

# Safety Instructions

## iTEMP TMT142B

HART®

ATEX, IECEx: Ex db IIC T6 Gb  
Ex tb IIIC Txxx°C Db






# iTEMP 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](http://www.endress.com) -> Downloads -> Manuals and Datasheets -> Type: Ex Safety Instruction (XA) -> Text Search: ...
- In the Device Viewer: [www.endress.com](http://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](http://www.endress.com) -> Downloads -> Brochures and Catalogs -> Text Search: CP00021Z
- On the CD for devices with CD-based documentation

**Manufacturer's  
certificates****IECEX certificate**

Certificate number: KEM 06.0020X

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

- IEC 60079-0: 2017
- IEC 60079-1: 2014
- IEC 60079-31: 2014

**ATEX certificate**

Certificate number: KEMA 02ATEX2338X

**EU Declaration of Conformity**

Declaration number: EC\_00164

**UKCA certificate**

Certificate number: CML 21UKEX11006 X

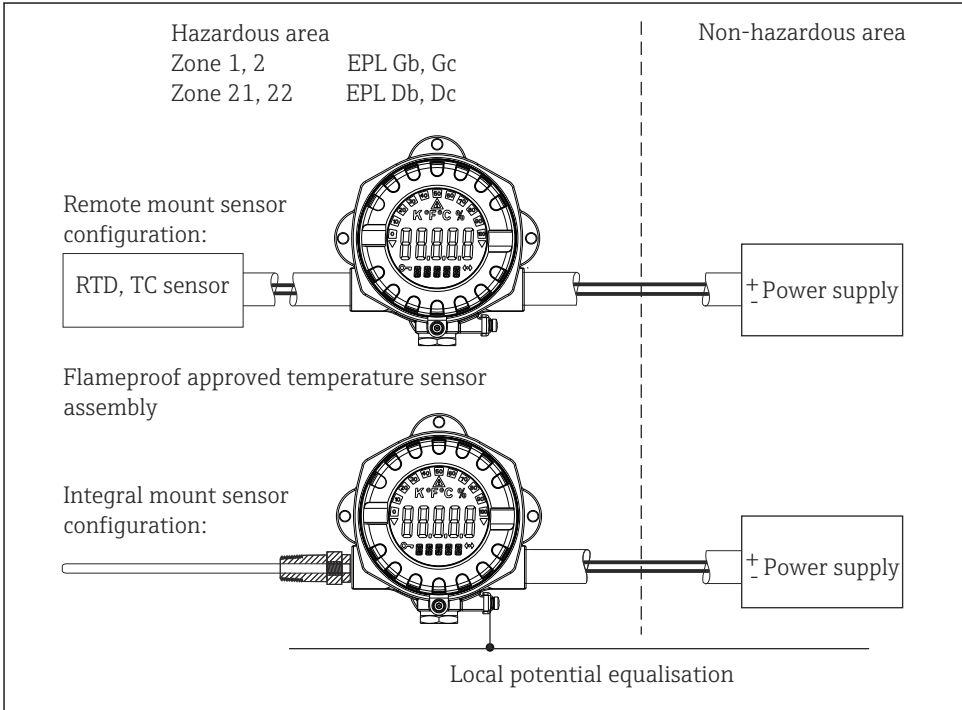
**UKCA Declaration of Conformity**

Declaration number: UK\_00412

**Manufacturer  
address**

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

## Safety instructions



A0050945

## Safety instructions: Installation of protection flameproof

### **⚠ WARNING**

#### **Explosive atmosphere**

- ▶ Do not open the electrical connection of the power supply circuit in an explosive atmosphere.
- 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 housing of field transmitter must be connected to the potential matching line.
- Only the approved wire entries as specified in paragraph 10.3 of EN/IEC60079-14, paragraph 16 of EN/IEC 60079-0, paragraph 13 of EN/IEC 60079-1 must be used.
- For connection through a conduit entry approved for this purpose the associated sealing facility shall be mounted directly to the housing.
- Seal the cable entries with certified cable glands and or blanking elements which have at least type of protection Ex db.

- For operating the transmitter housing at an ambient temperature under  $-20\text{ }^{\circ}\text{C}$ , appropriate cables and cable entries permitted for this application must be used.
- For ambient temperatures higher than  $+70\text{ }^{\circ}\text{C}$ , use suitable heat-resisting cables or wires, cable entries and sealing facilities for  $T_a +5\text{K}$  above surrounding.
- During operation, the cover must be screwed all the way in and the cover's safety catch must be fastened.
- The remote or integral mounted temperature sensor must comply with the requirements according to EN/IEC 60079-1.
- The temperature class specified for the certified temperature sensor shall be taken into account.

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

**⚠ WARNING**

**Explosive atmosphere**

- ▶ In an explosive atmosphere, do not open the device (ensure that the IP 66/67 housing protection is maintained during operation).
  - 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).
  - Seal the cable entries tight with certified cable glands which have at least type of protection Ex tb suitable for Group IIIC (degree of protection IP6X).
  - The housing of the field transmitter must be connected to the potential matching line.
  - The provided cable entries to option code glands are suitable ATEX/IECEX certified cable glands with a temperature range of  $-20$  to  $+95\text{ }^{\circ}\text{C}$ .
  - For ambient temperatures higher than  $+70\text{ }^{\circ}\text{C}$ , use suitable heat-resisting cables or wires, cable entries and sealing facilities for application temperature  $+5\text{ K}$  above surrounding.
  - The remote or integral mounted temperature sensor must comply with the requirements according to EN/IEC 60079-31.
  - The maximum surface temperature specified for the certified temperature sensor shall be taken into account.

**Safety instructions:  
Special conditions**

- The flameproof joints are not intended to be repaired.
- 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.

## Temperature tables

| Type             | Temperature class | Ambient temperature                         |
|------------------|-------------------|---|
| iTEMP<br>TMT142B | T6                | $-40\text{ °C} \leq T_a \leq +55\text{ °C}$ |
|                  | T5                | $-40\text{ °C} \leq T_a \leq +70\text{ °C}$ |
|                  | T4                | $-40\text{ °C} \leq T_a \leq +80\text{ °C}$ |

| Type             | Maximum surface temperature | Ambient temperature                         |
|------------------|-----------------------------|---|
| iTEMP<br>TMT142B | +110 °C                     | $-40\text{ °C} \leq T_a \leq +80\text{ °C}$ |

## Electrical connection data

| Type          | Electrical data                                  |
|---------------|--|
| iTEMP TMT142B | $U \leq 36\text{ V}_{DC}$<br>$P \leq 3\text{ W}$ |

| Category | Type of protection (ATEX/IECEx) | Type          |
|----------|---------------------------------|---------------|
| II 2G    | Ex db IIC T6...T4 Gb            | iTEMP TMT142B |
| II 2D    | Ex tb IIIC T110°C Db            |               |











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