

Safety Instructions **iTEMP TMT142B**

HART®

ATEX, IECEx: Ex ia IIC T6 Ga




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 -> 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****IECEX certificate**

Certificate number: IECEX EPS 17.0077X

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

- IEC 60079-0 : 2017
- IEC 60079-11 : 2011

ATEX certificate

Certificate number: EPS ATEX 1 131 X

EU Declaration of Conformity

Declaration number: EC_00605

UKCA certificate

Certificate number: CML 21UKEX21007 X

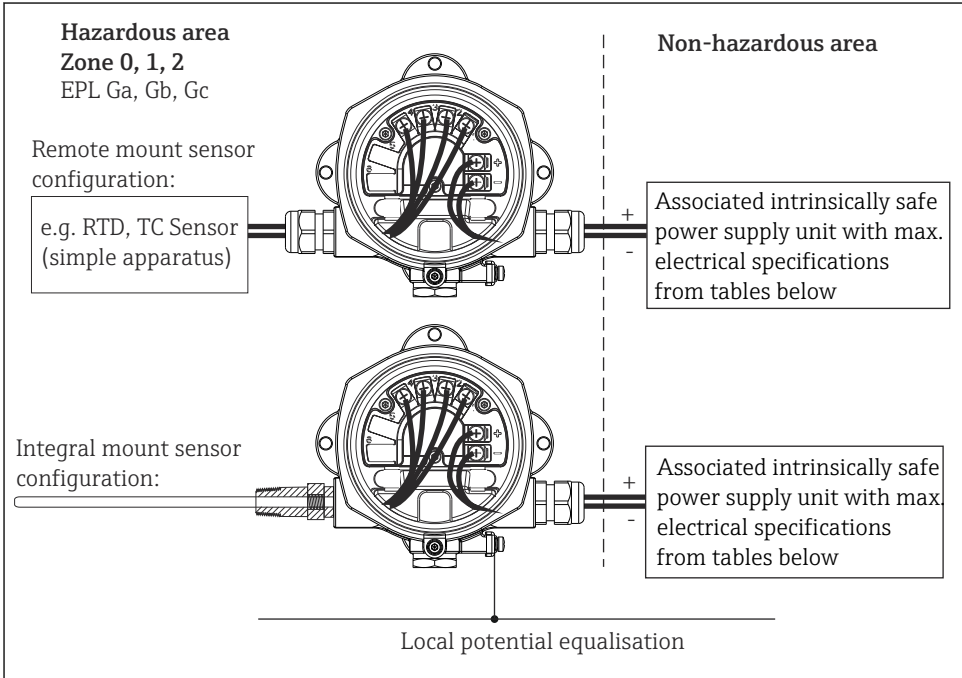
UKCA Declaration of Conformity

Declaration number: UK_00413

**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.

Safety instructions:
Zone 0

- Only operate devices in potentially explosive vapour/air mixtures under atmospheric conditions:
 - $-50\text{ °C} \leq T_a \leq +60\text{ °C}$
 - $0.8\text{ bar} \leq p \leq 1.1\text{ bar}$
- 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:
Special conditions

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	
		Zone 1 EPL Gb	Zone 0 EPL Ga
iTEMP TMT142B	T6	$-50\text{ °C} \leq T_a \leq +55\text{ °C}$	$-50\text{ °C} \leq T_a \leq +40\text{ °C}$
	T5	$-50\text{ °C} \leq T_a \leq +70\text{ °C}$	$-50\text{ °C} \leq T_a \leq +50\text{ °C}$
	T4	$-50\text{ °C} \leq T_a \leq +85\text{ °C}$	$-50\text{ °C} \leq T_a \leq +60\text{ °C}$

Electrical connection data

Type	Electrical data									
iTEMP TMT142B	Supply (terminals + and -):	$U_i \leq 30\text{ V}_{DC}$ $I_i \leq 300\text{ mA}$ $P_i \leq 1000\text{ mW}$ $C_i \leq 5\text{ nF}$ $L_i = 0$								
	Sensor circuit (terminals 1 to 4):	$U_o \leq 4.3\text{ V}_{DC}$ $I_o \leq 4.8\text{ mA}$ $P_o \leq 5.2\text{ mW}$								
	Maximum connection values:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Ex ia IIC</td> <td style="width: 33%;">Lo = 40 mH</td> <td style="width: 33%;">Co = 10.4 μF</td> </tr> <tr> <td>Ex ia IIB</td> <td>Lo = 150 mH</td> <td>Co = 160 μF</td> </tr> <tr> <td>Ex ia IIA</td> <td>Lo = 300 mH</td> <td>Co = 1000 μF</td> </tr> </table>	Ex ia IIC	Lo = 40 mH	Co = 10.4 μF	Ex ia IIB	Lo = 150 mH	Co = 160 μF	Ex ia IIA	Lo = 300 mH
Ex ia IIC	Lo = 40 mH	Co = 10.4 μF								
Ex ia IIB	Lo = 150 mH	Co = 160 μF								
Ex ia IIA	Lo = 300 mH	Co = 1000 μF								

Category	Type of protection (ATEX/IECEx)	Type
II 1G	Ex ia IIC T6...T4 Ga	iTEMP TMT142B



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