

## Voltage measuring transducers - MCR-VAC-UI-O-DC - 2811103

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MCR voltage measuring transducer, for alternating current voltages from 0..20 V AC to 0..440 V AC, output signal 0..10 V/0(4)..20 mA

### Your advantages

- Replacement device MACX MCR-VAC-(PT) 2906239 with 8 measurement ranges from 0 V ... 20 V AC to 0 V ... 660 V AC, output signals: 0 V ... 10 V / 0 (4) mA ... 20 mA
- Adjustable voltage ranges
- Bidirectional output signals
- 3-way isolation
- ZERO/SPAN adjustment  $\pm 20\%$
- Tool-free parameterization of measured values
- Teach-in configuration of the measured value range



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 125400
GTIN	4017918125400
Weight per Piece (excluding packing)	200.000 g
Custom tariff number	85437090
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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## Technical data

### Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C (non-condensing)
Maximum altitude	< 2000 m
Degree of protection	IP20
Noise immunity	EN 61000-6-2

### Input data

Input voltage range	0 V ... 370 V AC
Input resistance	370 kΩ
Input voltage range	0 V ... 250 V AC
Input resistance	250 kΩ
Input voltage range	0 V ... 170 V AC
Input resistance	170 kΩ
Input voltage range	0 V ... 120 V AC
Input resistance	120 kΩ
Input voltage range	0 V ... 80 V AC
Input resistance	80 kΩ
Input voltage range	0 V ... 54 V AC
Input resistance	54 kΩ
Input voltage range	0 V ... 36 V AC
Input resistance	36 kΩ
Input voltage range	0 V ... 24 V AC
Input resistance	24 kΩ
Nom. voltage	440 V (ungrounded)
	250 V (to earth)

### Output data

Output name	Voltage output
Voltage output signal	0 V ... 10 V
Max. output voltage	15 V
Load/output load voltage output	> 10 kΩ
Ripple	< 50 mV <sub>PP</sub>
Output name	Current output
Current output signal	0 mA ... 20 mA

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### Technical data

#### Output data

	4 mA ... 20 mA
Max. output current	30 mA
Load/output load current output	< 500 $\Omega$
Ripple	< 50 mV <sub>pp</sub>

#### Power supply

Supply voltage range	18.5 V DC ... 30.2 V DC
Max. current consumption	< 45 mA

#### Connection data

Connection method	Pluggable screw connection
Connection technology	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	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

#### General

Maximum transmission error	< 1.5 % (of final value)
Temperature coefficient, typical	0.02 %/K (50/60 Hz)
Frequency measuring range	45 Hz ... 400 Hz
Alignment zero	$\pm$ 20 %
Alignment span	$\pm$ 20 %
Step response (10-90%)	250 ms
Overvoltage category	III
Degree of pollution	2
Rated insulation voltage	300 V DC
Test voltage input/output	3.3 kV (50 Hz, 1 min.)
Test voltage input/power supply	3.3 kV (50 Hz, 1 min.)
Test voltage output/power supply	1 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Color	green
Housing material	Polyamide PA non-reinforced
Conformance	CE-compliant
UL, USA/Canada	cULus

<https://www.phoenixcontact.com/us/products/2811103>



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### Technical data

#### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Connection in acc. with standard	CUL
Conformance	CE-compliant
UL, USA/Canada	cULus

#### Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	UL, USA/Canada
Identification	cULus

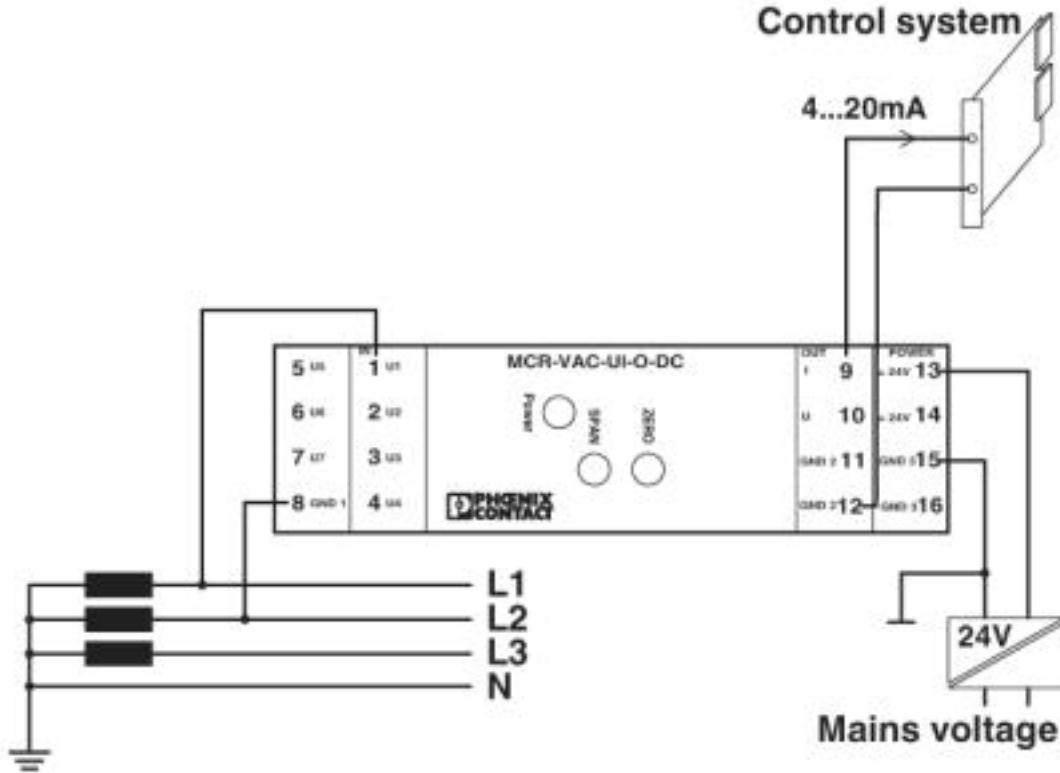
#### Environmental Product Compliance

	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

### Drawings

# Voltage measuring transducers - MCR-VAC-UI-O-DC - 2811103

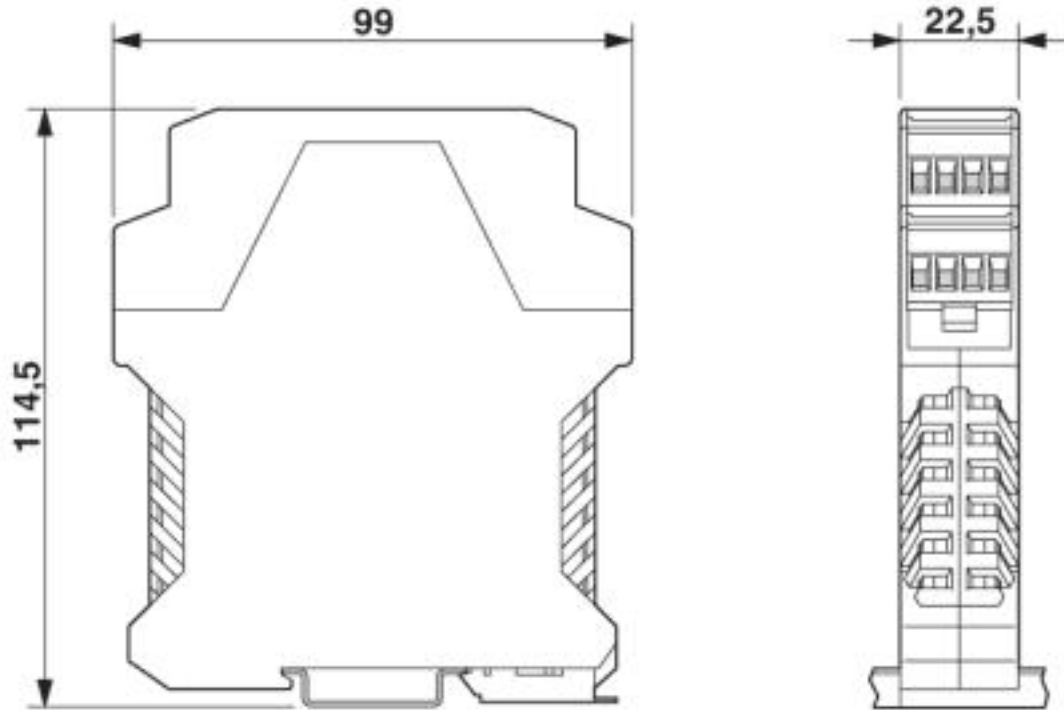
Application drawing



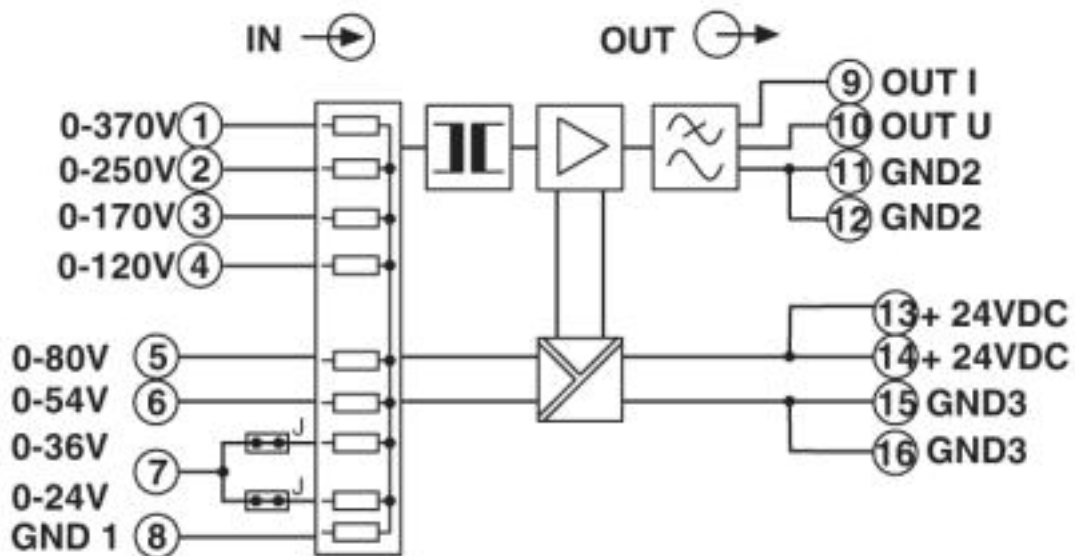
Voltage measurement in case of grounded circuits

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Dimensional drawing



Circuit diagram



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## Voltage measuring transducers - MCR-VAC-UI-O-DC - 2811103

### Classifications

#### eCl@ss

eCl@ss 4.0	27271100
eCl@ss 4.1	27200300
eCl@ss 5.0	27200300
eCl@ss 5.1	27200300
eCl@ss 6.0	27210100
eCl@ss 7.0	27210125
eCl@ss 8.0	27210125
eCl@ss 9.0	27210125

#### ETIM

ETIM 4.0	EC002477
ETIM 5.0	EC002477
ETIM 6.0	EC002477
ETIM 7.0	EC002477

#### UNSPSC

UNSPSC 6.01	30211504
UNSPSC 7.0901	39121006
UNSPSC 11	39121006
UNSPSC 12.01	39121006
UNSPSC 13.2	39121006

### Approvals


#### Approvals

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UL Recognized / cUL Recognized / EAC / cULus Recognized

#### Ex Approvals

#### Approval details


UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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### Approvals

cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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EAC			RU C- DE.A*30.B.01082
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cULus Recognized			
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