Product data sheet
Characteristics

RMPT53BD
Harmony analog, Temperature transmitter, 0..250 °C/32..482 °F, for Optimum Pt100 probes

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 <= 500 Ohm Voltage 0...10 V >= 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	<= 40 mA for voltage output <= 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	1 x 2.5 mm² 2 x 1.5 mm²
Tightening torque	0.6…1.1 N.m
Marking	CE

Surge withstand	0.5 kV during 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
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 EN/IEC 60751 EN/IEC 60947-1 EN/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

Package 1 Weight	0.102 kg
Package 1 Height	0.270 dm
Package 1 width	0.820 dm
Package 1 Length	0.850 dm

Offer Sustainability

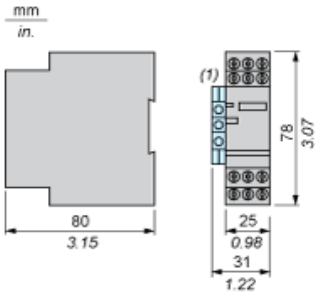
Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
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

Contractual warranty

Warranty	18 months

Analog Interface (Converter)

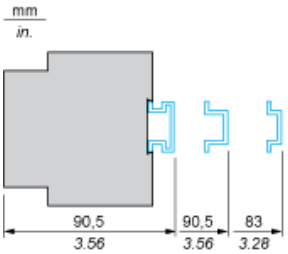
Dimensions



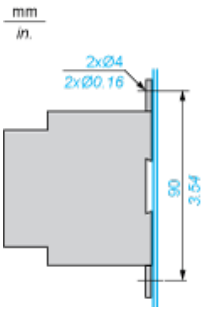
(1) Terminal block AB1TP435U or AB1RRNTP435U2

Mounting

Mounting on Rails AM1•••••

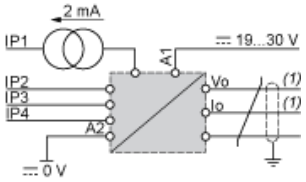


Panel Mounting



Analog Interface: Converter for Optimum Pt100 Probe

Wiring Diagram



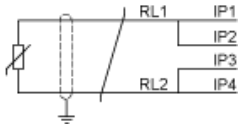
(1) Use 1 output only.

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.

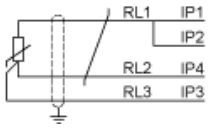
Input Connections

2-wire type



RL1 + RL2 ≤ 200 mΩ

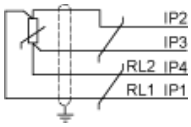
3-wire type



RL1 = RL2 = RL3

RL1 + RL2 ≥ 200 Ω

4-wire type



RL1 + RL2 ≤ 200 Ω