

## RMPT10BD

temperature transmitter - 40..40 °C/40..104 °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 - 40...40 °C/- 40...104 °F Pt 100 2, 3 or 4 wires                       |
| Analogue output type      | Current 0...20 mA ≤ 500 Ohm<br>Current 4...20 mA ≤ 500 Ohm<br>Voltage 0...10 V ≥ 100 kOhm |

### Complementary

|                               |                                                                                                                                                                           |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protection type               | Overvoltage protection on output (+/- 30 V)<br>Reverse polarity protection on output<br>Reverse polarity protection on power supply<br>Short-circuit protection on output |
| Analogue output voltage       | -15...-11 V when no input or input wire broken<br>11...15 V when no input or input wire broken                                                                            |
| Analogue output current       | 0...-30 mA when no input or input wire broken<br>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<br>≤ 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<br>+/- 1 % of full scale (2 wires) at 20 °C<br>+/- 10 % of full scale at 20 °C (electromagnetic interference of 10 V/m)   |
| Repeat accuracy               | +/- 0.2 % full scale at 20 °C<br>+/- 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 <sup>2</sup><br>2 x 1.5 mm <sup>2</sup>                                                                                                                        |
| 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                   | By screws, mounting plate<br>Clip-on, 35 mm symmetrical DIN rail                                                                                                          |
| Safety reliability data       | MTTFd = 32.9 years<br>B10d = 30437                                                                                                                                        |
| Product weight                | 0.12 kg                                                                                                                                                                   |

### Environment

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

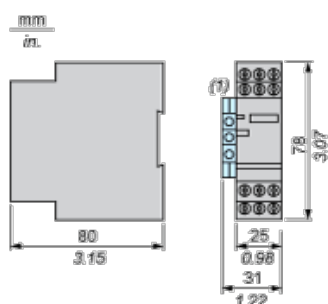
|                                       |                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------|
|                                       | UL                                                                                                   |
| IP degree of protection               | IP20 terminal block<br>IP50 housing                                                                  |
| fire resistance                       | 850 °C conforming to IEC 60695-2-1<br>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<br>2 kV on power supply conforming to IEC 61000-4-4 |
| disturbance radiated/conducted        | CISPR 11<br>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)<br>0...60 °C (2 cm spacing)                                        |
| pollution degree                      | 2 conforming to IEC 60664-1                                                                          |

### Contractual warranty

|                 |           |
|-----------------|-----------|
| Warranty period | 18 months |
|-----------------|-----------|

## Analog Interface (Converter)

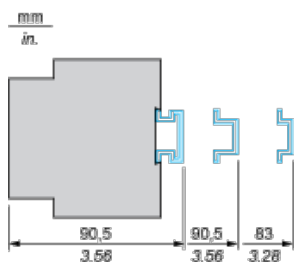
### Dimensions



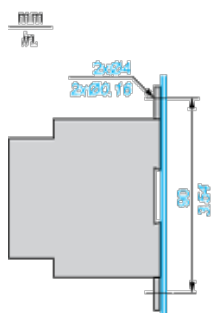
(1) Terminal block AB1TP435U or AB1RRNTP435U2

## Mounting

### Mounting on Rails AM1.....

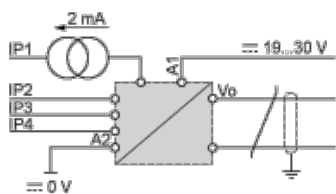


### Panel Mounting



## Analog Interface: Converter for Universal Pt100 Probe

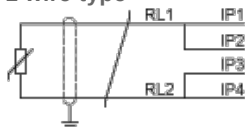
### Wiring Diagram



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.

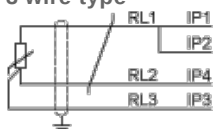
### Input Connections

#### 2-wire type



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

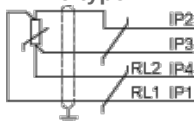
#### 3-wire type



$$RL1 = RL2 = RL3$$

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

#### 4-wire type



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