEMP TMT188	Electrical Data
Power supply (terminals 1 and 2)	$U_i \leq 30\ V_{DC}$ $I_i \leq 100$ mA $P_i \leq 760$ mW C_i = negligibly small L_i = negligibly small
Sensor circuit (terminals 3 to 6)	$U_o \leq 8.2\ V_{DC}$ $I_o \leq 4.6$ mA $P_o \leq 9.35$ mW
Maximum connection values Ex ia IIC Ex ia IIB	 L_o = 4.5 mH C_o = 974 nF L_o = 8.5 mH C_o = 1 900 nF

www.addresses.endress.com

Endress+Hauser

People for Process Automation