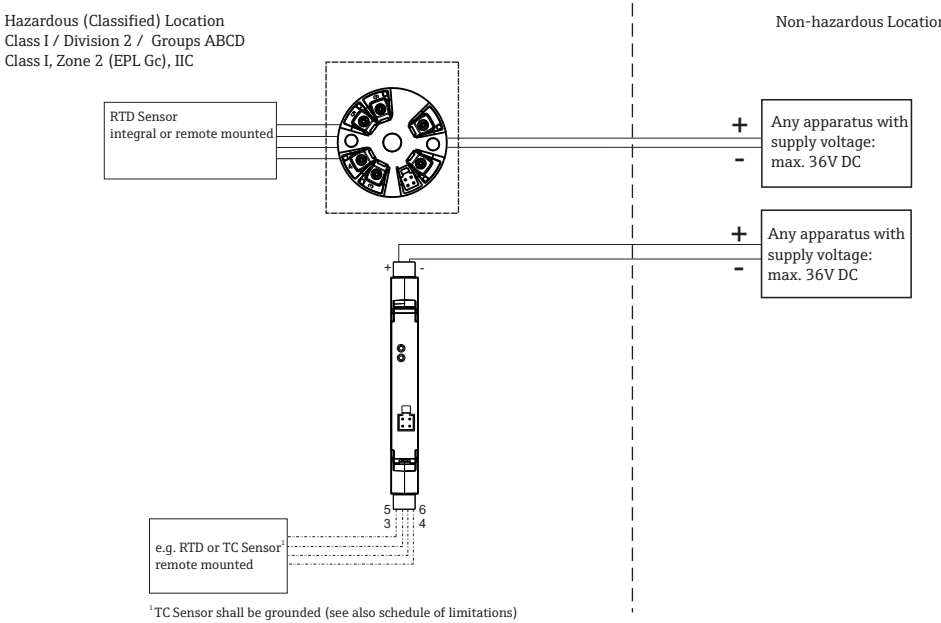

Applicable requirements see CSA certificate **80107564**

Installation Notes TMT31, F2058

- CSA approved apparatus must be installed in accordance with manufacturer's instructions.
- Install per Canadian Electrical Code or National Electrical Code (NFPA 70).
- Use supply wires suitable for 5°C above surroundings.
- Terminal specification:

-	Torque	Cable version	Cable cross-section
Screw terminals	0.35Nm	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.

- WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.
  AVERTISSEMENT: RISQUE POTENTIEL DE DECHARGES ELECTROSTATIQUES – VOIR CONSIGNES.

INCREASED SAFETY
Ex ec IIC Gc
Class I, Zone 2, AEx ec IIC
Class I, Division 2, Groups A, B, C, D

- Intrinsic safety barrier is not required. Vmax see table below.
- WARNING: EXPLOSION HAZARD - DO NOT CONNECT OR DISCONNECT WHILE CIRCUITS ARE LIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.
- AVERTISSEMENT: RISQUE EXPLOSIF- NE JAMAIS BRANCHEZ OU DECONNECTEZ QUAND LES CIRCUITS INTERNES SONT SOUS TENSION Á MOINS QUE LA ZONE SOIT PAS À RISQUES.

Functional ratings
These ratings do not supersede Hazardous Location values
Unom ≤ 36 DC Inom ≤ 4 to 20 mA

Schedule of Limitations:

- 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 device may only be powered by a power supply unit with a limited energy electric circuit in accordance with CSA/UL/EN/IEC 61010-1:2010 chapter 6.3.1/6.3.2 and 9.4 or Class 2 according to CSA 223/UL 1310
- For use in the type of protection increased safety Ex ec, and for Zone 2 (EPL Gc), and Class I, Division 2 applications, the transmitter TMT31/F2058 shall be installed completely inside an additional enclosure, providing a degree of protection of not less than IP54 according to CSA/UL 60079-0 and CSA/UL 60079-7 and requiring a tool to open. 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 CSA/UL 60079-7 must be considered for the installation.
- If the head transmitter TMT31/F2058, in type of protection increased safe and for use in Zone 2 (EPL Gc) and Class I, Division 2 applications, is mounted in an optional field housing the field housing must be equipped with suitable cable glands, certified according to CSA/UL 60079-0 and CSA/UL 60079-7, providing a degree of ingress protection of not less than IP54.
- This component has not been evaluated for process pressure and process temperature, or any other source of heating or cooling.
- Wire end ferrules must be used with spring terminals and when using flexible cables with a cable cross section of = 0.3 mm²
- The end user shall ensure appropriate earthing of any metallic field housing (optional) and any metallic accessories if used.
- DINrail thermocouple's temperature input is not considered as galvanically isolated therefore the sensor shall be connected to the local potential equalization or ground.
- The maximum temperature rise recorded was +48°K. These components do 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 as follows:

Rating	TMT31 and F2058	Sensor input RTD (e = 1) Ambient temperature range	Sensor input TC (e = 2) Ambient temperature range	TCode guidance
10...36 Vdc	Head (c = 1)	-40 °C ≤ Ta ≤ +85 °C	-40 °C ≤ Ta ≤ +80 °C	135°C
		-40 °C ≤ Ta ≤ +50 °C	-40 °C ≤ Ta ≤ +45 °C	100°C
		-40 °C ≤ Ta ≤ +35 °C	-40 °C ≤ Ta ≤ +30 °C	85°C
	DIN rail (c = 2)	-40 °C ≤ Ta ≤ +85 °C	-40 °C ≤ Ta ≤ +85 °C	135°C
		-40 °C ≤ Ta ≤ +67 °C	-40 °C ≤ Ta ≤ +67 °C	100°C
		-40 °C ≤ Ta ≤ +52 °C	-40 °C ≤ Ta ≤ +52 °C	85°C
10...30 Vdc	Head (c = 1)	-40 °C ≤ Ta ≤ +85 °C	-40 °C ≤ Ta ≤ +85 °C	135°C
		-40 °C ≤ Ta ≤ +57 °C	-40 °C ≤ Ta ≤ +53 °C	100°C
		-40 °C ≤ Ta ≤ +42 °C	-40 °C ≤ Ta ≤ +38 °C	85°C
	DIN rail (c = 2)	-40 °C ≤ Ta ≤ +85 °C	-40 °C ≤ Ta ≤ +85 °C	135°C
		-40 °C ≤ Ta = +70 °C	-40 °C ≤ Ta ≤ +70 °C	100°C
		-40 °C ≤ Ta ≤ +55 °C	-40 °C ≤ Ta ≤ +55 °C	85°C

- The factory programming 4-pins covered terminals (CDI-Connection) are not used during normal operations.

	Approved	Date (yyyy-mm-dd)	Drawing No.	Dwg.rev.	Revision no.	Revision date (yyyy-mm-dd)	Name	Material	
	Pfanzelt	2021-07-16	10000012751	A	W24212	2025-06-16	MP	71711603 XA02683T/09/EN/02.25-00	Endress+Hauser
Volume (mm³)	Designed	Date (yyyy-mm-dd)	Unit	Scale	Title			Series	
	Pfanzelt	2021-07-15	iTEMP TMT31, F2058	1:1	CONTROL DRAWING CSA Increased Safety			Objekt version	Sheet
Refer to protection notice ISO 16016	Edge of working parts ISO 13715	Geometrical tolerancing ISO 2768-mH-E	Part No. -	Format A4					1 of 1

Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany