XA03671T/09/EN/01.25-00
71727012
2025-11-24

Safety Instructions
iTEMP TMT82

HART®

IND-Ex: Ex ia IIC T6...T4 Ga
Ex ia IIC T6...T4 Gb
Ex ib [ia Ga] IIC T6...T4 Gb

Endress+Hauser
People for Process Automation

iTEMP TMT82

HART®

Table of contents

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 TMT82

Supplementary documentation

Explosion protection brochure: CP00021Z

The Explosion-protection brochure is available:
- In the download area of the Endress+Hauser website:
  www.endress.com -> Downloads -> Brochures and Catalogs -> Text Search: CP00021Z
- On the CD for devices with CD-based documentation

Certificates and declarations

PESO Approval No.:

- P647717/1
- KLPL/Ex/15-108X Issue no. 02

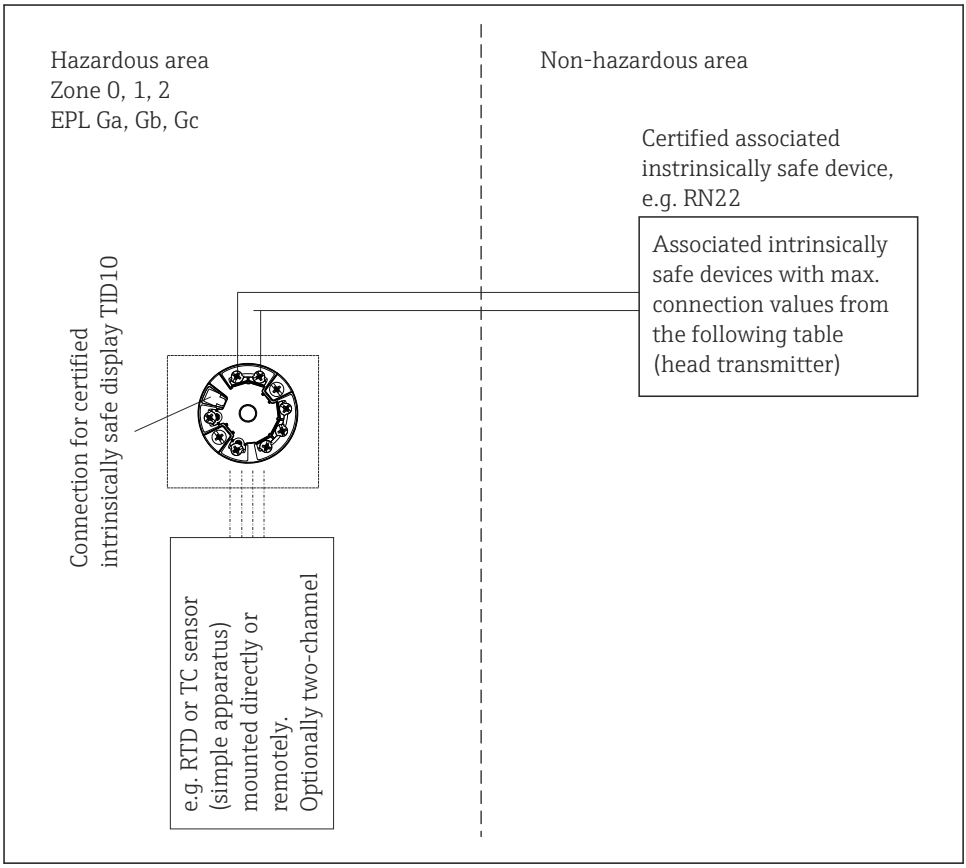
Affixing the approval number certifies conformity with the following standards (depending on the device version):

- IS/IEC 60079-0: 2017
- IS/IEC 60079-11: 2023

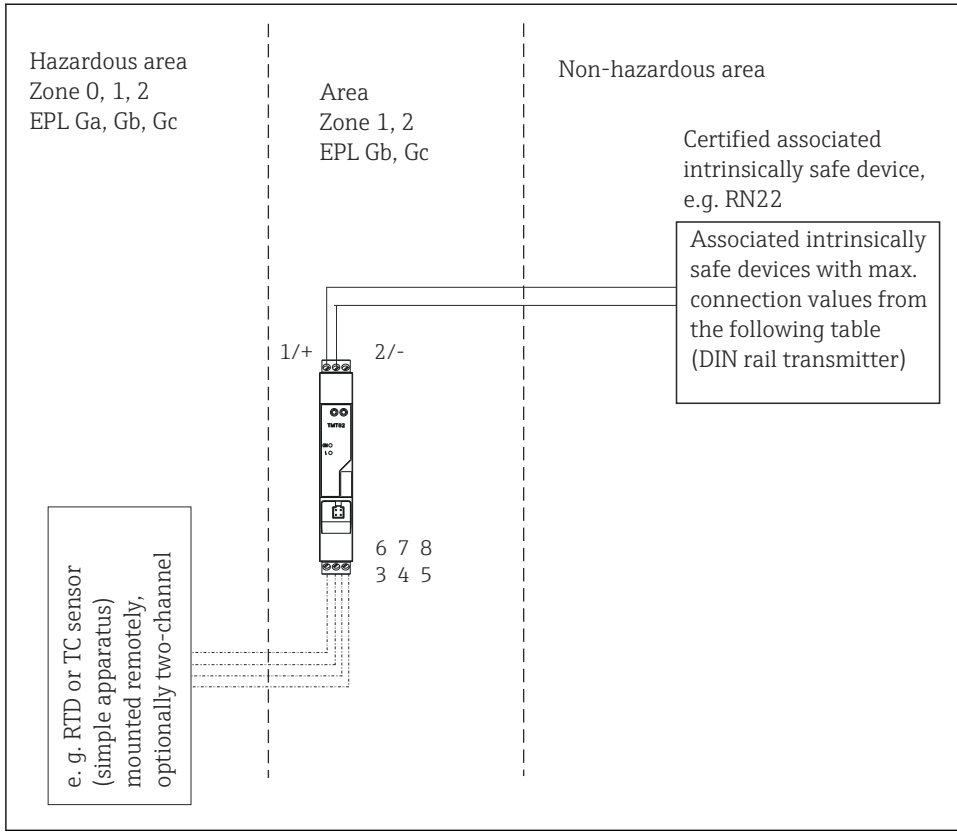
Manufacturer address

Endress+Hauser Wetzer (India)
Private Limited
M-192/2, MIDC Waluj
Chhatrapati Sambhajinagar 431136
India

Safety instructions:



1 Installation of the head transmitter



2 *Installation of the DIN rail 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 national regulations (e.g. IS 16724 : 2018).
- When installing the unit note that the housing ingress protection classification IP20 according to IS/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 (connection head) must be connected to the potential compensation cable.
- The certified TID10 display may only be installed in zone 1/EPL Gb or zone 2/EPL Gc.
- The permissible ambient temperatures for the display, type TID10, are to 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: Zone 1 and Zone 2

- According to the specifications of the manufacturer, this apparatus can be operated in zone 1 (category 2)/EPL Gb or zone 2 (category 3) /EPL Gc.
- The sensor current circuit may be introduced into zone 0 (category 1)/EPL Ga.

Safety instructions: Zone 0 (only for head transmitters)

(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.
  - $-52\ °C \leq Ta \leq +60\ °C$
  - $0.8\ bar \leq p \leq 1.1\ bar$

  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 (IS/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.

Temperature tables

Type (order option)	Temperature class	Ambient temperature zone 1	Ambient temperature zone 0
TMT82-xxA1xxxxxxxxx TMT82-xxA2xxxxxxxxx without display	T6	−52 °C = Ta = +58 °C	−52 °C = Ta = +46 °C
	T5	−52 °C = Ta = +75 °C	−52 °C = Ta = +60 °C
	T4	−52 °C = Ta = +85 °C	−52 °C = Ta = +60 °C
TMT82-xxA1xxxxxxxxx TMT82-xxA2xxxxxxxxx with display (TID)	T6	−40 °C = Ta = +55 °C	
	T5	−40 °C = Ta = +70 °C	
	T4	−40 °C = Ta = +85 °C	
TMT82-xxA3xxxxxxxxx (DIN rail transmitter)	T6	−40 °C = Ta = +46 °C	
	T5	−40 °C = Ta = +61 °C	
	T4	−40 °C = Ta = +85 °C	

Electrical connection data

Type	Electrical data		
iTEMP TMT82 HART® Order option: TMT82-xxA1xxxxxxxxx TMT82-xxA2xxxxxxxxx (head transmitter)	Power supply (terminals + and -)	Ui ≤ 30 V_{DC} Ii ≤ 130 mA Pi = 800 mW Ci = negligibly small Li = negligibly small	
	Sensor circuit (terminals 3 to 7)	Uo ≤ 7.6 V_{DC} Io ≤ 13 mA Po ≤ 24.7 mW	
	Max. connection values Ex ia IIC Ex ia IIB Ex ia IIA	 Lo = 10 mH Lo = 50 mH Lo = 50 mH	 Co = 1 µF Co = 4.5 µF Co = 6.7 µF
	Display connection (optional)	Uo ≤ 7.6 V_{DC} Ii ≤ 130 mA Ci = negligibly small Li = negligibly small	
	Max. connection values Ex ia IIC Ex ia IIB Ex ia IIA	 Lo = 3.1 mH Lo = 16 mH Lo = 27 mH	 Co = 0.64 µF Co = 3.8 µF Co = 12 µF

Type	Electrical data		
iTEMP TMT82 HART® Order option: TMT82-xxA3xxxxxxxxx (DIN rail transmitter)	Power supply (terminals + and -)	Ui = 30 V_{DC} Ii = 130 mA Pi = 770 mW Ci = negligibly small Li = negligibly small	
	Sensor circuit (terminals 3 to 8)	Uo = 9 V_{DC} Io = 13 mA Po = 29.3 mW	
	Max. connection values Ex ia IIC Ex ia IIB Ex ia IIA	 Lo = 5 mH Lo = 20 mH Lo = 50 mH	 Co = 0.93 µF Co = 3.8 µF Co = 4.8 µF

www.addresses.endress.com

Endress+Hauser

People for Process Automation