

## Current transducers - MACX MCR-SL-CAC- 5-I - 2810612

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Current measuring transducer for 1 A and 5 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

### Product Description

The MACX MCR-SL-CAC-5-I(-UP) current measuring transducers convert sinusoidal alternating currents of 1 A or 5 A into standard analog signals 0...20 mA or 4...20 mA. The DIP switches, which can be accessed on the upper side of the housing, can be used to configure the input and output current.

The MACX MCR-SL-CAC-5-I current transducer contains a supply voltage range of 19.2 V DC to 30 V DC.


The MACX MCR-SL-CAC-5-I current transducer contains a long range version with a supply voltage range of 19.2 V AC/DC to 253 V AC/DC.

### Your advantages

- Input/output can be configured via DIP switches



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 153775
GTIN	4046356153775

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

Width	22.5 mm
Height	104 mm
Depth	114.5 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C (-4 °F...149 °F)
Ambient temperature (storage/transport)	-40 °C ... 85 °C (-40 °F ... 185 °F)

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## Technical data

### Ambient conditions

Maximum altitude	2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Degree of protection	IP20
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

### Input data

Configurable/programmable	Via DIP switches
Input current range	0 A ... 5 A
Setting range for min. input current	0 A AC ... 1 A (configurable)
Setting range for max. input current	0 A AC ... 5 A (configurable)
Overload capacity	2 x I <sub>N</sub> (continuous)
Surge strength	20 x I <sub>N</sub> (1 s)
Nominal frequency f <sub>N</sub>	50 Hz
Frequency measuring range	45 Hz ... 65 Hz
Connection method	Screw terminal block

### Output data

Output name	Current output
Configurable/programmable	Via DIP switches
Current output signal	0 mA ... 20 mA (configurable)
	4 mA ... 20 mA (configurable)
Max. output current	25 mA
Load/output load current output	< 500 Ω (20 mA)
Ripple	< 10 mV <sub>PP</sub> (for 500 Ω at 20 mA)
Status display	LED red (error), LED green (ready)

### Switching output

Output name	No switching output
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### Power supply

Nominal supply voltage	24 V DC (-20 % ... +25 %)
Supply voltage range	19.2 V DC ... 30 V DC
Max. current consumption	< 32 mA (at U <sub>B</sub> =24 V DC, I <sub>OUT</sub> =20 mA)
Power consumption	< 0.9 W (at U <sub>B</sub> =24 V DC, I <sub>OUT</sub> =20 mA)

### Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	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

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## Technical data

### General

Maximum transmission error	≤ 0.5 % (of nominal range value under nominal conditions)
Maximum temperature coefficient	< 0.02 %/K
Temperature coefficient, typical	< 0.015 %/K
Step response (10-90%)	≤ 300 ms
	typ. 200 ms
Overvoltage category	II
Degree of pollution	2
Test voltage input/output	4 kV (50 Hz, 1 min.)
Test voltage output/power supply	1.5 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Color	gray
Housing material	Polyamide PA non-reinforced
Mounting position	any
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
	EN 61000-4-6
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized

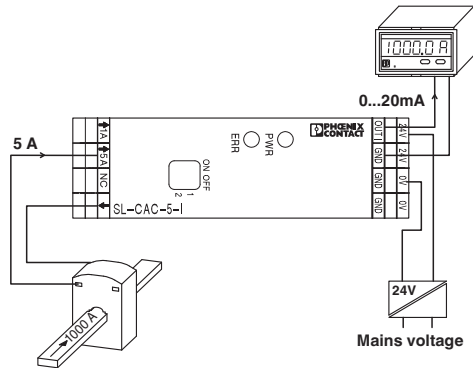
### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

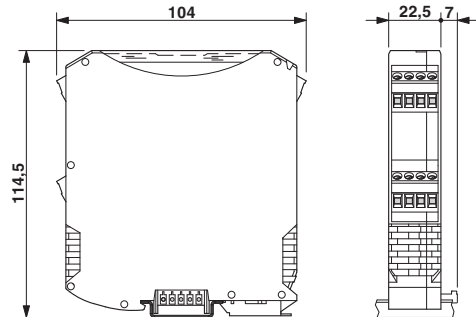
## Drawings

# Current transducers - MACX MCR-SL-CAC- 5-I - 2810612

Application drawing

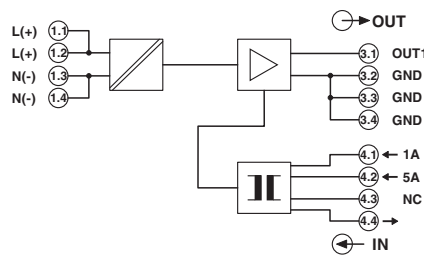


Dimensional drawing



Current measurement

Circuit diagram



## Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / cULus Recognized

Ex Approvals

ATEX / EAC Ex

## Approval details

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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### Approvals

cULus Recognized



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