Where simplicity meets reliability

Our iTEMP TMT31 temperature transmitter combines simplified selection, ordering, installation and operation with the highest reliability and long-term stability in one product.

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Endress+Hauser

iTEMP TMT31 temperature transmitter

4-20 mA temperature transmitter as head or DIN rail device with one RTD or one TC sensor input suitable for use in zone 2 (Ex ec) / Div. 2 areas

The iTEMP TMT31 4-20 mA temperature transmitter is designed for customers in all industries who want to easily select, order, install and operate simple products.

It is a reliable, long-term stable, single-channel 4-20 mA temperature transmitter for modular thermometers with form B connection head or for installation in control cabinets with DIN rail mounting. The capable iTEMP TMT31 can be used with either all Pt100 and Pt1000 RTD sensors, or all common thermocouple sensors.

▶ Take a look at the product video

Visit the product website

Benefits at a glance

The iTEMP TMT31 offers reliability, long-term stability, high accuracy, and diagnostic functions. It is available as a head transmitter for installation in industrial and hygienic thermometers with a form B connection head or as a DIN rail device for installation in control cabinets.

The transmitter can be ordered with either an input for RTD thermometers or TC thermometers.

In addition the transmitter can be parameterized on site using free software tools such as DeviceCare from Endress+Hauser or is preprogrammed at the factory and ready for immediate use.

Push-in terminals for fast and tool-free wiring during installation or maintenance

Optimization of the accuracy of the measuring point through sensor-transmitter-matching

Diagnostic information according to NAMUR NE107

Increased safety through Ex approvals

Industry focus

The updated iTEMP TMT31 temperature transmitter from the F segment is in conjunction with the appropriate sensor the right choice for any measuring point in basic processes across all industries.

The option of installing the temperature transmitter in all modular thermometers from Endress+Hauser and third-party suppliers also using the DIN rail variant as a stand-alone solution makes the possible applications countless.

The iTEMP TMT31 is available in different variants and with a wide range of functions and features, making it suitable for all industries. This versatility is demonstrated by the following examples of how the iTEMP TMT31, together with the matching iTHERM thermometer from Endress+Hauser, is the perfect combination for various industries.

Industry focus

Food & Beverage:
iTEMP TMT31 as head transmitter with RTD input
iTHERM ModuLine TM401 / TM402 thermometer

Water & Wastewater:
iTEMP TMT31 as head transmitter with RTD input
iTHERM ModuLine TST434B thermometer

Oil & Gas:
iTEMP TMT31 as head or DIN rail transmitter with TC or RTD input
iTHERM ModuLine TM111 / TM131 thermometer

Life Sciences:
iTEMP TMT31 as head transmitter with RTD input
iTHERM ModuLine TM411 / TM412 thermometer

Chemical:
iTEMP TMT31 as head transmitter with TC input
iTHERM ModuLine TM111 thermometer

Power & Energy:
iTEMP TMT31 as head or DIN rail transmitter with TC or RTD input
iTHERM ModuLine TM131 thermometer

Mining, Minerals & Metals:
iTEMP TMT31 as head or DIN rail transmitter with TC input
iTHERM FlameLine TAF16 thermometer

Utilities:
iTEMP TMT31 as head transmitter with RTD input
iTHERM ModuLine TM121 thermometer

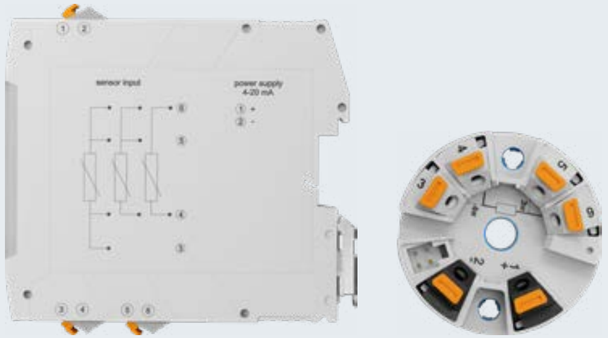
iTEMP TMT31

4-20 mA temperature transmitter

The updated iTEMP TMT31 simplifies and streamlines the Endress+Hauser temperature transmitter portfolio.

No matter which sensor input, which housing type and if pre-configuration is required — the starting point is always the iTEMP TMT31. This simplifies product selection and the ordering process while reducing the error rate during product configuration.

To suit the basic processes of all industries and applications, the transmitter is available in different variants — as DIN rail or head transmitter and with RTD or TC input.

	RTD	TC
		
Housing form	Temperature head transmitter form B, DIN rail	Temperature head transmitter form B, DIN rail
Input	1x RTD Pt100 / Pt1000	common TC types
Output	4-20 mA	4-20 mA
Power supply	U=10 to 36 VDC, protected against reverse polarity	U=10 to 36 VDC, protected against reverse polarity
Performance characteristics	Response time ≤0,5s	Response time ≤0,5s
Ambient temperature	–40 to +85 °C (–40 to +185 °F)	–40 to +85 °C (–40 to +185 °F)
Approvals	CSA, ATEX: Zone 2 (Ex ec) / Div. 2; DNV	CSA, ATEX: Zone 2 (Ex ec) / Div. 2
Additional Info	Sensor-transmitter-matching using Callendar van Dusen linearization <= 0,1 K or 0,07% of measuring range	Galvanic isolation

People for Process Automation

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