MCR-C-UI-UI-DCI - Signal conditioner

2810913

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MCR 3-way signal conditioner, with configurable input/output, for the electrical isolation of analog signals, preconfigured. For information on permitted signal combinations, please refer to the data sheet. Replacement item: 2811284 MACX MCR-UI-UI.

Product description

The MCR-C-UI-UI(-450)-DCI(-NC) 3-way signal conditioner is used to electrically isolate and convert analog signals. It ensures the electrical isolation of standard analog signals. The module input and output are electrically isolated and supplied by the mains via integrated DC/DC converters (3-way isolation). A green power LED indicates the required auxiliary energy. It is therefore clearly visible whether auxiliary energy is available. The MCR module ensures the safe decoupling of a sensor circuit from the evaluation circuit and therefore also prevents any mutual interference between multiple sensor circuits. The 3-way isolation means that the modules can be used universally, both on site or in the vicinity of the controller for signal conversion and electrical isolation, and along the transmission path to bridge high load resistance values. Signals are converted by means of an inductive transmission method. In addition, a filter connected downstream of the transmitter reduces possible interference.

Commercial data

Item number	2810913
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	DK1XXX
Product key	DK1XXX
Weight per piece (including packing)	149.4 g
Weight per piece (excluding packing)	149.4 g
Customs tariff number	85437090
Country of origin	DE

Technical data

Product properties

Product type	Signal conditioner
No. of channels	1

Electrical properties

Alignment span	± 2 %
Alignment zero	± 2 %
Electrical isolation between input and output	yes
Limit frequency (3 dB)	30 Hz
Maximum power dissipation for nominal condition	900 mW
Test voltage input/output	1.5 kV AC (50 Hz, 60 s)
Test voltage power supply/signal	1 kV AC (50 Hz, 60 s)
Protective circuit	Transient protection
Step response (10-90%)	11 ms
Maximum temperature coefficient	0.0075 %/K
Maximum transmission error	≤ 0.1 % (of final value)

Supply

Supply voltage range	18 V DC ... 30 V DC
Max. current consumption	< 30 mA (without load)

Input data

Signal

Number of inputs	1
Configurable/programmable	Yes, preconfigured
Voltage input signal	0 V ... 10 V (please indicate if different setting when ordering)
Max. voltage input signal	30 V
Max. current input signal	50 mA
Input resistance of voltage input	1 MΩ
Input resistance current input	50 Ω
Supply voltage	24 V DC

Output data

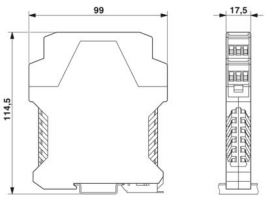
Signal

Number of outputs	1
Configurable/programmable	Yes, preconfigured
Voltage output signal	0 V ... 10 V (please indicate if different setting when ordering)
Max. voltage output signal	15 V
Max. current output signal	30 mA
Load/output load voltage output	≥ 10 kΩ
Load/output load current output	≤ 500 Ω

Connection data

Connection method	Pluggable screw connection
Connection technology	COMBICON
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

Dimensions

Dimensional drawing	
Width	17.5 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 ... 65 °C

Approvals

CE

Certificate	CE-compliant

UL, USA/Canada

Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D
	Class I, Zone 2, Group IIC

EMC data

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

Noise emission

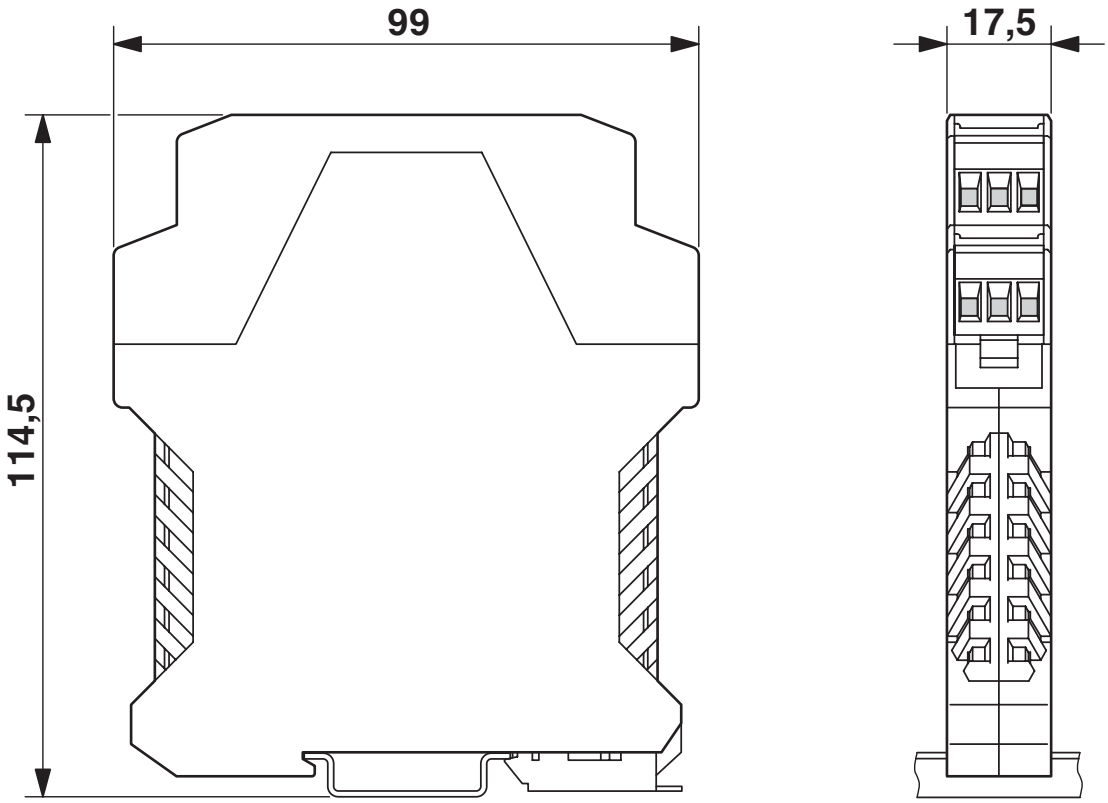
Standards/regulations	EN 61000-6-4

Mounting

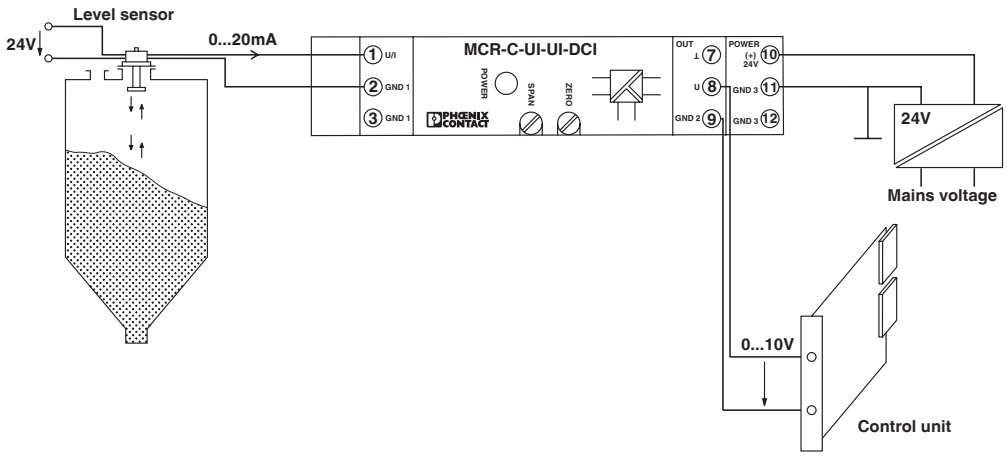
Mounting type	DIN rail mounting
Mounting position	any

Drawings

Dimensional drawing

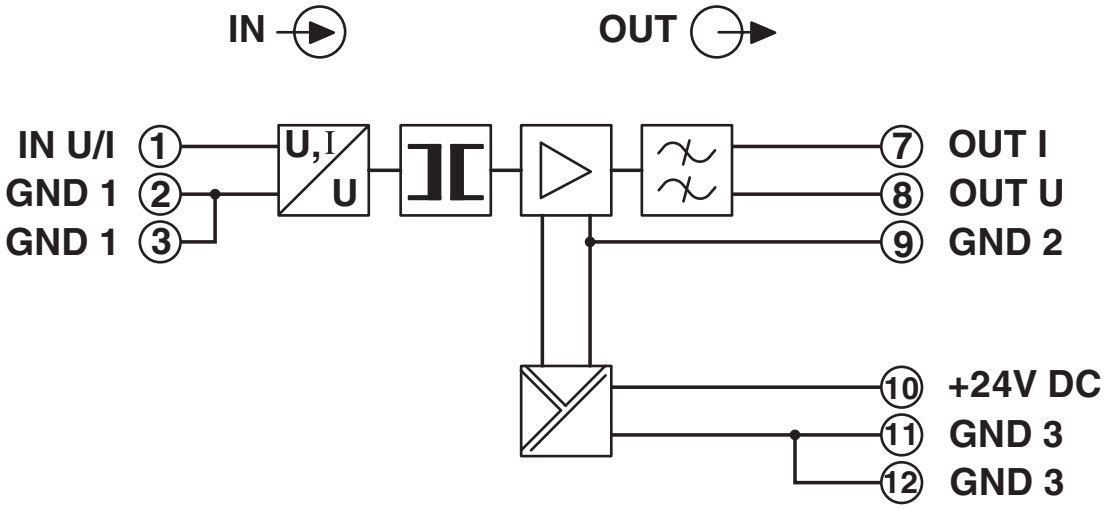


Application drawing



Application example: Level measurement

Circuit diagram



Classifications

UNSPSC

UNSPSC 21.0	39121008

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	15, 15(a), 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.)	Lead(CAS: 7439-92-1)

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