

# Safety Instructions

## iTEMP TMT82, TMT71, TMT72

DIN rail transmitter

ATEX: Ex nA IIC Gc  
Ex ec IIC Gc



# iTEMP TMT82, TMT71, TMT72

DIN rail transmitter

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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. TMT82

**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\_00187

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

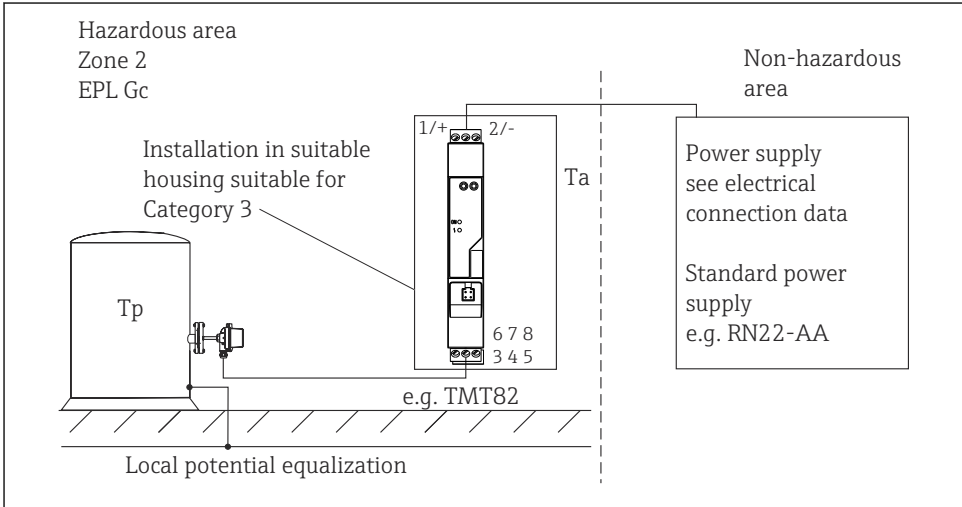
- EN IEC 60079-0: 2018
- EN 60079-15: 2010

The EU Declaration of Conformity is available on the Internet:  
[www.endress.com/Downloads](http://www.endress.com/Downloads)


**Certificate holder**

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

## Safety instructions



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 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).
- For operating the transmitter housing at an ambient temperature under  $-20^{\circ}\text{C}$ , appropriate cables, cable entries and sealing facilities permitted for this application must be used.
- For ambient temperatures higher than  $+70^{\circ}\text{C}$ , use suitable heat-resisting cables or wires, cable entries and sealing facilities for Ta  $+5\text{ K}$  above surrounding.

### WARNING

#### Explosive atmospheres

- ▶ In explosive atmospheres, do not open the device when energized. (Ensure that the housing protection rating of IP 54 is maintained during operation.)

## Safety instructions: Specific conditions of use

- Due to the risk of discharge, the non-metallic parts of the equipment and of all non-metallic accessories have to be protected from electrostatic charging during installation and operation (e.g. only wipe with a damp cloth and do not expose to high voltage fields).
- The use of the CDI interface is not allowed in Hazardous locations.

**For type of protection Ex nA:**

- For use in the type of protection Ex nA, and for Zone 2 (EPL Gc) application, the transmitter shall be installed completely inside an additional enclosure, providing a degree of protection of not less than IP54 according to EN/IEC 60079-0 and EN/IEC 60079-15. The ambient temperature within the end use enclosure shall not exceed the limits of the permissible ambient temperature range. Clearances, creepage distances, and separations as defined in EN/IEC 60079-15 must be considered for the installation.
- The TMT82 does not have any surface that achieves a temperature greater than 135 °C/100 °C/85 °C with a 5K safety factor when operated under full load conditions at an ambient of range of 85 °C/56 °C/41 °C respectively.
- The TMT71/L20221/TMT72/L20222 does not have any surface that achieves a temperature greater than 135 °C/100 °C/85 °C with a 5K safety factor when operated under full load conditions at an ambient of range of 85 °C/58 °C/43 °C respectively.
- For full certification as an electrical equipment for use in EPL Gc or Dc the tests according to IEC 60079-0:2017 section 5.2 and 5.3 have to be carried out. Based on the test results a temperature class shall be assigned.

**For type of protection Ex ec:**

- For use in the type of protection increased safety Ex ec, and for Zone 2 (EPL Gc) application, the transmitter shall be installed completely inside an additional enclosure, providing a degree of protection of not less than IP 54 according to EN/IEC 60079-0 and EN/IEC 60079-7. The ambient temperature within the end use enclosure shall not exceed the limits of the permissible ambient temperature range. Clearances, creepage distances, and separations as defined in EN/IEC 60079-7 must be considered for the installation.
- The TMT82 does not have any surface that achieves a temperature greater than 135 °C/100 °C/85 °C with a 5K safety factor when operated under full load conditions at an ambient of range of 85 °C/56 °C/41 °C respectively.
- The TMT71/L20221/TMT72/L20222 does not have any surface that achieves a temperature greater than 135 °C/100 °C/85 °C with a 5K safety factor when operated under full load conditions at an ambient of range of 85 °C/58 °C/43 °C respectively.
- For full certification as an electrical equipment for use in EPL Gc or Dc the tests according to IEC 60079-0:2017 section 5.2 and 5.3 have to be carried out. Based on the test results a temperature class shall be assigned.

**Temperature tables**

Type	Ambient temperature range
TMT82	$-40\text{ °C} \leq T_a \leq +85\text{ °C}$
TMT71, TMT72 L20221, L20222	$-50\text{ °C} \leq T_a \leq +85\text{ °C}$

**Electrical connection data**

Type	Type of protection	Power supply (terminals + and -)
TMT82	Ex nA IIC Gc Ex ec IIC Gc	$U_b = 12\text{ to }42\text{ V}_{DC}$ Output: 4 to 20 mA Current consumption: $\leq 23\text{ mA}$
TMT71, TMT72 L20221, L20222	Ex nA IIC Gc Ex ec IIC Gc	$U_b = 11\text{ to }36\text{ V}_{DC}$ Output: 4 to 20 mA Current consumption: $\leq 23\text{ mA}$

Category	Type of protection	Type
II 3G	Ex nA IIC Gc Ex ec IIC Gc	TMT82, TMT71, TMT72, L20221, L20222





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