

# Current transducers - MCR-S10-50-UI-DCI-NC



2814728

<https://www.phoenixcontact.com/de/produkte/2814728>

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MCR current measuring transducer, programmable and configurable, for measuring direct, alternating and distorted currents, input current 0...10 to 0...50 A, unconfigured

## Your advantages

- 3-way isolation
- True r.m.s. value measurement
- Device can be set via DIP switches or MCR/PI-CONF-WIN configuration software

## Commercial Data

Item number	2814728
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	J1 - MSR-Technik
Product Key	CK4A34
Catalog Page	Page 231 (C-5-2019)
GTIN	4017918169305
Weight per Piece (including packing)	173 g
Weight per Piece (excluding packing)	119,48 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
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### Product properties

Product type	Current transducer
Insulation characteristics	
Overvoltage category	III
Pollution degree	2

### Electrical properties

Total error	≤ 1.5 % (Temperature range)
Maximum power dissipation for nominal condition	2.2 W
Measuring category	III
Test voltage output/power supply	500 V AC (50 Hz, 60 s)
Test voltage input/output	4 kV AC (50 Hz, 60 s)
Test voltage input/power supply	4 kV AC (50 Hz, 60 s)
Protective circuit	Surge protection; 33 V suppressor diode
Step response (10-90%)	330 ms (AC) 40 ms (DC)
Temperature coefficient, typical	< 0.025 %/K
Maximum transmission error	< 0.5 % (of nominal range value under nominal conditions)
Rated insulation voltage	300 V AC (to earth)

#### Supply

Supply voltage range	20 V DC ... 30 V DC
Max. current consumption	< 40 mA (without load)

### Input data

#### Signal

Supply voltage	24 V DC
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#### Measurement

Configurable/programmable	Yes, unconfigured
Input current range	0 A AC/DC ... 55 A AC/DC (Permitted continuous overload: 120%)
Current measuring range	0 A AC/DC ... 50 A AC/DC
Setting range for min. input current	0 A AC/DC ... 9.5 A AC/DC
Setting range for max. input current	0 A AC/DC ... 55 A AC/DC
Overload capacity	Depending on through connected conductor

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Surge strength	Depending on through connected conductor
Frequency measuring range	15 Hz ... 400 Hz
Connection method	Through connection, diameter 10.5 mm
Curve type	AC, DC or distorted currents
Operate threshold	0.8 % (of measuring range nominal value 50 A)

## Output data

Signal: Voltage/current

Output name	Voltage output / current output
Configurable/programmable	Yes, unconfigured
Voltage output signal	0 V ... 5 V
	1 V ... 5 V
	0 V ... 10 V
	2 V ... 10 V
	-5 V ... 5 V
	-10 V ... 10 V
	10 V ... 0 V
	10 V ... 2 V
	10 V ... -10 V
	5 V ... 0 V
5 V ... 1 V	
5 V ... -5 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 k $\Omega$
Load/output load current output	< 500 $\Omega$

## 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

## LED signaling

Status display	Green LED
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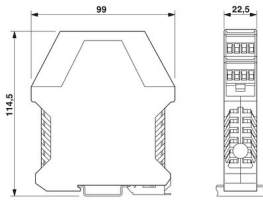
## Dimensions

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Dimensional drawing	
Width	22.5 mm
Height	99 mm
Depth	114.5 mm

## Material specifications

Housing material	Polyamide PA non-reinforced
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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	< 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)

## Approval data

### CE

Certificate	CE-compliant
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### UL, USA / Canada

Identification	Class I, Zone 2, AEx nA nC IIC T4, Ex nA nC IIC T4 Gc X Class I, Div. 2, Groups A, B, C and D or Non-Hazardous Locations Only
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## EMC data

Low Voltage Directive	Conformance with Low Voltage Directive
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2

## Standards and regulations

Standards/regulations	IEC 61010-2-030
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## Mounting

Mounting type	DIN rail mounting
Mounting position	any

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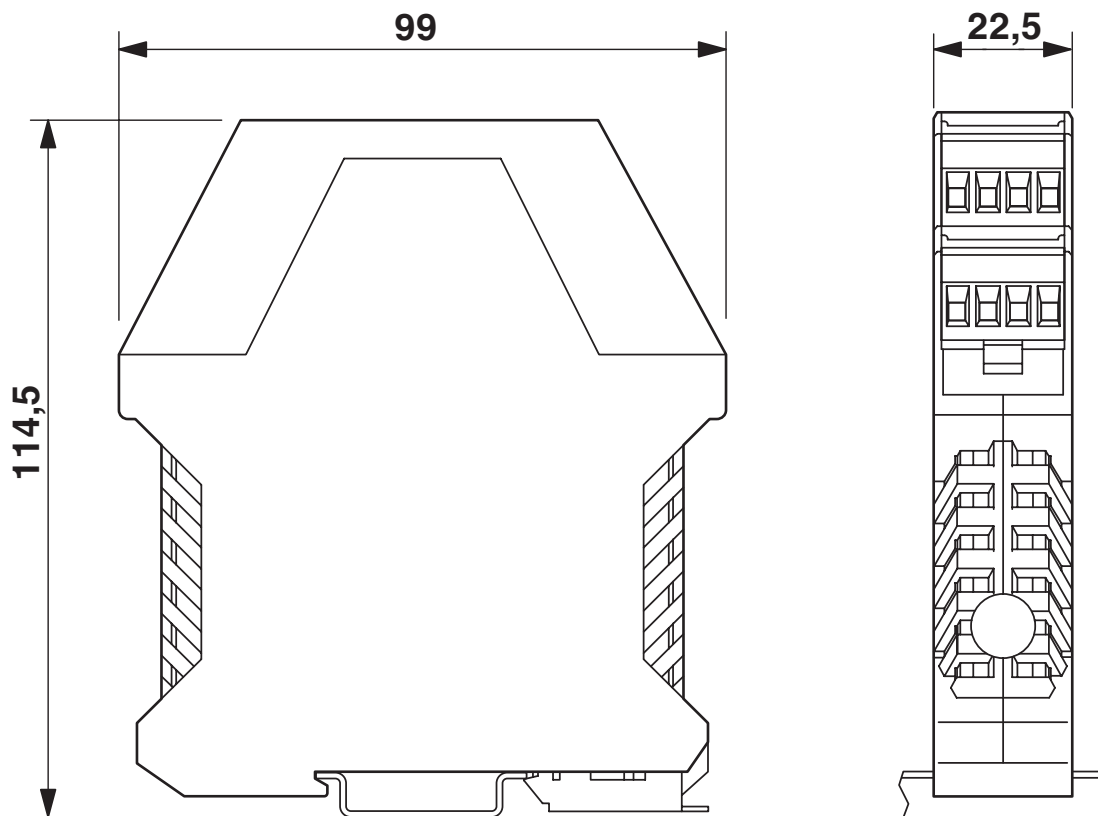


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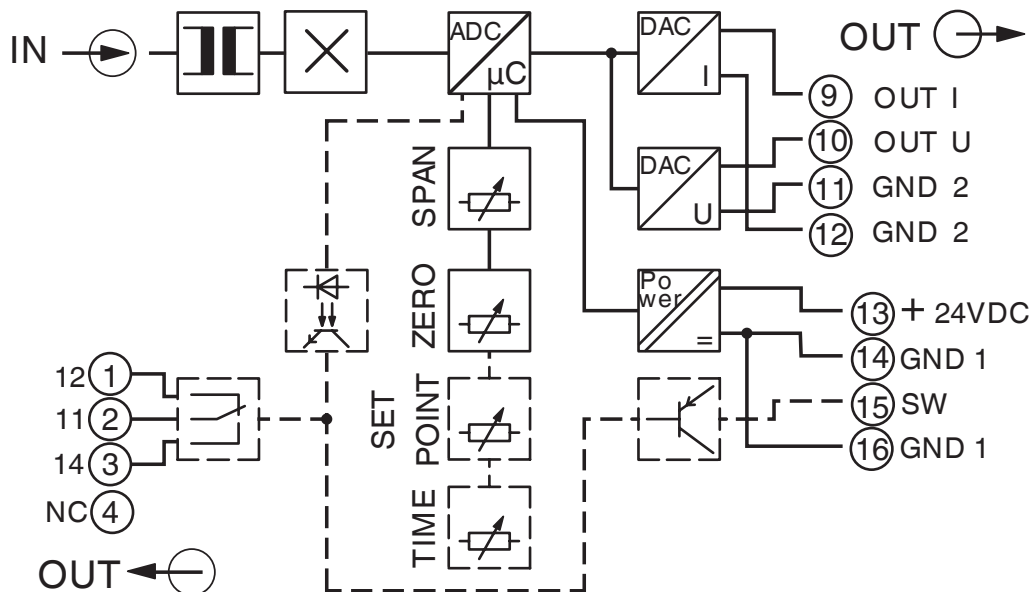
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## Drawings

Dimensional drawing



Circuit diagram



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## Approvals



**cUL Recognized**  
Approval ID: FILE E 238705



**UL Recognized**  
Approval ID: FILE E 238705



**EAC**  
Approval ID: RU\*DE.\*08.B.01852-19



**cUL Listed**  
Approval ID: FILE E 199827



**UL Listed**  
Approval ID: FILE E 199827

**cULus Recognized**

**cULus Listed**

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## Classifications

### ECLASS

ECLASS-9.0	27210123
ECLASS-10.0.1	27210123
ECLASS-11.0	27210123

### ETIM

ETIM 8.0	EC002475
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### UNSPSC

UNSPSC 21.0	39121000
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
	Hexahydromethylphthalic anhydride
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"



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## Accessories

### Adapter cable

Adapter cable - MCR-TTL-RS232-E - 2814388

<https://www.phoenixcontact.com/de/produkte/2814388>

Software adapter cable (Stereo jack connector/D-SUB 25-pos.), 1.2 m length, for programming MCR-T-..., MCR-S-... and MCR-f-... modules



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## Cable

Cable - CM-KBL-RS232/USB - 2881078

<https://www.phoenixcontact.com/de/produkte/2881078>

Connecting cable D-9-SUB to USB, with adapter D-9-SUB to D-25-SUB.



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