

Limit value switches - MINI MCR-2-T-REL-PT - 2905633

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Universally configurable temperature limit value switch with N/O relay output for the connection of 2, 3, and 4-conductor resistance thermometers and thermocouples. Configurable via DIP switch or software. Push-in connection technology

Product Description

Universally configurable temperature limit value switch with relay output and plug-in connection technology for switching temperature limit values. 2, 3, 4-conductor RTD and TC sensors can be processed on the input side. A relay with N/O contact is available on the output side. It is then possible to switch loads up to 250 V AC/DC and max. 6 A. You can configure the device using one of the free software solutions available or your smartphone. Default settings can also be made directly on the device by simply using the DIP switches (see configuration table). The temperature limit value switch supports fault monitoring and NFC communication.



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 999847
GTIN	4046356999847

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	6.2 mm
Height	110.5 mm
Depth	120.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Degree of protection	IP20

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Ambient conditions

Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
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Input data

Available input sources	Resistance thermometers
Sensor types (RTD) that can be used	Pt, Ni, Cu sensors
Connection technology	2, 3, 4-wire
Sensor input current	approx. 200 µA
Max. permissible overall conductor resistance	≤ 25 Ω (Per line, RTD in 3- or 4-wire technology)
	≤ 50 Ω (Per line, RTD in 2-wire technology)
Linear resistance measuring range	0 Ω ... 4000 Ω
Linear mV signal range	-500 mV ... 500 mV
Available input sources	Thermocouples
Sensor types that can be used (TC)	B, E, J, K, N, R, S, T, L, U, A-1, A-2, A-3, M, L

Switching output

Output name	Relay output
Contact type	1 N/O contact
Contact material	AgSnO ₂ , hard gold-plated
Maximum switching voltage	250 V AC
	240 V AC (UL)
Limiting continuous current	6 A
Min. switching current	100 mA (12 V DC)
Mechanical service life	2x 10 ⁷ cycles
Setting range of the response delay	0 s ... 10 s (can be set freely via software)
Internal hysteresis	can be set freely via software
Max. switching current	6 A (for 250 V AC)

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	9.6 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715))
Typical current consumption	44 mA (12 V DC)
	22 mA (24 V DC)
Power consumption	570 mW

Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section solid	0.14 mm ² ... 2.5 mm ² (with ferrule)
	0.14 mm ² ... 2.5 mm ² (without ferrule)
Conductor cross section flexible	0.14 mm ² ... 2.5 mm ²

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Connection data

Conductor cross section AWG	24 ... 12 (flexible)
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General

No. of channels	1
Maximum temperature coefficient	0.01 %/K
Switching point accuracy	< 0.1 %
Status display	Yellow LED (switching output)
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	300 V
Test voltage, input/output/supply	3 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Color	gray
Housing material	PBT
Mounting position	any
Assembly instructions	The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715.
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc X
UL, USA/Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A
	Class I, Zone 2, Group IIC T4A
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc X
UL, USA/Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A
	Class I, Zone 2, Group IIC T4A
DNV GL-Temperature	B
DNV GL-Humidity	B
DNV GL-Vibration	A

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Standards and Regulations

DNV GL-EMC	A
DNV GL-Enclosure	Required protection according to the Rules shall be provided upon installation on board
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Approvals

Approvals

Approvals

UL Listed / cUL Listed / DNV GL / EAC / EAC / cULus Listed

Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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DNV GL		https://approvalfinder.dnvgl.com/	TAA000021E
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EAC			TR_TS_D_00573_c
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Approvals

EAC		TR_TS_S_00010_c
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cULus Listed		
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