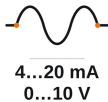


RTD TEMPERATURE TRANSMITTER



Type: **TP-RTD**

- Pt100 · Pt1000 · Ni100
- -200 ... 800 °C
- OUTPUT 4 ... 20 mA
- RFID PROGRAMMABLE



ORDERING

Version	with factory setting: Pt100, 3-wire, 0 ... 150 °C
Version	with customer setting — please state measured quantity, type of connection 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-RTD sits in the connection head and turns the signal of a resistance thermometer into an impressed current of 4 to 20 mA. It accepts Pt100 in two-, three- and four-wire connection, Pt1000 in two-wire connection and Ni100 in two-, three- and four-wire connection; the measuring range reaches from -200 to 800 °C with Pt100 and Pt1000, and from -50 to 170 °C with Ni100. The manufacturer gives the accuracy as at most 0.1 % of the measuring range or 0.2 °C, and the resolution as 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: measured quantity, type of connection and measuring range can be changed at any time with the DEV-RP configurator and its software. The black PA66 case measures Ø 45 × 23 mm, weighs about 35 g and is rated IP20 for mounting inside the connection head.

INPUT AND OUTPUT	DEVICE AND CONNECTION
• Pt100: 2-, 3-, 4-wire, -200 ... 800 °C • Pt1000: 2-wire, -200 ... 800 °C • Ni100: 2-, 3-, 4-wire, -50 ... 170 °C • Output 4 ... 20 mA, 2-wire • Accuracy max. 0.1 % of range or 0.2 °C • Resolution 16 bit (1 µA) • Signal on error 21.5 mA or 3.8 mA • Cable resistance up to 20 Ω	• Supply 6 ... 32 V DC out of the current loop • Configuration over RFID (NFC) • Case synthetics PA66, black • Dimensions Ø 45 × 23 mm, approx. 35 g • Terminal screws, conductor to 1 mm² • Protection class IP20 • Operating temperature -40 ... 85 °C • EN 61000-6-4 and EN 61000-6-2



TECHNICAL DATA

INPUT

Pt100	measuring range $-200 \dots 800 \text{ }^{\circ}\text{C}$ · resistance range $18.5 \dots 378 \text{ } \Omega$ · 2-, 3-, 4-wire
Pt1000	measuring range $-200 \dots 800 \text{ }^{\circ}\text{C}$ · resistance range $185 \dots 3780 \text{ } \Omega$ · 2- wire
Ni100	measuring range $-50 \dots 170 \text{ }^{\circ}\text{C}$ · resistance range $69 \dots 223 \text{ } \Omega$ · 2-, 3-, 4-wire
Cable resistance	maximum $20 \text{ } \Omega$

MEASURING AMPLIFIER

Resolution	16 bit ($1 \text{ } \mu\text{A}$)
Accuracy	maximum 0.1 % of the measuring range or $0.2 \text{ }^{\circ}\text{C}$
Influence EMC	$< 0.5 \text{ } \%$
Interference suppression	$50 \dots 60 \text{ Hz}$
Configuration	RFID configurator (NFC)

OUTPUT

Current signal	$4 \dots 20 \text{ mA}$
Connection	2-wire
Signal on error	21.5 mA or 3.8 mA , adjustable
Overflow	final value $+ 5 \text{ }^{\circ}\text{C}$
Underflow	zero value $- 5 \text{ }^{\circ}\text{C}$
Output protection	approx. 30 mA

ENVIRONMENT AND SUPPLY

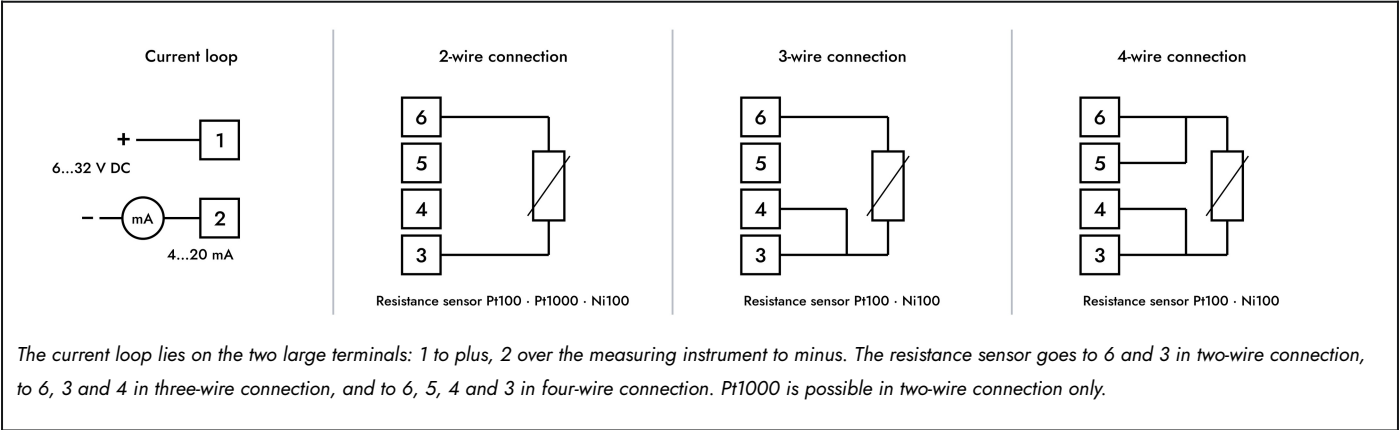
Operating temperature	$-40 \dots 85 \text{ }^{\circ}\text{C}$
Storage temperature	$-40 \dots 105 \text{ }^{\circ}\text{C}$
Air humidity	$30 \dots 90 \text{ } \%$ rH at $40 \text{ }^{\circ}\text{C}$, no condensation
Supply voltage	$6 \dots 32 \text{ V DC}$ out of the current loop

MECHANICS

Case	synthetics PA66, black · $\varnothing 45 \times 23 \text{ mm}$
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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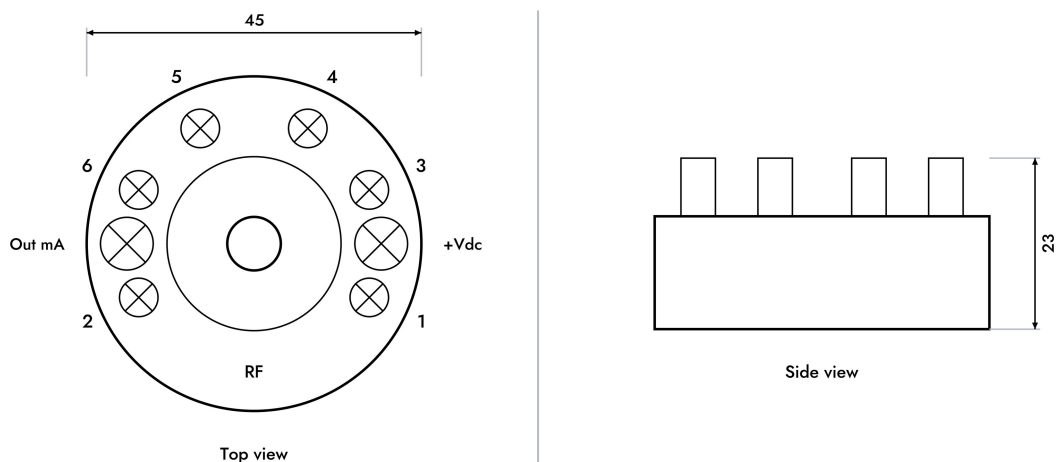
The manufacturer document names no further accessories.

COMPLIANCE

	Protection class	IP20 to IEC 60529 — mounted in the connection head
	Output signal	4 ... 20 mA, 2-wire, supplied out of the current loop
	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.

