

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



2814744

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

Commercial data

Item number	2814744
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C444
Product key	CK4A34
Catalog page	Page 231 (C-5-2019)
GTIN	4017918169299
Weight per piece (including packing)	188.8 g
Weight per piece (excluding packing)	135.68 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	< 50 mA (without load)

Input data

Measurement

Configurable/programmable	Yes, unconfigured
Input current range	0 A AC/DC ... 55 A AC/DC (Permitted continuous overload: 120%)
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
LSB: Current	1 µA (1 A)
	2 µA (2 A)
	5 µA (5 A)
	10 µA (10 A)

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	50 μ A (50 A)
	100 μ A (100 A)
Overload capacity	Depending on through connected conductor
Surge strength	Depending on through connected conductor
Frequency measuring range	15 Hz ... 400 Hz
Curve type	AC, DC or distorted currents
Operate threshold	0.8 % (of measuring range nominal value 50 A)

Output data

Switching: Relay

Contact switching type	1 changeover contact
Contact material	AgSnO ₂ , 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	Yellow LED

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 k Ω

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Load/output load current output	< 500 Ω
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Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14
Connection method	Through connection

Signaling

Status display	Green LED
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Dimensions

Item dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Circular conductor

Diameter	10.5 mm
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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
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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

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

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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