XA02868T/09/EN/01.22-00
71570386
2022-05-16

Safety Instructions
iTEMP TMT182

Ex ia IIC T4...T6 Ga/Gb

Safety instructions for electrical apparatus in explosion-hazardous areas

Endress+Hauser
People for Process Automation

iTEMP TMT182

Table of contents

About this document

This document has been translated into several languages. Legally determined is solely the English source text.

The document translated into EU languages is available:
- In the download area of the Endress+Hauser website: www.endress.com -> Downloads -> Manuals and Datasheets -> Type: Ex Safety Instruction (XA) -> Text Search: ...
- In the Device Viewer: www.endress.com -> Product tools -> Access device specific information -> Check device features

If not yet available, the document can be ordered.

Associated documentation

This document is an integral part of the following Operating Instructions:
- Brief operating instructions: KA00142R
- Technical information: TI00078R

Supplementary documentation

Explosion-protection brochure: CP00021Z/11

The Explosion-protection brochure is available:
- In the download area of the Endress+Hauser website: www.endress.com -> Downloads -> Brochures and Catalogs -> Text Search: CP00021Z
- On the CD for devices with CD-based documentation

Manufacturer's certificates

NEPSI Certificate of Conformity

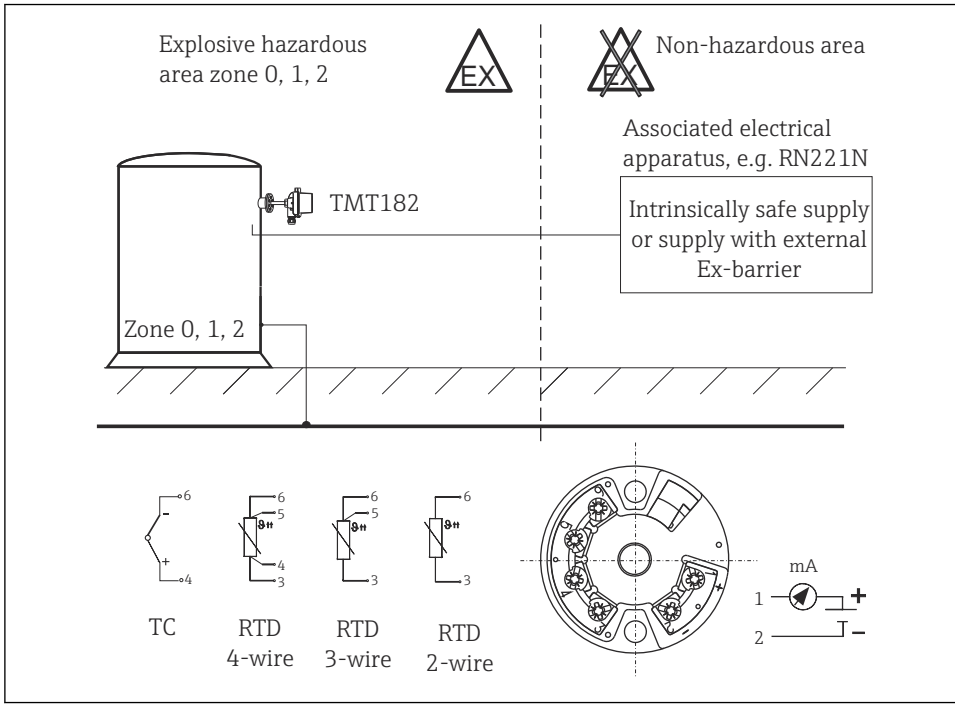
Certificate number: GYJ22.1032X

Affixing the certificate number certifies conformity with the following standards (depending on the device version).
- GB3836.1-2010
- GB3836.4-2010
- GB3836.20-2010

Manufacturer address

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

Safety instructions:



Safety instructions: Installation

- Comply with the installation and safety instructions in the Operating Instructions and Certificate No. GYJ22.1032X.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations (e.g. EN/IEC 60079-14).
- When installing the unit note that the housing ingress protection classification IP20 according to EN/IEC 60529 is upheld.
- When connecting the measurement unit with a certified circuit of category “ib” into an IIC or IIB hazardous area the ignition class changes to: Ex ib IIC or Ex ib IIB.
- Unit set-up is also allowed in the Ex area using a certified handheld module, e.g. DXR375.
- When interconnecting the rules and regulations for such intrinsically safe circuits must be adhered to.

Safety instructions: Zone 0

These instructions are only valid if the unit is to be installed directly in the zone 0 (category 1)/EPL Ga:

- 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 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/EPL Ga, 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

The relationship between ambient temperature range and the temperature class is shown as follows:

Type	Temperature class	Ambient temperature zone 1, 2	Ambient temperature zone 0
iTEMP TMT182	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	Electrical data		
iTEMP TMT182 Order option: TMT182-1xxxC/D/L	Power supply (terminals 1 and 2)	Ui ≤ 30 V_{DC} Ii ≤ 100 mA Pi ≤ 800 mW Ci ≤ 0 Li ≤ 0	
	Sensor circuit (terminals 3 to 6)	Uo ≤ 5 V_{DC} Io ≤ 3.6 mA Po ≤ 4.5 mW	
	Max. connection values Ex ia IIC Ex ia IIB Ex ia IIA	 Lo = 100 mH Lo = 100 mH Lo = 100 mH	 Co = 2.1 µF Co = 10 µF Co = 15 µF

www.addresses.endress.com

Endress+Hauser

People for Process Automation