

## Limit value switches - MINI MCR-2-UI-REL - 2902033

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Universally configurable threshold value switch with changeover contact relay output and plug-in connection technology for switching analog limit values. Configurable via DIP switch or software. Screw connection technology, standard configuration.

### Product Description


Universally configurable threshold value switch with changeover contact relay output and plug-in connection technology for switching analog limit values. Current signals between 0 mA ... 24 mA and voltage signals between 0 V ... 12 V can be processed on the input side. A relay with changeover 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. Default settings can also easily be made directly on the device via DIP switches (see configuration table). The measuring transducer supports fault monitoring and NFC communication.



COMPLETE line



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 652056
GTIN	4046356652056
Weight per Piece (excluding packing)	125.000 g
Custom tariff number	85437090
Country of origin	Germany
Sales Key	CK1443

### 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	109.81 mm
Depth	119.2 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
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#### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Degree of protection	IP20 (not assessed by UL)
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

#### Input data

Configurable/programmable	Yes
Voltage input signal	0 V ... 10 V (via DIP switch)
	0 V ... 12 V (can be set via software)
Current input signal	0 mA ... 20 mA (via DIP switch)
	0 mA ... 24 mA (can be set via software)
max. input voltage	12 V
Max. input current	24 mA
Input resistance of voltage input	> 120 kΩ
Input resistance current input	approx. 50 Ω (+0.7 V for test diode)

#### Switching output

Output name	Relay output
Contact type	1 changeover contact
Contact material	AgSnO <sub>2</sub> , hard gold-plated
Maximum switching voltage	250 V AC
	30 V DC
	240 V AC (UL)
Limiting continuous current	6 A AC
	4 A DC
Min. switching current	100 mA (12 V DC)
Mechanical service life	2x 10 <sup>7</sup> 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 AC (250 V AC)
	4 A DC (30 V DC)

#### 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	40 mA (12 V DC)
	20 mA (24 V DC)
Power consumption	≤ 0.5 W

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#### Connection data

Connection method	Screw connection
Stripping length	10 mm
Screw thread	M3
Conductor cross section solid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (with ferrule)
	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (without ferrule)
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12 (flexible)
Torque	0.5 Nm ... 0.6 Nm

#### General

No. of channels	1
Maximum transmission error	0.1 % (of final value)
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 (effective)
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.
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/approvals

Designation	CE
Identification	CE-compliant
Designation	ATEX
Identification	# II 3G Ex ec ic nC IIC T4 Gc

<https://www.phoenixcontact.com/gb/products/2902033>

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### Technical data

#### Conformance/approvals

Certificate	BVS 18 ATEX E 071 X
Designation	IECEX
Identification	Ex ec ic nC IIC T4 Gc
Certificate	IECEX BVS 18.0060X
Designation	UL, USA/Canada
Identification	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A
	Class I, Zone 2, Group IIC T4A
Designation	Shipbuilding approval
Certificate	DNV GL TAA000021E
Temperature	B
Humidity	B
Vibration	A
EMC	A
Enclosure	Required protection according to the Rules shall be provided upon installation on board

#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

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