XA03084T/09/EN/01.22-00
71591662
2022-11-30

Safety Instructions
iTEMP TMT162

PROFIBUS® PA, FOUNDATION Fieldbus™

Ex ia IIC T4...T6 Ga

Endress+Hauser
People for Process Automation

iTEMP TMT162

PROFIBUS® PA, FOUNDATION Fieldbus™

Table of contents

Associated documentation

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

PROFIBUS® PA:
- Operating instructions: BA00275R
- Brief operating instructions: KA00276R
- Technical information: TI00086R

FOUNDATION Fieldbus™:
- Operating instructions: BA00224R
- Brief operating instructions: KA00189R
- Technical information: TI00086R

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

Manufacturer´s certificates

NEPSI certificate

Certificate number: GYJ22.1039X

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

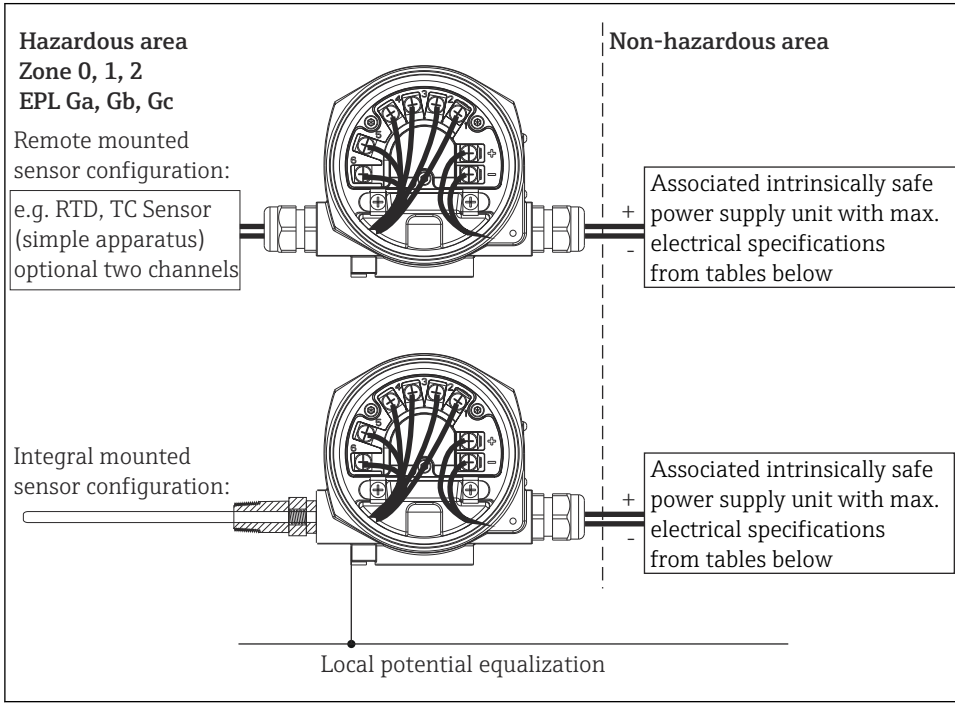
- GB/T 3836.1-2021
- GB/T 3836.4-2021

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

Manufacturer address

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

Safety instructions:



A0050218

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).
- The type of protection changes as follows when the devices are connected to certified intrinsically safe circuits of Category ib: Ex ib IIC. When connecting an intrinsically safe ib circuit, do not operate the sensor at Zone 0.
- When connecting two independent sensors make sure that the potential equalisation cables are at the same potential.
- The circuits of the transmitter are isolated from its enclosure in conformance with EN/IEC 60079-11 chapter 6.3.13.

Safety instructions: Zone 0

- Only operate devices in potentially explosive vapour/air mixtures under atmospheric conditions:
  - -20 °C ≤ Ta ≤ +60 °C
  - 0.8 bar ≤ p ≤ 1.1 bar
- If no potentially explosive mixtures are present, or if additional protective measures have been taken, according to EN 1127-1, the transmitters may be operated under other atmospheric conditions in accordance with the manufacturer's specifications.
- Associated devices with galvanic isolation between the intrinsically safe and non-intrinsically safe circuits are preferred.

Safety instructions: Specific conditions of use

- The temperature transmitter must be installed 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.
- When the optional non-conductive coating is applied the risk from electrostatic discharge shall be minimized.

Temperature tables

Type	Temperature class	Ambient temperature
iTEMP TMT162 - PROFIBUS® PA - FOUNDATION Fieldbus™	T6	−40 °C ≤ Ta ≤ +55 °C
	T5	−40 °C ≤ Ta ≤ +70 °C
	T4	−40 °C ≤ Ta ≤ +85 °C

Electrical connection data

Type	Electrical Data			
TMT162 - PROFIBUS® PA - FOUNDATION Fieldbus™	Supply (terminal + and -):	$U_i \leq 17.5\ V_{DC}$	or	$U_i \leq 24\ V_{DC}$
		$I_i \leq 500$ mA		$I_i \leq 250$ mA (nominal)
		$P_i \leq 5.32$ mW		$P_i \leq 1.2$ W
		$C_i \leq 5$ nF		
		$L_i = 10$ µH		
	Applicable for connection to a Fieldbus system according to FISCO-model			
	Sensor circuit (terminal 1 to 6):	$U_o \leq 8.6\ V_{DC}$		
		$I_o \leq 26.9$ mA		
		$P_o \leq 57.6$ mW		
	Max. single connection values:			
	Ex ia IIC	$L_o = 48$ mH		$C_o = 6.2$ µF
	Ex ia IIB	$L_o = 180$ mH		$C_o = 55$ µF
	Ex ia IIA	$L_o = 380$ mH		$C_o = 1000$ µF

www.addresses.endress.com

Endress+Hauser

People for Process Automation