# ECM-UC-100A-MTCP - Current measuring transducer

1191984

https://www.phoenixcontact.com/us/products/1191984

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CRA-READY



Current measuring transducers for measuring AC, DC, and distorted currents. Configuration via USB-C interface via the web server (without 24 V DC). Current measuring ranges: 0 A ... 125 A. Modbus/TCP interface configuration (RJ45), Standard configuration, Push-in connection. The product is being prepared for compliance with the Cyber Resilience Act (CRA).

## Product description

Intuitive configuration and precise measurement
The ECM UC current measuring transducer saves you a lot of time with the intuitive device configuration via web-based management. The products detect AC, DC, and distorted currents with an accuracy of < 0.5%.

## Your advantages

- Intuitive configuration and visualization of measured data via user-guided WBM
- Easy connection to the PC via standard USB-C cable without additional 24 V supply
- High measuring accuracy of < 0.5% in the measuring ranges
- Digital further processing of the measured data
- Reliable even at temperatures down to -40°C and installation altitudes of up to 4000 m

## Commercial data

| | |
|---|---|
| Item number | 1191984 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C444 |
| Product key | CMMA34 |
| GTIN | 4063151243531 |
| Weight per piece (including packing) | 139.62 g |
| Weight per piece (excluding packing) | 113.5 g |
| Customs tariff number | 85043129 |
| Country of origin | DE |

# Technical data

## Notes

### Note on application

| | |
|---|---|
| Note on application | As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA. |

## Product properties

| | |
|---|---|
| Product type | Current measuring transducer |
| Special properties | The product is being prepared for compliance with the Cyber Resilience Act (CRA) |

### Insulation characteristics

| | |
|---|---|
| Insulation | Safe isolation in accordance with IEC/EN 61010-1 |
| Overvoltage category | III (300 V) |
| Pollution degree | 2 |

## Electrical properties

| | |
|---|---|
| Step response (10-90%) | 200 ms (AC/DC) |
| | 20 ms (DC) |
| Maximum temperature coefficient | < 0.03 %/K |
| Maximum transmission error | 0.5 % (of nominal range value under nominal conditions) |
| Rated insulation voltage | 300 V AC (to earth) |

### Electrical isolation IEC 61010-2-030

| | |
|---|---|
| Standards/regulations | IEC 61010-2-030 |
| Measuring category | III (300 V) |

### Electrical isolation Input/output

| | |
|---|---|
| Test voltage | 4 kV AC (50 Hz, 60 s) |

### Electrical isolation Input/power supply

| | |
|---|---|
| Test voltage | 4 kV AC (50 Hz, 60 s) |

### Electrical isolation Output/supply

| | |
|---|---|
| Test voltage | 2 kV AC (50 Hz, 60 s) |

### Supply

| | |
|---|---|
| Nominal supply voltage | 24 V DC |
| Nominal supply voltage range | 12 V DC ... 24 V DC -20 % ... +25 % |
| Supply voltage range | 9.6 V DC ... 30 V DC |
| Power consumption | ≤ 2 W (30 V DC) |

## Input data

Measurement

| | |
|---|---|
| Input current range | 0 A AC ... 100 A AC |
| | -100 A DC ... 100 A DC |
| Measuring range | 0 A AC/DC ... 50 A AC/DC |
| | 0 A AC/DC ... 100 A AC/DC |
| Setting range for min. input current | 0 A AC/DC ... 9.4 A AC/DC |
| | 0 A AC/DC ... 18.8 A AC/DC |
| Setting range for max. input current | 0 A AC/DC ... 62.5 A AC/DC (DIN/EN 61010-1) |
| | 0 A AC/DC ... 125 A AC/DC (DIN/EN 61010-1) |
| | -125 A DC ... 125 A DC (DIN/EN 61010-1) |
| Overload capacity | 2 x $I_N$ (continuous), depending on the fed-through conductor |
| Surge strength | 20 x $I_N$ (1 s), depending on the fed-through conductor |
| Frequency measuring range | 0 Hz ... 100 Hz |
| | 0 Hz ... 200 Hz |
| | 0 Hz ... 500 Hz |
| | 0 Hz ... 1000 Hz |
| Curve type | AC, DC or distorted currents |

## Connection data

| | |
|---|---|
| Connection method | Push-in connection |
| Stripping length | 10 mm |
| Conductor cross-section rigid | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section AWG | 24 ... 13 |

Circular conductor

| | |
|---|---|
| Conductor cross-section rigid | 25 mm² |
| Conductor cross-section AWG | 3 |

## Interfaces

WBM

| | |
|---|---|
| Designation | WBM: Default address, USB-C interface |
| IP address | 192.168.128.1 |

Modbus TCP

| | |
|---|---|
| Designation | Modbus/TCP interface configuration |
| Note | Register contents, see register table |
| Connection method | RJ45 |
| IP address | 192.168.1.2 |
| | 255.255.255.0 (Subnet) |

## Dimensions

Item dimensions

| | |
|---|---|
| Width | 22.6 mm |

| | |
|---|---|
| Height | 106.7 mm |
| Depth | 113.8 mm |
| Depth (Device depth (DIN rail mounting)) | 114.5 mm (Snapped onto DIN rail NS 35/7,5 in accordance with EN 60715) |

Circular conductor

| | |
|---|---|
| Diameter | 11 mm |

## Material specifications

| | |
|---|---|
| Color | gray (RAL 7042) |
| Flammability rating according to UL 94 | V0 (Housing) |
| Housing material | PA 6.6-FR |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 60 °C |
| | -40 °F ... 140 °F |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 4000 m |
| Permissible humidity (operation) | ≤ 95 % (non-condensing) |

## Approvals

CE

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

UL, USA/Canada

| | |
|---|---|
| Identification | Ind. Cont. Eq. E238705-E196811 |

## 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 61010-1 |

## Mounting

| | |
|---|---|
| Mounting position | vertical or horizontal |

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1191984

**cULus Listed**
Approval ID: E238705-20221221

**cULus Listed**
Approval ID: E196811-20231108

**cULus Listed**
Approval ID: E196811-20231109

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27210123 |
| ECLASS-15.0 | 27210123 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002475 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 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.) | Lead(CAS: 7439-92-1) |
| | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol(CAS: 79-94-7) |

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