Product data sheet
Characteristics

RMTK90BD
temperature transmitter - 0..1200 °C/32..2192 °F - for thermocouples K

Main

Range of product	Harmony Analog
Product or component type	Converter for thermocouples
Analogue input type	Thermocouple 0...1200 °C/32...2192 °F thermocouple K conforming to IEC 60584
Analogue output type	Current 0...20 mA <= 500 Ohm 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 Short-circuit 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
[Us] rated supply voltage	24 V DC +/- 20 %, non isolated
Current consumption	<= 40 mA for voltage <= 40 mA for voltage output <= 60 mA for current
Local signalling	LED (green) for power ON
Measurement error	+/- 10 % of full scale at 20 °C (electromagnetic interference of 10 V/m) +/- 1 % of full scale at 20 °C
Repeat accuracy	+/- 0.25 % full scale at 20 °C +/- 0.8 % full scale at 60 °C
Temperature coefficient	200 ppm/°C
Cold junction compensation	Built-in, measurement: between 0 and 60 °C
Clamping connection capacity	2 x 1.5 mm² 1 x 2.5 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	2 kV
Fixing mode	By screws (mounting plate) Clip-on (35 mm symmetrical DIN rail)
Safety reliability data	MTTFd = 49.2 years B10d = 45447
Net weight	0.12 kg

Environment

Standards	IEC 60584-1 IEC 60947-1
Product certifications	GL UL CSA
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 electrostatic discharge	6 KV (in contact) conforming to IEC 61000-4-2 level 3 8 kV (in air) conforming to IEC 61000-4-2 level 3
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

Packing Units

Package 1 Weight	0.101 kg
Package 1 Height	0.270 dm
Package 1 width	0.820 dm
Package 1 Length	0.850 dm

Offer Sustainability

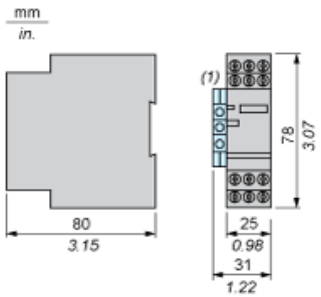
Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product 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

Contractual warranty

Warranty	18 months

Analog Interface (Converter)

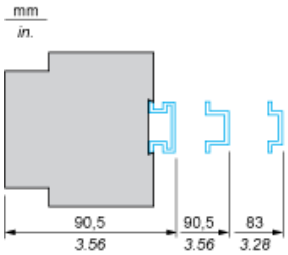
Dimensions



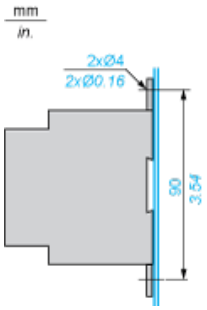
(1) Terminal block AB1TP435U or AB1RRNTP435U2

Mounting

Mounting on Rails AM1•••••

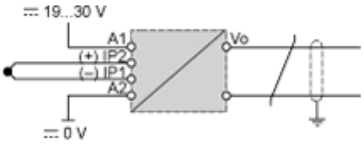


Panel Mounting



Analog Interfaces

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 diagram and must be kept away from each other.