MCR-S-1-5-UI-SW-DCI-NC - Current measuring transducer

2814731

https://www.phoenixcontact.com/us/products/2814731

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MCR current transducer, programmable and configurable, for measuring direct, alternating and distorted currents, with relay and transistor output, input current 0 ... 0.2 A to 0 ... 11 A, unconfigured

Your advantages

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

Commercial data

Item number	2814731
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C444
Product key	CMMA33
GTIN	4017918169282
Weight per piece (including packing)	203.9 g
Weight per piece (excluding packing)	149.08 g
Customs tariff number	85437090
Country of origin	DE

Technical data

Product properties

Product type	Current measuring 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	< 50 mA (without load)

Input data

Measurement

Number of inputs	3
Configurable/programmable	Yes, unconfigured
Input current range	0 A AC/DC ... 11 A AC/DC (Permitted continuous overload: 120%)
Measuring range	0 A AC/DC ... 1 A AC/DC
	0 A AC/DC ... 5 A AC/DC
	0 A AC/DC ... 10 A AC/DC
Setting range for min. input current	0 mA AC/DC ... 200 mA AC/DC
Setting range for max. input current	0 A AC/DC ... 11 A AC/DC
LSB: Current	1 µA (1 A)
	2 µA (2 A)
	5 µA (5 A)
	10 µA (10 A)
	50 µA (50 A)
	100 µA (100 A)

Overload capacity	2 x I_N (continuous)
Surge strength	20 x I_N (1 s)
Frequency measuring range	15 Hz ... 400 Hz
Curve type	AC, DC or distorted currents
Operate threshold	2 % (of measuring range nominal value 1/5/10 A)

Output data

Switching: Relay

Contact switching type	1 changeover contact
Contact material	AgSnO, hard gold-plated
Maximum switching voltage	30 V AC
	36 V DC
	250 V AC
Limiting continuous current	50 mA (for gold layer, 30 V AC/ 36 V DC)
	2 A (in case of a destroyed gold layer, 250 V AC)

Switching: Transistor

Continuous load current	80 mA (Not short-circuit proof)
Output voltage range	19 V ... 29 V (supply voltage - 1 V)
Setting range of the threshold value	1 % ... 110 %
Setting range of the response delay	0.1 s ... 20 s
Status display	LED (yellow)

Signal: Voltage/current

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 kΩ
Load/output load current output	< 500 Ω

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

Signaling

Status display	LED (green)

Dimensions

Item dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Color	green (RAL 6021)
Housing material	Polyamide PA non-reinforced

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)

Approvals

CE

Certificate	CE-compliant

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

EMC data

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

Noise emission

Standards/regulations	EN 61000-6-4

Standards and regulations

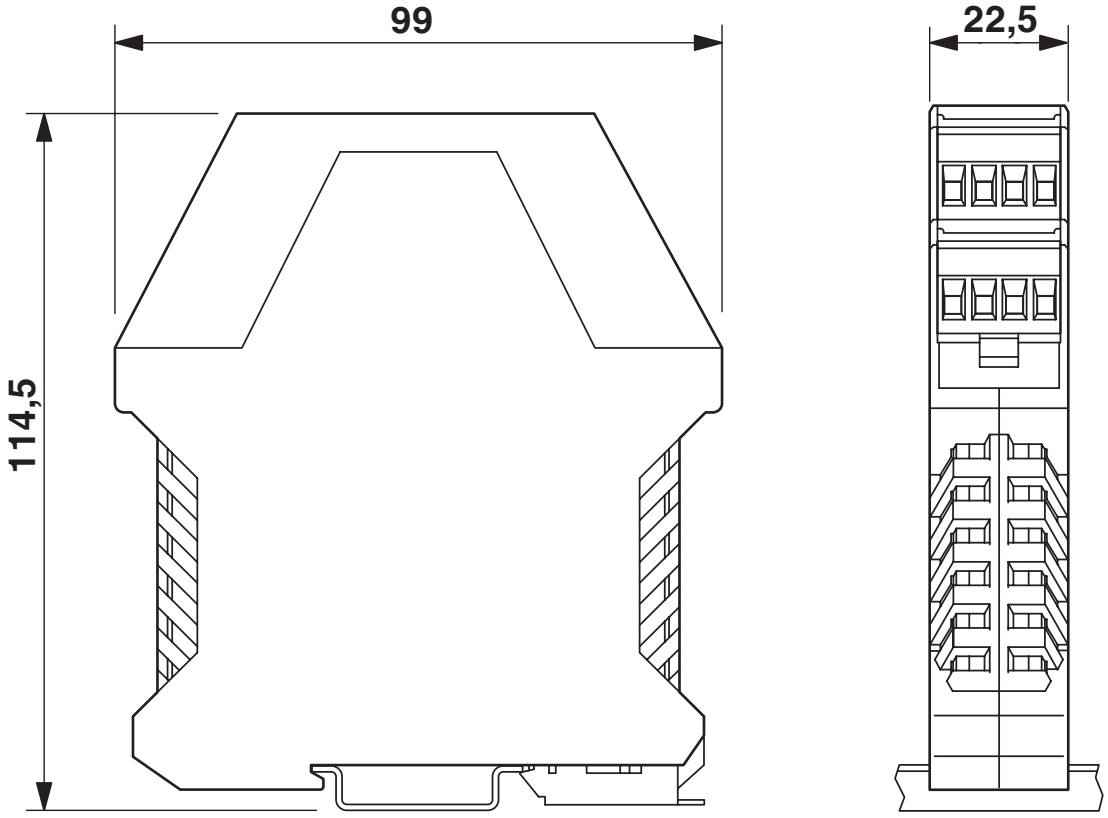
Standards/regulations	IEC 61010-2-030

Mounting

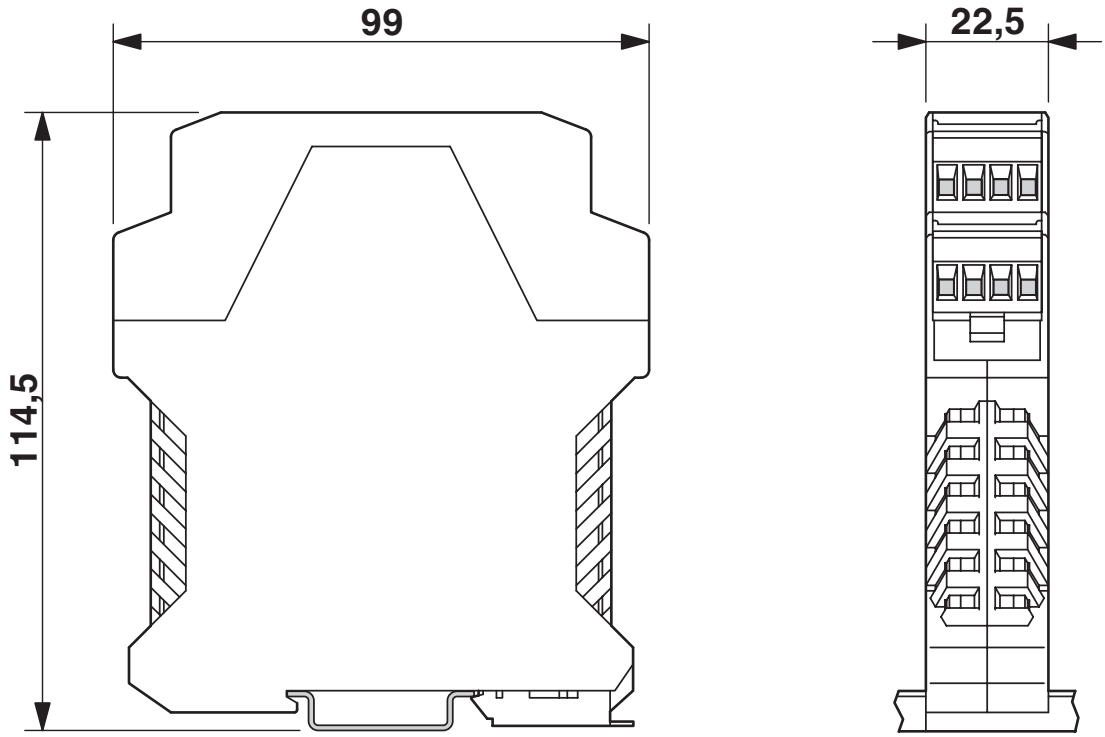
Mounting type	DIN rail mounting
Mounting position	any

Drawings

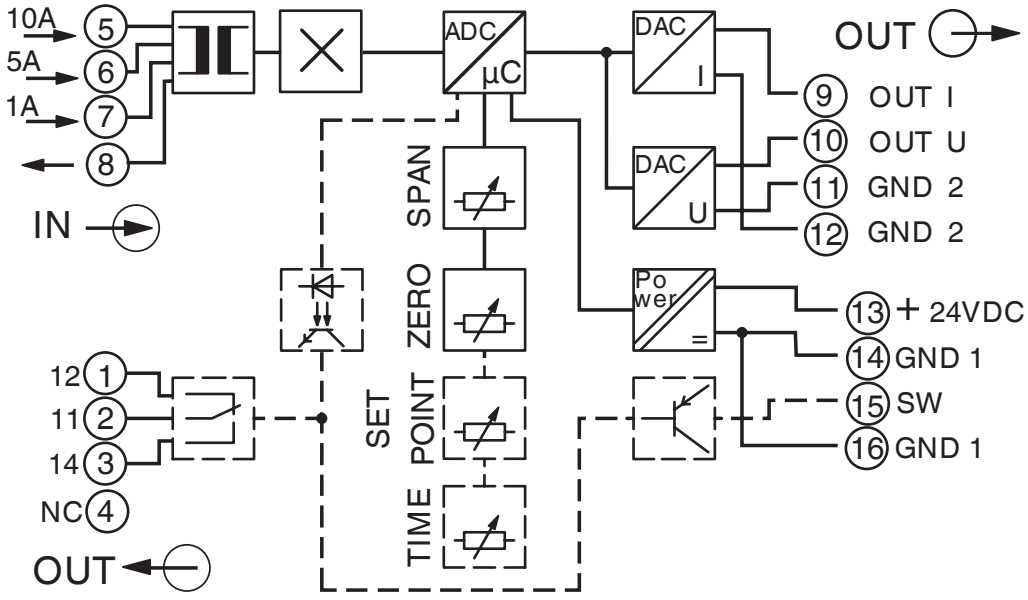
Dimensional drawing



Dimensional drawing



Circuit diagram



Classifications

ECLASS

ECLASS-13.0	27210123

ETIM

ETIM 9.0	EC002475

UNSPSC

UNSPSC 21.0	39121000

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 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.)	Hexahydromethylphthalic anhydride(CAS: n/a)
	Lead(CAS: 7439-92-1)
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol(CAS: 79-94-7)
SCIP	559130c9-efe2-4ff8-9e29-a228cb04a43f

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