XA02912T/09/EN/01.22-00
71584179
2022-08-22

Safety Instructions
iTEMP TMT142, TMT142B

HART®

Ex ia IIC T4~T6 Ga/Gb

Endress+Hauser
People for Process Automation

iTEMP TMT142, TMT142B

HART®

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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:

- Operating instructions: BA00191R
- Brief operating instructions: KA00222R
- Technical information: TI00107R

Supplementary documentation

Explosion protection brochure: CP00021Z

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

Certificate number: GYJ22.1036X

Affixing the certificate number certifies conformity with the following standards (depending on the device version)

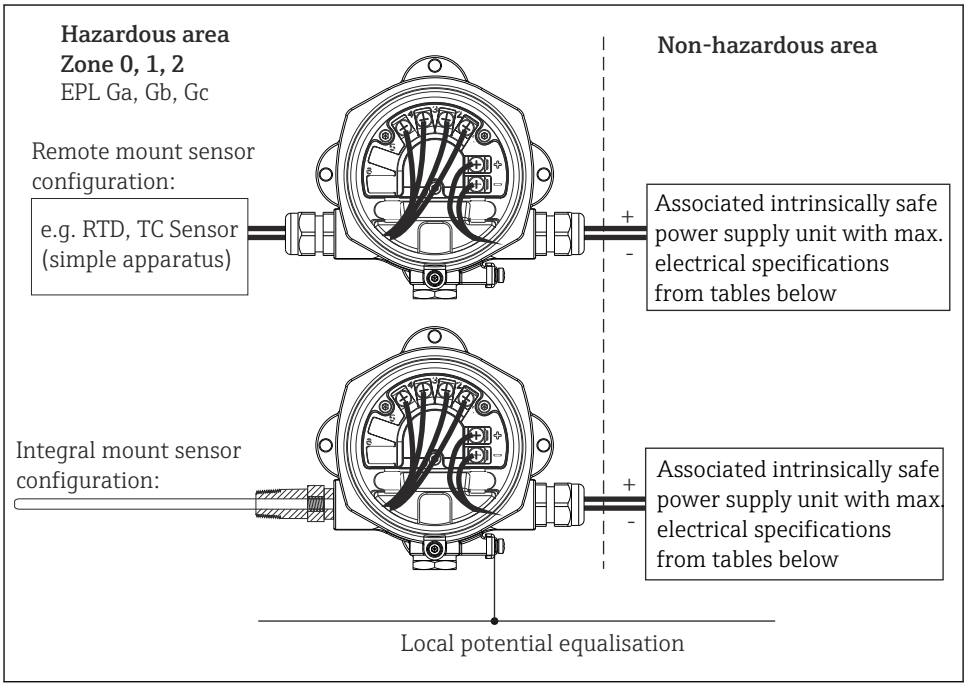
- GB 3836.1-2010
- GB 3836.4-2010
- GB 3836.20-2010

Please refer to NEPSI/CCC certificates for conditions of safe use.

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.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations (e.g. EN/IEC 60079-14).
- The type of protection changes as follows when the devices are connected to certified intrinsically safe circuits of Category ib: Ex ib IIC. When connecting an intrinsically safe ib circuit, do not operate the sensor at Zone 0.
- When connecting two independent sensors make sure that the potential equalisation cables are at the same potential.
- The circuits of the transmitter are isolated from its enclosure in conformance with EN/IEC 60079-11 chapter 6.3.13.

Safety instructions: Zone 0

- Only operate devices in potentially explosive vapour/air mixtures under atmospheric conditions:
  - -20 °C ≤ Ta ≤ +60 °C
  - 0.8 bar ≤ p ≤ 1.1 bar
- If no potentially explosive mixtures are present, or if additional protective measures have been taken, according to EN 1127-1, the transmitters may be operated under other atmospheric conditions in accordance with the manufacturer's specifications.
- Associated apparatus with galvanic isolation between the intrinsically safe and non-intrinsically safe circuits are preferred.

Safety instructions: Specific conditions of use

- The temperature transmitter must be installed so, that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron/steel is excluded.
- When the optional non-conductive coating is applied the risk from electrostatic discharge shall be minimized.

Temperature tables

Type	Temperature class	Ambient temperature
TMT142	T6	−40 °C ≤ Ta ≤ +55 °C
	T5	−40 °C ≤ Ta ≤ +70 °C
	T4	−40 °C ≤ Ta ≤ +85 °C

Electrical connection data

Type	Electrical data		
TMT142 HART®	Supply (terminals + and -):	Ui ≤ 30 V_{DC} Ii ≤ 300 mA Pi ≤ 1000 mW Ci ≤ 5 nF Li = 0	
	Sensor circuit (terminals 1 to 6):	Uo ≤ 7.6 V_{DC} Io ≤ 29.3 mA Po ≤ 55.6 mW	
	Maximum connection single values: Ex ia IIC Ex ia IIB Ex ia IIA	 Lo = 40 mH Lo = 150 mH Lo = 300 mH	 Co = 10.4 µF Co = 160 µF Co = 1000 µF

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