

# MINI MCR-SL-UI-REL - Limit value switch



2864480

<https://www.phoenixcontact.com/us/products/2864480>

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



## Product description

The only 6.2 mm wide configurable 3-way threshold value switch MINI MCR-SL-UI-REL... is used for the closed-loop control and monitoring of standard analog signals.

On the input side, the analog standard signals 0...20 mA or 0...10 V per DIP switch can be set. A relay with changeover contact is available on the output side. The switching thresholds are set via a potentiometer.

The DIP switches, which can be accessed on the side of the housing, have the following functions:

- Configuring the switching hysteresis,
- Configuring the operating and closed circuit current behavior,
- Setting the relay energizing times as well as
- Setting the dropout delays.

The relay status is shown by a yellow LED in the front of the housing.

Power (19.2 V DC to 30 V DC) can either be supplied via the connection terminal blocks of 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
- Changeover contact relay at the 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

## Commercial data

Item number	2864480
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C403
Product key	CK1243
Catalog page	Page 113 (C-7-2015)
GTIN	4017918974879
Weight per piece (including packing)	101.2 g
Weight per piece (excluding packing)	70.9 g

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Customs tariff number	85437090
Country of origin	DE

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## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Limit value switch
Product family	MINI Analog
No. of channels	1
Configuration	DIP switches

#### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### System properties

#### Functionality

Configuration	DIP switches
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### Electrical properties

No. of channels	1
Electrical isolation	3-way isolation
Electrical isolation between input and output	yes
Maximum power dissipation for nominal condition	< 405 mW
Switching point accuracy	< 0.05 %
Step response (0–99%)	< 35 ms
Maximum temperature coefficient	< 0.02 %/K

#### Electrical isolation Input/power supply

Rated insulation voltage	50 V AC/DC
Test voltage	1.5 kV AC (50 Hz, 60 s)
Insulation	Basic insulation in accordance with IEC/EN 61010

#### Supply

Nominal supply voltage	24 V DC $\pm$ 15 %
Supply voltage range	19.2 V DC ... 30 V DC (The DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, item no. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail in accordance with EN 60715)
Max. current consumption	< 14 mA (at 24 V DC)
Power consumption	< 330 mW (at 24 V DC)

### Input data

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Signal: Voltage/current

Number of inputs	1
Voltage input signal	0 V ... 10 V
Max. voltage input signal	30 V
Current input signal	0 mA ... 20 mA
Max. current input signal	100 mA
Input resistance of voltage input	> 100 kΩ
Input resistance current input	50 Ω
Specification of the switching point	With 25-speed potentiometer

## Output data

Switching: Relay

Contact switching type	1 changeover contact
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 %

Signal

Number of outputs	1
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## Connection data

Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross section rigid	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

## Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	101.2 mm

## Material specifications

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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
Housing material	PBT

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

## Approvals

### CE

Certificate	CE-compliant
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### UKCA

Certificate	UKCA-compliant
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### UL, USA

Identification	Class I, Zone 2, AEx nA nC IIC T5
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### UL, USA/Canada

Identification	UL 508 Recognized
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### UL, Canada

Identification	Class I, Zone 2, Ex nA nC IIC T5 Gc
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### Shipbuilding approval

Certificate	DNV GL TAA00002R0
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### DNV GL data

Temperature	B
Humidity	B
Vibration	B
EMC	A
Enclosure	Required protection according to the Rules shall be provided upon installation on board

## EMC data

Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4

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## Electrostatic discharge

Standards/regulations	EN 61000-4-2
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## Electrostatic discharge

Comments	Safety measures must be taken to prevent electrostatic discharge.
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## Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	5 %

## Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	5 %

## Surge current load (surge)

Standards/regulations	EN 61000-4-5
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## Surge current load (surge)

Comments	Criterion B
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## Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	5 %

## Standards and regulations

Electrical isolation	3-way isolation
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## Mounting

Mounting type	DIN rail mounting
Assembly instructions	The DIN rail connector can be used for bridging the supply voltage. It can be snapped onto a 35 mm EN 60715 DIN rail.
Mounting position	any

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2864480>



**cUL Recognized**  
Approval ID: FILE E 238705



**UL Recognized**  
Approval ID: FILE E 238705



**DNV GL**  
Approval ID: TAA00002R0



**cUL Listed**  
Approval ID: FILE E 199827



**UL Listed**  
Approval ID: FILE E 199827

**cULus Recognized**

**cULus Listed**

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## Classifications

### ECLASS

ECLASS-11.0	27210120
ECLASS-12.0	27210120
ECLASS-13.0	27210120

### ETIM

ETIM 8.0	EC002653
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### UNSPSC

UNSPSC 21.0	39121000
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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