

# MCR-SL-1-CP-I-I-ZF - Passive separator



2864749

<https://www.phoenixcontact.com/us/products/2864749>

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MCR passive isolator, single-channel, for electrical isolation of current signals without supply voltage, with spring-cage connection.

Replacement item: 2864419 MINI MCR-SL-1CP-I-I

## Your advantages

- Voltage drop at isolating amplifier of just 1.7 V
- Does not require additional auxiliary voltage
- Supplied by an input loop
- Highly compact 2-conductor passive isolators for the electrical isolation and filtering of standard analog signals
- Two channels on a design width of just 6.2 mm

## Commercial data

Item number	2864749
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C403
Product key	DK1131
GTIN	4017918974947
Weight per piece (including packing)	76.5 g
Weight per piece (excluding packing)	52.2 g
Customs tariff number	85437090
Country of origin	DE

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## Technical data

### Product properties

Product type	Passive separator
Product family	MINI Analog
No. of channels	1

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

Rated insulation voltage	50 V AC/DC
Electrical isolation	Basic insulation in accordance with EN 61010
Electrical isolation between input and output	yes
Limit frequency (3 dB)	75 Hz
Maximum power dissipation for nominal condition	34 mW
Test voltage input/output	1.5 kV AC (50 Hz, 60 s)
Test voltage channel/channel	1.5 kV AC (50 Hz, 60 s)
Signal transmission behavior	In = Out
Step response (10-90%)	5 ms (at 600 $\Omega$ load)
Maximum temperature coefficient	$\leq 0.002$ %/K (of measured value / 100 $\Omega$ load)
Temperature coefficient, typical	$< 0.002$ %/K (of measured value / 100 $\Omega$ load)
Maximum transmission error	$\leq 0.1$ % (of final value)
Additional error, load-dependent	$< 0.03$ % (of measured value / 100 $\Omega$ load)

### Supply

Supply voltage range	loop-powered, no external supply necessary
Power consumption	34 mW

### Input data

#### Signal

Description of the input	Current input
Number of inputs	1
Configurable/programmable	no
Max. voltage input signal	18 V
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA
Max. current input signal	40 mA
Response current	approx. 190 $\mu$ A
Input voltage limitation	$< 2$ V (20 mA)
Voltage dissipation	1.9 V (I = 20 mA)

### Output data

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## Signal: Current

Number of outputs	1
Configurable/programmable	no
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA
Load/output load current output	< 600 $\Omega$ (at I = 20 mA output signal)
Ripple	< 10 mV <sub>rms</sub> (at 600 $\Omega$ )

## Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
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	24 ... 12

## Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

## Material specifications

Color	green (RAL 6021)
Housing material	PBT
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

## 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

## Approvals

### CE

Certificate	CE-compliant
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## ATEX

Identification	⊕ II 3 G Ex nA II T6 X
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## UL, USA/Canada

Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D

## GL

Identification	GL EMC 2 D
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## EMC data

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

## Noise emission

Standards/regulations	EN 61000-6-4
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## Electrostatic discharge

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

Comments	Criterion B
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## Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Evaluation criterion	A

## Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Evaluation criterion	B

## 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
Evaluation criterion	A

## Standards and regulations

Electrical isolation	Basic insulation in accordance with EN 61010
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## Mounting

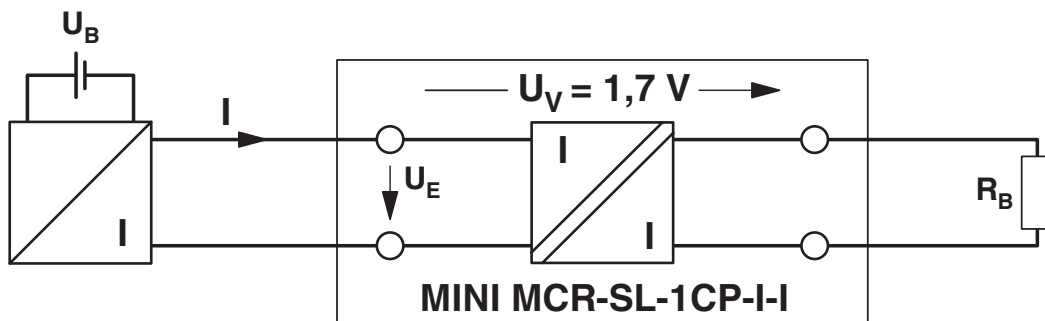
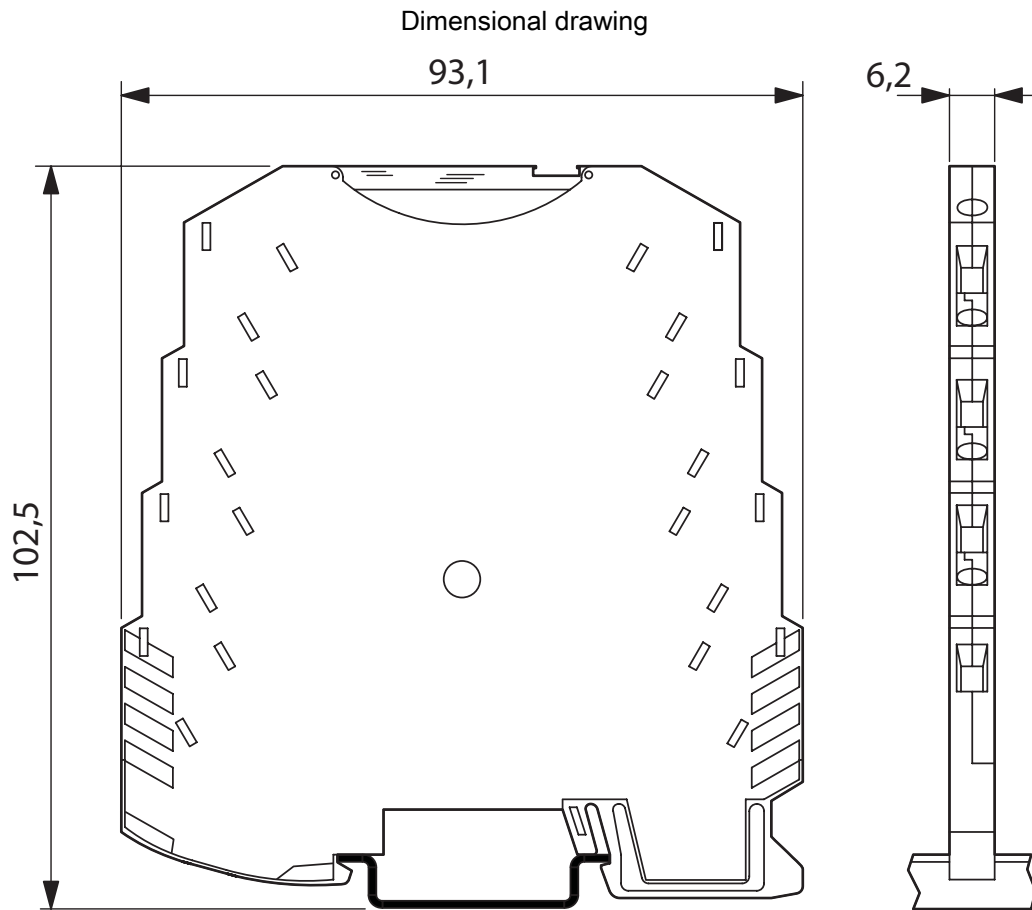
Mounting type	DIN rail mounting
Assembly note	The DIN rail connector can be used for bridging the supply voltage. It can be snapped onto a 35 mm EN 60715 DIN rail.
Mounting position	any

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## Drawings



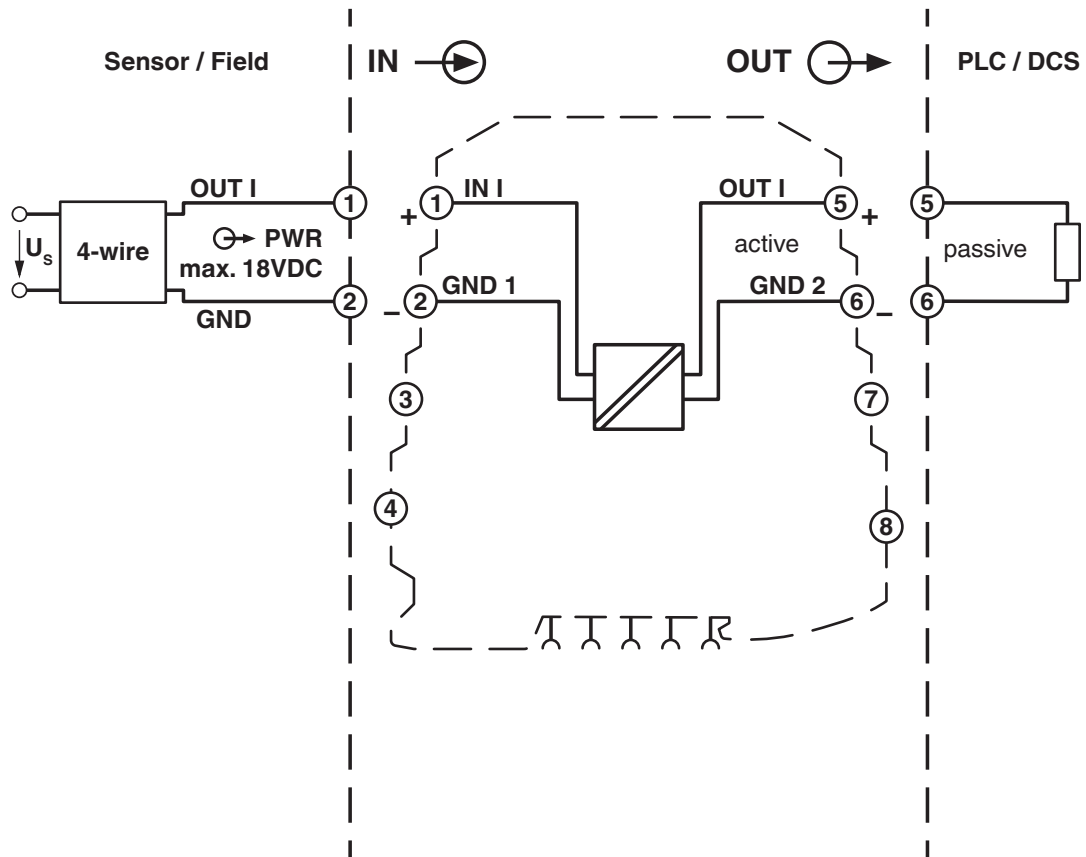
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Block diagram



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## Environmental product compliance

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)