

# MCR-SL-CUC-100-I - Universal current transducer



2308027

<https://www.phoenixcontact.com/ae/products/2308027>

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Universal current transducer, for measuring AC, DC, and distorted currents, 0 ... 100 A input current, 4 ... 20 mA output

## Your advantages

- Variable mounting on DIN rail and mounting panel
- Compact dimensions also enable distributed use
- Simple connection technology thanks to COMBICON plug-in connection terminal blocks
- 3-way isolation
- Universal current measurement, no shunt required

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2308027       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CMM           |
| Product key                          | CMMA31        |
| GTIN                                 | 4046356433808 |
| Weight per piece (including packing) | 298.5 g       |
| Weight per piece (excluding packing) | 290 g         |
| Customs tariff number                | 90303370      |
| Country of origin                    | CN            |

## Technical data

### Product properties

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

### Electrical properties

|                                                 |                                           |
|-------------------------------------------------|-------------------------------------------|
| Linearity error                                 | $\leq \pm 1\%$ (From the range end value) |
| Maximum power dissipation for nominal condition | 1 W                                       |
| Step response (10-90%)                          | 150 ms                                    |
| Temperature coefficient, typical                | 0.02 %/K (0 °C ... 60 °C)                 |
|                                                 | 0.04 %/K (-40 °C ... 65 °C)               |
| Maximum transmission error                      | $\leq \pm 1\%$ (of final value)           |
| Rated insulation voltage                        | 300 V AC                                  |

#### Electrical isolation Input/output

|              |                         |
|--------------|-------------------------|
| Test voltage | 3.5 kV AC (50 Hz, 60 s) |
|--------------|-------------------------|

#### Electrical isolation Input/power supply

|              |                         |
|--------------|-------------------------|
| Test voltage | 3.5 kV AC (50 Hz, 60 s) |
|--------------|-------------------------|

#### General

|                |   |
|----------------|---|
| Accuracy class | 1 |
|----------------|---|

#### Supply

|                          |                     |
|--------------------------|---------------------|
| Nominal supply voltage   | 24 V DC             |
| Supply voltage range     | 20 V DC ... 30 V DC |
| Max. current consumption | $(30 + I_{OUT})$ mA |
| Power consumption        | 1.65 W              |

### Input data

#### Measurement

|                           |                              |
|---------------------------|------------------------------|
| Number of inputs          | 1                            |
| Input current range       | 0 A AC/DC ... 100 A AC/DC    |
| Overload capacity         | $6 \times I_{IN}$            |
| Frequency measuring range | 20 Hz ... 6000 Hz (0 Hz)     |
| Curve type                | AC, DC or distorted currents |

#### Current transformer

|                                     |                   |
|-------------------------------------|-------------------|
| Rated frequency: Standard converter | 20 Hz ... 6000 Hz |
| Primary rated current $I_{pn}$      | 100 A             |
| Accuracy class                      | 1                 |

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## Output data

Signal: Current

|                                 |                |
|---------------------------------|----------------|
| Current output signal           | 4 mA ... 20 mA |
| Max. current output signal      | < 25 mA        |
| Load/output load current output | < 300 $\Omega$ |

## Connection data

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Connection method                | Push-in connection                           |
| Stripping length                 | 10 mm                                        |
| Conductor cross-section rigid    | 0.25 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 ... 12                                    |
| Connection method                | Through connection                           |

## Dimensions

Item dimensions

|        |         |
|--------|---------|
| Width  | 90 mm   |
| Height | 33.8 mm |
| Depth  | 85 mm   |

Circular conductor

|          |       |
|----------|-------|
| Diameter | 32 mm |
|----------|-------|

## Material specifications

|                  |                    |
|------------------|--------------------|
| Color            | green (RAL 6021)   |
| Housing material | Franyl B63 V0 GV30 |

## Environmental and real-life conditions

Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Degree of protection                    | IP20             |
| Ambient temperature (operation)         | -40 °C ... 65 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

## Approvals

CE

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

UKCA

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

UL, USA/Canada

|                |                       |
|----------------|-----------------------|
| Identification | UL/C-UL Listed UL 508 |
|----------------|-----------------------|

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## EMC data

Noise immunity

EN 61000-6-2

Noise emission

Standards/regulations

EN 61000-6-4

## Mounting

Mounting type

DIN rail mounting

# MCR-SL-CUC-100-I - Universal current transducer

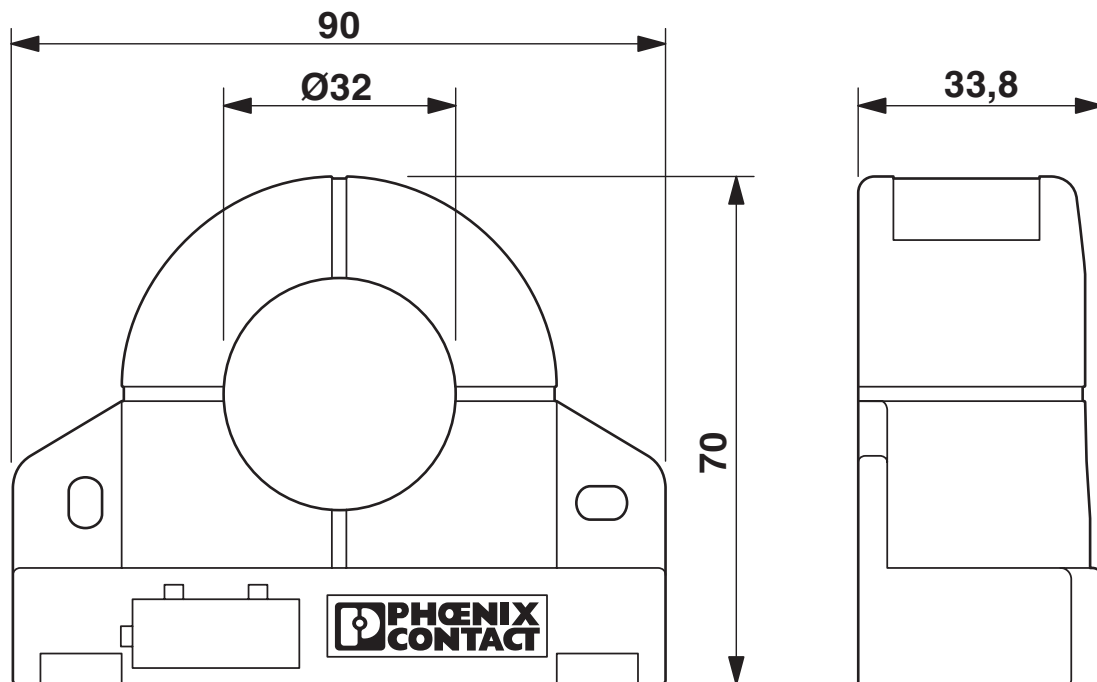
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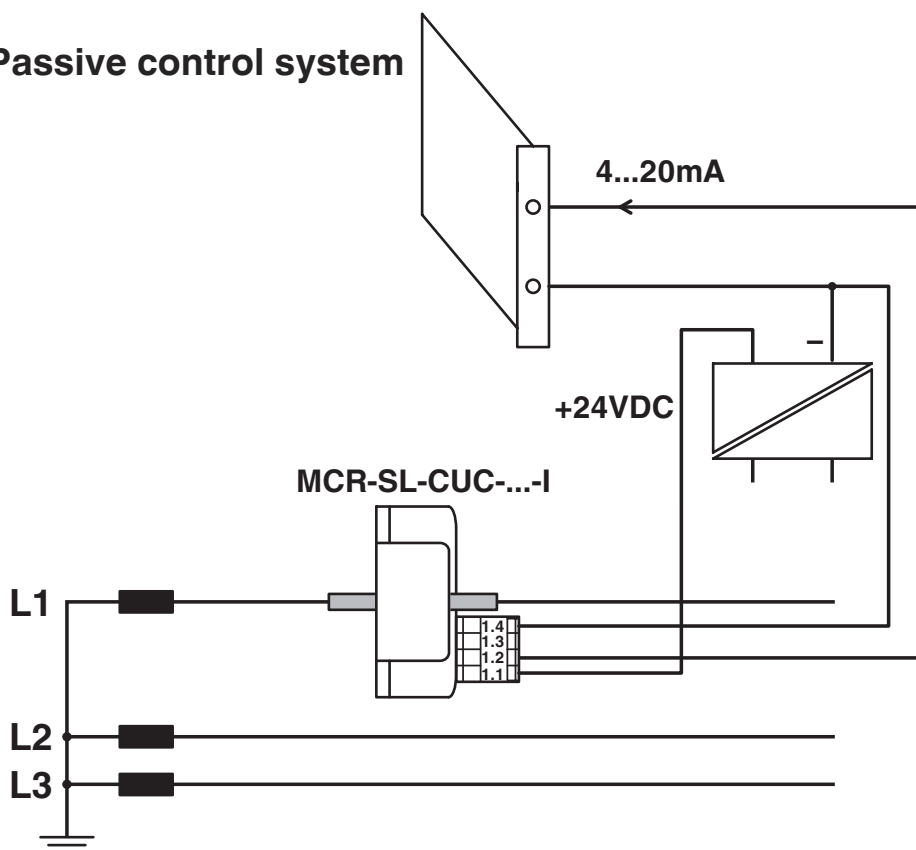
## Drawings

Dimensional drawing



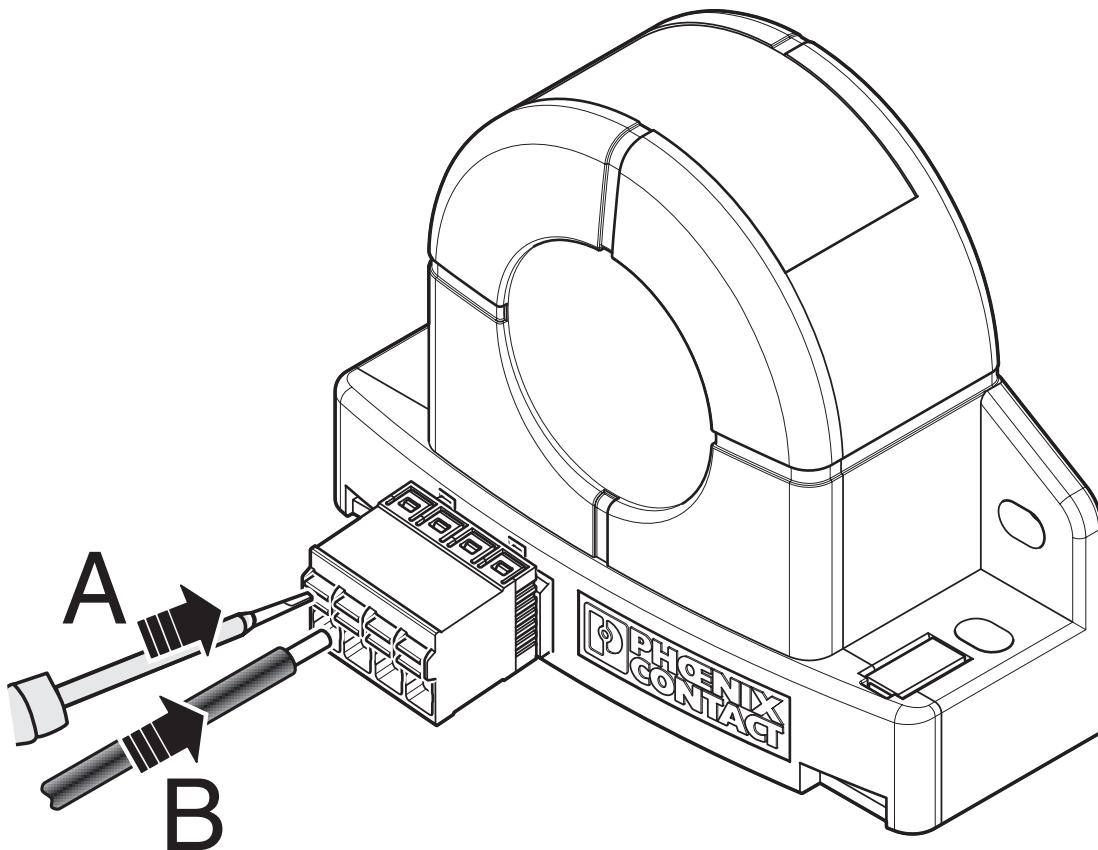
Application drawing

## Passive control system

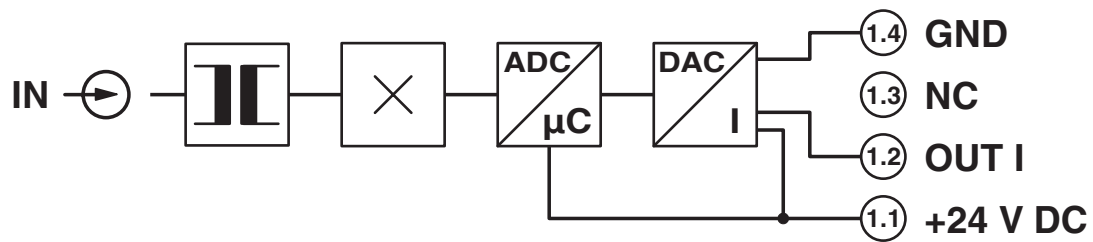


Current monitoring

Schematic diagram



Circuit diagram



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## Approvals

📄 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/ae/products/2308027>



**EAC**

Approval ID: RU\*DE.\*08.B.01852-19



**UL Listed**

Approval ID: E123528



**cUL Listed**

Approval ID: E123528

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27210123 |
| ECLASS-15.0 | 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, No exemptions |
|-----------------------------------------|--------------------|

### China RoHS

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|                                        | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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