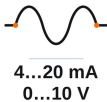


THERMOCOUPLE TEMPERATURE TRANSMITTER



Type: **TP-TC**

- TYPE K · S · R · J · T · N · B · E
- -260 ... 1820 °C
- OUTPUT 4 ... 20 mA, ISOLATED
- RFID PROGRAMMABLE



ORDERING

Version	with factory setting: type K, 0 ... 1200 °C
Version	with customer setting — please state type of thermocouple and measuring range with the order
Programming	RFID configurator DEV-RP with cable and software, ordered separately

The manufacturer keeps the two versions under order numbers of its own. An octogon order code has not yet been defined for this product.

OVERVIEW

The TP-TC sits in the connection head and turns the voltage of a thermocouple into an impressed current of 4 to 20 mA. Eight thermocouple types are supported — K, S, R, J, T, N, B and E — and together they cover -260 to 1820 °C. The output is galvanically isolated against the input with 1 kV AC and is linearised in the device; the transmission error is at most 0.1 % of full scale or 0.2 °C, the resolution 16 bit. The device is supplied out of the current loop with 6 to 32 V DC and needs no auxiliary energy of its own. It is set without contact over RFID: type of thermocouple and measuring range can be changed at any time with the DEV-RP configurator and its software. The black PA66 case measures $\varnothing 45 \times 23$ mm, weighs about 35 g and is rated IP20 for mounting inside the connection head.

INPUT AND OUTPUT	DEVICE AND CONNECTION
• Type K $-260 \dots 1360$ °C • Type S and R $-40 \dots 1760$ °C • Type J $-200 \dots 1200$ °C · Type B $40 \dots 1820$ °C • Type T $-260 \dots 400$ °C · Type N $-260 \dots 1280$ °C • Type E $-260 \dots 940$ °C • Output 4 ... 20 mA, isolated, linearised • Transmission error max. 0.1 % FS or 0.2 °C • Isolation voltage 1 kV AC	• Supply 6 ... 32 V DC out of the current loop • Configuration over RFID (NFC) • Case synthetics PA66, black • Dimensions $\varnothing 45 \times 23$ mm, approx. 35 g • Terminal screws, conductor to 1 mm² • Protection class IP20 • Operating temperature $-40 \dots 85$ °C • EN 61000-6-4 and EN 61000-6-2



TECHNICAL DATA

INPUT — MEASURING RANGES

Type K	–260 ... 1360 °C
Type S · Type R	–40 ... 1760 °C
Type J	–200 ... 1200 °C
Type T	–260 ... 400 °C
Type N	–260 ... 1280 °C
Type B	40 ... 1820 °C
Type E	–260 ... 940 °C
Cable resistance	maximum 20 Ω

MEASURING AMPLIFIER

Resolution	16 bit (2 μ A)
Transmission error	maximum 0.1 % of full scale or 0.2 °C
Influence EMC	< 0.5 %
Interference suppression	50 ... 60 Hz
Isolation voltage	1 kV AC
Configuration	RFID configurator (NFC)

OUTPUT

Current signal	4 ... 20 mA, galvanically isolated, linearised
Connection	2-wire
Signal on error	21.5 mA or 3.8 mA, adjustable
Overflow	final value + 5 °C
Underflow	zero value – 5 °C
Output protection	approx. 30 mA

ENVIRONMENT AND SUPPLY

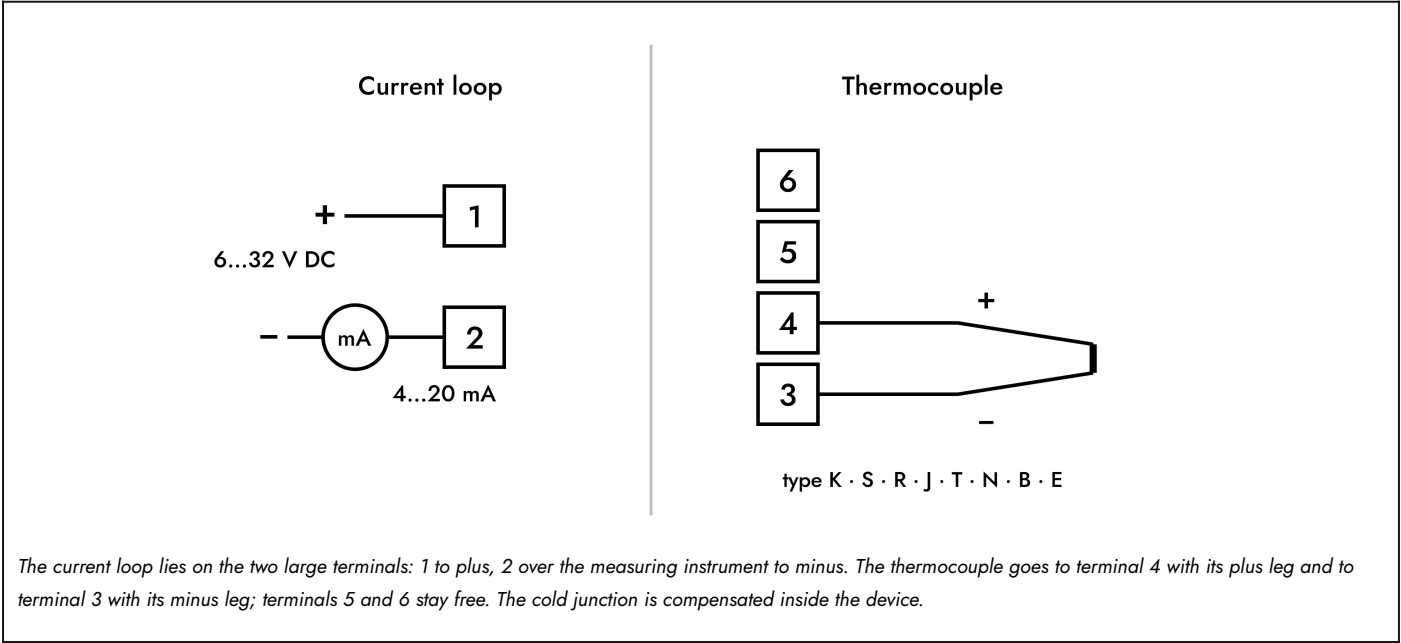
Operating temperature	–40 ... 85 °C
Storage temperature	–40 ... 105 °C
Air humidity	30 ... 90 % rH at 40 °C, no condensation
Supply voltage	6 ... 32 V DC out of the current loop

MECHANICS

Case	synthetics PA66, black · $\varnothing$ 45 × 23 mm
Protection class	IP20
Electrical connection	terminal screws · conductor cross section 1 mm ² · stripping length 8 mm
Weight	approx. 35 g
Conformity	EN 61000-6-4 · EN 61000-6-2



ELECTRICAL CONNECTION



ACCESSORIES

DEV-RP	RFID configurator with cable and software; carried in the octogon range as EKMH
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The manufacturer document names no further accessories.

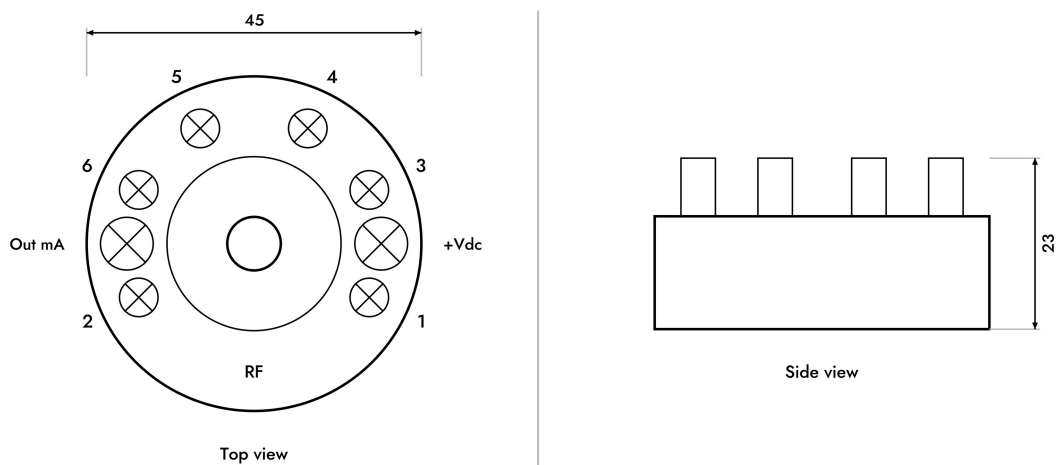
COMPLIANCE

	Protection class	IP20 to IEC 60529 — mounted in the connection head
	Output signal	4 ... 20 mA, 2-wire, galvanically isolated with 1 kV AC
	Case material	synthetics PA66, black

The manufacturer names EN 61000-6-4 and EN 61000-6-2 under conformity — emission and immunity for the industrial environment. The document states no marking beyond that.



DIMENSIONS (mm)



Drawn by octogon from the manufacturer document; dimensioned are the two values the document gives, $\varnothing 45$ and 23 mm. The position of the terminals follows the top view of the document, the outline is schematic.

