

Safety Instructions

iTEMP TMT85

Ex ec IIC T4...T6 Gc



iTEMP TMT85

Table of contents

Associated documentation	4
Supplementary documentation	4
Certificates and declarations	4
Manufacturer address	4
Safety instructions:	5
Safety instructions: Installation	5
Safety instructions: Specific conditions of use	7
Temperature tables	7
Electrical connection data	7

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: GYJ23.1312X

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

- GB/T 3836.1-2021
- GB/T 3836.3-2021

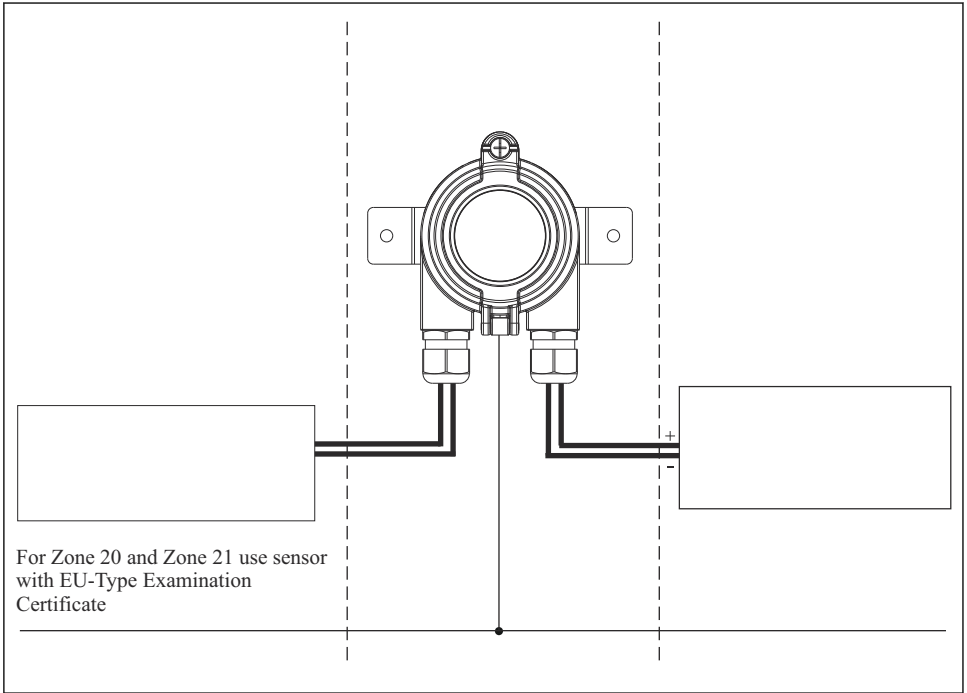


Please refer to NEPSI/CCC certificates for conditions of safe use.


Manufacturer address

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

Safety instructions:



A0054840

 1 Installation of the head transmitter

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).
- Seal the cable entries tight with certified cable glands (min. IP6X) IP6X according to EN/IEC 60529.
- The provided cable entries to option code glands are suitable ATEX/IECEX Ex certified cable glands with a temperature range of -20 to $+95$ °C.
- For operating the transmitter at an ambient temperature under -20 °C, appropriate cables, cable entries and sealing facilities permitted for this application must be used.
- The device must be connected to the local potential equalization.

- For ambient temperatures higher than +70 °C, use suitable heat-resisting cables or wires, cable entries and sealing facilities for Ta +5 K above surrounding.
- Clean the housing regularly to avoid a layer of dust accumulating on the housing.
- The device must be installed and maintained 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.

⚠ WARNING

Explosive atmosphere

- ▶ In an explosive atmosphere, do not open the device when voltage is supplied (ensure that the IP6x housing protection is maintained during operation).

Terminal specification

Category	Torque	Cable version	Cable cross-section
Screw terminals	0.5 Nm	Solid or flexible	≤ 2.5 mm ² (14 AWG)
Push-in terminals (cable version, stripping length = min. 10 mm (0.39 in))	-	Solid or flexible	0.2 to 1.5 mm ² (24 to 16 AWG)
	-	Flexible with wire and ferrules with/without plastic ferrule	0.25 to 1.5 mm ² (24 to 16 AWG)

Applicable for option field housing AA or A, AB or B and AC or C (head transmitter as component only):

- For use in the type of protection increased safety Ex ec, and for Zone 2 (EPL Gc) application, the head transmitter shall be installed completely inside an additional enclosure, providing a degree of protection of not less than IP 54 according to EN/IEC 60079-0 and EN/IEC 60079-7. The ambient temperature within the end use enclosure shall not exceed the limits of the permissible ambient temperature range. Clearances, creepage distances, and separations as defined in EN/IEC 60079-7 must be considered for the installation.

The end user shall ensure appropriate earthing of the metallic field housing (optional) and all metallic accessories if used (wall or pipe mounting accessories for the field housing and the DIN rail clip for the head transmitter) upon installation.

- The TMT85 does not have any surface that achieves a temperature greater than 135 °C/100 °C/85 °C with a 5K safety factor when operated under full load conditions at an ambient of range of 85 °C/70 °C/55 °C respectively.

Safety instructions:

Specific conditions of use

The suffix "X" placed after the certificate number indicates that this product is subject to special conditions for safe use, that is:

- In an explosive atmosphere, do not open the device when voltage is supplied.
- The relationship between ambient temperature and temperature class is shown as follows:

Temperature tables

Type	Type of protection	Ambient temperature	Temperature class
iTEMP TMT85 field housing without display	Ex ec IIC T4...T6 Gc	-50 °C ≤ Ta ≤ +55 °C	T6
		-50 °C ≤ Ta ≤ +70 °C	T5
		-50 °C ≤ Ta ≤ +85 °C	T4
iTEMP TMT85 head transmitter field housing with display	Ex ec IIC T4...T6 Gc	-40 °C ≤ Ta ≤ +55 °C	T6
		-40 °C ≤ Ta ≤ +70 °C	T5
		-40 °C ≤ Ta ≤ +85 °C	T4

Electrical connection data

Type	Type of protection	Power supply (terminals 1+ and 2-)	Sensor circuit (terminals 3 to 7)	Max. connection values
iTEMP TMT85	Ex ec IIC T4...T6 Gc	U _b = 9 to 32 V _{DC} Output: FOUNDATION Fieldbus™ Current consum. ≤ 11 mA		



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