

RMPT53BD

temperature transmitter - 0...250 °C/32...482 °F - for
Optimum Pt100 probes



Main

Range of product	Zelio Analog
Product or component type	Converter for Optimum Pt100 probes
Analogue input type	Temperature probe 0...250 °C/32...482 °F Pt 100 2, 3 or 4 wires
Analogue output type	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
Analogue output voltage	-15...-11 V when no input or input wire broken 11...15 V when no input or input wire broken
Analogue output current	0...-30 mA when no input or input wire broken 22...30 mA when no input or input wire broken
[Us] rated supply voltage	24 V DC non isolated +/- 20 %
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
Safety reliability data	MTTFd = 43.9 years B10d = 40564
Product weight	0.12 kg

Environment

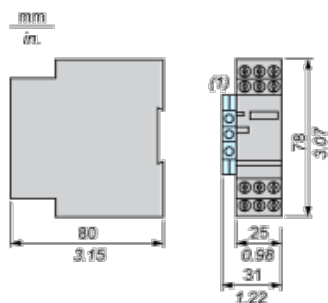
electromagnetic compatibility	Electrostatic discharge (test level: 6 kV, level 3 - contact discharge) conforming to IEC 61000-4-2 Electrostatic discharge (test level: 8 kV, level 3 - air discharge) conforming to IEC 61000-4-2
standards	DIN 43760 EN/IEC 60584-1 EN/IEC 60751 EN/IEC 60947-1
product certifications	CSA GL

The information provided in this documentation contains general descriptions and/or technical characteristics of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

	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 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	CISPR 11 CISPR 22 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)

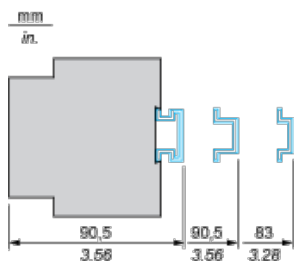
Dimensions



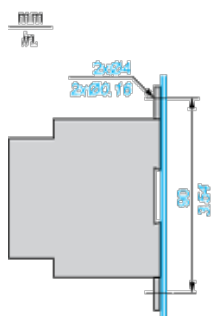
(1) Terminal block AB1TP435U or AB1RRNTP435U2

Mounting

Mounting on Rails AM1.....

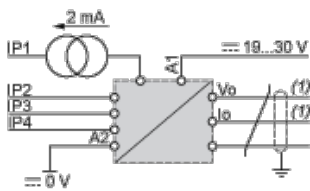


Panel Mounting



Analog Interface: Converter for Optimum Pt100 Probe

Wiring Diagram



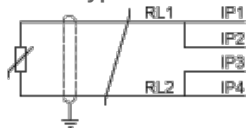
(1) Use 1 output only.

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.

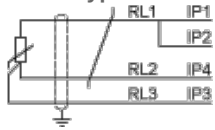
Input Connections

2-wire type



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

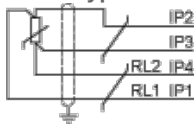
3-wire type



$$RL1 = RL2 = RL3$$

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

4-wire type



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