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

2810638

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

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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

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_N (continuous)

Surge strength	8 x I_N (1 s)
Nominal frequency f_N	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_{PP} (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 mm² ... 2.5 mm²
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
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

	-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

ATEX

Identification	II 3 G Ex nA IIC T4 Gc X

UKCA Ex (UKEX)

Identification	II 3 G Ex nA IIC T4 Gc
Certificate	PxCIF21UKEX2810638X

EAC Ex

Identification	Ex nA IIC T4 Gc
Certificate	BY/112 02.01 TP012 103.01 00078

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

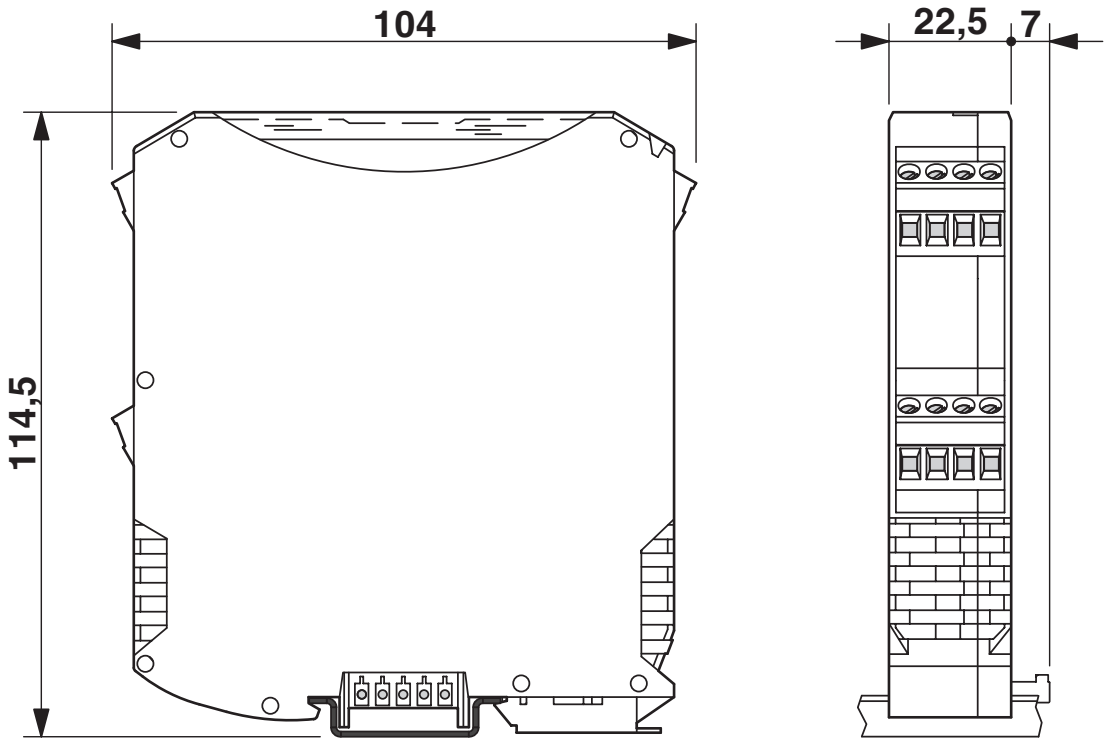
Standards/regulations	EN 61000-4-6

Mounting

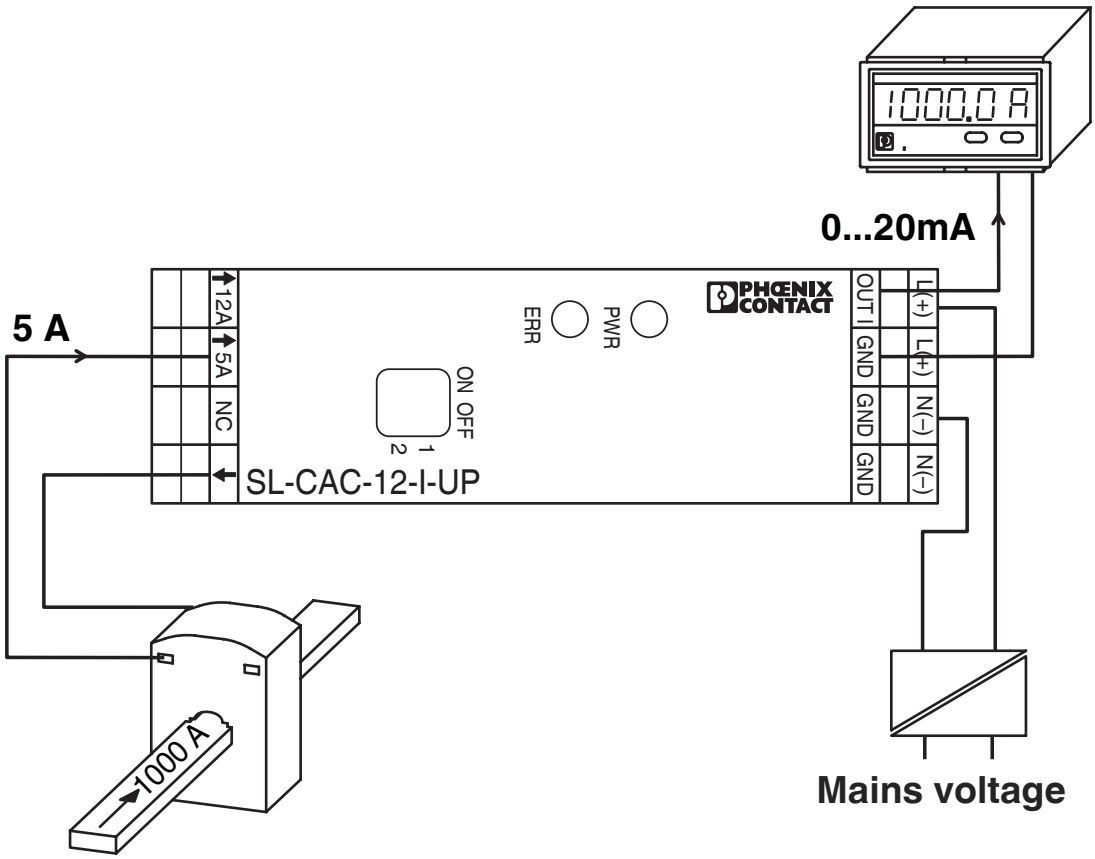
Mounting type	DIN rail mounting
Mounting position	any

Drawings

Dimensional drawing

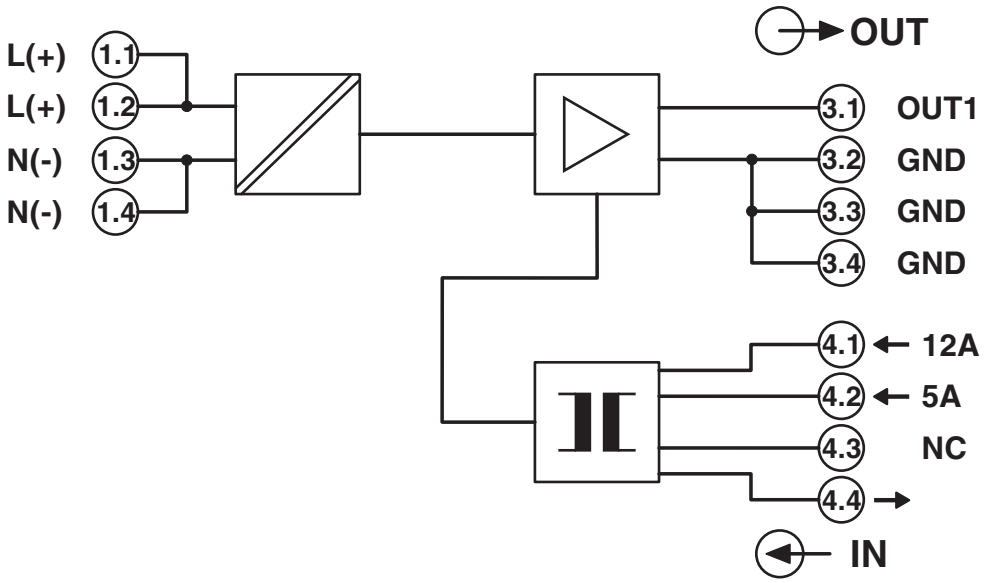


Application drawing



Current measurement

Circuit diagram



Classifications

ECLASS

ECLASS-13.0	27210123
ECLASS-15.0	27210123

ETIM

ETIM 9.0	EC002475

UNSPSC

UNSPSC 21.0	39121000

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

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