

## Limit value switches - MINI MCR-SL-UI-REL - 2864480

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MCR limit value switch, with adjustable hysteresis and delay time, with screw connection

### Product Description

The 6.2 mm wide configurable 3-way threshold value switch MINI MCR-SL-UI-REL... is used to control and monitor analog standard signals. On the input side, the analog standards signals 0...20 mA or 0...10 V per DIP switch can be set. On the output side, a relay with PDT contact is available. The switching thresholds are set via potentiometer.

The DIP switches located on the side of the housing have the following functions:

- Configuration of the switching hysteresis,
- Configuration of the operating and closed circuit current behavior,
- Setting of relay pickup times
- Setting of dropout delay

The relay status is indicated by a yellow LED on the front of the housing.


Power (19.2 V DC to 30 V DC) can be supplied through connection terminal blocks on the modules or in conjunction with the DIN rail connector.

### Your advantages

- ✓ Power supply possible via the foot element (TBUS)
- ✓ Highly-compact threshold value switch for switching analog limit values
- ✓ Status and error indication via two diagnostic LEDs
- ✓ Operating current/closed circuit current switch-over
- ✓ PDT relay at output
- ✓ Limit value can be freely adjusted via potentiometer on the front
- ✓ Input signal, hysteresis, and delay time can be configured via DIP switches
- ✓ 3-way isolation



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 974879
GTIN	4017918974879

### Technical data

#### Note

# Limit value switches - MINI MCR-SL-UI-REL - 2864480

## 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	93.1 mm
Depth	101.2 mm

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

### Input data

Number of inputs	1
Voltage input signal	0 V ... 10 V
Current input signal	0 mA ... 20 mA
max. input voltage	30 V
Max. input current	100 mA
Input resistance of voltage input	> 100 kΩ
Input resistance current input	50 Ω

### Output data

Number of outputs	1
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### 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	2 A
Setting range of the response delay	0 s ... 10 s (0 s; 1 s; 2 s; 3 s; 4 s; 6 s; 8 s; 10 s)
Internal hysteresis	0.1 %; 1 %; 2.5 %; 5 %

### Power supply

Nominal supply voltage	24 V DC ±15 %
Supply voltage range	19.2 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))
Max. current consumption	< 14 mA (at 24 V DC)
Power consumption	< 330 mW (at 24 V DC)

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## Technical data

### Connection data

Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross section solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	26 ... 12

### General

No. of channels	1
Maximum temperature coefficient	< 0.02 %/K
Switching point accuracy	< 0.05 %
Electrical isolation	Basic insulation according to EN 61010
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	50 V AC/DC
Test voltage input/power supply	1.5 kV AC (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	green
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

### EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	5 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	5 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	5 %

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4

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## Technical data

### Standards and Regulations

Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Electrical isolation	Basic insulation according to EN 61010
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc X
UL, USA	Class I, Zone 2, AEx nA nC IIC T5
UL, USA/Canada	UL 508 Recognized
UL, Canada	Class I, Zone 2, Ex nA nC IIC T5 Gc
GL	GL EMC 2 D

### Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	ATEX
Identification	# II 3 G Ex nA nC IIC T4 Gc X
Designation	UL, USA
Identification	Class I, Zone 2, AEx nA nC IIC T5
Designation	UL, USA/Canada
Identification	UL 508 Recognized
Designation	UL, Canada
Identification	Class I, Zone 2, Ex nA nC IIC T5 Gc
Designation	GL
Identification	GL EMC 2 D

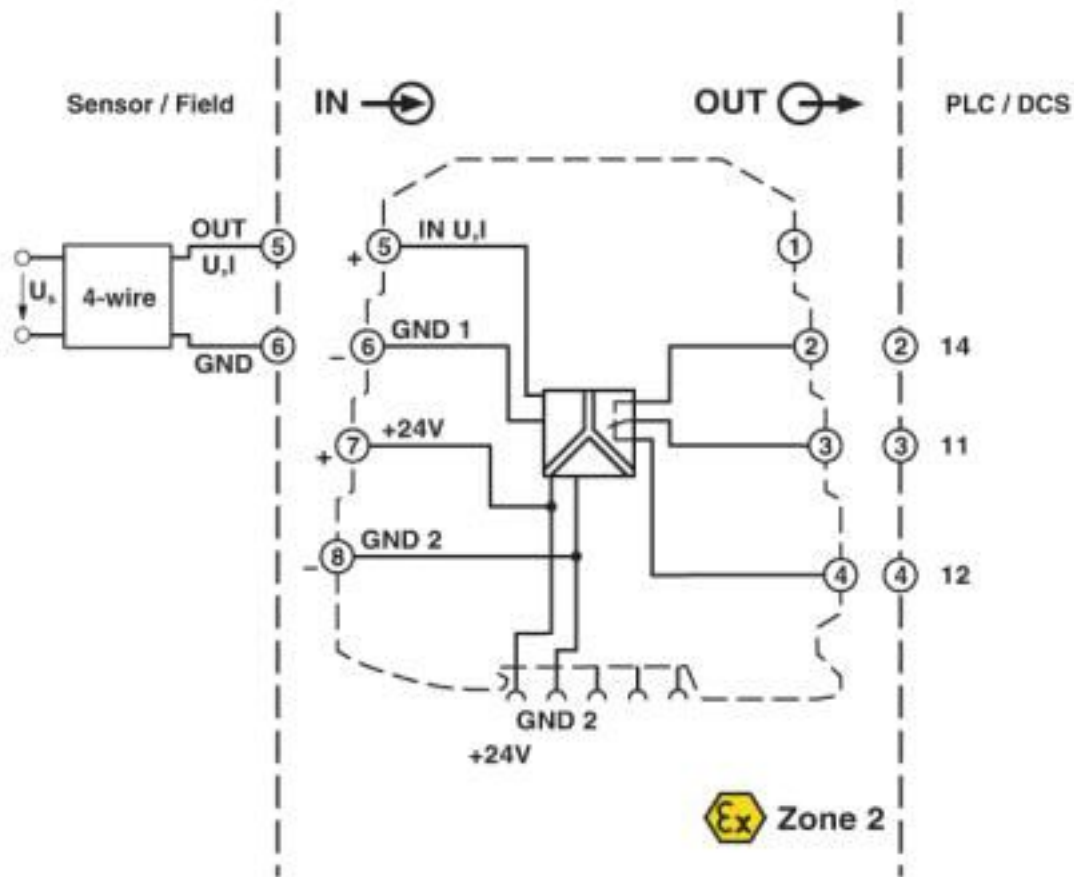
### Environmental Product Compliance

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"

## Drawings

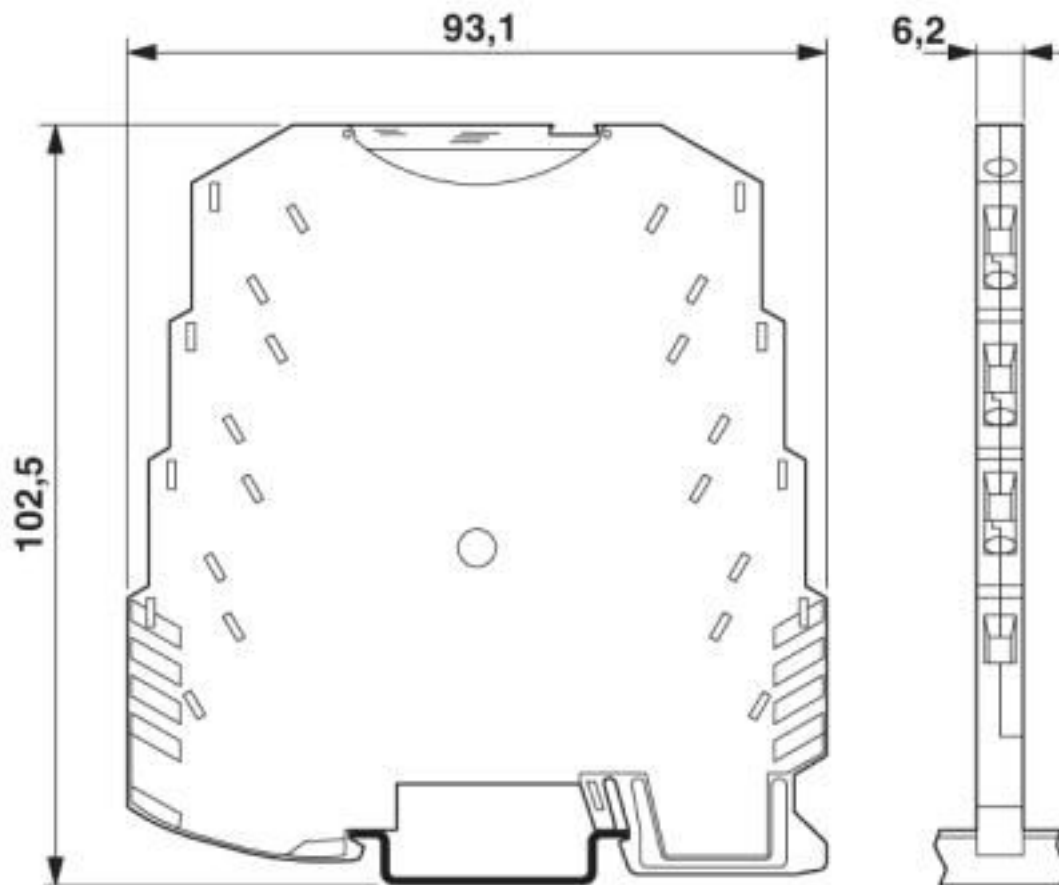
# Limit value switches - MINI MCR-SL-UI-REL - 2864480

Block diagram



# Limit value switches - MINI MCR-SL-UI-REL - 2864480

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	27210122
eCl@ss 4.0	27210100
eCl@ss 4.1	27210100
eCl@ss 5.0	27210100
eCl@ss 5.1	27210100
eCl@ss 6.0	27210100
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
ETIM 7.0	EC002654

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## Classifications

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008
UNSPSC 18.0	39121008
UNSPSC 19.0	39121008
UNSPSC 20.0	39121008
UNSPSC 21.0	39121008

## Approvals

### Approvals

#### Approvals

GL / UL Recognized / cUL Recognized / DNV GL / cULus Recognized

#### Ex Approvals

ATEX / UL Listed / cUL Listed / EAC Ex / cULus Listed

### Approval details

GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	24917-05 HH
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UL Recognized		<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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cUL Recognized		<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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DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA00002R0
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## Limit value switches - MINI MCR-SL-UI-REL - 2864480

### Approvals

cULus Recognized



### Accessories

#### Accessories

##### DIN rail connector

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

### Marking material

Transparent cover - MINI MCR DKL - 2308111



Fold up transparent cover for MINI MCR modules with additional labeling option using insert strips and flat Zack marker strip 6.2 mm

Marking label - MINI MCR-DKL-LABEL - 2810272



Label for extended marking of MINI MCR modules in connection with the MINI MCR-DKL

### Power module

Power terminal block - MINI MCR-SL-PTB - 2864134



MCR power terminal block for supplying several MINI Analog modules via the DIN rail connector, with screw connection, maximum current consumption of up to 2 A



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### Accessories

Power terminal block - MINI MCR-SL-PTB-SP - 2864147



MCR feed-in terminal for supplying several MINI Analog modules via a DIN rail connector, with spring-cage connection, maximum current consumption of up to 2 A. Replacement part: 2902067 MINI MCR-2-PTB-PT.

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### Power supply

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



Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

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



Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1,5 A, for the potentially explosive area

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### System adapter

System adapter - MINI MCR-SL-V8-FLK 16-A - 2811268



Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.

# Mouser Electronics

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