

# Safety Instructions

## **iTEMP TMT182B**

Temperature transmitter

Ex ia IIC T4...T6 Ga

Ex ia IIC T4...T6 Gb

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

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





# iTEMP TMT182B

Temperature transmitter

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**Associated documentation**

To commission the device, please observe the Operating Instructions pertaining to the device:  
[www.endress.com/<product code>](http://www.endress.com/<product code>), e.g. TMT182B

**Supplementary documentation**

Explosion protection brochure: CP00021Z

The Explosion-protection brochure is available:

- In the download area of the Endress+Hauser website:  
[www.endress.com](http://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: GYJ22.3604X

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

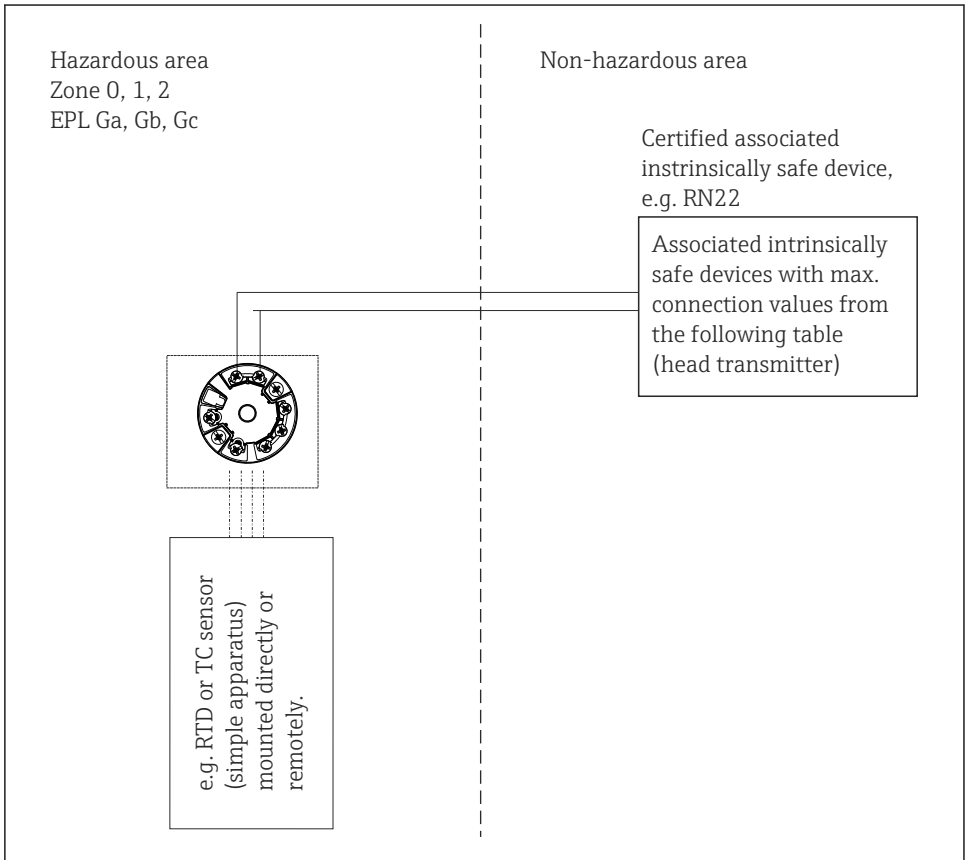


Please refer to NEPSI/CCC certificates for conditions of safe use.


**Manufacturer address**

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

## Safety instructions:



A0050987

 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).
- 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:**  
**Zone 0**

(These instructions are only valid if the unit is to be installed directly in the zone 0 (category 1)/EPL Ga.)

- Explosive moisture/air mixtures are only allowed to 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 there is no explosive mixture present or the additional measures according to EN 1127-1 are upheld the unit can also be operated outside the atmospheric conditions according to the manufacturers specification.
- The restricted ambient temperatures as per EN 1127-1 6.4.2 must be observed (see table).
- The power circuit to be supplied must meet the specifications for explosion protection Ex ia IIC (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).
- 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.

**Special instructions:**  
**Specific conditions of use**

- In hazardous areas it is not permitted to use the CDI interface of TMT182B for configuration.
- The head 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
iTEMP TMT182B Head transmitter	T6	$-50\text{ °C} \leq T_a \leq +55\text{ °C}$	$-50\text{ °C} \leq T_a \leq +40\text{ °C}$
	T5	$-50\text{ °C} \leq T_a \leq +70\text{ °C}$	$-50\text{ °C} \leq T_a \leq +60\text{ °C}$
	T4	$-50\text{ °C} \leq T_a \leq +85\text{ °C}$	$-50\text{ °C} \leq T_a \leq +60\text{ °C}$

## Electrical connection data

Electrical data		
Power supply (terminals + and -)	$U_i \leq 30 V_{DC}$ $I_i \leq 100 \text{ mA}$ $P_i = 800 \text{ mW}$ $C_i = \text{negligibly small}$ $L_i = \text{negligibly small}$	
Sensor circuit (terminals 3 to 6)	$U_o \leq 5 V_{DC}$ $I_o \leq 5.4 \text{ mA}$ $P_o \leq 6.6 \text{ mW}$	
Max. combined connection values		
Ex ia IIC	$L_o = 20 \text{ mH}$	$C_o = 2.4 \mu\text{F}$
Ex ia IIB	$L_o = 100 \text{ mH}$	$C_o = 14 \mu\text{F}$
Ex ia IIA	$L_o = 100 \text{ mH}$	$C_o = 36 \mu\text{F}$

Type of protection (NEPSI)
Ex ia IIC T4...T6 Ga
Ex ia IIC T4...T6 Gb
Ex ia [ia Ga] IIC T4...T6 Gb
Ex ib [ia Ga] IIC T4...T6 Gb



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