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Safety Instructions
iTEMP TMT31

ATEX: Ex ec IIC Gc

Endress+Hauser
People for Process Automation

iTEMP TMT31

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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).

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>, e.g. iTEMP TMT31

Supplementary documentation

Explosion protection brochure: CP00021Z

The explosion protection brochure is available on the Internet:
www.endress.com/Downloads

Certificates and declarations

ATEX certificate

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

- EN IEC 60079-0 : 2018
- EN 60079-7 : 2015

EU Declaration of Conformity

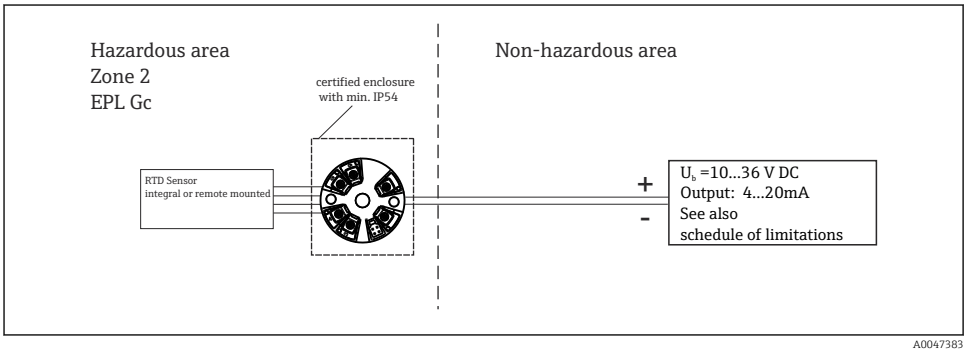
Declaration number: EC_00187 U

The EU Declaration of Conformity is available on the Internet:
www.endress.com/Downloads

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).
- For operating the transmitter at an ambient temperature under −20 °C, appropriate cables, cable entries and sealing facilities permitted for this application must be used.
- For ambient temperatures higher than +65 °C, use suitable heat-resisting cables or wires, cable entries and sealing facilities for Ta +5 K above surrounding.
- Terminal specification:

	Torque	Cable version	Cable cross-section
Screw terminals	0.35 Nm	Solid or flexible	≤ 1.5 mm² (16 AWG)
Push-in terminals [1] cable design, stripping length = min. 10 mm (0.39 in)	-	Solid or flexible	0.2 to 1.5 mm² (24 to 16 AWG)
	-	Flexible with wire end ferrules with/ without plastic ferrule	0.25 to 1.5 mm² (24 to 16 AWG)

1) Ferrules must be used with push-in terminals and when using flexible cables with a cable cross-section of = 0.3 mm².

Safety instructions: Schedule of limitations

- The device must be powered only by a power unit that operates using a limited-energy circuit in accordance with IEC/EN 61010-1, Section 9.4 and the requirements in Table 18.
- For use in the type of protection increased safety Ex ec, and for Zone 2 (EPL Gc) application, the transmitter iTMEP TMT31/F2058 shall be installed completely inside an additional enclosure, providing a degree of protection of not less than IP54 according to IEC/EN 60079-0 and IEC/EN 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 IEC/EN 60079-7 must be considered for the installation.
- The end user shall ensure appropriate earthing of the metallic field housing (optional) and all metallic accessories if used (wall or pipe mounting accessories for the field housing and the DIN rail clip for the head transmitter) upon installation.
- These components does not have any surface that achieves a temperature greater than 135 °C/100 °C/85 °C with a 5 K safety factor when operated under full load conditions at an ambient of range as follows:

Rating	iTEMP TMT31 and F2058	Sensor input RTD (e = 1) Ambient temperature range	Sensor input TC (e = 2) Ambient temperature range	TCode guidance
10 to 36 V_{DC}	Head (c = 1)	−40 °C ≤ Ta ≤ +85 °C	−40 °C ≤ Ta ≤ +80 °C	T135 °C
		−40 °C ≤ Ta ≤ +50 °C	−40 °C ≤ Ta ≤ +45 °C	T100 °C
		−40 °C ≤ Ta ≤ +35 °C	−40 °C ≤ Ta ≤ +30 °C	T85 °C
	DIN rail (c = 2)	−40 °C ≤ Ta ≤ +85 °C	−40 °C ≤ Ta ≤ +85 °C	T135 °C
		−40 °C ≤ Ta ≤ +67 °C	−40 °C ≤ Ta ≤ +67 °C	T100 °C
		−40 °C ≤ Ta ≤ +52 °C	−40 °C ≤ Ta ≤ +52 °C	T85 °C
10 to 30 V_{DC}	Head (c = 1)	−40 °C ≤ Ta ≤ +85 °C	−40 °C ≤ Ta ≤ +80 °C	T135 °C
		−40 °C ≤ Ta ≤ +57 °C	−40 °C ≤ Ta ≤ +53 °C	T100 °C
		−40 °C ≤ Ta ≤ +42 °C	−40 °C ≤ Ta ≤ +38 °C	T85 °C
	DIN rail (c = 2)	−40 °C ≤ Ta ≤ +85 °C	−40 °C ≤ Ta ≤ +85 °C	T135 °C
		−40 °C ≤ Ta ≤ +70 °C	−40 °C ≤ Ta ≤ +70 °C	T100 °C
		−40 °C ≤ Ta ≤ +55 °C	−40 °C ≤ Ta ≤ +55 °C	T85 °C

For full certification as an electrical equipment for use in EPL Gc or Dc the tests according to IEC/EN 60079-0 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	Type of protection	Ambient Temperature
iTEMP TMT31, F2058	Ex ec IIC Gc	-40 °C ≤ Ta ≤ +85 °C

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