

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

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Universally configurable limit value switch with PDT 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 limit value switch with PDT 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 PDT 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 be made directly on the device by simply using the DIP switches (see configuration table). The measuring transducer supports fault monitoring and NFC communication.



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 652056
GTIN	4046356652056

### 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

#### Input data

Configurable/programmable	Yes
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#### Input data

Voltage input signal	0 V ... 10 V (via DIP switch)
	0 V ... 12 V (via DIP switch)
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 k $\Omega$
Input resistance current input	approx. 50 $\Omega$ (+ 0.7 V for test diode)

#### Switching output

Output name	Relay output
Contact type	1 PDT
Contact material	AgSnO <sub>2</sub> , 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 <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 (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	40 mA (12 V DC)
	20 mA (24 V DC)
Power consumption	≤ 0.5 W

#### Connection data

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

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## Technical data

### Connection data

Screw thread	M3
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### 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.
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
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
	Class I, Div. 2, Groups A, B, C, D T4A
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## Technical data

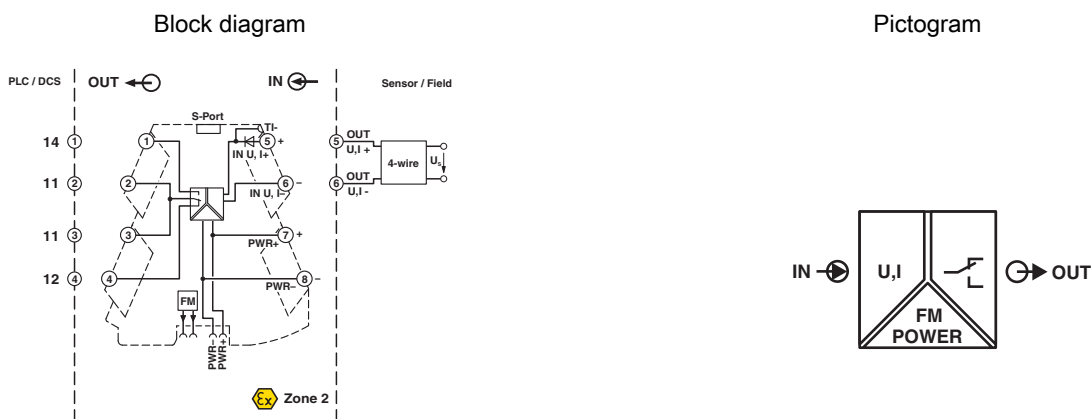
### Standards and Regulations

Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 2 HL 1 - HL 2 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"

## Drawings



## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals


UL Listed / cUL Listed / ATEX / cULus Listed

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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### Approvals

cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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EAC		RU C- DE.A*30.B.01082
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cULus Listed	
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