

RMPT30BD

temperature transmitter - 0..100 °C/32..212 °F -
for Universal Pt100 probes



Main

Range of product	Zelio Analog
Product or component type	Converter for Universal Pt100 probes
Analogue input type	Temperature probe 0...100 °C/32..212 °F Pt 100 2, 3 or 4 wires
Analogue output type	Current 0...20 mA ≤ 500 Ohm Current 4...20 mA ≤ 500 Ohm Voltage 0...10 V ≥ 100 kOhm

Complementary

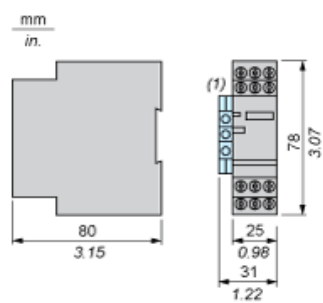
Protection type	Overvoltage protection on output (+/- 30 V) Reverse polarity protection on output Reverse polarity protection on power supply Short-circuit protection on output
Abnormal analogue output voltage	+/- 13 V when no input wired or wire broken
Abnormal analogue output current	0 A when no input wired or wire broken
[Us] rated supply voltage	24 V DC +/- 20 %, non isolated
Current consumption	≤ 40 mA for voltage output ≤ 60 mA for current output
Local signalling	LED green (power ON)
Measurement error	+/- 0.5 % of full scale (3 or 4 wires) at 20 °C +/- 1 % of full scale (2 wires) at 20 °C +/- 10 % of full scale at 20 °C (electromagnetic interference of 10 V/m)
Repeat accuracy	+/- 0.2 % full scale at 20 °C +/- 0.6 % full scale at 60 °C
Temperature coefficient	150 ppm/°C
Maximum wiring resistance	0.2 Ohm connection in 2 wires
Clamping connection capacity	1 x 2.5 mm ² 2 x 1.5 mm ²
Tightening torque	0.6...1.1 N.m
Marking	CE
Surge withstand	0.5 kV for 1.2/50 µs conforming to IEC 61000-4-5
[Ui] rated insulation voltage	2000 V
Fixing mode	Clip-on, 35 mm symmetrical DIN rail Fixed, mounting plate
Product weight	0.12 kg

Environment

Standards	DIN 43760 EN/IEC 60584-1 EN/IEC 60751 EN/IEC 60947-1
Product certifications	CSA GL UL
IP degree of protection	IP20 terminal block IP50 housing
Fire resistance	850 °C conforming to IEC 60695-2-1 850 °C conforming to UL
Shock resistance	50 gn for 11 ms conforming to IEC 60068-2-27
Vibration resistance	5 gn (f = 10...100 Hz) conforming to IEC 60068-2-6
Resistance to electrostatic discharge	6 kV (in contact) conforming to IEC 61000-4-2 level 3 8 kV (in air) conforming to IEC 61000-4-2 level 3
Resistance to fast transients	1 kV on input-output conforming to IEC 61000-4-4 2 kV on power supply conforming to IEC 61000-4-4
Disturbance radiated/conducted	CISPR11 CISPR22 group 1- class B
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	0...50 °C (mounting side by side) 0...60 °C (2 cm spacing)
Pollution degree	2 conforming to IEC 60664-1

Analog Interface (Converter)

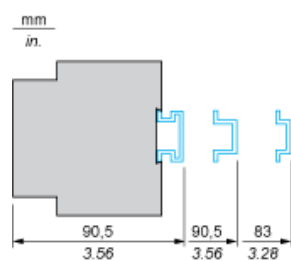
Dimensions



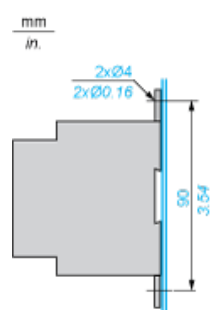
(1) Terminal block AB1TP435U or AB1RRNTP435U2

Mounting

Mounting on Rails AM1•••••

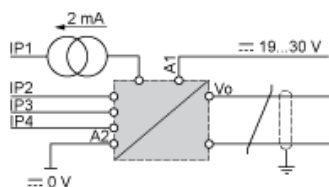


Panel Mounting



Analog Interface: Converter for Universal Pt100 Probe

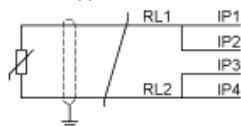
Wiring Diagram



The input, output and power supply lines must be kept away from the power cables to avoid effects due to induced interference.
The input and output cables must be shielded as indicated in the schemes and must be kept away from each other.

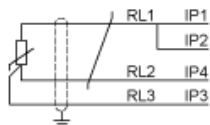
Input Connections

2-wire type



$$RL1 + RL2 \leq 200 \text{ m}\Omega$$

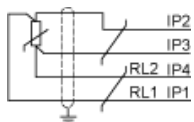
3-wire type



$$RL1 = RL2 = RL3$$

$$RL1 + RL2 \geq 200 \text{ }\Omega$$

4-wire type



$$RL1 + RL2 \leq 200 \text{ }\Omega$$