

# MCR-C-UI-UI-DCI

Order No.: 2810913



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2810913>

MCR 3-way isolating amplifier, with configurable I/O, for the electrical isolation of analog signals, with GL approval, preconfigured. For information about permissible signal combinations, please refer to the data sheet.

Commercial data	
Pack	1 pcs.
Customs tariff	85437090
Weight/Piece	0.1426 KG
Catalog page information	Page 360 (IF-2009)

### Product notes

WEEE/RoHS-compliant since:  
06/30/2006



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### Product description

The MCR-C-UI-UI(-450)-DCI(-NC) 3-way isolation amplifier is used to electrically isolate and convert analog signals. The device provides electrical isolation of analog standard signals. The module input and output are supplied via integrated DC/DC converters, which are electrically isolated from the mains (3-way isolation).

The required auxiliary voltage is indicated via a green power LED. This clearly indicates whether or not auxiliary voltage is available.

The MCR module ensures the safe decoupling of a sensor circuit from the evaluation circuit and also prevents the negative effects of several sensor circuits connected with one another. 3-way isolation enables the universal use of modules both locally and close to the control system for signal conversion and electrical isolation, as well as on the transmission path for jumpering high load resistors.

Signals are converted by an inductive transmission method. In addition, a filter connected downstream of the transmitter reduces possible interference.

#### Technical data

##### Input data

Configurable/programmable	Yes, preconfigured
Voltage input signal	0 V ... 10 V (please indicate any different setting when ordering)
Max. input voltage	30 V
Max. input current	50 mA
Input resistance of voltage input	1 M $\Omega$
Input resistance current input	50 $\Omega$

##### Output data

Configurable/programmable	Yes, preconfigured
Voltage output signal	0 V ... 10 V (please indicate any different setting when ordering)
Max. output voltage	15 V
Max. output current	30 mA
Load/output load voltage output	$\geq 10$ k $\Omega$
Load/output load current output	$\leq 500$ $\Omega$

##### Power supply

Range of supply voltages	18 V DC ... 30 V DC
Max. current consumption	< 30 mA (without load)

##### Connection data

Type of connection	Pluggable screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Stripping length	8 mm
Screw thread	M3
Connection method	COMBICON

**General data**

No. of channels	1
Width	17.5 mm
Height	99 mm
Depth	114.5 mm
Transmission error, max.	≤ 0.1 % (of end value)
Maximum temperature coefficient	0.0075 %/K
Limit frequency (3 dB)	30 Hz
Alignment zero	± 2 %
Alignment span	± 2 %
Step response (10-90%)	11 ms
Protective circuitry	Transient protection
Ambient temperature (operation)	-20 °C ... 65 °C
Degree of protection	IP20
Electromagnetic compatibility	Conformance with EMC directive 2004/108/EC
Emitted interference	EN 61000-6-4
Immunity to interference	EN 61000-6-2:2005
Color	green
Housing material	Polyamide PA non-reinforced
Mounting position	Any
Conformity	CE compliant
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D or non-hazardous locations
GL	Germanischer Lloyd

**Certificates / Approvals**



Certification CUL, GL, GOST, UL

Certification Ex: CUL-EX LIS, UL-EX LIS

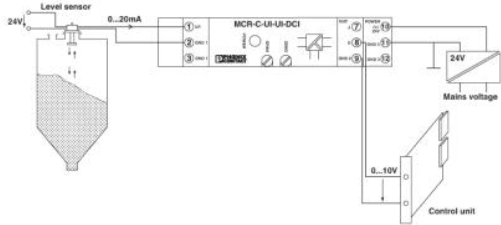
**Configuration options**

Input signal	<p>0...20 mA [IN01]          4...20 mA [IN02]          0...10 V [IN03]          0...5 V [IN05]          1...5 V [IN06]          -60...+60 mV [IN13]          -100...+100 mV [IN14]          -200...+200 mV [IN15]          -300...+300 mV [IN16]          -500...+500 mV [IN17]          -1...+1 V [IN18]          -2...+2 V [IN19]          -2.5...+2.5 V [IN20]          -5...+5 V [IN21]          -10...+10 V [IN22]          -20...+20 V [IN23]          0...60 mV [IN24]          0...100 mV [IN25]          0...200 mV [IN26]          0...300 mV [IN27]          0...500 mV [IN28]          0...1 V [IN29]          0...2 V [IN30]          0...2.5 V [IN31]          0...20 V [IN32]          -5...+5 mA [IN33]          -10...+10 mA [IN34]          -20...+20 mA [IN35]          0...5 mA [IN36]          0...10 mA [IN37]</p>
Output signal	<p>0...20 mA [OUT01]          4...20 mA [OUT02]          0...10 V [OUT03]          0...5 V [OUT05]          1...5 V [OUT06]          -5...+5 V [OUT13]          -10...+10 V [OUT14]          0...5 mA [OUT15]          0...10 mA [OUT16]</p>
Plant calibration certificate	<p>No plant calibration certific. [NONE]          Certificate without test data [YES]          Certificate with test data [YESPLUS]</p>

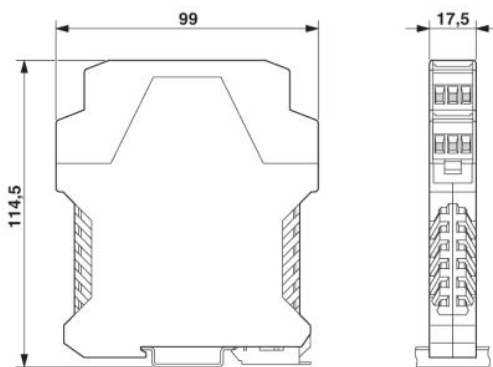
**Diagrams/Drawings**

Application drawing

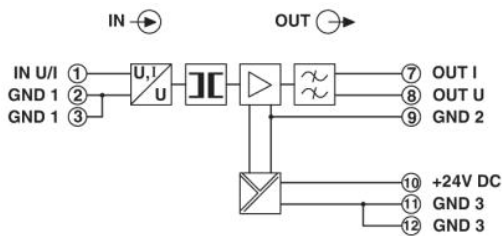
Application example: Level measurement



Dimensioned drawing



Circuit diagram



Approbationslogos (EX-Bereich)

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