

MCR-S-10-50-UI-DCI - Current measuring transducer



2814647

<https://www.phoenixcontact.com/us/products/2814647>

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MCR current measuring transducer, programmable and configurable, for measuring direct, alternating and distorted currents, input current 0...10 to 0...50 A, configured

Your advantages

- Device can be set via DIP switches or MCR/PI-CONF-WIN configuration software
- 3-way isolation
- True r.m.s. value measurement

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2814647 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | C494 |
| Product key | CMMA34 |
| Weight per piece (including packing) | 172.9 g |
| Weight per piece (excluding packing) | 170 g |
| Customs tariff number | 85437090 |
| Country of origin | DE |

Technical data

Product properties

| | |
|----------------------------|------------------------------|
| Product type | Current measuring transducer |
| Insulation characteristics | |
| Overvoltage category | III |
| Pollution degree | 2 |

Electrical properties

| | |
|---|---|
| Total error | ≤ 1.5 % (Temperature range) |
| Maximum power dissipation for nominal condition | 2.2 W |
| Measuring category | III |
| Test voltage output/power supply | 500 V AC (50 Hz, 60 s) |
| Test voltage input/output | 4 kV AC (50 Hz, 60 s) |
| Test voltage input/power supply | 4 kV AC (50 Hz, 60 s) |
| Protective circuit | Surge protection; 33 V suppressor diode |
| Step response (10-90%) | 330 ms (AC) |
| | 40 ms (DC) |
| Temperature coefficient, typical | < 0.025 %/K |
| Maximum transmission error | < 0.5 % (of nominal range value under nominal conditions) |
| Rated insulation voltage | 300 V AC (to earth) |

Supply

| | |
|--------------------------|------------------------|
| Supply voltage range | 20 V DC ... 30 V DC |
| Max. current consumption | < 40 mA (without load) |

Input data

Measurement

| | |
|--------------------------------------|--|
| Configurable/programmable | Yes, preconfigured |
| Input current range | 0 A AC/DC ... 55 A AC/DC (Permitted continuous overload: 120%) |
| Measuring range | 0 A AC/DC ... 50 A AC/DC |
| Setting range for min. input current | 0 A AC/DC ... 9.5 A AC/DC |
| Setting range for max. input current | 0 A AC/DC ... 55 A AC/DC |
| LSB: Current | 1 µA (1 A) |
| | 2 µA (2 A) |
| | 5 µA (5 A) |
| | 10 µA (10 A) |
| | 50 µA (50 A) |
| | 100 µA (100 A) |
| Overload capacity | Depending on through connected conductor |
| Surge strength | Depending on through connected conductor |
| Frequency measuring range | 15 Hz ... 400 Hz |

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| | |
|-------------------|---|
| Curve type | AC, DC or distorted currents |
| Operate threshold | 0.8 % (of measuring range nominal value 50 A) |

Output data

Signal: Voltage/current

| | |
|---------------------------------|-----------------------|
| Configurable/programmable | Yes, preconfigured |
| Voltage output signal | 0 V ... 5 V |
| | 1 V ... 5 V |
| | 0 V ... 10 V |
| | 2 V ... 10 V |
| | -5 V ... 5 V |
| | -10 V ... 10 V |
| | 10 V ... 0 V |
| | 10 V ... 2 V |
| | 10 V ... -10 V |
| | 5 V ... 0 V |
| | 5 V ... 1 V |
| | 5 V ... -5 V |
| | Current output signal |
| 4 mA ... 20 mA | |
| 20 mA ... 0 mA | |
| 20 mA ... 4 mA | |
| Load/output load voltage output | > 10 k Ω |
| Load/output load current output | < 500 Ω |

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 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 | 24 ... 14 |
| Connection method | Through connection |

Signaling

| | |
|----------------|-------------|
| Status display | LED (green) |
|----------------|-------------|

Dimensions

Item dimensions

| | |
|--------|----------|
| Width | 22.5 mm |
| Height | 99 mm |
| Depth | 114.5 mm |

Circular conductor

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| | |
|----------|---------|
| Diameter | 10.5 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) | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | < 2000 m |
| Permissible humidity (operation) | 10 % ... 95 % (non-condensing) |

Approvals

CE

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

UL, USA/Canada

| | |
|----------------|--|
| Identification | Class I, Zone 2, AEx nA nC IIC T4, Ex nA nC IIC T4 Gc X Class I, Div. 2, Groups A, B, C and D or Non-Hazardous Locations Only |
|----------------|--|

EMC data

| | |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC directive |
| Low Voltage Directive | Conformance with Low Voltage Directive |
| Noise immunity | EN 61000-6-2 |

Noise emission

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

Standards and regulations

| | |
|-----------------------|-----------------|
| Standards/regulations | IEC 61010-2-030 |
|-----------------------|-----------------|

Mounting

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

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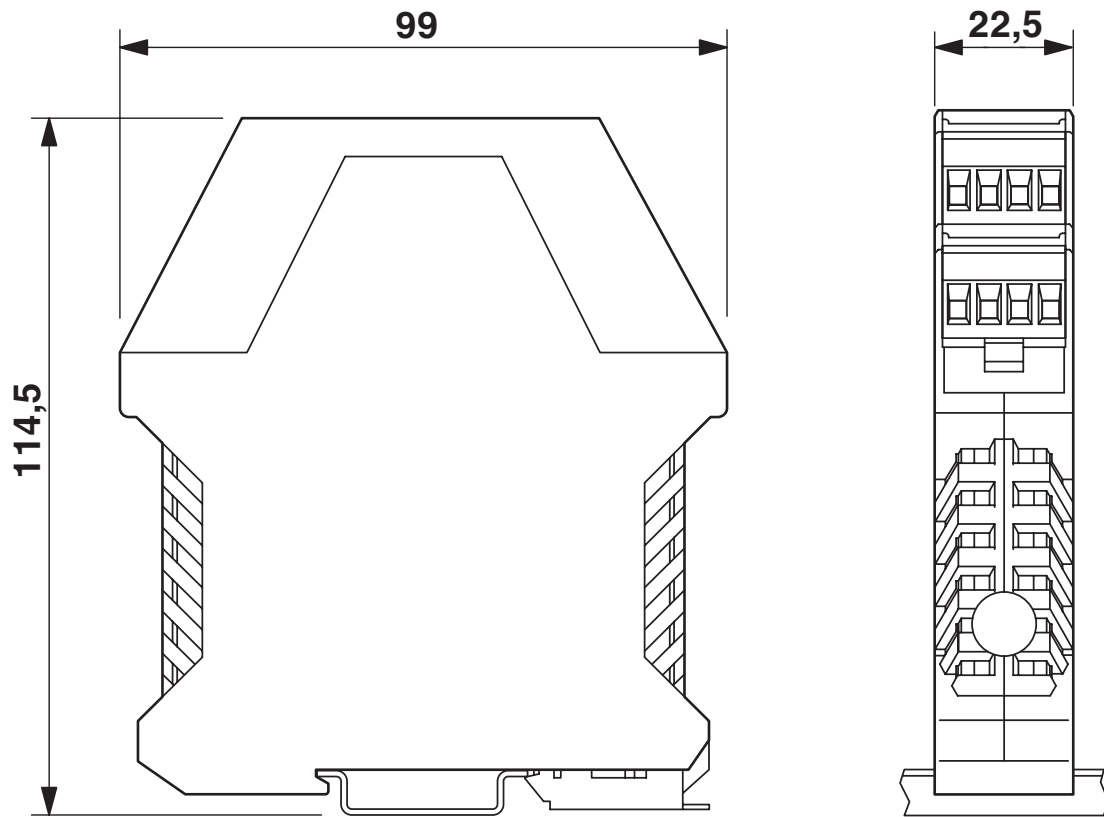


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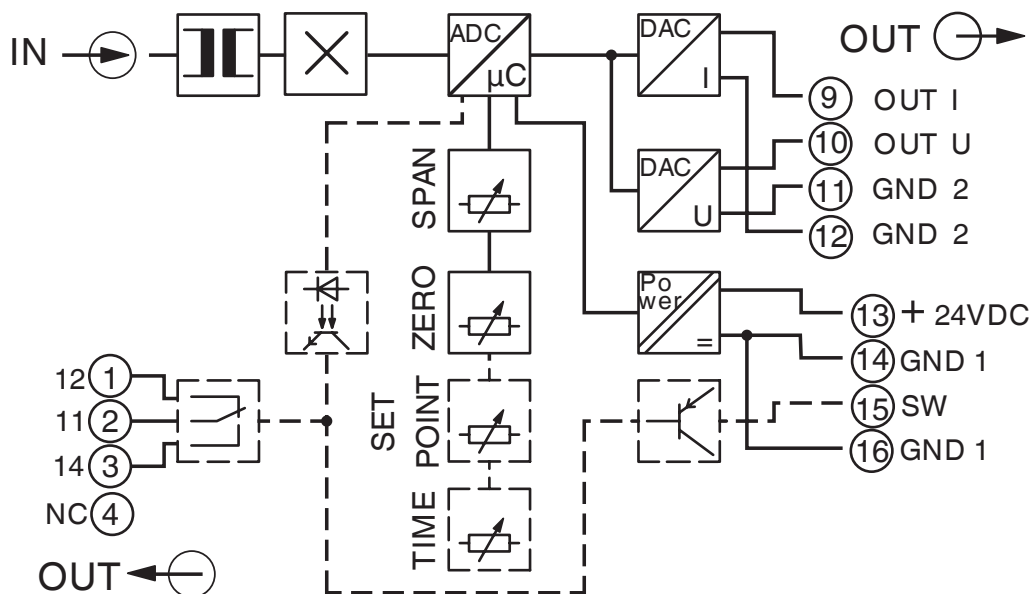
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Drawings

Dimensional drawing



Circuit diagram



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Classifications

ECLASS

ECLASS-13.0

27210123

ETIM

ETIM 9.0

EC002475

UNSPSC

UNSPSC 21.0

39121000

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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.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
| | Lead(CAS: 7439-92-1) |
| | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol(CAS: 79-94-7) |

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