

# MCR-FL-C-UI-UI-DCI-24/230 - Signal conditioner



2814838

<https://www.phoenixcontact.com/us/products/2814838>

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MCR 3-way isolating amplifier, with configurable inputs/outputs, reliable isolation and wide range power supply, for electrical isolation of analog signals

## Commercial data

Item number	2814838
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DK1XXX
GTIN	4017918190811
Weight per piece (including packing)	126.2 g
Weight per piece (excluding packing)	126.2 g
Customs tariff number	85437090
Country of origin	DE

## Technical data

### Product properties

Product type	Signal conditioner
No. of channels	1

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

Limit frequency (3 dB)	< 10 Hz (can be switched)
	approx. 10 kHz (default setting, 10 Hz can be switched)
Test voltage, input/output/supply	4 kV AC (50 Hz, 60 s)
Test voltage	1 kV AC/DC
Protective circuit	Transient protection
Step response (10-90%)	35 ms (10 Hz)
	35 $\mu$ s (10 kHz)
Maximum temperature coefficient	0.005 %/K
Maximum transmission error	$\leq$ 0.1 % (of final value)

### Electrical isolation

Insulation	Basic insulation in accordance with IEC/EN 61010-1
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### Supply

Supply voltage range	20 V AC/DC ... 253 V AC/DC
Max. current consumption	30 mA (Without load current)
Power consumption	approx. 2 VA (AC)
	approx. 1 W (DC)

## Input data

### Signal: Current input

Description of the input	Current input
Configurable/programmable	Yes, can be reconnected/switched
Current input signal	0 mA ... 20 mA (default setting)
	4 mA ... 20 mA
Max. current input signal	approx. 22 mA
Voltage dissipation	approx. 250 mV (at 20 mA)

### Signal: Voltage input

Description of the input	Voltage input
Voltage input signal	0 V ... 10 V
Max. voltage input signal	11 V
Input resistance of voltage input	approx. 1 M $\Omega$

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## Output data

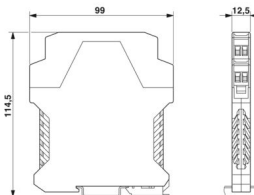
### Signal

Configurable/programmable	Yes, can be switched
Voltage output signal	0 V ... 10 V
Max. voltage output signal	11 V
Current output signal	0 mA ... 20 mA (default setting) 4 mA ... 20 mA
Max. current output signal	approx. 22 mA
Load/output load voltage output	$\geq 1 \text{ k}\Omega$ (at 10 V)
Load/output load current output	$\leq 600 \Omega$ (at 20 mA)
Ripple	$< 10 \text{ mV}_{PP}$

## Connection data

Connection method	Pluggable screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	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

## Dimensions

Dimensional drawing	
Width	12.5 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)	-10 °C ... 70 °C

## EMC data

Electromagnetic compatibility	Conformance with EMC directive
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## Mounting

Mounting position

any

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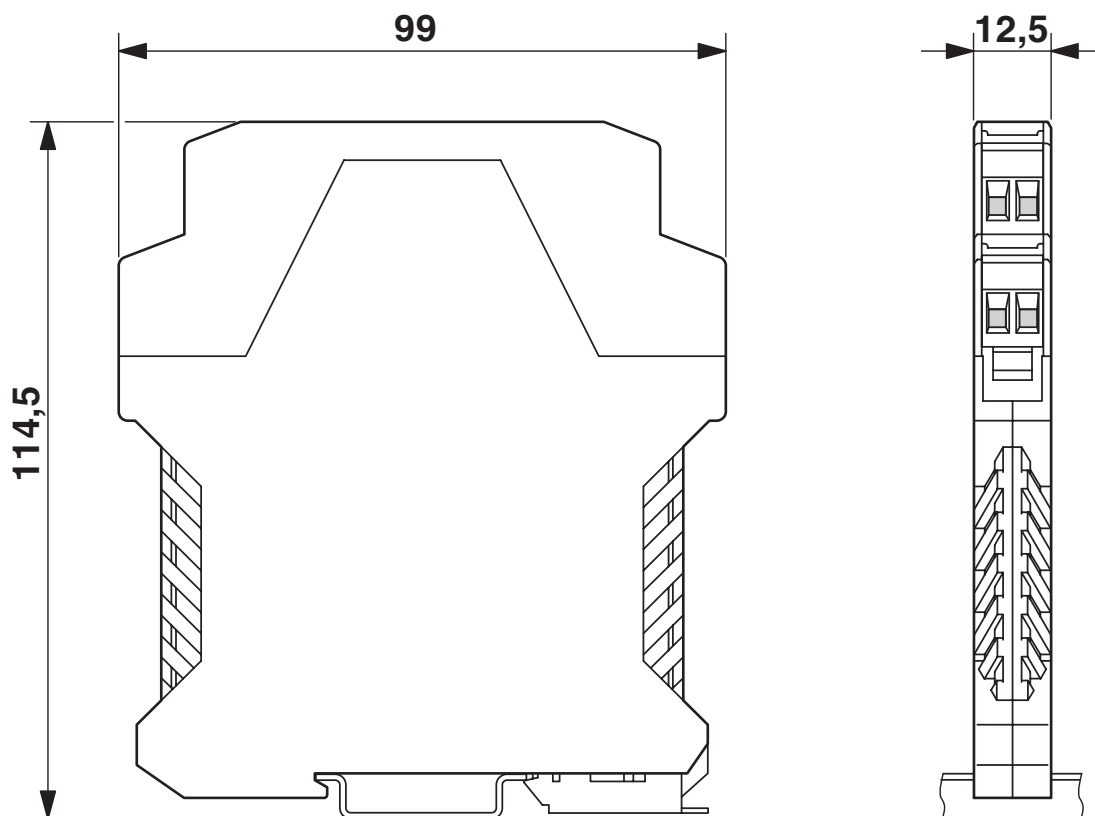
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## Drawings

Dimensional drawing



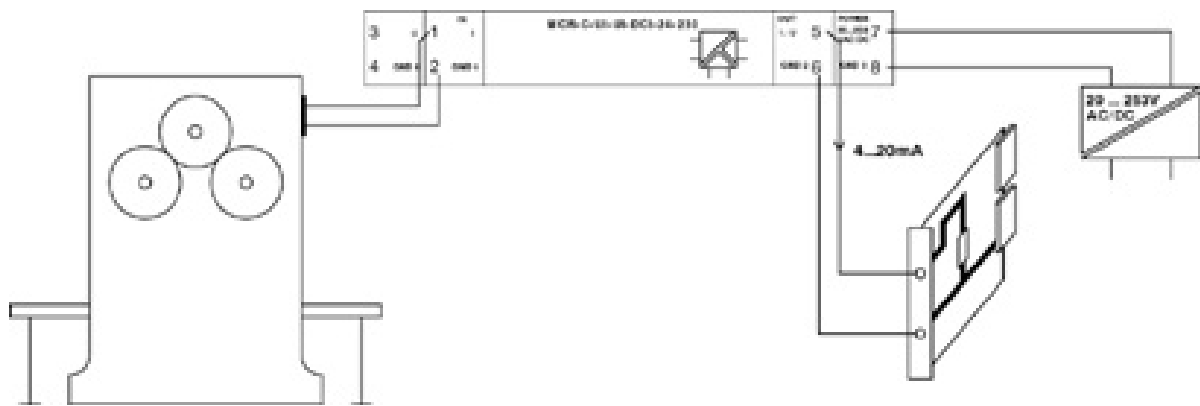
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## Application drawing



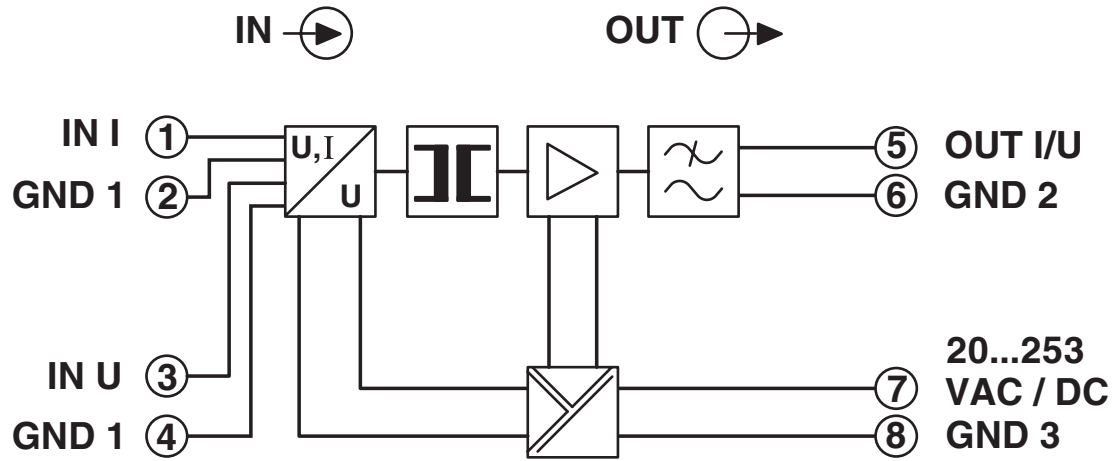
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Circuit diagram



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## Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	
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	No substance above 0.1 wt%
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