

Limit value switches - MINI MCR-2-T-REL - 2905632

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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, screw connection technology

The figure shows a version with push-in connection

Article 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

package_quantity	1
GTIN	4046356999830

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
Degree of protection	IP20

Input data

Available input sources	Resistance thermometers
Sensor types (RTD) that can be used	Pt, Ni, Cu sensors
Connection technology	2, 3, 4-wire

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Technical data

Input data

Sensor input current	approx. 200 μ A
Max. permissible overall conductor resistance	$\leq 25 \Omega$ (Per line, RTD in 3- or 4-wire technology)
Max. permissible overall conductor resistance	$\leq 50 \Omega$ (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
Maximum switching voltage	240 V AC (UL)
Limiting continuous current	6 A
Min. switching current	100 mA (12 V DC)
Mechanical service life	2 x 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)
Typical current consumption	22 mA (24 V DC)
Power consumption	570 mW

Connection data

Connection method	Screw connection
Single conductor/terminal point, solid, with ferrule, min.	0.2 mm ²
Single conductor/terminal point, solid, with ferrule, max.	1.5 mm ²
Single conductor/terminal point, solid, without ferrule, min.	0.2 mm ²
Single conductor/terminal point, solid, without ferrule, max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Min. AWG conductor cross section, flexible	24
Max. AWG conductor cross section, flexible	12
Stripping length	10 mm
Screw thread	M3

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Technical data

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
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A
UL, USA/Canada	Class I, Zone 2, Group IIC T4A
GL	GL applied for
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
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A
UL, USA/Canada	Class I, Zone 2, Group IIC T4A
GL	GL applied for

Environmental Product Compliance

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

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Classifications

eCl@ss

eCl@ss 5.1	27210122
eCl@ss 6.0	27210122
eCl@ss 7.0	27210122
eCl@ss 8.0	27210122
eCl@ss 9.0	27210122

ETIM

ETIM 4.0	EC002654
ETIM 5.0	EC002654
ETIM 6.0	EC002654

Approvals

ATEX /

Approval details

ATEX

Accessories

DIN rail connector

ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



Power module

MINI MCR-2-PTB - 2902066



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Accessories

MINI MCR-2-PTB-PT - 2902067



Evaluation unit

MINI MCR-2-FM-RC - 2904504



MINI MCR-2-FM-RC-PT - 2904508



Power supply

MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



MINI-PS-100-240AC/24DC/1.5/EX - 2866653



Programming adapter

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Accessories

IFS-BT-PROG-ADAPTER - 2905872



IFS-USB-PROG-ADAPTER - 2811271



NFC-USB-PROG-ADAPTER - 2900013



System adapter

MINI MCR-2-V8-FLK 16 - 2901993



Communication module

MINI MCR-2-V8-MOD-RTU - 2905634



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Accessories

MINI MCR-2-V8-MOD-TCP - 2905635



MINI MCR-2-V8-PB-DP - 2905636



Device marking

UCT-EM (30X5) - 0801505



UCT-EM (30X5) YE - 0830340



UC-EMLP (15X5) - 0819301



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Accessories

UC-EMLP (15X5) YE - 0822615



UC-EMLP (15X5) SR - 0828095



US-EMLP (15X5) - 0828790



US-EMLP (15X5) YE - 0828873



US-EMLP (15X5) SR - 0828874



Labeled device marker

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Accessories

UCT-EM (30X5) CUS - 0801589



UCT-EM (30X5) YE CUS - 0830348



UC-EMLP (15X5) CUS - 0824550



UC-EMLP (15X5) YE CUS - 0824551



UC-EMLP (15X5) SR CUS - 0828099



US-EMLP (15X5) CUS - 0830076



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Accessories

US-EMLP (15X5) YE CUS - 0830077



US-EMLP (15X5) SR CUS - 0830078



Terminal marking

SK 5,0 WH:REEL - 0805221



Accessories

ME 6,2 TBUS-2 1,5/5-ST-3,81 GY - 2695439



UC-EMLP (15X5)L - 0820138



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Accessories

UC-EMLP (15X5)L CUS - 0824552

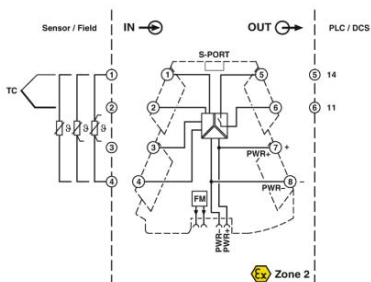
UC-EMLP (15X5)L YE - 0825325

UC-EMLP (15X5)L YE CUS - 0826680

UC-EMLP (15X5)L SR - 0828103

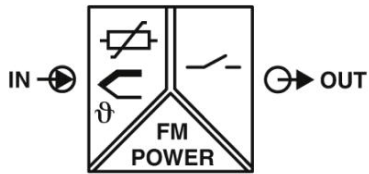
Drawings

Block diagram



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Pictogram



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