

Safety Instructions **iTEMP TMT142B**

HART®

IND-EX: Ex ia IIC T6 Ga



iTEMP TMT142B

HART®

Table of contents

About this document	3
Associated documentation	3
Supplementary documentation	3
Certificates and declarations	3
Manufacturer address	3
Safety instructions	4
Safety instructions: Installation	4
Safety instructions: Zone 0	5
Safety instructions: Specific conditions of use	5
Temperature tables	5
Electrical connection data	5

About this document

The document number of these Safety Instructions (XA) must match the information on the nameplate.

Associated documentation

All documentation is available on the Internet:

www.endress.com/Deviceviewer

(enter the serial number from the nameplate).

To commission the device, please observe the Operating Instructions pertaining to the device:

www.endress.com/<product code>, e.g. iTEMP TMT142B

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

Certificates and declarations

PESO Approval No.:

■ P642151/1

■ KLPL/Ex/15-107X Issue no. 01

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

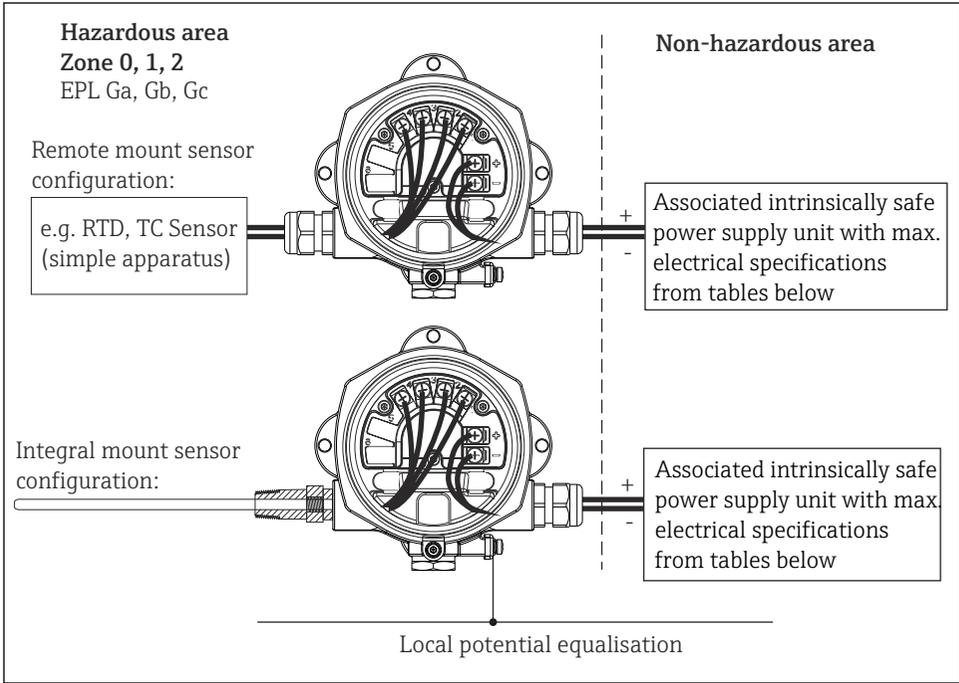
■ IS/IEC 60079-0: 2017

■ IS/IEC 60079-11: 2023

Manufacturer address

Endress+Hauser Wetzer (India)
Private Limited
M-192/2, MIDC Waluj
Chhatrapati Sambhajnagar 431136
India

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 national regulations (e.g. IS 16724 : 2018).
- 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:
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.

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								



71727713

www.addresses.endress.com
