

Product data sheet

Specifications



Converter for Optimum Pt100 probes, Harmony Analog, temperature transmitter, 0...250 degree C Or 32...482 degree F

RMPT53BD

Main

Range of product	Harmony 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 \leq 500 Ohm Voltage 0...10 V \geq 100 kOhm

Complementary

Protection type	Short-circuit protection on output Reverse polarity protection on power supply Overvoltage protection on output (+/- 30 V) Reverse polarity protection on output
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 (temporary performance degradation when subject to electromagnetic interference) +/- 1 % of full scale (2 wires) at 20 °C
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 during 1.2/50 μ s conforming to IEC 61000-4-5
[U _i] 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
Net 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 IEC 60751 IEC 60947-1 IEC 60584-1
Product certifications	UL CSA GL
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 22 group 1 - class B CISPR 11
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

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.700 cm
Package 1 Width	8.200 cm
Package 1 Length	8.500 cm
Package 1 Weight	101.900 g
Unit Type of Package 2	S02
Number of Units in Package 2	47
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	5.250 kg

Contractual warranty

Warranty	18 months
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Use Better

 Materials and Substances	
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	A23b5c8f-6893-4fd3-af99-564158dac76
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

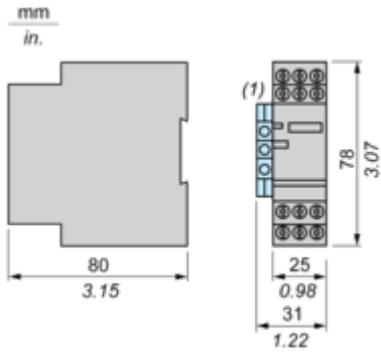
Use Again

 Repack and remanufacture	
End of life manual availability	End of Life Information
Take-back	No

Dimensions Drawings

Analog Interface (Converter)

Dimensions

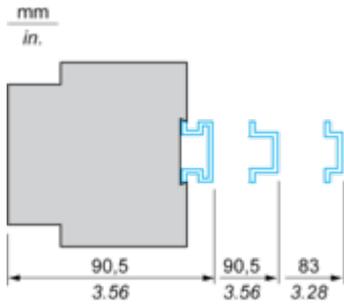


(1) Terminal block AB1TP435U or AB1RRNTP435U2

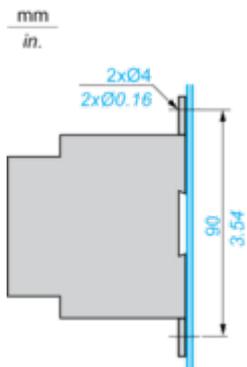
Mounting and Clearance

Mounting

Mounting on Rails AM1•••••



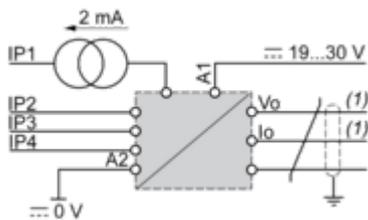
Panel Mounting



Connections and Schema

Analog Interface: Converter for Optimum Pt100 Probe

Wiring Diagram



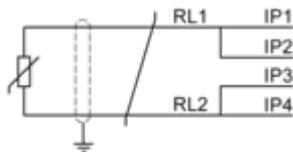
(1) Use 1 output only.

The input, output and power supply lines must be kept away from the power cables to avoid effects due to induced interference.

The supply, input and output cables must be shielded as indicated in the schemes and must be kept away from each other.

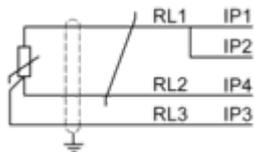
Input Connections

2-wire type



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

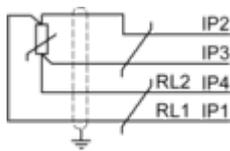
3-wire type



$RL1 = RL2 = RL3$

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

4-wire type



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

Technical Illustration

Dimensions

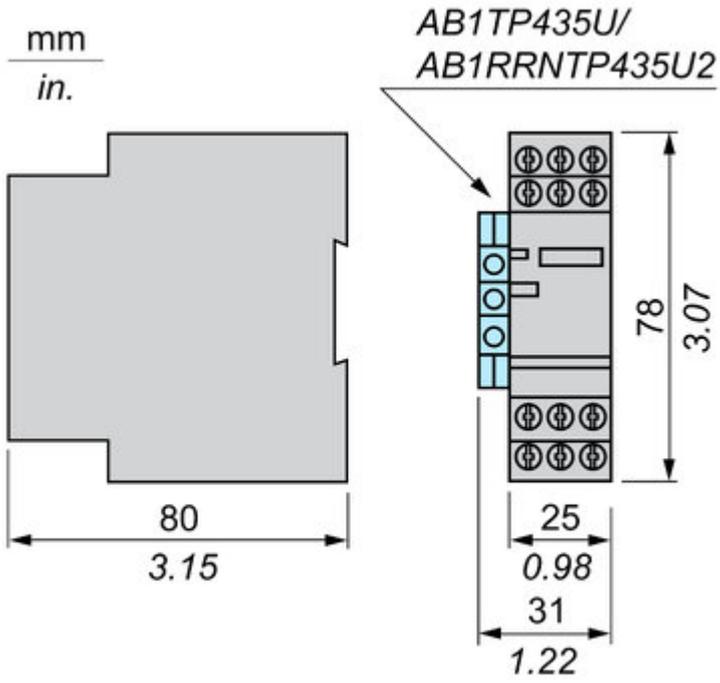


Image of product / Alternate images

Alternative





