

## Current transducers - MCR-S-1-5-UI-SW-DCI-NC - 2814731

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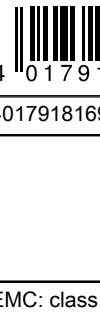
MCR current transducer, programmable and configurable, for measuring direct, alternating and distorted currents, with relay and transistor output, input current 0 ... 0.2 A to 0 ... 11 A, unconfigured

### 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



### Key Commercial Data

|              |  |
|--------------|--|
| Packing unit | 1 pc   |
| GTIN         | <br>4 017918 169282 |
| GTIN         | 4017918169282  |

### Technical data

#### Note

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

#### Dimensions

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

#### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Maximum altitude                        | < 2000 m         |
| Degree of protection                    | IP20             |
| Noise immunity                          | EN 61000-6-2     |

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### Technical data

#### Input data

|                                      |   |
|--------------------------------------|---|
| Input                                | Current measuring input                         |
| Number of inputs                     | 3   |
| Configurable/programmable            | Yes, unconfigured                               |
| Input current range                  | 0 A ... 11 A (AC/DC)                            |
| Operate threshold                    | 2 % (of measuring range nominal value 1/5/10 A) |
| Setting range for min. input current | 0 A ... 200 mA                                  |
| Setting range for max. input current | 0 A ... 11 A                                    |
| Impulse form                         | AC, DC or distorted currents                    |
| Overload capacity                    | 2 x I <sub>N</sub> (continuous)                 |
| Surge strength                       | 20 x I <sub>N</sub> (1 s)                       |
| Frequency measuring range            | 15 Hz ... 400 Hz                                |
| Connection method                    | Screw connection                                |

#### Output data

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

#### Switching output

|                           |   |
|---------------------------|---|
| Output name               | Relay output                                |
| Contact type              | 1 PDT                                       |
| Contact material          | AgSnO, hard gold-plated                     |
| Maximum switching voltage | 30 V AC                                     |
|                           | 36 V DC                                     |
|                           | 250 V AC (when the gold layer is destroyed) |

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## Technical data

### Switching output

|                                      |  |
|--------------------------------------|--|
| Limiting continuous current          | 50 mA                                  |
|                                      | 2 A (when the gold layer is destroyed) |
| Output name                          | Transistor output, pnp                 |
| Output voltage range                 | 19 V ... 29 V (supply voltage - 1 V)   |
| Continuous load current              | 80 mA (Not short-circuit proof)        |
| Setting range of the threshold value | 1 % ... 110 %                          |
| Setting range of the response delay  | 0.1 s ... 20 s                         |
| Status display                       | Yellow LED                             |

### Power supply

|                          |                        |
|--------------------------|------------------------|
| Supply voltage range     | 20 V DC ... 30 V DC    |
| Max. current consumption | < 50 mA (without load) |

### Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection                            |
| Stripping length                 | 8 mm  |
| Screw thread                     | M3  |
| Conductor cross section solid    | 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                                   |

### General

|                                  |   |
|----------------------------------|---|
| Maximum transmission error       | < 0.5 % (of nominal range value under nominal conditions) |
| Temperature coefficient, typical | < 0.025 %/K   |
| Step response (10-90%)           | 330 ms (with AC)  |
|                                  | 40 ms (with DC)   |
| Status display                   | Green LED   |
| Overvoltage category             | III   |
| Degree of pollution              | 2   |
| Rated insulation voltage         | 300 V AC (to earth)                                       |
| Test voltage input/output        | 4 kV (50 Hz, 1 min.)                                      |
| Test voltage input/power supply  | 4 kV (50 Hz, 1 min.)                                      |
| Test voltage output/power supply | 500 V (50 Hz, 1 min.)                                     |
| Electromagnetic compatibility    | Conformance with EMC directive                            |
| Noise emission                   | EN 61000-6-4  |
| Noise immunity                   | EN 61000-6-2  |
| Color                            | green   |
| Housing material                 | Polyamide PA non-reinforced                               |
| Mounting position                | any   |

### Standards and Regulations

|                               |                                |
|-------------------------------|--------------------------------|
| Electromagnetic compatibility | Conformance with EMC directive |
| Noise emission                | EN 61000-6-4                   |

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### Technical data

#### Standards and Regulations

|                                  |   |
|----------------------------------|---|
| Noise immunity                   | EN 61000-6-2  |
| Connection in acc. with standard | CUL   |
| Low Voltage Directive            | Conformance with Low Voltage Directive                                |
| Conformance                      | CE-compliant  |
| UL, USA/Canada                   | 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 |

#### Conformance/approvals

|                |   |
|----------------|---|
| Designation    | CE  |
| Identification | CE-compliant  |
| Designation    | 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 |

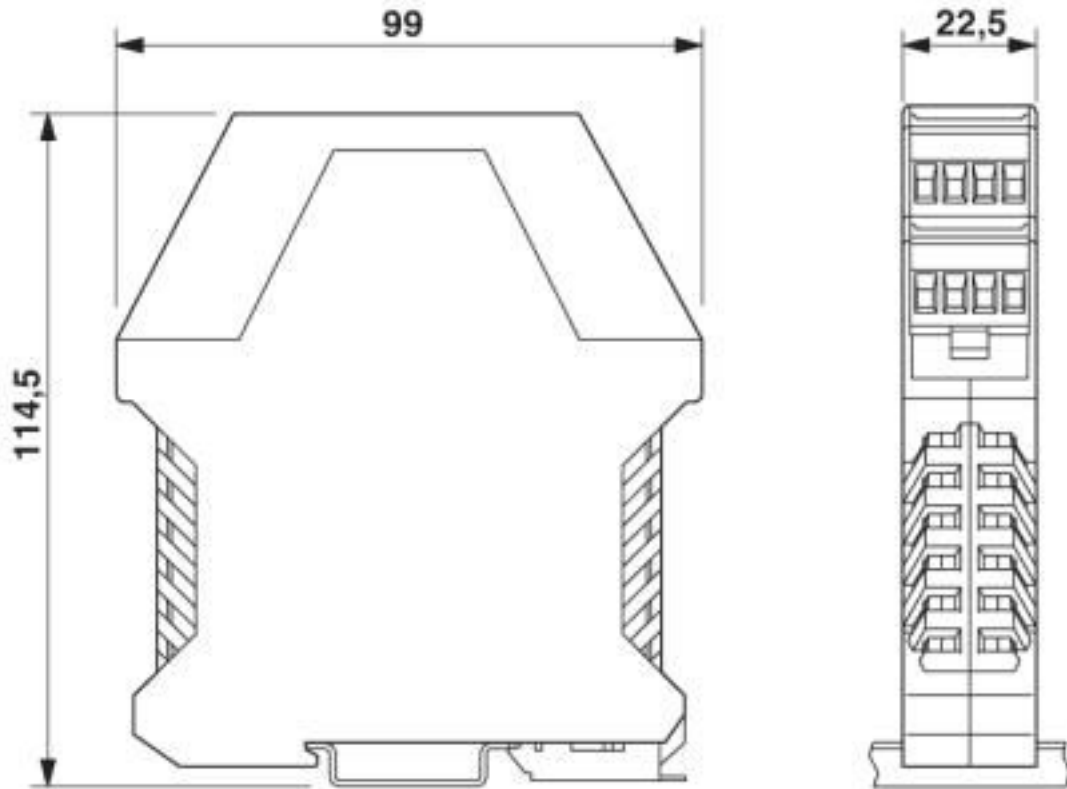
#### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

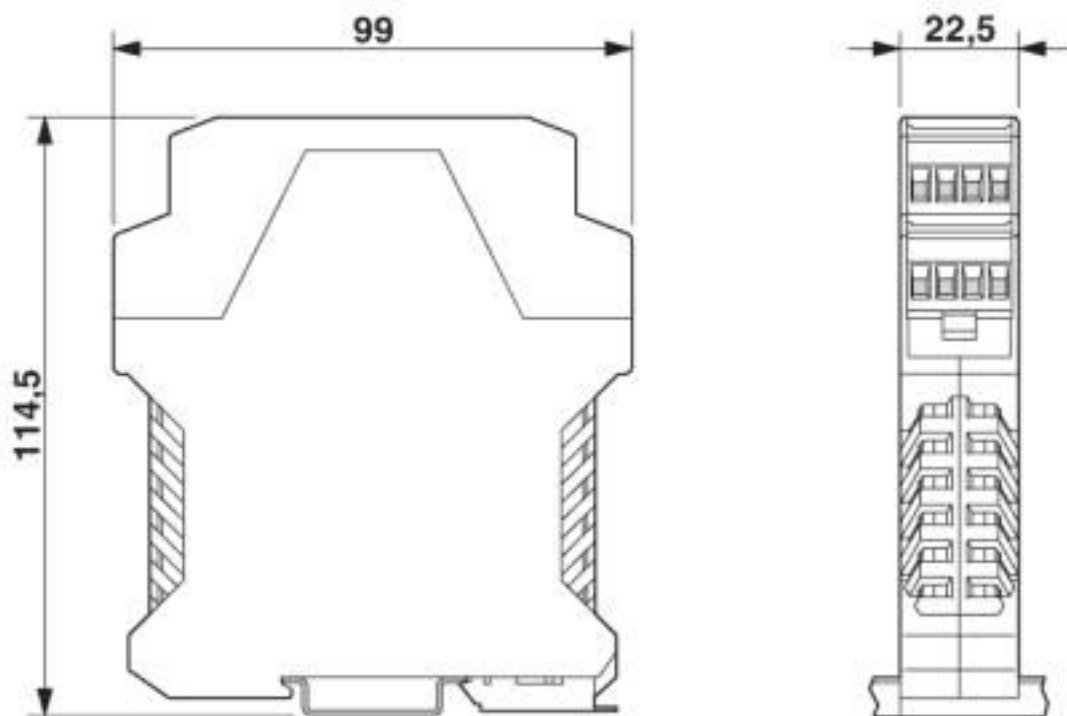
### Drawings

# Current transducers - MCR-S-1-5-UI-SW-DCI-NC - 2814731

Dimensional drawing

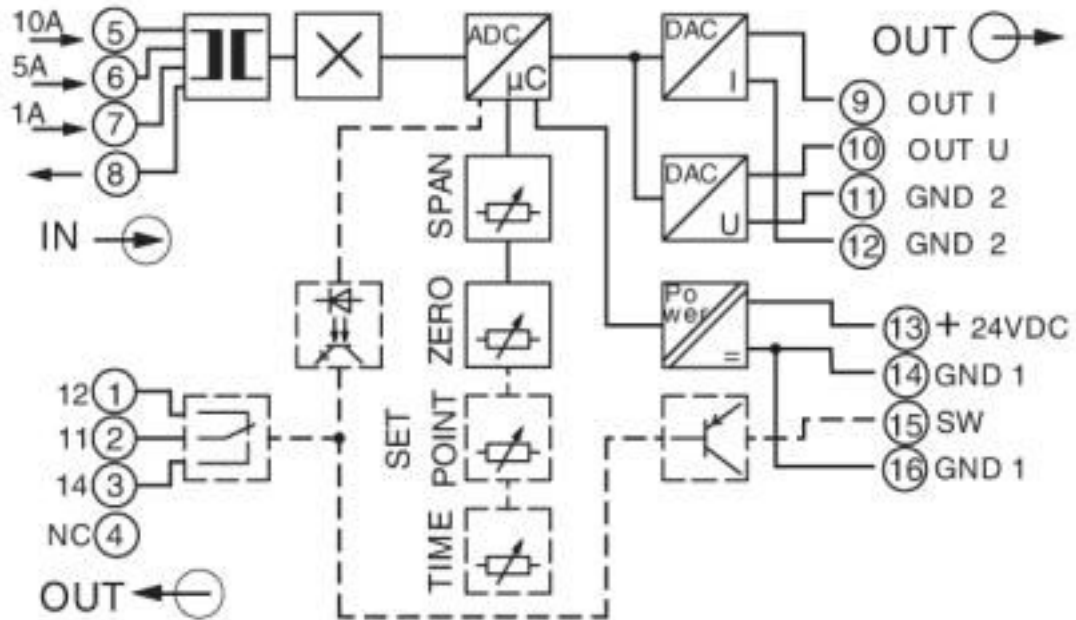


Dimensional drawing



## Current transducers - MCR-S-1-5-UI-SW-DCI-NC - 2814731

Circuit diagram



### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27210123 |
| eCl@ss 4.0    | 27271100 |
| eCl@ss 4.1    | 27200300 |
| eCl@ss 5.0    | 27200300 |
| eCl@ss 5.1    | 27200300 |
| eCl@ss 6.0    | 27210100 |
| eCl@ss 7.0    | 27210123 |
| eCl@ss 8.0    | 27210123 |
| eCl@ss 9.0    | 27210123 |

ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC002475 |
| ETIM 4.0 | EC002475 |
| ETIM 5.0 | EC002475 |
| ETIM 6.0 | EC002475 |
| ETIM 7.0 | EC002475 |

UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211506 |
| UNSPSC 7.0901 | 39121008 |
| UNSPSC 11     | 39121008 |
| UNSPSC 12.01  | 39121008 |

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## Classifications

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 39121032 |
| UNSPSC 18.0 | 39121032 |
| UNSPSC 19.0 | 39121032 |
| UNSPSC 20.0 | 39121032 |
| UNSPSC 21.0 | 39121032 |

## Approvals

### Approvals

#### Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

### Approval details

|               |  |   |               |
|---------------|--|---|---------------|
| UL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|---------------|--|---|---------------|

|                |  |   |               |
|----------------|--|---|---------------|
| cUL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|----------------|--|---|---------------|

|     |  |                      |
|-----|--|----------------------|
| EAC |  | RU*DE.*08.B.01852-19 |
|-----|--|----------------------|

|                  |  |
|------------------|--|
| cULus Recognized |  |
|------------------|--|

## Accessories

### Accessories

Arrester test system

## Current transducers - MCR-S-1-5-UI-SW-DCI-NC - 2814731

### Accessories

Cable - CM-KBL-RS232/USB - 2881078



Connecting cable D-9-SUB to USB, with adapter D-9-SUB to D-25-SUB.

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### Programming adapter

Adapter cable - MCR-TTL-RS232-E - 2814388



Software adapter cable (Stereo jack connector/D-SUB 25-pos.), 1.2 m length, for programming MCR-T-..., MCR-S-... and MCR-f-... modules

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