

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



2864419

<https://www.phoenixcontact.com/us/products/2864419>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



MCR loop-powered isolator, 1-channel, for the electrical isolation of current signals without auxiliary power, with screw connection

## Product description

The 6.2 mm narrow passive loop-powered isolator MINI MCR-SL-...CP-I-I... is used for the electrical isolation and filtering of 0...20 mA and 4...20 mA standard current signals without additional supply voltage.

## Your advantages

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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2864419       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C403          |
| Product key                          | DK1131        |
| GTIN                                 | 4017918974848 |
| Weight per piece (including packing) | 84 g          |
| Weight per piece (excluding packing) | 59 g          |
| Customs tariff number                | 85437090      |
| Country of origin                    | DE            |

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



2864419

<https://www.phoenixcontact.com/us/products/2864419>

## Technical data

### Product properties

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

### Electrical properties

|   |  |
|---|--|
| Electrical isolation                            | 2-way isolation                              |
| Electrical isolation between input and output   | yes  |
| Limit frequency (3 dB)                          | 75 Hz  |
| Maximum power dissipation for nominal condition | 34 mW  |
| Signal transmission behavior                    | In = Out                                     |
| Step response (10-90%)                          | 5 ms (at 600 Ω load)                         |
| Maximum temperature coefficient                 | ≤ 0.002 %/K (of measured value / 100 Ω load) |
| Temperature coefficient, typical                | < 0.002 %/K (of measured value / 100 Ω load) |
| Maximum transmission error                      | ≤ 0.1 % (of final value)                     |
| Additional error, load-dependent                | < 0.03 % (of measured value / 100 Ω load)    |

### Electrical isolation

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Pollution degree     | 2  |

### Electrical isolation Input/output IEC/EN 61010

|                          |                         |
|--------------------------|-------------------------|
| Standards/regulations    | IEC/EN 61010            |
| Rated insulation voltage | 50 V AC/DC              |
| Test voltage             | 1.5 kV AC (50 Hz, 60 s) |
| Insulation               | Basic insulation        |

### Supply

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

### Input data

#### Signal: Current

|                           |                                  |
|---------------------------|----------------------------------|
| Number of inputs          | 1                                |
| Configurable/programmable | no                               |
| Max. voltage input signal | 18 V                             |
| Current input signal      | 0 mA ... 20 mA<br>4 mA ... 20 mA |
| Max. current input signal | 40 mA                            |
| Response current          | approx. 190 μA                   |
| Input voltage limitation  | < 2 V (20 mA)                    |
| Voltage dissipation       | 1.9 V (I = 20 mA)                |

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

2864419

<https://www.phoenixcontact.com/us/products/2864419>

## Output data

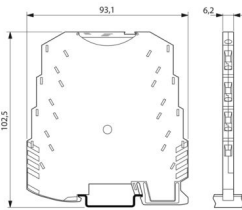
Signal: Current

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

## 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

|  |                  |
|--|------------------|
| 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              |
| Altitude                                | ≤ 2000 m                      |
| Permissible humidity (operation)        | 5 % ... 95 % (non-condensing) |

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



2864419

<https://www.phoenixcontact.com/us/products/2864419>

## Approvals

CE

|             |              |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

UL, USA/Canada

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

## 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 |
|-----------------------|--------------|

Electrostatic discharge

|                       |              |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
|-----------------------|--------------|

Electrostatic discharge

|          |             |
|----------|-------------|
| Comments | Criterion B |
|----------|-------------|

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 |
|-----------------------|--------------|

Surge current load (surge)

|          |             |
|----------|-------------|
| Comments | Criterion B |
|----------|-------------|

Conducted interference

|                       |                         |
|-----------------------|-------------------------|
| Designation           | Conducted interferences |
| Standards/regulations | EN 61000-4-6            |
| Evaluation criterion  | A                       |

## Standards and regulations

|                      |                 |
|----------------------|-----------------|
| Electrical isolation | 2-way isolation |
|----------------------|-----------------|

## Mounting

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



2864419

<https://www.phoenixcontact.com/us/products/2864419>

|                   |   |
|-------------------|---|
| 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   |

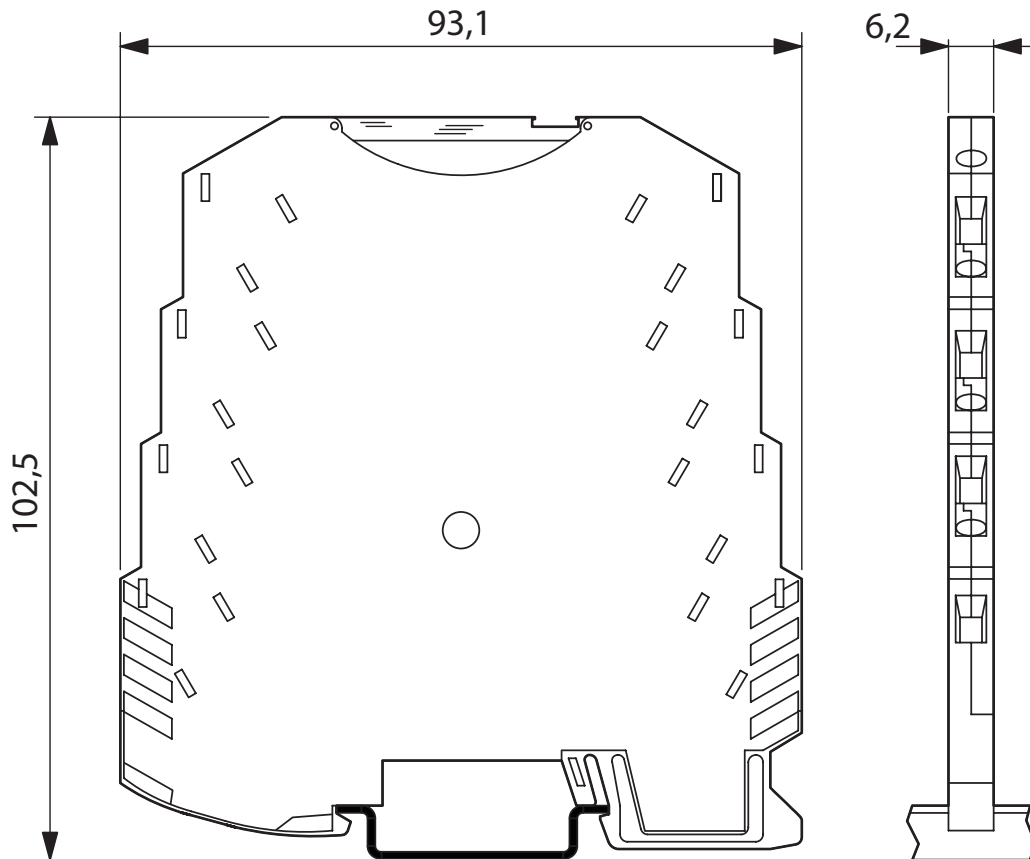
# MINI MCR-SL-1CP-I-I - Passive separator

2864419

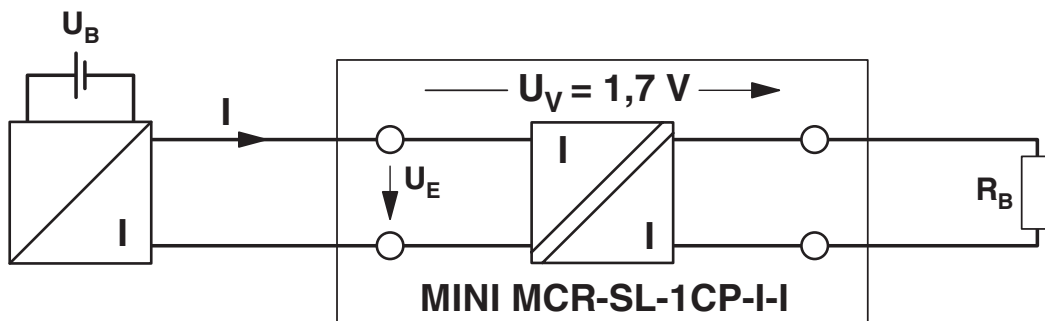
<https://www.phoenixcontact.com/us/products/2864419>

## Drawings

Dimensional drawing



Application drawing

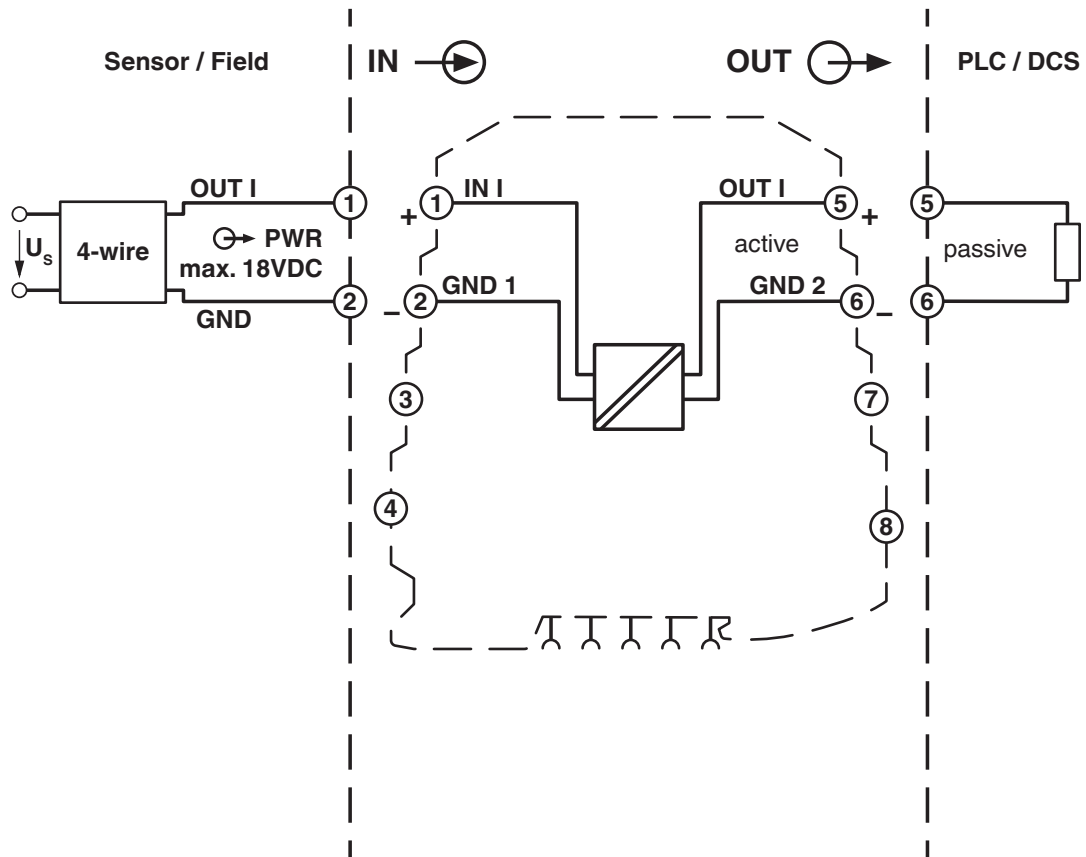


# MINI MCR-SL-1CP-I-I - Passive separator

2864419

<https://www.phoenixcontact.com/us/products/2864419>

Block diagram



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



2864419

<https://www.phoenixcontact.com/us/products/2864419>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2864419>



**cUL Recognized**  
Approval ID: FILE E 123528



**UL Recognized**  
Approval ID: FILE E 123528



**DNV GL**  
Approval ID: TAA00000BW



**cUL Recognized**  
Approval ID: E199827



**UL Recognized**  
Approval ID: E199827

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



2864419

<https://www.phoenixcontact.com/us/products/2864419>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27210120 |
| ECLASS-15.0 | 27210120 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC002653 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121000 |
|-------------|----------|

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



2864419

<https://www.phoenixcontact.com/us/products/2864419>

## Environmental product compliance

### EU RoHS

|   |        |
|---|--------|
| Fulfills EU RoHS substance requirements | Yes    |
| Exemption                               | 7(c)-I |

### 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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.806 kg CO2e |
|---------|---------------|

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)