

## 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

The figure shows 2810625 MACX MCR-SL-CAC-5-I-UP

### 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.

### Product Features

- ☒ Input/output can be configured via DIP switches



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	176.8 GRM
Custom tariff number	85437090
Country of origin	Germany

### Technical data

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

## Technical data

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C (-40°F...185°F)
Maximum altitude	2000 m
Degree of protection	IP20

### Input data

Configurable/programmable	Via DIP switches
Operate threshold	0.3 % (1 A)
	0.45 % (5 A)
Setting range for min. input current	0 A AC ... 1 A AC (configurable)
Setting range for max. input current	0 A AC ... 5 A AC (configurable)
Overload capacity	2 x $I_N$ (continuous)
Surge strength	20 x $I_N$ (1 s)
Nominal frequency $f_N$	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 $\Omega$ (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 $U_B=24$ V DC, $I_{OUT}=20$ mA)
Power consumption	< 0.9 W (at $U_B=24$ V DC, $I_{OUT}=20$ mA)

### Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14

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### Connection data

Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Stripping length	8 mm
Screw thread	M3

### 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%)	max. 300 ms
	typ. 200 ms
Surge voltage category	II
Pollution degree	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 2004/108/EC
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Color	green
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

## Classifications

### eCl@ss

eCl@ss 4.0	27200303
eCl@ss 4.1	27200303
eCl@ss 5.0	27200303
eCl@ss 5.1	27200303
eCl@ss 6.0	27200303
eCl@ss 7.0	27142316
eCl@ss 8.0	27142316

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### Classifications

#### ETIM

ETIM 2.0	EC001440
ETIM 3.0	EC001440
ETIM 4.0	EC001440
ETIM 5.0	EC002475

#### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

### Approvals

#### Approvals

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#### Approvals

UL Recognized / cUL Recognized / UL Recognized / cUL Recognized / cULus Recognized

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#### Ex Approvals

#### ATEX


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#### Approvals submitted

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#### Approval details


UL Recognized 
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cUL Recognized 
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### Approvals

UL Recognized 

cUL Recognized 

cULus Recognized 

### Accessories

#### Accessories

##### DIN rail connector

DIN rail connector - ME 22,5 TBUS 1,5/ 5-ST-3,81 GN - 2707437



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

Electronic housing - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

### Power supply

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

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## Accessories

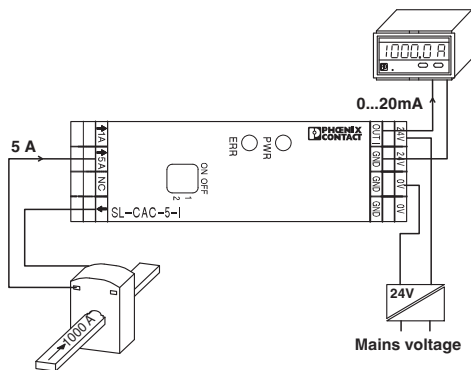
Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653



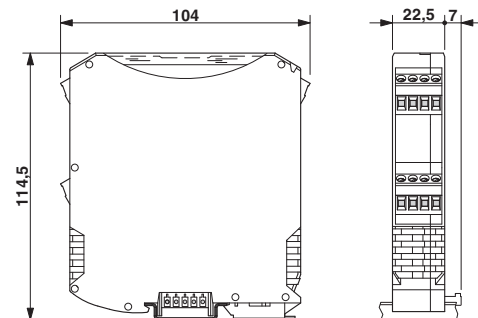
Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1,5 A, for the potentially explosive area

## Drawings

Application drawing



Dimensioned drawing



## Current measurement

Circuit diagram

