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Safety Instructions
iTEMP TMT82, TMT84, TMT85

HART®, PROFIBUS®, FOUNDATION Fieldbus™

Ex ia [ia Ga] IIC T4...T6 Gb

Endress+Hauser
People for Process Automation

iTEMP TMT82, TMT84, TMT85

HART®, PROFIBUS®, FOUNDATION Fieldbus™

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About this document

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

Associated documentation

To commission the device, please observe the Operating Instructions pertaining to the device:
www.endress.com/<product code>, e.g. TMT85

Supplementary documentation

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:
www.endress.com/Downloads

Certificates and declarations

NEPSI certificate

Certificate number: GYJ23.1124X

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

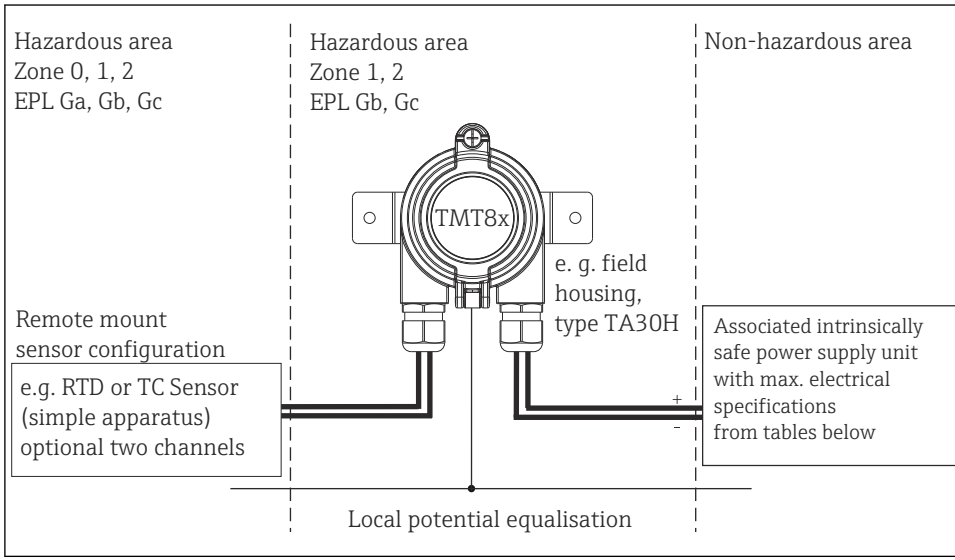
- GB/T 3836.1-2021
- GB/T 3836.4-2021

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



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 housing of the field transmitter must be connected to the potential matching line.
- The type of protection changes as follows when the device is 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 (EPL Ga).
- When connecting two independent sensors make sure that the potential equalisation cables are at the same potential.
- The circuits of assembled head transmitter are isolated from its enclosure in conformance with EN/IEC 60079-11 chapter 6.3.13.

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

Transmitter version with field housing, type TA30H, TA30A, TA30D		Temperature class / code	Ambient temperature range
Ex ia IIC	iTEMP TMT82 without display TID10	T6	−52 to +58 °C
		T5	−52 to +75 °C
		T4	−52 to +85 °C
	iTEMP TMT84 and iTEMP TMT85 without display TID10	T6	−40 to +55 °C
		T5	−40 to +70 °C
		T4	−40 to +85 °C
	iTEMP TMT82, TMT84, TMT85 with display TID10	T6	−40 to +55 °C
		T5	−40 to +70 °C
		T4	−40 to +85 °C

Transmitter version with field mount housing (dual compartment)		Temperature class / code	Ambient temperature range
Ex ia IIC	iTEMP TMT82 without display TID10	T6	−40 to +58 °C
		T5	−40 to +75 °C
		T4	−40 to +85 °C
	iTEMP TMT82 with display TID10	T6	−40 to +55 °C
		T5	−40 to +70 °C
		T4	−40 to +85 °C

Electrical connection data

Type	Electrical data	
iTEMP TMT82 HART®-protocol	Supply voltage (terminal + and -)	$U_i \leq 30\ V_{DC}$ $I_i \leq 130$ mA $P_i \leq 800$ mW C_i = negligibly small L_i = negligibly small
	Sensor circuit (terminal 3 to 7)	$U_o \leq 7.6\ V_{DC}$ $I_o \leq 13$ mA $P_o \leq 24.7$ mW C_i = negligibly small L_i = negligibly small

Type	Electrical data		
	Maximum connection values Ex ia IIC Ex ia IIB Ex ia IIA	 L_o = 10 mH L_o = 50 mH L_o = 50 mH	 C_o = 1 µF C_o = 4.5 µF C_o = 6.7 µF
iTEMP TMT84 PROFIBUS® PA-protocol iTEMP TMT85 FOUNDATION Fieldbus™-protocol	Supply voltage (terminal + and -)	FISCO: $U_i \leq 17.5\ V_{DC}$ $I_i \leq 380$ mA $C_i \leq 5$ nF L_i = 2.75 µH	or: $U_i \leq 24\ V_{DC}$ $I_i \leq 250$ mA $C_i \leq 5$ nF L_i = 2.75 µH
	Applicable for connection to a Fieldbus system according to FISCO-model		
	Sensor circuit (terminal 3 to 7)	$U_o \leq 7.2\ V_{DC}$ $I_o \leq 25.9$ mA $P_o \leq 46.7$ mW $C_i \leq 5$ nF L_i = negligibly low	
	Max. connection values Ex ia IIC Ex ia IIB Ex ia IIA	 L_o = 20 mH L_o = 50 mH L_o = 100 mH	 C_o = 0.97 µF C_o = 4.6 µF C_o = 6 µF

www.addresses.endress.com

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