

# Product data sheet

Specifications



## Harmony analog, Temperature transmitter, 0..250 °C/32..482 °F, for Universal Pt100 probes

RMPT50BD

### Main

Range of product	Harmony Analog
Product or component type	Converter for Universal Pt100 probes
Analogue input type	Temperature probe 0...250 °C/32...482 °F Pt 100 2, 3 or 4 wires
Analogue output type	Current 0...20 mA $\leq$ 500 Ohm Current 4...20 mA $\leq$ 500 Ohm Voltage 0...10 V $\geq$ 100 kOhm

### Complementary

Protection type	Reverse polarity protection on output Short-circuit protection on output Reverse polarity protection on power supply Overvoltage protection on output (+/- 30 V)
Abnormal analogue output voltage	-15...-11 V when no input or input wire broken 11...15 V when no input or input wire broken
Abnormal analogue output current	-30...0 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	$\leq$ 40 mA for voltage output $\leq$ 60 mA for current output
Local signalling	LED (green) for 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	2 x 1.5 mm <sup>2</sup> 1 x 2.5 mm <sup>2</sup>
Tightening torque	0.6...1.1 N.m
Marking	CE
Surge withstand	0.5 kV during 1.2/50 $\mu$ s 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	B10d = 30437 MTTFd = 32.9 years

Net weight	0.12 kg
<b>Environment</b>	
<b>Electromagnetic compatibility</b>	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
<b>Standards</b>	EN/IEC 60947-1 EN/IEC 60584-1 DIN 43760 EN/IEC 60751
<b>Product certifications</b>	CSA UL GL
<b>IP degree of protection</b>	IP20 (terminal block) IP50 (housing)
<b>Fire resistance</b>	850 °C conforming to IEC 60695-2-1 850 °C conforming to UL
<b>Shock resistance</b>	50 gn for 11 ms conforming to IEC 60068-2-27
<b>Vibration resistance</b>	5 gn (f= 10...100 Hz) conforming to IEC 60068-2-6
<b>Resistance to fast transients</b>	1 kV (on input-output) conforming to IEC 61000-4-4 2 kV (on power supply) conforming to IEC 61000-4-4
<b>Disturbance radiated/ conducted</b>	CISPR 11 CISPR 22 group 1 - class B
<b>Ambient air temperature for storage</b>	-40...85 °C
<b>Ambient air temperature for operation</b>	0...50 °C mounting side by side 0...60 °C 2 cm spacing
<b>Pollution degree</b>	2 conforming to IEC 60664-1

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	106.0 g
<b>Package 1 Height</b>	2.7 cm
<b>Package 1 width</b>	8.2 cm
<b>Package 1 Length</b>	8.5 cm
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	47
<b>Package 2 Weight</b>	5.416 kg
<b>Package 2 Height</b>	15.0 cm
<b>Package 2 width</b>	30.0 cm
<b>Package 2 Length</b>	40.0 cm

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Mercury free</b>	Yes
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>

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**Circularity Profile**[End of Life Information](#)

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**WEEE**

The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

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**California proposition 65**

WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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**Contractual warranty**

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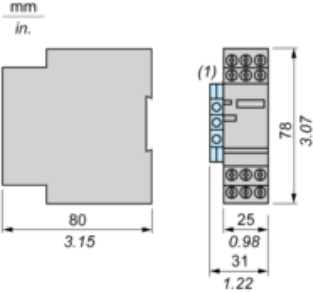
**Warranty**

18 months

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Analog Interface (Converter)

Dimensions

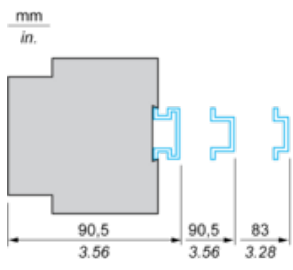


(1) Terminal block AB1TP435U or AB1RRNTP435U2

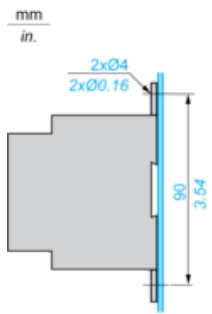
**Mounting**

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**Mounting on Rails AM1•••••**

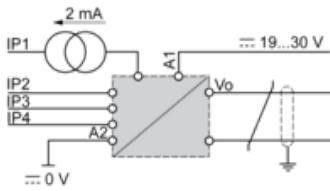


**Panel Mounting**



**Analog Interface: Converter for Universal Pt100 Probe**

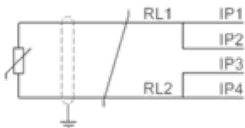
**Wiring Diagram**



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

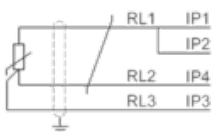
**Input Connections**

**2-wire type**



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

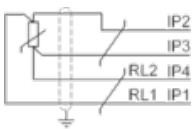
**3-wire type**



$RL1 = RL2 = RL3$

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

**4-wire type**



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