

# MCR-1CLP-I-I-00 - Passive separator



2814016

<https://www.phoenixcontact.com/us/products/2814016>

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MCR passive isolator, for the electrical isolation of current signals without auxiliary power, 1-channel, input signal: 0(4)...20 mA, output signal: 0(4)...20 mA

## Your advantages

- 1, 2 or 4-channel version as an option
- Electrical isolation without additional auxiliary voltage
- 0/4 ... 20 mA current signals

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2814016                        |
| Packing unit                         | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | C401                           |
| Product key                          | DK1XXX                         |
| GTIN                                 | 4017918131722                  |
| Weight per piece (including packing) | 100.5 g                        |
| Weight per piece (excluding packing) | 100.5 g                        |
| Customs tariff number                | 85437090                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

|                 |                   |
|-----------------|-------------------|
| Product type    | Passive separator |
| No. of channels | 1                 |

### Electrical properties

|   |  |
|---|--|
| Electrical isolation between input and output   | yes  |
| Limit frequency (3 dB)                          | < 75 Hz                                      |
| Maximum power dissipation for nominal condition | 50 mW  |
| Test voltage input/output                       | 510 V AC (50 Hz, 60 s)                       |
| Signal transmission behavior                    | In = Out                                     |
| Step response (10-90%)                          | 5 ms (with 500 Ω load)                       |
| Maximum temperature coefficient                 | ≤ 0.002 %/K (of measured value / 100 Ω load) |
| Maximum transmission error                      | ≤ 0.1 % (of final value)                     |
| Additional error, load-dependent                | 0.02 % (of measured value)                   |

### Supply

|                      |                                      |
|----------------------|--------------------------------------|
| Supply voltage range | no separate supply voltage necessary |
|----------------------|--------------------------------------|

### Input data

#### Signal

|                           |                                  |
|---------------------------|----------------------------------|
| Description of the input  | Current input                    |
| Number of inputs          | 1                                |
| Configurable/programmable | no                               |
| Max. voltage input signal | 30 V (30 V overload)             |
| Current input signal      | 0 mA ... 20 mA<br>4 mA ... 20 mA |
| Max. current input signal | 50 mA (100 mA overload)          |
| Response current          | < 50 μA                          |
| Input voltage limitation  | 33 V (with Zener diode)          |
| Voltage dissipation       | 2.5 V (I = 20 mA)                |

### Output data

#### Signal: Current

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Number of outputs               | 1                                     |
| Configurable/programmable       | no                                    |
| Current output signal           | 0 mA ... 20 mA<br>4 mA ... 20 mA      |
| Max. current output signal      | < 50 mA                               |
| Load/output load current output | ≤ 1375 Ω (at I = 20 mA output signal) |
| Ripple                          | < 5 mV (rms)                          |

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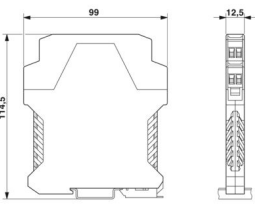
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## Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Pluggable screw connection                  |
| Stripping length                 | 8 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      | 24 ... 14                                   |

## Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 12.5 mm  |
| Height              | 99 mm  |
| Depth               | 114.5 mm   |

## Material specifications

|                  |                             |
|------------------|-----------------------------|
| Color            | green (RAL 6021)            |
| Housing material | Polyamide PA non-reinforced |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Degree of protection            | IP20             |
| Ambient temperature (operation) | -10 °C ... 70 °C |

## Approvals

### CE

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

### UL, USA/Canada

|                |       |
|----------------|-------|
| Identification | cULus |
|----------------|-------|

## Mounting

|                   |                   |
|-------------------|-------------------|
| Mounting type     | DIN rail mounting |
| Mounting position | any               |

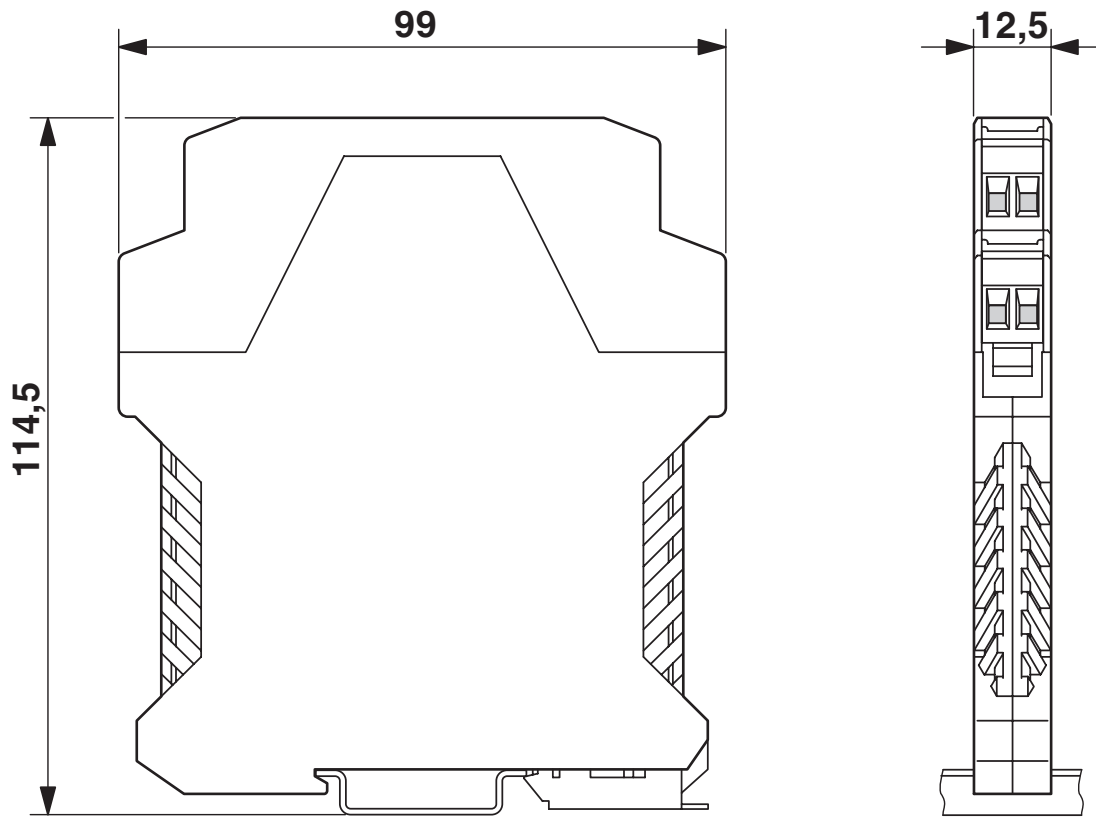
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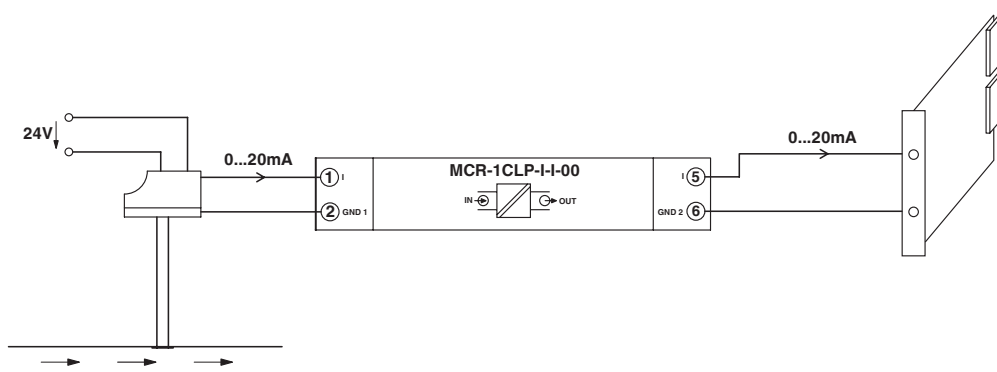
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## Drawings

Dimensional drawing



Application drawing



Application example: - flow measurement

1 = magnetic inductive flow gauge

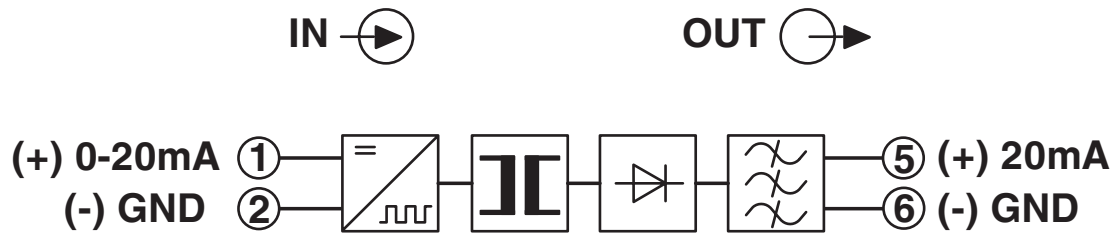
2 = control

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Circuit diagram



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## Environmental product compliance

### EU RoHS

|   |      |
|---|------|
| Fulfills EU RoHS substance requirements | Yes  |
| Exemption                               | 6(c) |

### 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.) | Lead(CAS: 7439-92-1) |
|-------------------------------------|----------------------|

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