

# MACX MCR-SL-CAC-12-I-UP - Current measuring transducer



2810638

<https://www.phoenixcontact.com/us/products/2810638>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Current measuring transducer for 5 A and 12 A AC, the output signal 0...20 mA or 4...20 mA, can be configured using a DIP switch with an operating mode indication through an LED

## Your advantages

- Input/output can be configured via DIP switches

## Commercial data

Item number	2810638
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C444
Product key	CMMA21
GTIN	4046356510356
Weight per piece (including packing)	218.6 g
Weight per piece (excluding packing)	140 g
Customs tariff number	85437090
Country of origin	DE

# MACX MCR-SL-CAC-12-I-UP - Current measuring transducer



2810638

<https://www.phoenixcontact.com/us/products/2810638>

## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
----------	---

### Product properties

Product type	Current measuring transducer
--------------	------------------------------

#### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Electrical properties

Maximum power dissipation for nominal condition	< 0.9 W (24 V DC) < 3.4 W (230 V AC)
Protective circuit	Surge protection; 35 V suppressor diode
Step response (10-90%)	≤ 300 ms 200 ms
Maximum temperature coefficient	< 0.02 %/K
Temperature coefficient, typical	< 0.015 %/K
Maximum transmission error	≤ 0.5 % (of nominal range value under nominal conditions)
Reverse polarity protection	yes
Rated insulation voltage	300 V AC (to earth)

#### Electrical isolation Input/output

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

#### Electrical isolation Output/supply

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

#### Supply

Supply voltage range	19.2 V AC/DC ... 253 V AC/DC
Max. current consumption	< 33 mA (24 V DC)
Power consumption	< 0.8 W (24 V DC)

### Input data

#### Measurement

Configurable/programmable	Via DIP switches
Input current range	0 A AC ... 5 A AC (configurable) 0 A AC ... 12 A AC (configurable)
Voltage input signal	≤ 300 V AC
Input impedance	< 50 mΩ
Overload capacity	1 x I <sub>N</sub> (continuous)

# MACX MCR-SL-CAC-12-I-UP - Current measuring transducer



2810638

<https://www.phoenixcontact.com/us/products/2810638>

Surge strength	8 x I <sub>N</sub> (1 s)
Nominal frequency f <sub>N</sub>	50 Hz
Frequency measuring range	45 Hz ... 65 Hz
Curve type	Sine

## Output data

Signal: Current

Configurable/programmable	Via DIP switches
Open-circuit voltage	15 V
Current output signal	0 mA ... 20 mA (configurable) 4 mA ... 20 mA (configurable)
Max. current output signal	25 mA
Load/output load current output	< 500 Ω (20 mA)
Ripple	< 10 mV <sub>PP</sub> (500 Ω / 20 mA)
Status display	LED red (error), LED green (ready)

## Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
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 ... 14
Tightening torque	0.5 Nm ... 0.6 Nm

## Interfaces

Data communication (bypass)

Limit frequency (3 dB)	approx. 3 Hz
------------------------	--------------

## Dimensions

Item dimensions

Width	22.5 mm
Height	104 mm
Depth	114.5 mm

## Material specifications

Color	gray (RAL 7042)
Housing material	Polyamide PA non-reinforced

## Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 65 °C

# MACX MCR-SL-CAC-12-I-UP - Current measuring transducer



2810638

<https://www.phoenixcontact.com/us/products/2810638>

	-4 °F ... 149 °F
Ambient temperature (storage/transport)	-40 °C ... 85 °C (-40 °F ... 185 °F)
Altitude	≤ 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)

## Approvals

CE

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

## EMC data

Electromagnetic compatibility	Conformance with EMC directive
Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.

Noise emission

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

Electrostatic discharge

Standards/regulations	EN 61000-4-2
-----------------------	--------------

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
-----------------------	--------------

Electromagnetic HF field

Comments	Criterion A
----------	-------------

Fast transients (burst)

Standards/regulations	EN 61000-4-4
-----------------------	--------------

Fast transients (burst)

Comments	Criterion B
----------	-------------

Surge current load (surge)

Standards/regulations	EN 61000-4-5
-----------------------	--------------

Surge current load (surge)

Comments	Criterion B
----------	-------------

Conducted interference

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

## Mounting

Mounting type	DIN rail mounting
Mounting position	any

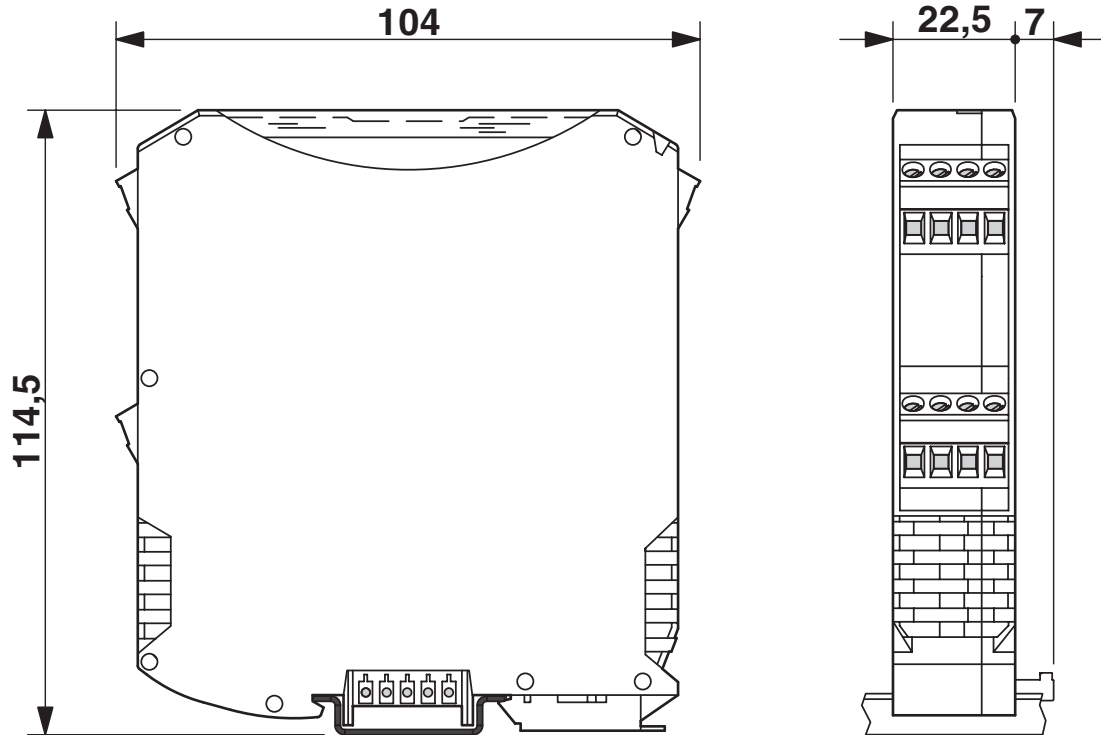
# MACX MCR-SL-CAC-12-I-UP - Current measuring transducer

2810638

<https://www.phoenixcontact.com/us/products/2810638>

## Drawings

Dimensional drawing



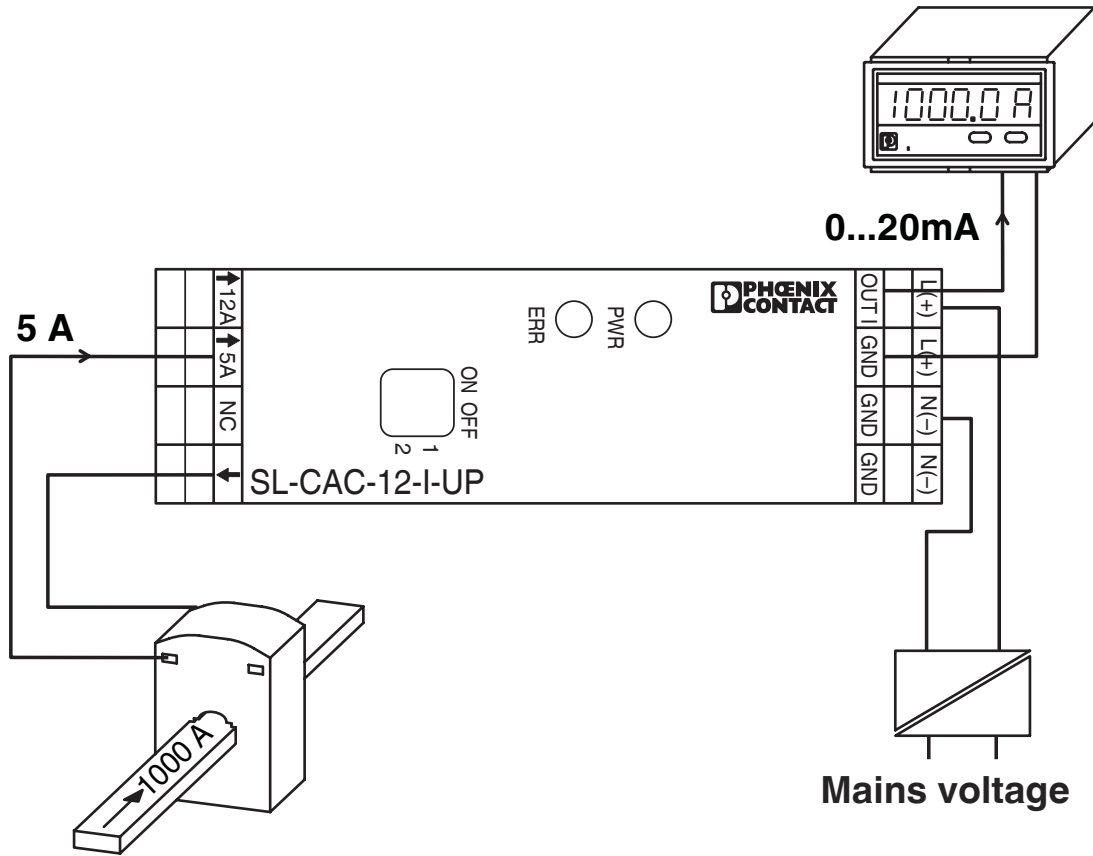
# MACX MCR-SL-CAC-12-I-UP - Current measuring transducer



2810638

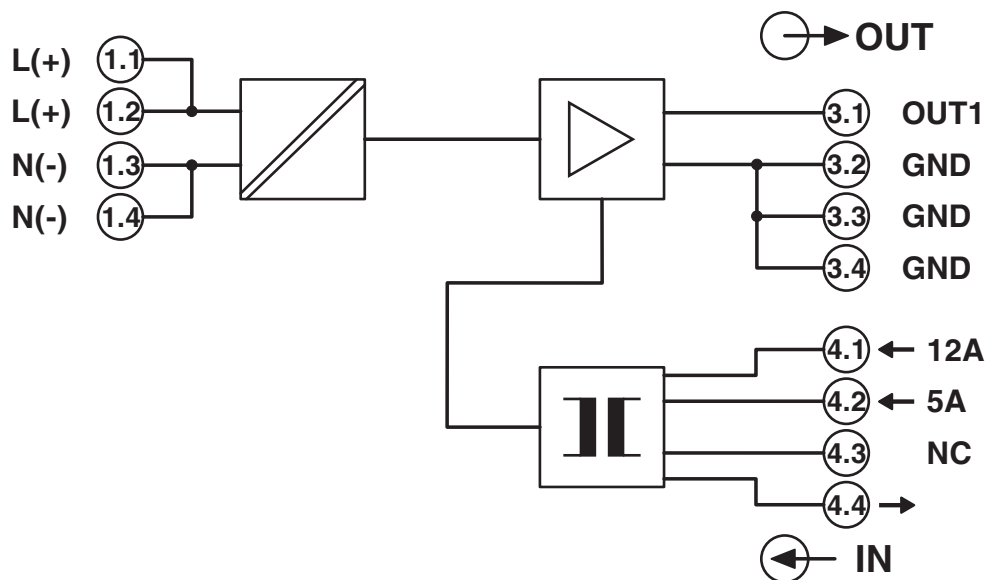
<https://www.phoenixcontact.com/us/products/2810638>

Application drawing



Current measurement

Circuit diagram



# MACX MCR-SL-CAC-12-I-UP - Current measuring transducer



2810638

<https://www.phoenixcontact.com/us/products/2810638>

## Classifications

### ECLASS

ECLASS-13.0	27210123
ECLASS-15.0	27210123

### ETIM

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

### UNSPSC

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

# MACX MCR-SL-CAC-12-I-UP - Current measuring transducer



2810638

<https://www.phoenixcontact.com/us/products/2810638>

## 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)
	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1)
SCIP	1bf10248-ee20-421c-8937-809477c16e6a

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)