

## Current transducers - MCR-S10-50-UI-SW-DCI-NC - 2814744

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MCR current measuring transducer, programmable and configurable, for measuring direct, alternating and distorted currents, with relay and transistor output, 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

RoHS



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 169299
GTIN	4017918169299
Weight per Piece (excluding packing)	193.700 g
Custom tariff number	85437090
Country of origin	Germany

### 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	99 mm
Depth	114.5 mm

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### Technical data

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	< 2000 m
Degree of protection	IP20
Noise immunity	EN 61000-6-2

#### Input data

Input	Current measuring input
Configurable/programmable	Yes, unconfigured
Input current range	0 A ... 55 A (AC/DC)
Operate threshold	0.8 % (of measuring range nominal value 50 A)
Setting range for min. input current	0 A ... 9.5 A
Setting range for max. input current	0 A ... 55 A
Impulse form	AC, DC or distorted currents
Overload capacity	Depending on through connected conductor
Surge strength	Depending on through connected conductor
Frequency measuring range	15 Hz ... 400 Hz
Connection method	Through connection, diameter 10.5 mm

#### Output data

Output name	Voltage output / current output
Configurable/programmable	Yes, unconfigured
Voltage output signal	0 V ... 10 V
	2 V ... 10 V
	-10 V ... 10 V
	0 V ... 5 V
	1 V ... 5 V
	-5 V ... 5 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

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### Technical data

#### Output data

Load/output load voltage output	> 10 k $\Omega$
Load/output load current output	< 500 $\Omega$

#### Switching output

Output name	Relay output
Contact type	1 PDT
Contact material	AgSnO, hard gold-plated
Maximum switching voltage	30 V AC
	36 V DC
	250 V AC (when the gold layer is destroyed)
Limiting continuous current	50 mA
	2 A (when the gold layer is destroyed)
Output name	Transistor output, pnp
Output voltage range	19 V ... 29 V (supply voltage - 1 V)
Continuous load current	80 mA (Not short-circuit proof)
Setting range of the threshold value	1 % ... 110 %
Setting range of the response delay	0.1 s ... 20 s
Status display	Yellow LED

#### Power supply

Supply voltage range	20 V DC ... 30 V DC
Max. current consumption	< 50 mA (without load)

#### 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

#### General

Maximum transmission error	< 0.5 % (of nominal range value under nominal conditions)
Temperature coefficient, typical	< 0.025 %/K
Step response (10-90%)	330 ms (with AC)
	40 ms (with DC)
Status display	Green LED
Overvoltage category	III
Degree of pollution	2

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### Technical data

#### General

Rated insulation voltage	300 V AC (to earth)
Test voltage input/output	4 kV (50 Hz, 1 min.)
Test voltage input/power supply	4 kV (50 Hz, 1 min.)
Test voltage output/power supply	500 V (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Color	green
Housing material	Polyamide PA non-reinforced
Mounting position	any

#### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Connection in acc. with standard	CUL
Low Voltage Directive	Conformance with Low Voltage Directive
Conformance	CE-compliant
UL, USA/Canada	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

#### Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	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

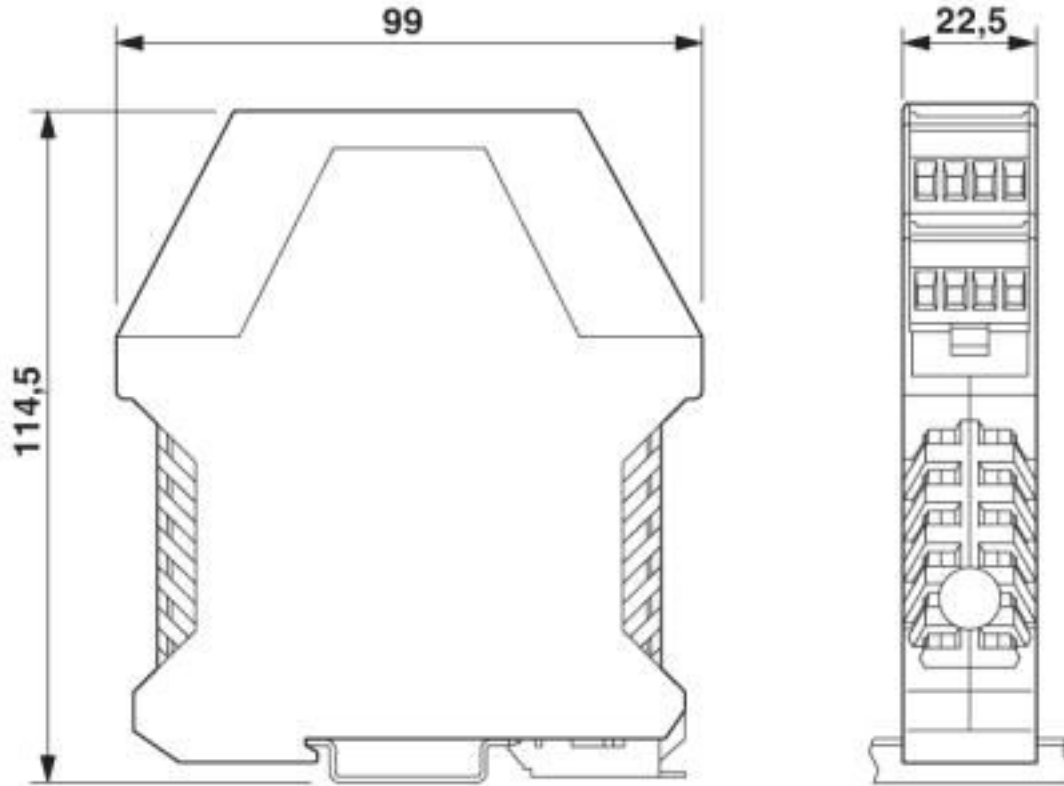
#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

### Drawings

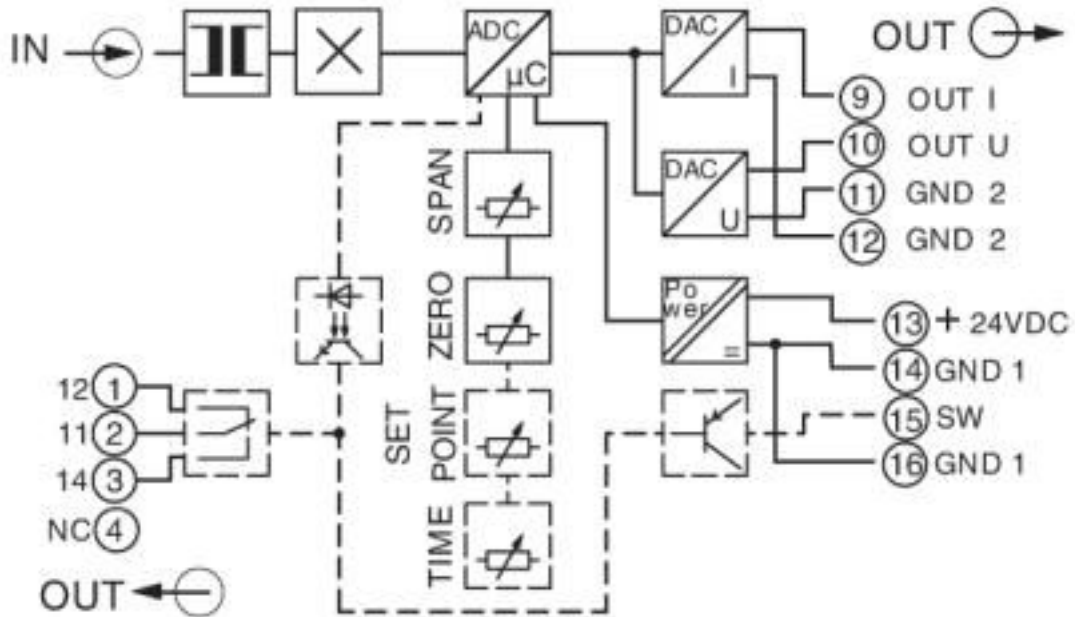
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Dimensional drawing



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Circuit diagram



### Classifications

eCl@ss

eCl@ss 4.0	27271100
eCl@ss 4.1	27200300
eCl@ss 5.0	27200300
eCl@ss 5.1	27200300
eCl@ss 6.0	27210100
eCl@ss 7.0	27210123
eCl@ss 8.0	27210123
eCl@ss 9.0	27210123

ETIM

ETIM 3.0	EC002475
ETIM 4.0	EC002475
ETIM 5.0	EC002475
ETIM 6.0	EC002475
ETIM 7.0	EC002475

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008

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## Classifications

### UNSPSC

UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121032
UNSPSC 18.0	39121032
UNSPSC 19.0	39121032
UNSPSC 20.0	39121032
UNSPSC 21.0	39121032

## Approvals

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#### Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

### 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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EAC			RU*DE.*08.B.01852-19
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cULus Recognized			
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### Accessories

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#### Arrester test system

Cable - CM-KBL-RS232/USB - 2881078



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

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### Programming adapter

Adapter cable - MCR-TTL-RS232-E - 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