

Safety Instructions

iTEMP TMT71

iTEMP TMT72

Ex ia IIC T6...T4 Ga

Ex ia IIC T6...T4 Gb

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

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



iTEMP TMT71

iTEMP TMT72

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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 TMT7x

Supplementary documentation

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:

www.endress.com/Downloads

Certificates and declarations**Korean certificate**

Certificate number:

25-KA4BO-0585X

25-KA4BO-0586X

25-KA4BO-0587X

25-KA4BO-0588X

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

Protect Device Safety Certification Notice No. 2021-22



Please refer to Korean certificates for conditions of safe use.

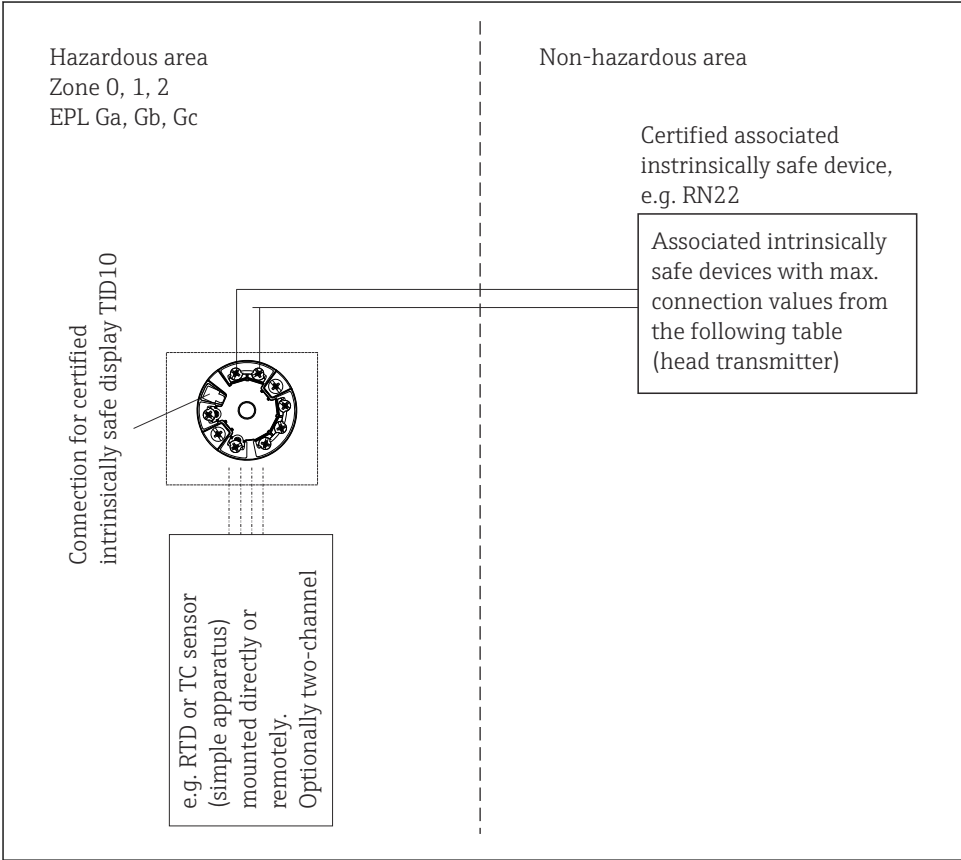
Manufacturer address

Endress+Hauser Wetzer GmbH + Co. KG

Obere Wank 1

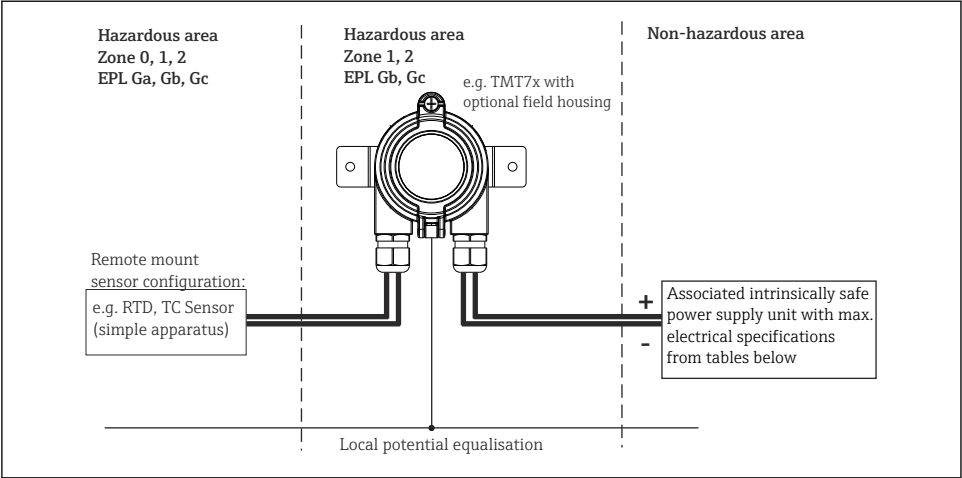
87484 Nesselwang, Germany

Safety instructions

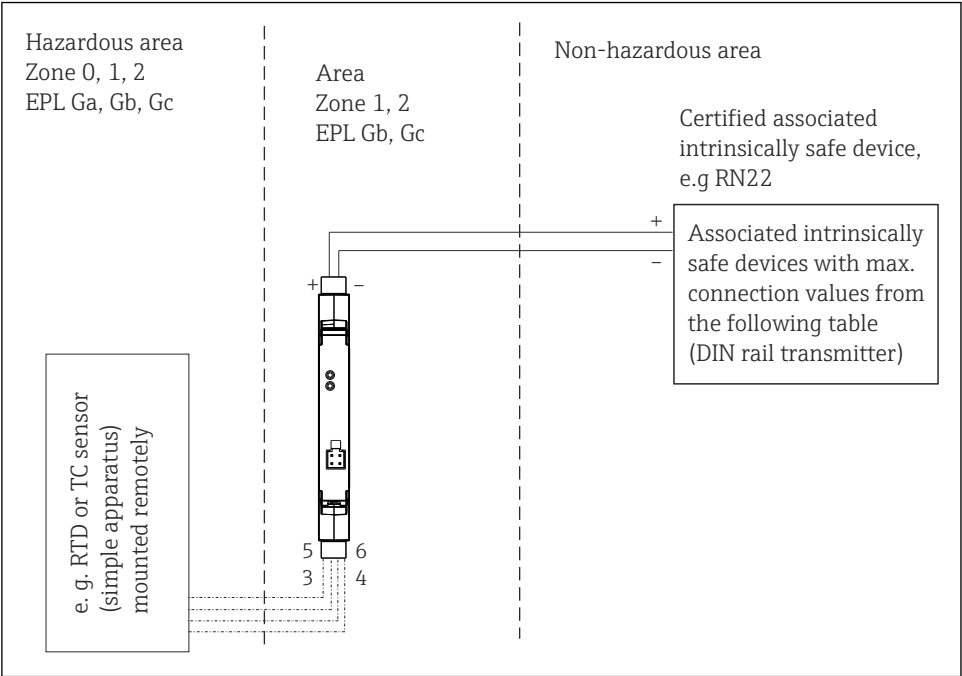


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1 Installation of the head transmitter



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**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).
- When installing the unit note that the housing ingress protection classification IP20 according to EN/IEC 60529 is upheld.
- When connecting the measurement unit with a certified circuit of category "ib" into an IIC or IIB hazardous area the ignition class changes to: Ex ib IIC or Ex ib IIB.
- In hazardous areas it is not permitted to use the CDI interface for configuration.

**Safety
instructions:
Head transmitter**

- The device (terminal head) must be connected to the potential compensation cable.
- The certified display, type TID10, may only be installed in Zone 1/EPL Gb or Zone 2/EPL Gc.
- The permitted ambient temperatures for display type TID10 must be observed.

**Safety
Instructions: DIN
rail transmitter**

On installation please make sure that the spacing between the intrinsically safe and non-intrinsically safe circuits is at least 50 mm.

**Safety
instructions: Field
housing
(optionally)**

- The housing of the field transmitter must be connected to the potential matching line.
- When connecting two independent sensors make sure that the potential equalization 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:
Zone 0**

(These instructions are only valid if the device is installed directly in Zone 0 (Category 1)/EPL Ga.)

- Explosive steam/air mixtures may only occur 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 explosive mixtures are present, or if additional measures have been taken in accordance with EN 1127-1, the devices may also be operated outside the atmospheric conditions in accordance with the manufacturer's specifications.
- The ambient temperature restrictions outlined in EN 1127-1 6.4.2 must be observed (see table).

- The power circuit to be supplied must comply with Ex ia IIC type of protection (EN/IEC 60079-14 12.3).
- The devices can only be used in fluids if the process-wetted materials are sufficiently resistant to such fluids.
- If the entire device is operated in Zone 0/EPL Ga, the compatibility of the device materials with the fluids has to be ensured. (Housing: polycarbonate (PC), potting: silicone).
- It is not permitted to mount the TID10 display in zone 0/EPL Ga.
- The temperature transmitter must be installed in such a way that electrostatic charge cannot occur, e.g. installation in grounded metallic head or grounded housing.

**Safety
instructions:
Specific
conditions of use**

- ■ In hazardous areas it is not permitted to use the CDI interface of iTEMP TMT7x or L2022x for configuration.
- The head- and DIN rail-transmitter must be protected against electrostatic charge/discharge.

**Temperature
tables**

Type (order option)	Temperature class	Ambient temperature EPL Gb/Zone 1	Ambient temperature EPL Ga/Zone 0
TMT7x-xxx1xxxx, L2022x-xxx1xxxx Head transmitter without display	T6	$-50^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$
	T5	$-50^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
	T4	$-50^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
TMT7x-xxx1xxxx, L2022x-xxx1xxxx Head transmitter with display (TID10)	T6	$-40^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$	
	T5	$-40^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$	
	T4	$-40^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$	
TMT7x-xxx1xxxx, L2022x-xxx1xxxx Field housing without display	T6	$-50^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$	
	T5	$-50^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$	
	T4	$-50^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$	
TMT7x-xxx1xxxx, L2022x-xxx1xxxx Field housing with display (TID10)	T6	$-40^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$	
	T5	$-40^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$	
	T4	$-40^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$	
TMT7x-xxx2xxxxxxxx, L2022x-xxx2xxxx TMT7x-xxx3xxxxxxxx, L2022x-xxx3xxxx DIN rail transmitter	T6	$-50^{\circ}\text{C} \leq T_a \leq +43^{\circ}\text{C}$	
	T5	$-50^{\circ}\text{C} \leq T_a \leq +58^{\circ}\text{C}$	
	T4	$-50^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$	

Electrical
connection data

Type	Electrical data		
TMT7x, L2022x Order option: TMT7x-xxx1xxxx L2022x-xxx1xxxx (head transmitter) TMT7x-xxx2xxxx L2022x-xxx2xxxx TMT7x-xxx3xxxx L2022x-xxx3xxxx (DIN rail transmitter)	Power supply (Klemmen + und -)	U _i ≤ 30 V _{DC} I _i ≤ 100 mA P _i = 800 mW (head transmitter) P _i = 700 mW (DIN rail transmitter) C _i = negligible L _i = negligible	
	Sensor circuit (terminals 3 to 6)	U _o ≤ 4.3 V _{DC} I _o ≤ 4.8 mA P _o ≤ 5.2 mW	
	Max. connection data		
	Ex ia IIC	Lo = 50 mH	Co = 3 µF
	Ex ia IIB	Lo = 100 mH	Co = 18 µF
	Ex ia IIA	Lo = 100 mH	Co = 48 µF



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