# MINI MCR-BL-U-I-4 - Signal conditioner

2810492

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3-way signal conditioner, for electrical isolation of analog signals, with screw connection, input signal: 0 V ... 10 V, output signal: 4 mA ... 20 mA

## Commercial data

| | |
|---|---|
| Item number | 2810492 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Product key | DKA131 |
| GTIN | 4046356166713 |
| Weight per piece (including packing) | 66.9 g |
| Weight per piece (excluding packing) | 59 g |
| Country of origin | DE |

# MINI MCR-BL-U-I-4 - Signal conditioner

2810492

https://www.phoenixcontact.com/us/products/2810492

## Technical data

### Notes

Utilization restriction

| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|---|---|

### Product properties

Product properties

| Product type | Signal conditioner |
|---|---|
| Product family | ESSENTIAL edition |
| No. of channels | 1 |

Insulation characteristics

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

### Electrical properties

| Electrical isolation | 3-way isolation |
|---|---|
| Limit frequency (3 dB) | approx. 100 Hz |
| Step response (10-90%) | 500 ms |
| Maximum temperature coefficient | < 0.01 %/K |
| Temperature coefficient, typical | < 0.002 %/K |
| Maximum transmission error | < 0.1 % (of final value) |

Electrical isolation Input/output/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 ±10 % |
|---|---|
| Supply voltage range | 19.2 V DC ... 30 V DC |
| Max. current consumption | < 20 mA |
| Power consumption | < 450 mW |

### Input data

Signal: Voltage

| Number of inputs | 1 |
|---|---|
| Configurable/programmable | no |
| Voltage input signal | 0 V ... 10 V |
| Max. voltage input signal | 30 V |
| Input resistance of voltage input | approx. 100 kΩ |

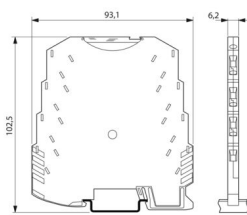### Output data

## Signal

| | |
|---|---|
| Number of outputs | 1 |
| Open-circuit voltage | approx. 12.5 V |
| Current output signal | 4 mA ... 20 mA |
| Max. current output signal | 28 mA |
| Load/output load current output | ≤ 500 Ω |
| Ripple | < 20 $mV_{PP}$ (at 500 Ω) |

## Connection data

| | |
|---|---|
| Connection method | Screw connection |
| Stripping length | 12 mm |
| Screw thread | M3 |
| Conductor cross-section rigid | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section AWG | 26 ... 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) | -10 °C ... 60 °C |
| Ambient temperature (storage/transport) | -20 °C ... 65 °C |

## Approvals

CE

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

| UKCA | |
|---|---|
| Certificate | UKCA-compliant |

## EMC data

| Electromagnetic compatibility | Conformance with EMC directive |
|---|---|
| Noise immunity | EN 61000-6-2:2005 |

| Noise emission | |
|---|---|
| Standards/regulations | EN 61000-6-4 |

| Electrostatic discharge | |
|---|---|
| Comments | Safety measures must be taken to prevent electrostatic discharge. |

## Standards and regulations

| Electrical isolation | 3-way isolation |
|---|---|

## Mounting

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

# MINI MCR-BL-U-I-4 - Signal conditioner
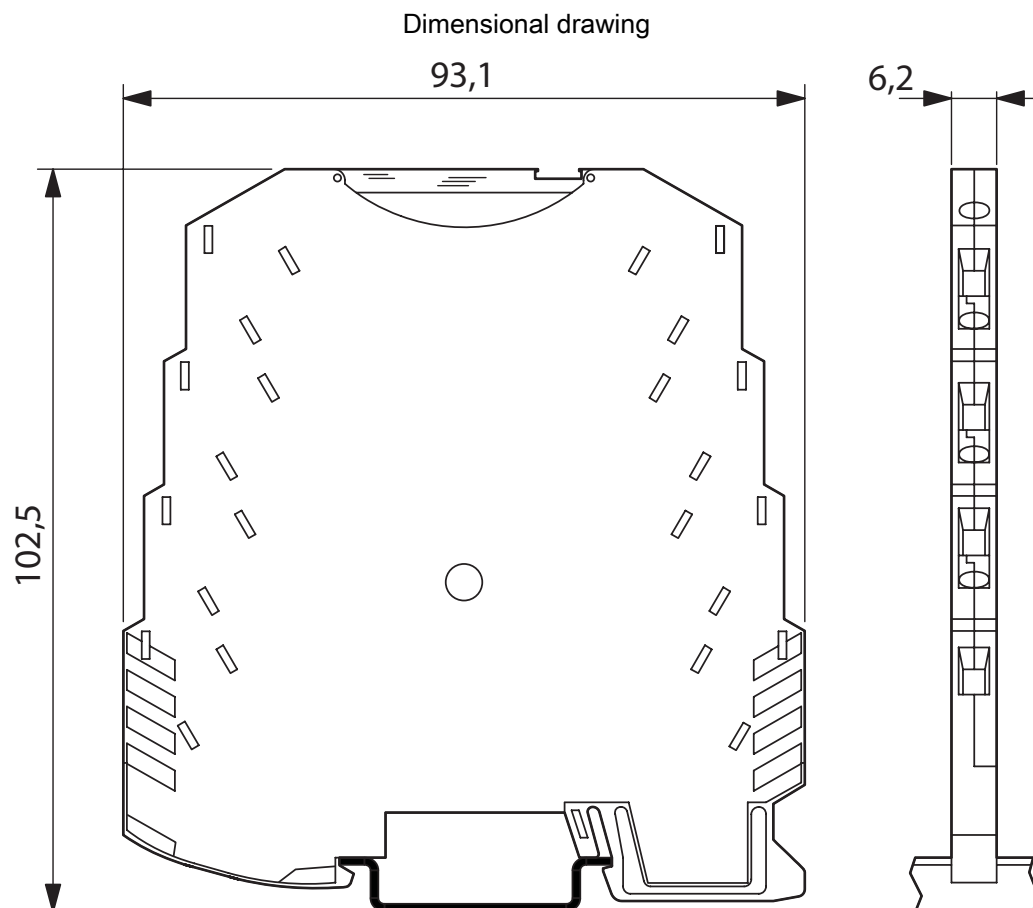
## Drawings

### Dimensional drawing

93,1

6,2

102,5

2810492

https://www.phoenixcontact.com/us/products/2810492

Block diagram
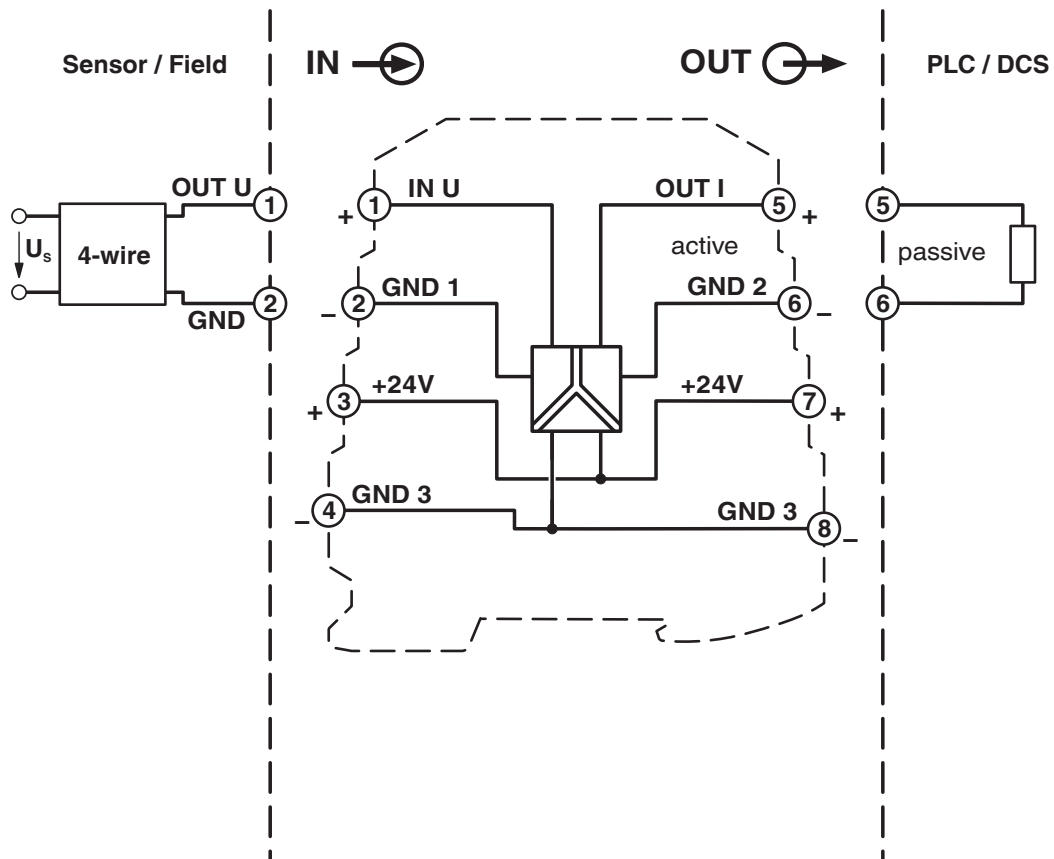
## Classifications

### ECLASS

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

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC002653 |

### UNSPSC

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

## Environmental product compliance

### EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c), 7(a), 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.) | Lead(CAS: n/a) |
| SCIP | 5b3b43c9-678c-4dc3-8820-28467c3a6633 |

# MINI MCR-BL-U-I-4 - Signal conditioner

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## Accessories

### MINI MCR DKL - Transparent cover

2308111

https://www.phoenixcontact.com/us/products/2308111

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

### MINI MCR-DKL-LABEL - Marking label

2810272

https://www.phoenixcontact.com/us/products/2810272

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

# MINI MCR-BL-U-I-4 - Signal conditioner

## SZS 0,6X3,5 - Screwdriver

Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip