

# Safety Instructions

## iTEMP TMT182B

ATEX, IECEx: Ex ia IIC T6 Ga  
Ex ia IIC T6 Gb






# iTEMP TMT182B

## Table of contents


|  |   |
|--|---|
| About this document .....                              | 4 |
| Associated documentation .....                         | 4 |
| Supplementary documentation .....                      | 4 |
| Manufacturer´s certificates .....                      | 5 |
| Manufacturer address .....                             | 5 |
| Safety instructions: .....                             | 6 |
| Safety instructions: Installation .....                | 6 |
| Safety instructions: Zone 0 .....                      | 7 |
| Special instructions: Specific conditions of use ..... | 7 |
| Temperature tables .....                               | 7 |
| Electrical connection data .....                       | 8 |

## About this document

 This document has been translated into several languages. Legally determined is solely the English source text.

The document translated into EU languages is available:

- In the download area of the Endress+Hauser website:  
[www.endress.com](http://www.endress.com) -> Downloads -> Manuals and Datasheets -> Type: Ex Safety Instruction (XA) -> Text Search: ...
- In the Device Viewer: [www.endress.com](http://www.endress.com) -> Product tools -> Access device specific information -> Check device features

 If not yet available, the document can be ordered.

## Associated documentation

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

- Operating instructions: BA02260T
- Brief operating instructions: KA01605T
- Technical information: TI01692T

## 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****IECEX certificate**

Certificate number: IECEX EPS 18.0026X

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

- IEC 60079-0 : 2017
- IEC 60079-11: 2011

**ATEX certificate**

Certificate number: EPS 18 ATEX 1 049 X

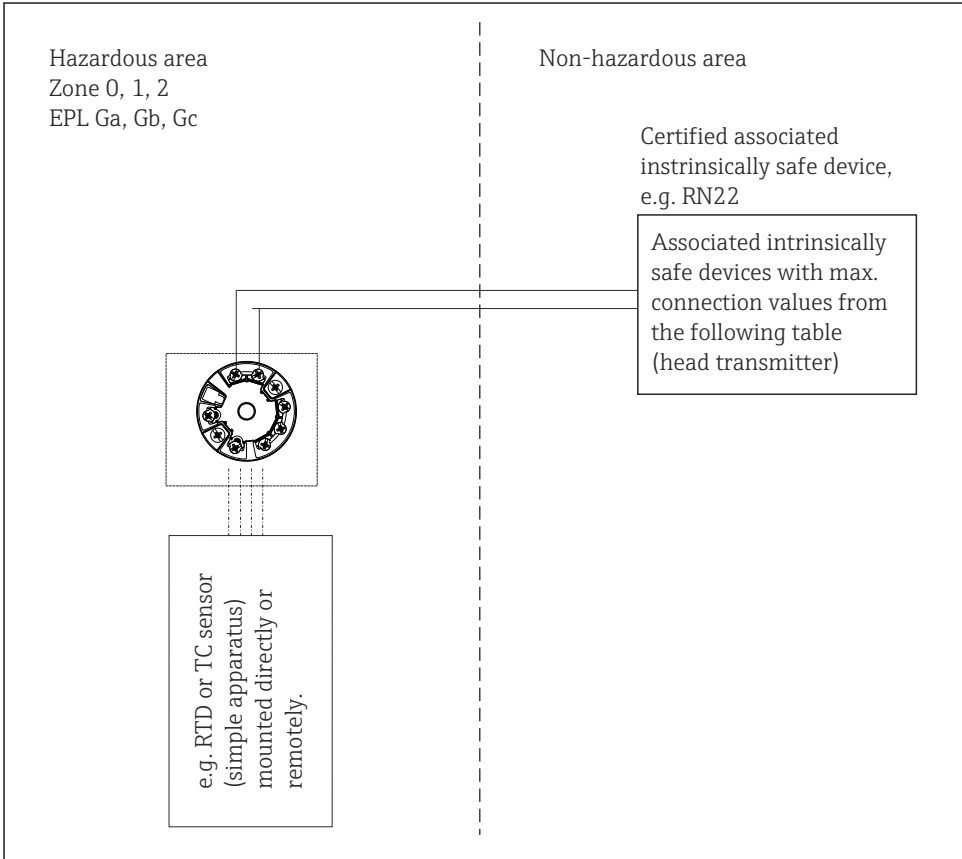
**EU Declaration of Conformity**


Declaration number: EC\_00695

**Manufacturer  
address**

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

## Safety instructions:



 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<br>EPL Gb/Zone 1        | Ambient temperature<br>EPL Ga/Zone 0        |
|-----------------------------------|-------------------|---|---|
| iTEMP TMT182B<br>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<br>(terminals + and -)  | $U_i \leq 30 V_{DC}$<br>$I_i \leq 100 \text{ mA}$<br>$P_i = 800 \text{ mW}$<br>$C_i = \text{negligibly small}$<br>$L_i = \text{negligibly small}$ |                                 |
| Sensor circuit<br>(terminals 3 to 6) | $U_o \leq 5 V_{DC}$<br>$I_o \leq 5.4 \text{ mA}$<br>$P_o \leq 6.6 \text{ mW}$   |                                 |
| Max. combined connection values      |   |                                 |
| Ex ia IIC                            | $L_o = 20 \text{ mH}$   | $C_o = 2.4 \text{ }\mu\text{F}$ |
| Ex ia IIB                            | $L_o = 100 \text{ mH}$  | $C_o = 14 \text{ }\mu\text{F}$  |
| Ex ia IIA                            | $L_o = 100 \text{ mH}$  | $C_o = 36 \text{ }\mu\text{F}$  |

| Category | Type of protection (ATEX, IECEx) |
|----------|----------------------------------|
| II1G     | Ex ia IIC T6...T4 Ga             |
| II2G     | Ex ia IIC T6...T4 Gb             |











71581018

[www.addresses.endress.com](http://www.addresses.endress.com)

---