

ECM-UC-100A-UI-REL - Current measuring transducer



1698172

<https://www.phoenixcontact.com/us/products/1698172>

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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). Current measuring ranges: 0 A ... 125 A. Relay output, Standard configuration, Push-in connection

Commercial data

Item number	1698172
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C444
Product key	CMMA34
GTIN	4067923263055
Weight per piece (including packing)	163 g
Weight per piece (excluding packing)	141.2 g
Customs tariff number	85437090
Country of origin	DE

Technical data

Product properties

Product type	Current measuring transducer
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/power supply

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

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 ... 100 A AC -100 A DC ... 100 A DC
Measuring range	0 A AC/DC ... 50 A AC/DC
Setting range for min. input current	0 A AC/DC ... 9.4 A AC/DC

Setting range for max. input current	0 A AC/DC ... 18.8 A AC/DC 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 10 Hz ... 100 Hz 10 Hz ... 200 Hz 10 Hz ... 500 Hz 10 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 kΩ
Load/output load current output	< 500 Ω

Signal: digital

Max. voltage output signal	24 V DC
Max. current output signal	≤ 100 mA

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Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 13

Circular conductor

Conductor cross-section rigid	25 mm ²
Conductor cross-section AWG	3

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)

Circular conductor

Diameter	11 mm
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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

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Certificate	CE-compliant
UKCA	
Certificate	UKCA-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
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/us/products/1698172>



cULus Listed

Approval ID: E238705



cULus Listed

Approval ID: E196811



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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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