

# ECM-UC-10A-UI-REL - Current measuring transducer



1698164

<https://www.phoenixcontact.com/gb/products/1698164>

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Current measuring transducers for measuring AC, DC, and distorted currents. Configuration via USB-C interface via the web server (without 24 V DC). Four current measuring ranges: 0 A ... 0.1 A to 0 A ... 12.5 A. Relay output, Standard configuration, Push-in connection

## Commercial data

Item number	1698164
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CMMA33
Product key	CMMA33
GTIN	4067923262850
Weight per piece (including packing)	171.3 g
Weight per piece (excluding packing)	171.3 g
Customs tariff number	85437090
Country of origin	DE

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## Technical data

### Product properties

#### 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	< 0.02 %/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)
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#### Electrical isolation Input/power supply

Test voltage	4 kV AC (50 Hz, 60 s)
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#### Electrical isolation Output/supply

Test voltage	2 kV AC (50 Hz, 60 s)
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### Supply

Nominal supply voltage range	12 V DC ... 24 V DC -20 % ... +25 %
Supply voltage range	9.6 V DC ... 30 V DC
Power consumption	≤ 2.3 W (30 V DC)

### Input data

#### Signal: digital

Voltage input signal	0 V DC ... 30 V DC
Current input signal	2 mA ... 15 mA

#### Measurement

Input current range	0 A AC ... 10 A AC
	-10 A DC ... 10 A DC
Measuring range	0 A AC/DC ... 0.1 A AC/DC
	0 A AC/DC ... 1 A AC/DC
	0 A AC/DC ... 5 A AC/DC
	0 A AC/DC ... 10 A AC/DC

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Setting range for min. input current	0 A AC/DC ... 100 mA AC/DC
Setting range for max. input current	0 A AC/DC ... 12.5 A AC/DC (DIN/EN 61010-1)
	0 A AC/DC ... 10 A AC/DC (UL 61010-1)
	-12.5 A DC ... 12.5 A DC (DIN/EN 61010-1)
	-10 A DC ... 10 A DC (UL 61010-1)
Overload capacity	$2 \times I_N$
Surge strength	$10 \times I_N$
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

## Output data

### Switching: Relay

Contact switching type	1 changeover contact
Contact material	AgNi
Minimum switching voltage	12 V (10 mA)
Maximum switching voltage	250 V AC
	48 V DC
Limiting continuous current	6 A AC (250 V AC, 50/60 Hz)
	1 A DC (48 V DC)

### Signal: Voltage/current

Voltage output signal	0 V ... 10 V
	0 V ... 5 V
	1 V ... 5 V
	2 V ... 10 V
	-10 V ... 10 V
	-5 V ... 5 V
	10 V ... -10 V
	5 V ... -5 V
	10 V ... 0 V
	5 V ... 0 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 k $\Omega$
Load/output load current output	< 500 $\Omega$

### Signal: digital

Max. voltage output signal	24 V DC
Max. current output signal	$\leq 100$ mA

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## Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	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 ... 13

## Interfaces

### WBM

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

## 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)

## 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
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### UL, USA/Canada

Identification	Ind. Cont. Eq. E238705-E196811
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## EMC data

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

## Noise emission

Standards/regulations	EN 61000-6-4
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## Standards and regulations

Standards/regulations	IEC 61010-1
Standards/regulations	IEC/EN 61131-2 (type 3)
Standards/regulations	IEC/EN 61131-2 (type 3)

## Mounting

Mounting position	vertical or horizontal
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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1698164>



**cULus Listed**

Approval ID: E238705



**cULus Listed**

Approval ID: E196811



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## Classifications

### ECLASS

ECLASS-13.0	27210123
ECLASS-15.0	27210123

### ETIM

ETIM 9.0	EC002475
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### UNSPSC

UNSPSC 21.0	39121000
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## 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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