

MINI MCR-SL-I-U-4 - Signal conditioner



2813538

<https://www.phoenixcontact.com/us/products/2813538>

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

Your advantages

- Power supply possible via the foot element (TBUS)
- Low power consumption
- Entry-level alternative to configurable signal conditioners
- Highly-compact isolating amplifier for electrical isolation, conversion, amplification, and filtering of standard analog signals
- 3-way isolation
- Fixed signal combinations

Commercial data

| | |
|--------------------------------------|--------------------|
| Item number | 2813538 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C403 |
| Product key | CK1211 |
| Catalog page | Page 97 (C-7-2015) |
| GTIN | 4046356100632 |
| Weight per piece (including packing) | 87.2 g |
| Weight per piece (excluding packing) | 71.4 g |
| Customs tariff number | 85437090 |
| Country of origin | DE |

MINI MCR-SL-I-U-4 - Signal conditioner



2813538

<https://www.phoenixcontact.com/us/products/2813538>

Technical data

Notes

Utilization restriction

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


Product properties

| | |
|-----------------|--------------------|
| Product type | Signal conditioner |
| Product family | MINI Analog |
| No. of channels | 1 |

Insulation characteristics

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

Electrical properties

| | |
|---|--|
| Electrical isolation | Basic insulation in accordance with EN 61010 |
| Electrical isolation between input and output | yes |
| Limit frequency (3 dB) | approx. 100 Hz |
| Maximum power dissipation for nominal condition | 434.3 mW |
| Step response (10-90%) | \approx  ms |
| Maximum temperature coefficient | < 0.01 %/K |
| Temperature coefficient, typical | < 0.002 %/K |
| Maximum transmission error | \leq 0.1 % (of final value) |

Electrical isolation Input/output/power supply

| | |
|--------------------------|-------------------------|
| Rated insulation voltage | 30 V AC |
| | 50 V DC |
| Test voltage | 1.5 kV AC (50 Hz, 60 s) |

Supply

| | |
|--------------------------|---|
| Nominal supply voltage | 24 V DC |
| 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 | < 9 mA |
| Power consumption | < 200 mW |

Input data

Signal: Current

| | |
|---------------------------|----------------|
| Number of inputs | 1 |
| Configurable/programmable | no |
| Current input signal | 4 mA ... 20 mA |

MINI MCR-SL-I-U-4 - Signal conditioner



2813538

<https://www.phoenixcontact.com/us/products/2813538>

| | |
|--------------------------------|---------------------|
| Max. current input signal | 50 mA |
| Input resistance current input | approx. 50 Ω |

Output data

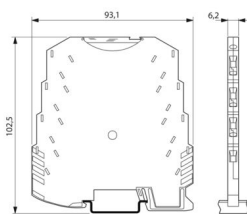
Signal: Voltage

| | |
|---------------------------------|--|
| Number of outputs | 1 |
| Configurable/programmable | no |
| Voltage output signal | 0 V ... 10 V |
| Max. voltage output signal | 12.5 V |
| Short-circuit current | approx. 2 mA |
| Load/output load voltage output | $\geq 10 \text{ k}\Omega$ |
| Ripple | < 20 mV _{PP} < 20 mV _{PP} (at 10 k Ω) |

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 12 mm |
| Screw thread | M3 |
| Conductor cross section rigid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| 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 |
|----------------------|------|

MINI MCR-SL-I-U-4 - Signal conditioner



2813538

<https://www.phoenixcontact.com/us/products/2813538>

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

UKCA

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

UL, USA/Canada

| | |
|----------------|---------------------------------------|
| Identification | UL 508 Recognized |
| | Class I, Div. 2, Groups A, B, C, D T4 |

Shipbuilding approval

| | |
|-------------|-------------------|
| Certificate | DNV GL TAA000020N |
|-------------|-------------------|

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 |

Electrostatic discharge

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

Electrostatic discharge

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

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) |
|-------------|-------------------------|

MINI MCR-SL-I-U-4 - Signal conditioner



2813538

<https://www.phoenixcontact.com/us/products/2813538>

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

Surge current load (surge)

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

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 | Basic insulation in accordance with EN 61010 |
|----------------------|--|

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 |

MINI MCR-SL-I-U-4 - Signal conditioner

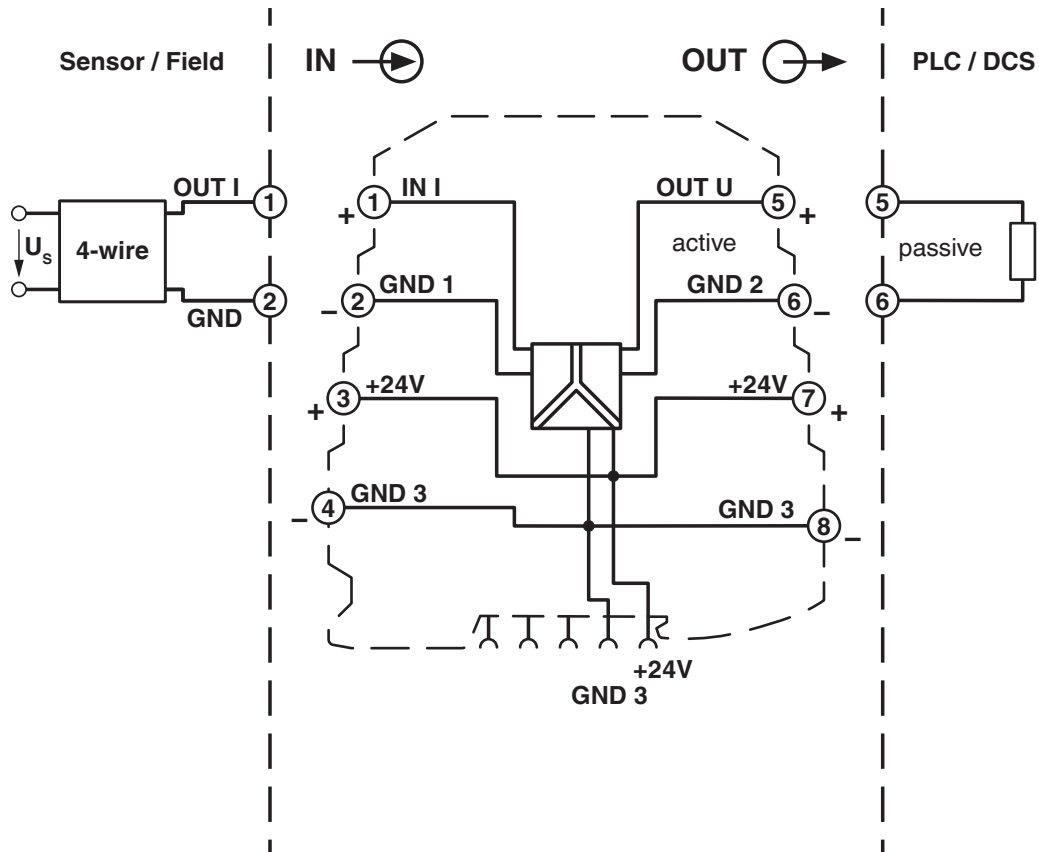
2813538

<https://www.phoenixcontact.com/us/products/2813538>



Drawings

Block diagram



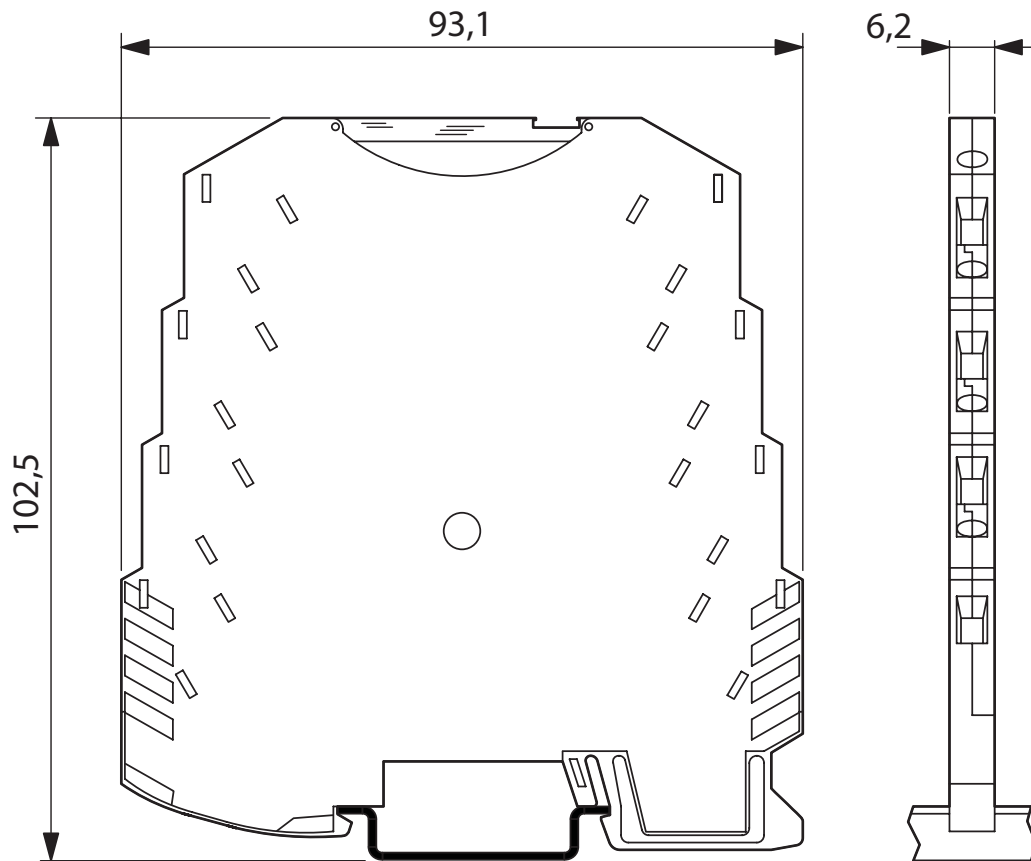
MINI MCR-SL-I-U-4 - Signal conditioner

2813538

<https://www.phoenixcontact.com/us/products/2813538>



Dimensional drawing



MINI MCR-SL-I-U-4 - Signal conditioner



2813538


<https://www.phoenixcontact.com/us/products/2813538>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2813538>




cUL Recognized
Approval ID: FILE E 238705




UL Recognized
Approval ID: FILE E 238705

DNV
Approval ID: TAA000020N



cUL Listed
Approval ID: FILE E 199827



UL Listed
Approval ID: FILE E 199827

cULus Recognized

cULus Listed

MINI MCR-SL-I-U-4 - Signal conditioner



2813538

<https://www.phoenixcontact.com/us/products/2813538>

Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27210120 |
| ECLASS-12.0 | 27210120 |
| ECLASS-13.0 | 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: 7439-92-1) |
| SCIP | 98fa3002-d003-4cab-b1cd-5bbce74fa5fd |

MINI MCR-SL-I-U-4 - Signal conditioner

2813538

<https://www.phoenixcontact.com/us/products/2813538>

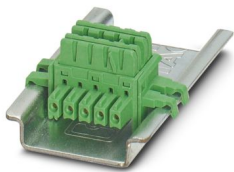


Accessories

ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - DIN rail bus connectors

2869728

<https://www.phoenixcontact.com/us/products/2869728>



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

TC-D37SUB-AIO16-M-PS-UNI - Module carrier

2902934

<https://www.phoenixcontact.com/us/products/2902934>



Universal termination carrier for connecting 16 MINI Analog signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection), with HART multiplexer connection

MINI MCR-SL-I-U-4 - Signal conditioner

2813538

<https://www.phoenixcontact.com/us/products/2813538>



TC-D37SUB-ADIO16-M-P-UNI - Module carrier

2902933

<https://www.phoenixcontact.com/us/products/2902933>



Universal termination carrier for connecting 16 MINI Analog signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection)

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-SL-I-U-4 - Signal conditioner

2813538

<https://www.phoenixcontact.com/us/products/2813538>



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-SL-PTB - Power terminal block

2864134

<https://www.phoenixcontact.com/us/products/2864134>

MCR power terminal block for supplying several MINI Analog modules via the DIN rail connector, with screw connection, maximum current consumption of up to 2 A



MINI MCR-SL-I-U-4 - Signal conditioner

2813538

<https://www.phoenixcontact.com/us/products/2813538>



QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply unit

2904614

<https://www.phoenixcontact.com/us/products/2904614>



Primary-switched power supply, QUINT POWER, screw connection, DIN rail mounting, supply of devices possible via the TBUS DIN rail connector, protective coating, input: single-phase, output: 24 V DC/2.5 A

SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/us/products/1205053>



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

Phoenix Contact 2024 © - 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