

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



2308108

<https://www.phoenixcontact.com/pc/products/2308108>

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Universal current transducer, for measuring DC, AC, and distorted currents, 0 ... 100 A input current, 0 ... 10 V 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                          | 2308108             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Product key                          | CK4A32              |
| Catalog page                         | Page 228 (C-5-2019) |
| GTIN                                 | 4046356569736       |
| Weight per piece (including packing) | 297 g               |
| Weight per piece (excluding packing) | 260 g               |
| Customs tariff number                | 90303370            |
| Country of origin                    | CN                  |

## Technical data

### Product properties

|                            |                    |
|----------------------------|--------------------|
| Product type               | Current 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) |
|--------------|-------------------------|

#### Supply

|                          |                     |
|--------------------------|---------------------|
| Nominal supply voltage   | 24 V DC             |
| Supply voltage range     | 20 V DC ... 30 V DC |
| Max. current consumption | 30 mA               |

### Input data

#### Measurement

|                           |                              |
|---------------------------|------------------------------|
| Number of inputs          | 1                            |
| Configurable/programmable | no                           |
| Input current range       | 0 A AC/DC ... 100 A AC/DC    |
| Overload capacity         | 6 x $I_{IN}$                 |
| Frequency measuring range | 20 Hz ... 6000 Hz (0 Hz)     |
| Curve type                | AC, DC or distorted currents |

### Output data

#### Signal: Voltage

|                                 |                          |
|---------------------------------|--------------------------|
| Voltage output signal           | 0 V ... 10 V             |
| Load/output load voltage output | $\geq 10\text{ k}\Omega$ |

### Connection data

|                   |                    |
|-------------------|--------------------|
| Connection method | Push-in connection |
|-------------------|--------------------|

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|                                  |                      |
|----------------------------------|----------------------|
| Stripping length                 | 10 mm                |
| Conductor cross section rigid    | 0.25 mm² ... 2.5 mm² |
| Conductor cross section flexible | 0.2 mm² ... 2.5 mm²  |
| 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

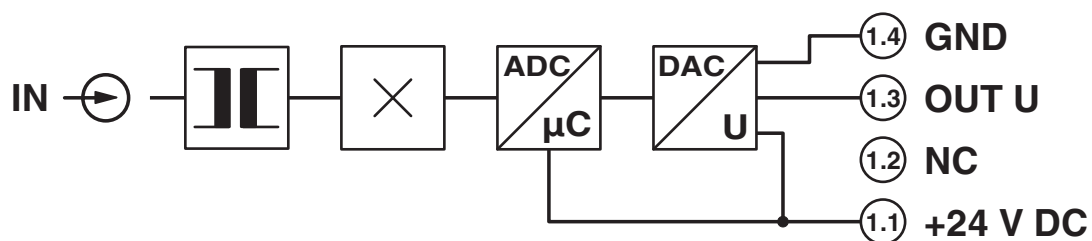
|                |                       |
|----------------|-----------------------|
| Identification | UL/C-UL Listed UL 508 |
|----------------|-----------------------|

## Mounting

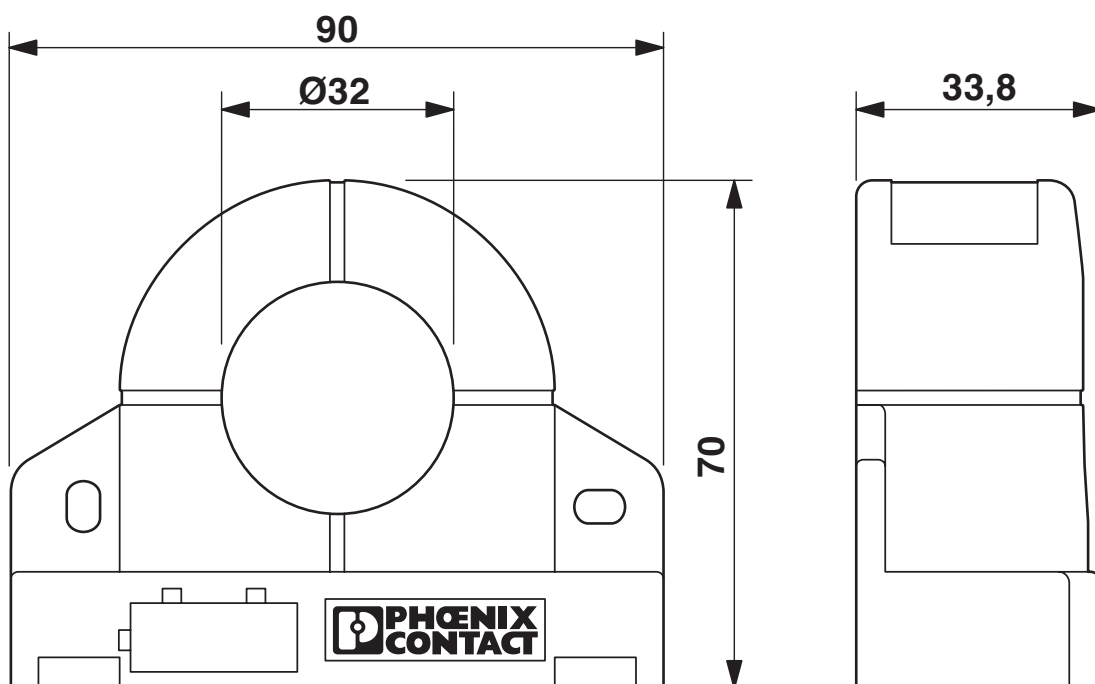
|               |                   |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

## Drawings

Circuit diagram



Dimensional drawing



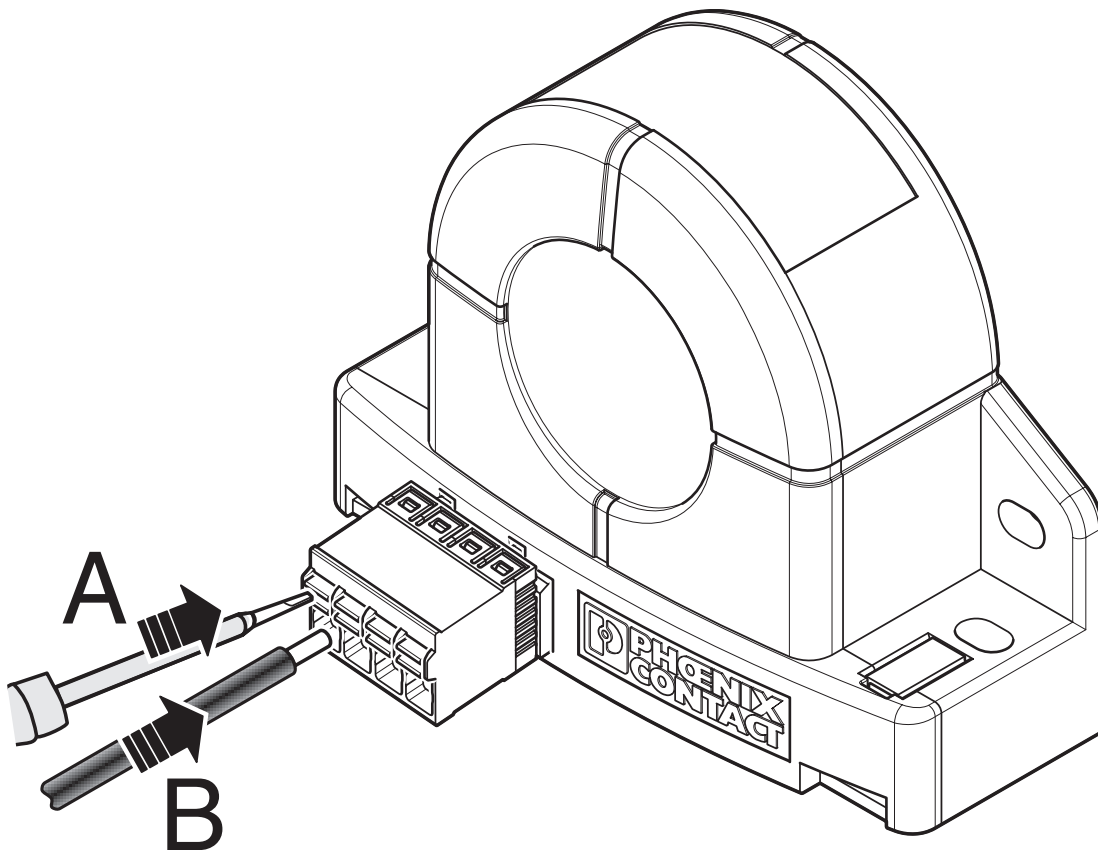
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Schematic diagram



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## Approvals

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**EAC**

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



**UL Listed**

Approval ID: E123528



**cUL Listed**

Approval ID: E123528

**cULus Listed**

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27210123 |
| ECLASS-12.0 | 27210123 |
| ECLASS-13.0 | 27210123 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002475 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121000 |
|-------------|----------|

Environmental product compliance

|                                         |                                                                                                                                                                                                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EU RoHS                                 |                                                                                                                                                                                                                                   |
| Fulfills EU RoHS substance requirements | Yes, No exemptions                                                                                                                                                                                                                |
| China RoHS                              |                                                                                                                                                                                                                                   |
| Environment friendly use period (EFUP)  | EFUP-25                                                                                                                                                                                                                           |
|                                         | 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.)     | No substance above 0.1 wt%                                                                                                                                                                                                        |