

# MACX MCR-UI-UI-UP

Order No.: 2811459

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2811459>

Configurable 3-way isolation amplifier with safe, electrical isolation and long range supply. DIP switches on the front enable the inputs and outputs to be reconfigured, allowing more than 1600 signal conversions to be set. Screw connection, SIL

**SIL 2****Ex n**

## Commercial data

Pack	1 pcs.
Customs tariff	85437090
Weight/Piece	0.1391 KG
Catalog page information	Page 358 (IF-2009)

## Product notes

WEEE/RoHS-compliant since:  
04/14/2009



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## Technical data

### Input data

Voltage input signal	0 mV ... 50 mV
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	0 mV ... 60 mV
	0 mV ... 75 mV
	0 mV ... 100 mV
	0 mV ... 120 mV
	0 mV ... 150 mV
	0 mV ... 200 mV
	0 mV ... 300 mV
	0 mV ... 500 mV
	0 V ... 1 V
	0 V ... 1.5 V
	0 V ... 2 V
	0 V ... 3 V
	0 V ... 5 V
	0 V ... 10 V (please indicate any different setting when ordering)
	0 V ... 15 V
	0 V ... 20 V
	0 V ... 30 V
	0 V ... 50 V
	0 V ... 100 V
	-50 mV ... 50 mV
	-60 mV ... 60 mV
	-75 mV ... 75 mV
	-100 mV ... 100 mV
	-120 mV ... 120 mV
	-150 mV ... 150 mV
	-200 mV ... 200 mV
	-300 mV ... 300 mV
	-500 mV ... 500 mV
	-1 V ... 1 V
	-1.5 V ... 1.5 V
	-2 V ... 2 V
	-3 V ... 3 V
	-5 V ... 5 V
	-10 V ... 10 V
	-15 V ... 15 V
	-20 V ... 20 V
	-30 V ... 30 V
	-50 V ... 50 V
PHOENIX CONTACT Deutschland GmbH <a href="http://www.phoenixcontact.de">http://www.phoenixcontact.de</a>	-100 V ... 100 V
	1 V ... 5 V
	2 V ... 10 V

Current input signal	0 mA ... 1 mA
	0 mA
	0 mA ... 2 mA
	0 mA ... 3 mA
	0 mA ... 5 mA
	0 mA ... 10 mA
	0 mA ... 15 mA
	0 mA ... 20 mA
	0 mA ... 30 mA
	0 mA ... 50 mA
	0 mA ... 100 mA
	-1 mA ... 1 mA
	-1.5 mA ... 1.5 mA
	-2 mA ... 2 mA
	-3 mA ... 3 mA
	-5 mA ... 5 mA
	-10 mA ... 10 mA
	-15 mA ... 15 mA
	-20 mA ... 20 mA
	-30 mA ... 30 mA
	-50 mA ... 50 mA
	-100 mA ... 100 mA
	1 mA ... 5 mA
	2 mA ... 10 mA
	4 mA ... 20 mA
Max. input voltage	$\pm 100$ V
Max. input current	$\pm 100$ mA
Input resistance of voltage input	Approx. 1 M $\Omega$ ( $\pm 1$ V DC ... $\pm 100$ V DC)
Input resistance current input	Approx. 10 $\Omega$ ( $\pm 10$ mA DC ... $\pm 100$ mA DC)
<b>Output data</b>	
Configurable/programmable	Yes, can be switched

Voltage output signal	0 V ... 10 V
	0 V ... 5 V
	2 V ... 10 V
	1 V ... 5 V
	-10 V ... 10 V
	-5 V ... 5 V
	0 V ... 2.5 V
	0.5 V ... 2.5 V
	-2.5 V ... 2.5 V
	Current output signal
	0 mA ... 10 mA
	0 mA ... 20 mA (please indicate any different setting when ordering)
	1 mA ... 5 mA
	2 mA ... 10 mA
	4 mA ... 20 mA
	-5 mA ... 5 mA
	-10 mA ... 10 mA
	-20 mA ... 20 mA
Max. output voltage	15 V
Max. output current	35 mA
Load/output load voltage output	$\geq 1 \text{ k}\Omega$ (10 V)
Load/output load current output	active: $\leq 600 \Omega$ (20 mA) (passive: $\leq (U_B - 2 \text{ V}) / I_{\text{outmax}}$ )

**Power supply**

Range of supply voltages	24 V AC/DC ... 230 V AC/DC (-20%/+10%, 50/60 Hz)
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**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**

Width	12.5 mm
Height	99 mm
Depth	114.5 mm
Transmission error, max.	≤ 0.1 % (Compared to the final value)
Maximum temperature coefficient	0.0075 %/K
Limit frequency (3 dB)	10 kHz (Can be switched to 30 Hz)
Alignment zero	± 4 %
Alignment span	± 4 %
Step response (10-90%)	35 µs (at 10 kHz) 11 ms (At 30 Hz)
Protective circuitry	Transient protection
Ambient temperature (operation)	-20 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20
Pollution degree	2
Surge voltage category	II
Color	green
Housing material	polyamide (PA 6.6)
Mounting position	Any
Conformity	CE compliant
ATEX	Ex II 3 G Ex nA nL II T4
IECEX	Ex nA nL II T4
UL, USA / Canada	UL applied for
GL	GL applied for
Functional safety (SIL)	SIL 2 according to EN 61508

**Safety characteristic data**

Equipment type	Typ A
SIL	SIL 2
SFF	85.9 %
MTBF	228 Years
DC	0 %

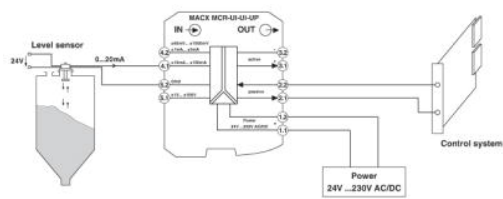
Note	Eingangstrenner 1 ... 5 mA
Equipment type	Typ A
SIL	SIL 2
SFF	82.8 %
MTBF	235 Years
DC	0 %
Note	Ausgangstrenner 1 ... 5 mA
Equipment type	Typ A
SIL	SIL 2
SFF	85.9 %
MTBF	228 Years
DC	0 %
Note	Eingangstrenner 1 ... 5 mA
Equipment type	Typ A
SIL	SIL 2
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**Certificates / Approvals**

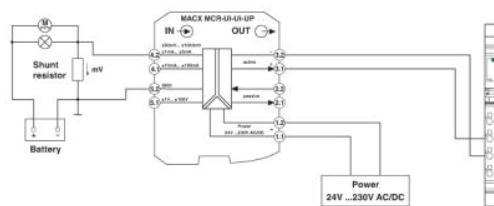
Certification Ex: IECEx

**Drawings**

Application drawing

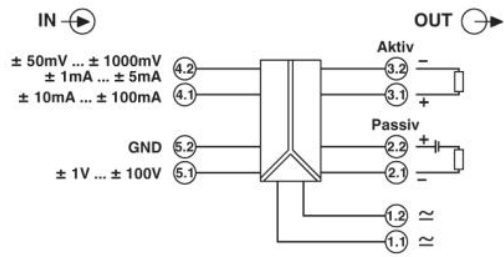


Level measurement with analog input terminals (active input card)

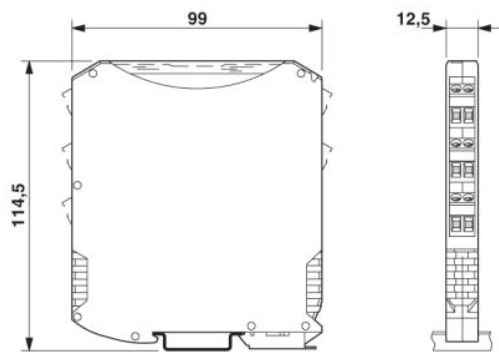


Shunt measurement and Inline terminal with analog input channels within an Inline station (passive input card)

Block diagram



Dimensioned drawing



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