

Safety Instructions **iTEMP TMT162**

HART®

Ex ia IIC T4...T6 Ga



iTEMP TMT162

HART®

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**Associated
documentation**

This document is an integral part of the following Operating Instructions:

HART®:

- Operating instructions: BA01801T
- Brief operating instructions: KA00250R
- Technical information: TI01344T

**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: GYJ22.1908X

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

- GB 3836.1-2021
- GB 3836.4-2021

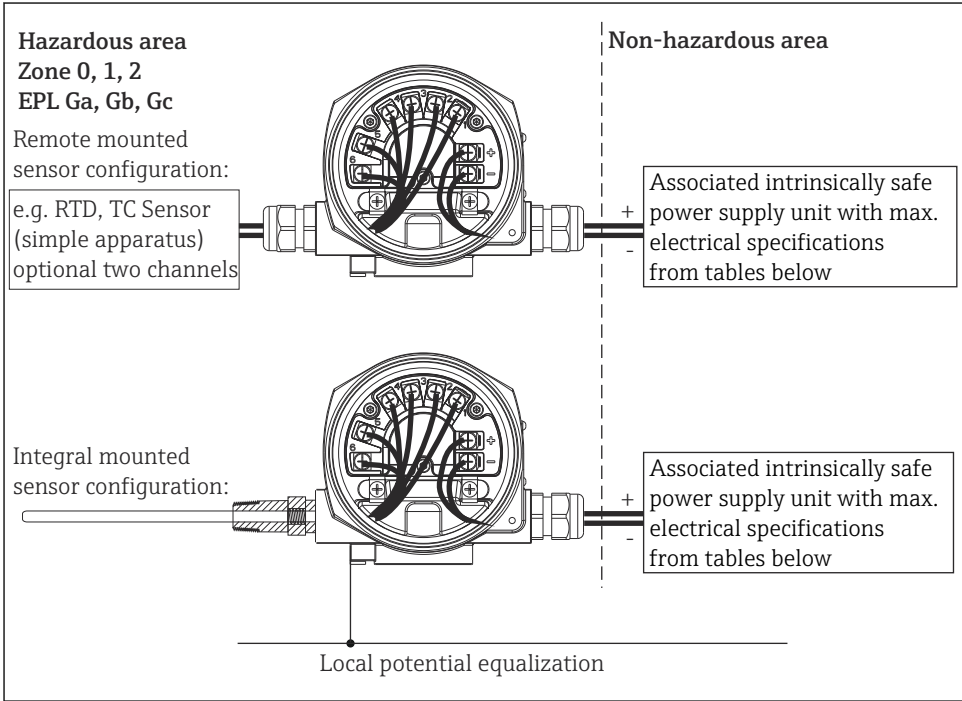


Please refer to NEPSI/CCC certificates for conditions of safe use.

**Manufacturer
address**

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

Safety instructions:



A0050218

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:
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 TMT162 (HART®)	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 TMT162 (HART®)	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 6):	$U_o \leq 7.6\text{ V}_{DC}$ $I_o \leq 13\text{ mA}$ $P_o \leq 24.7\text{ mW}$
	Maximum connection single values:	
	Ex ia IIC	$L_o = 40\text{ mH}$ $C_o = 10.4\text{ }\mu\text{F}$
	Ex ia IIB	$L_o = 150\text{ mH}$ $C_o = 160\text{ }\mu\text{F}$
	Ex ia IIA	$L_o = 300\text{ mH}$ $C_o = 1000\text{ }\mu\text{F}$



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