

Signal conditioner - MINI MCR-2-UI-UI - 2902037

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3-way signal conditioner with plug-in connection technology and calibrated measuring range changeover for the electrical isolation of unipolar and bipolar analog signals. Input/output configurable via DIP switch. Screw connection technology, standard configuration.

Figure shows MINI MCR-2-UI-UI-PT version

Product description

The 3-way signal conditioner with plug-in connection technology and calibrated measuring range changeover can be configured using DIP switches and is used for the electrical isolation, conversion, amplification, and filtering of unipolar and bipolar standard and normalized signals. On the input side, the standard analog signals 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 0 ... 5 V, 1 ... 5 V or 10 ... 10 V, and signals 2 ... 10 V, 0 ... 20 V, 4 V ... 20 V, 0 ... 24 V, 0 ... 30 V, -5 ... 5 V, -20 ... 20 V, -24 ... 24 V, -30 ... 30 V, and -20 ... 20 mA are available. On the output side, 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 0 ... 5 V, 1 ... 5 V, -10 ... 10 V, and -5 ... 5 V are possible. There is no need for adjustment following a measuring range changeover. The measuring transducer supports fault monitoring and NFC communication.



Key commercial data

| | |
|--------------------------------------|-----------|
| Packing unit | 1 pc |
| Weight per Piece (excluding packing) | 100.0 GRM |
| Custom tariff number | 85437090 |
| Country of origin | Germany |

Technical data

Note

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

Dimensions

| | |
|--------|----------|
| Width | 6.2 mm |
| Height | 110.5 mm |
| Depth | 120.5 mm |

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Technical data

Ambient conditions

| | |
|---|------------------|
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Degree of protection | IP20 |

Input data

| | |
|-----------------------------------|-----------------------------------|
| Number of inputs | 1 |
| Configurable/programmable | Yes |
| Voltage input signal | 0 V ... 5 V (via DIP switch) |
| | 1 V ... 5 V (via DIP switch) |
| | -5 V ... 5 V (via DIP switch) |
| | 0 V ... 10 V (via DIP switch) |
| | 2 V ... 10 V (via DIP switch) |
| | -10 V ... 10 V (via DIP switch) |
| | 0 V ... 20 V (via DIP switch) |
| | 4 V ... 20 V (via DIP switch) |
| | -20 V ... 20 V (via DIP switch) |
| | 0 V ... 24 V (via DIP switch) |
| | 4.8 V ... 24 V (via DIP switch) |
| | -24 V ... 24 V (via DIP switch) |
| | 0 V ... 30 V (via DIP switch) |
| | 6 V ... 30 V (via DIP switch) |
| | -30 V ... 30 V (via DIP switch) |
| Current input signal | 0 mA ... 20 mA (via DIP switch) |
| | 4 mA ... 20 mA (via DIP switch) |
| | -20 mA ... 20 mA (via DIP switch) |
| Max. input voltage | 33 V |
| Max. input current | 24 mA |
| Input resistance of voltage input | > 1000 kΩ |
| Input resistance current input | approx. 63 Ω |

Output data

| | |
|---------------------------|-------------------------------|
| Number of inputs | 1 |
| Configurable/programmable | Yes |
| Voltage output signal | 0 V ... 5 V (via DIP switch) |
| | 1 V ... 5 V (via DIP switch) |
| | -5 V ... 5 V (via DIP switch) |
| | 0 V ... 10 V (via DIP switch) |
| | 2 V ... 10 V (via DIP switch) |

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Output data

| | |
|---------------------------------|---------------------------------|
| | -10 V ... 10 V (via DIP switch) |
| Current output signal | 0 mA ... 20 mA (via DIP switch) |
| | 4 mA ... 20 mA (via DIP switch) |
| Max. output current | 22 mA |
| Short-circuit current | < 32 mA |
| Load/output load voltage output | ≥ 10 kΩ |
| Load/output load current output | ≤ 600 Ω (at 20 mA) |

Power supply

| | |
|-----------------------------|--|
| Nominal supply voltage | 24 V DC |
| Supply voltage range | 9.6 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715)) |
| Typical current consumption | 25 mA (Current output, at 24 V DC incl. load) |
| | 54 mA (Current output, at 12 V DC incl. load) |
| Power consumption | ≤ 800 mW (at I _{OUT} = 20 mA, 9.6 V DC, 600 Ω load) |

Connection data

| | |
|---|---------------------|
| Connection method | Screw connection |
| Single conductor/terminal point, solid, with ferrule, min. | 0.2 mm ² |
| Single conductor/terminal point, solid, with ferrule, max. | 1.5 mm ² |
| Single conductor/terminal point, solid, without ferrule, min. | 0.2 mm ² |
| Single conductor/terminal point, solid, without ferrule, max. | 2.5 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 1.5 mm ² |
| Min. AWG conductor cross section, flexible | 24 |
| Max. AWG conductor cross section, flexible | 12 |
| Stripping length | 10 mm |
| Screw thread | M3 |

General

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|---------------------------------|--|
| Maximum transmission error | ≤ 0.1 % (of final value) |
| Maximum temperature coefficient | 0.01 %/K |
| Limit frequency (3 dB) | 30 Hz (via DIP switch) |
| | 5 kHz (via DIP switch) |
| Step response (10-90%) | < 8.5 ms (with 30 Hz filter) |
| Protective circuit | Transient protection |
| Electrical isolation | Reinforced insulation in accordance with IEC 61010-1 |
| Surge voltage category | II |

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Technical data

General

| | |
|-----------------------------------|--|
| Pollution degree | 2 |
| Rated insulation voltage | 300 V |
| Test voltage, input/output/supply | 3 kV (50 Hz, 1 min.) |
| Electromagnetic compatibility | Conformance with EMC Directive 2004/108/EC |
| Noise emission | EN 61000-6-4 |
| Noise immunity | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |
| Color | gray |
| Housing material | PBT |
| Mounting position | any |
| Assembly instructions | The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715. |
| Conformance | CE-compliant |
| ATEX | # II 3 G Ex nA IIC T4 Gc X |
| UL, USA / Canada | UL 508 Listed |
| | Class I, Div. 2, Groups A, B, C, D T6 |
| | Class I, Zone 2, Group IIC T6 |

EMC data

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|-----------------------|--------------------------|
| Designation | Electromagnetic RF field |
| Standards/regulations | EN 61000-4-3 |
| Designation | Fast transients (burst) |
| Standards/regulations | EN 61000-4-4 |
| Designation | Conducted interferences |
| Standards/regulations | EN 61000-4-6 |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27040702 |
| eCl@ss 4.1 | 27040702 |
| eCl@ss 5.0 | 27242213 |
| eCl@ss 5.1 | 27049002 |
| eCl@ss 6.0 | 27049002 |
| eCl@ss 7.0 | 27049002 |
| eCl@ss 8.0 | 27210120 |

ETIM

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|----------|----------|
| ETIM 3.0 | EC001039 |
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Classifications

ETIM

| | |
|----------|----------|
| ETIM 4.0 | EC002540 |
| ETIM 5.0 | EC002653 |

UNSPSC

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|---------------|----------|
| UNSPSC 6.01 | 30211502 |
| UNSPSC 7.0901 | 39121004 |
| UNSPSC 11 | 39121004 |
| UNSPSC 12.01 | 39121004 |
| UNSPSC 13.2 | 39121004 |

Approvals

Approvals

Approvals


UL Listed / cUL Listed / GL / cULus Listed


Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

| |
|---|
| UL Listed  |
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| cUL Listed  |
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| |
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| GL |
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Approvals

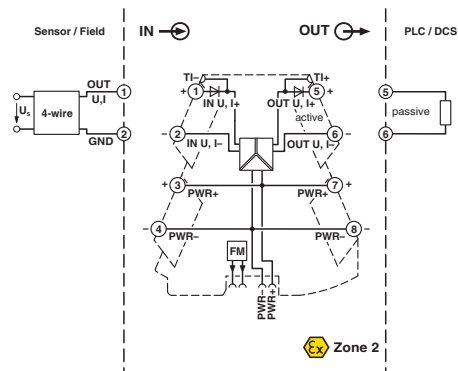


Drawings

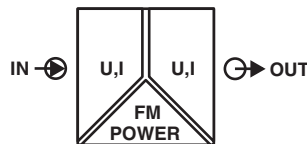
Pictogram



Block diagram



Pictogram





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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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