

# Safety Instructions

## **iTEMP TMT162**

PROFIBUS® PA, FOUNDATION Fieldbus™

ATEX: Ex ic IIC Gc





# iTEMP TMT162

PROFIBUS® PA, FOUNDATION Fieldbus™

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**Associated documentation**

All documentation is available on the Internet:  
[www.endress.com/Deviceviewer](http://www.endress.com/Deviceviewer)  
(enter the serial number from the nameplate).



If not yet available, a translation into EU languages can be ordered.

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. TMT162

**Supplementary documentation**

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:

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

**Certificates and declarations****EU Declaration of Conformity**

Declaration number: EC\_00165 X

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

- EN IEC 60079-0: 2018
- EN 60079-11: 2012

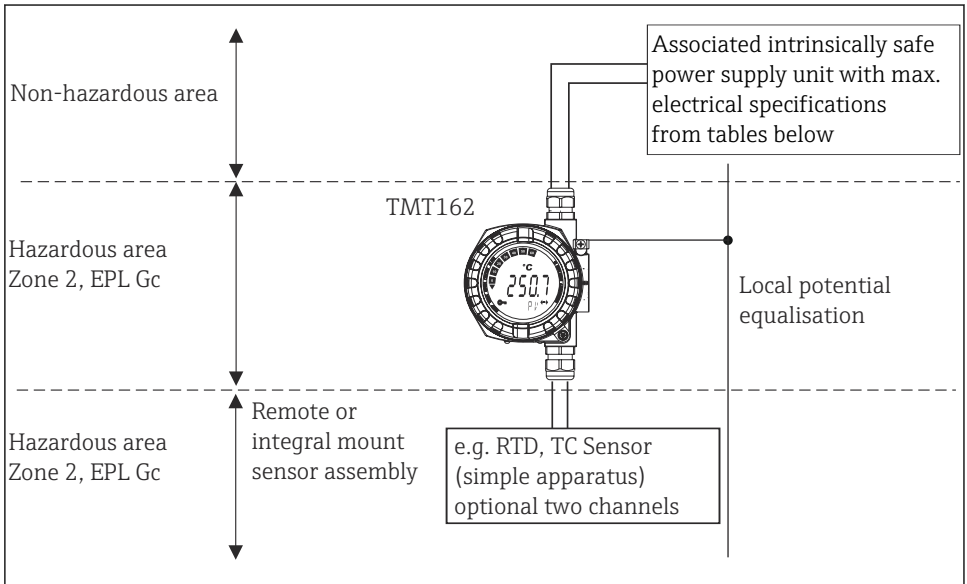
The EU Declaration of Conformity is available on the Internet:

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


**Manufacturer address**

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

## Safety instructions:



A0048932

 1 Installation of the 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).
- The device is only suitable for connection to certified, intrinsically safe equipment with explosion protection of at least Ex ic.
- If the conditions  $U_i > U_o$ ,  $(I_i > I_o)$ ,  $C_a > C_i + C_{cable}$  and  $L_a > L_i + L_{cable}$  are met, the energy-limited installation concept (Ex ic) allows energy-limited devices or associated energy-limited devices to be connected according to the entity concept.
- Observe the pertinent guidelines when interconnecting intrinsically safe circuits (e.g. EN/IEC 60079-14, Proof of Intrinsic Safety).
- The housing of the field transmitter must be connected to the potential matching line.
- 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.
- 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.

## Temperature tables

Category	Type of protection (ATEX)	Type
II 3G	Ex ic IIC T6...T4 Gc	TMT162

Type	Temperature class	Ambient temperature
TMT162	T6	$-40\text{ °C} \leq T_a \leq +55\text{ °C}$
	T5	$-40\text{ °C} \leq T_a \leq +70\text{ °C}$
	T4	$-40\text{ °C} \leq T_a \leq +85\text{ °C}$

## Electrical connection data

Type	Electrical Data									
TMT162 - PROFIBUS® PA - FOUNDATION Fieldbus™	<p>Supply (terminal + and -)</p> <p><math>U_i \leq 17.5\text{ V}_{DC}</math>                      or                      <math>U_i \leq 32\text{ V}_{DC}</math></p> <p><math>I_i \leq</math> not applicable                      <math>I_i \leq 11\text{ mA}</math> (nominal)</p> <p>(current controlled circuit)</p> <p><math>P_i \leq</math> not applicable                      <math>P_i \leq</math> not applicable</p> <p><math>C_i \leq 5\text{ nF}</math></p> <p><math>L_i = 10\text{ }\mu\text{H}</math></p> <p>Applicable for connection to a Fieldbus system according to FISCO-model</p> <p>Sensor circuit (terminal 1 to 6)</p> <p><math>U_o \leq 8.6\text{ V}_{DC}</math></p> <p><math>I_o \leq 26.9\text{ mA}</math></p> <p><math>P_o \leq 57.6\text{ mW}</math></p> <p>Max. connection values</p> <table> <tbody> <tr> <td>Ex ic IIC</td> <td><math>L_o = 48\text{ mH}</math></td> <td><math>C_o = 6.2\text{ }\mu\text{F}</math></td> </tr> <tr> <td>Ex ic IIB</td> <td><math>L_o = 180\text{ mH}</math></td> <td><math>C_o = 55\text{ }\mu\text{F}</math></td> </tr> <tr> <td>Ex ic IIA</td> <td><math>L_o = 380\text{ mH}</math></td> <td><math>C_o = 1\,000\text{ }\mu\text{F}</math></td> </tr> </tbody> </table>	Ex ic IIC	$L_o = 48\text{ mH}$	$C_o = 6.2\text{ }\mu\text{F}$	Ex ic IIB	$L_o = 180\text{ mH}$	$C_o = 55\text{ }\mu\text{F}$	Ex ic IIA	$L_o = 380\text{ mH}$	$C_o = 1\,000\text{ }\mu\text{F}$
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[www.addresses.endress.com](http://www.addresses.endress.com)

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