

MCR-VDC-UI-B-DC - Voltage measuring transducers



2811116

<https://www.phoenixcontact.com/us/products/2811116>

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MCR voltage measuring transducer, for direct current voltages from 0..(+/-)20 V DC to 0..(+/-)660 V DC, output signal (+/-)10 V/(+/-)20 mA

Your advantages

- 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

Commercial data

Item number	2811116
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C440
Product key	CMMB21
GTIN	4017918125394
Weight per piece (including packing)	157.2 g
Weight per piece (excluding packing)	155.2 g
Customs tariff number	85437090
Country of origin	DE

Technical data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Product properties

Product type	Voltage transducer
Configuration	INTERBUS

Insulation characteristics

Overvoltage category	II
Pollution degree	2

System properties

Functionality

Configuration	INTERBUS
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Electrical properties

Alignment span	$\pm 20 \%$
Alignment zero	$\pm 20 \%$
Frequency measuring range	40 Hz ... 70 Hz
Limit frequency (3 dB)	40 Hz
Test voltage input/output	1.5 kV (50 Hz, 1 min.)
Step response (10-90%)	12 ms
Maximum temperature coefficient	$< 0.015 \%/K$
Maximum transmission error	$< 1 \%$ (of final value)

Supply

Supply voltage range	18.5 V DC ... 30.2 V DC
Max. current consumption	$< 50 \text{ mA}$

Input data

Measurement

Description of the input	$\pm 550 \text{ V input}$
Input voltage range	-550 V DC ... 550 V DC
Maximum input voltage	$\pm 660 \text{ V DC (ungrounded)}$ $\pm 100 \text{ V DC (to earth)}$
Input resistance of voltage input	550 k Ω
Impulse form	DC voltage

Measurement

Description of the input	$\pm 370 \text{ V input}$
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Input voltage range	-370 V DC ... 370 V DC
Input resistance of voltage input	370 k Ω

Measurement

Description of the input	± 250 V input
Input voltage range	-250 V DC ... 250 V DC
Input resistance of voltage input	250 k Ω

Measurement

Description of the input	± 170 V input
Input voltage range	-170 V DC ... 170 V DC
Input resistance of voltage input	170 k Ω

Measurement

Description of the input	± 120 V input
Input voltage range	-120 V DC ... 120 V DC
Input resistance of voltage input	120 k Ω

Measurement

Description of the input	± 80 V input
Input voltage range	-80 V DC ... 80 V DC
Input resistance of voltage input	80 k Ω

Measurement

Description of the input	± 54 V input
Input voltage range	-54 V DC ... 54 V DC
Input resistance of voltage input	54 k Ω

Measurement

Description of the input	± 36 V input
Input voltage range	-36 V DC ... 36 V DC
Input resistance of voltage input	36 k Ω

Measurement

Description of the input	± 24 V input
Input voltage range	-24 V DC ... 24 V DC
Input resistance of voltage input	24 k Ω

Output data

Signal: Voltage output

Voltage output signal	-10 V ... 10 V
Max. voltage output signal	± 15 V
Load/output load voltage output	> 10 k Ω
Ripple	< 50 mV _{PP}

Signal: Current output

Current output signal	-20 mA ... 20 mA
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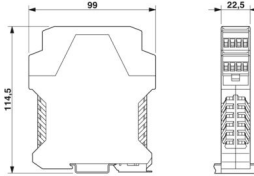
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Max. current output signal	± 30 mA
Load/output load current output	< 500 Ω
Ripple	< 50 mV _{PP}

Connection data

Connection method	Pluggable screw connection
Connection technology	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 14

Dimensions

Dimensional drawing	
Width	22.5 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)	-25 °C ... 50 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C (non-condensing)

Approvals

CE

Certificate	CE-compliant
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UL, USA/Canada

Identification	cULus
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EMC data

Electromagnetic compatibility	Conformance with EMC directive
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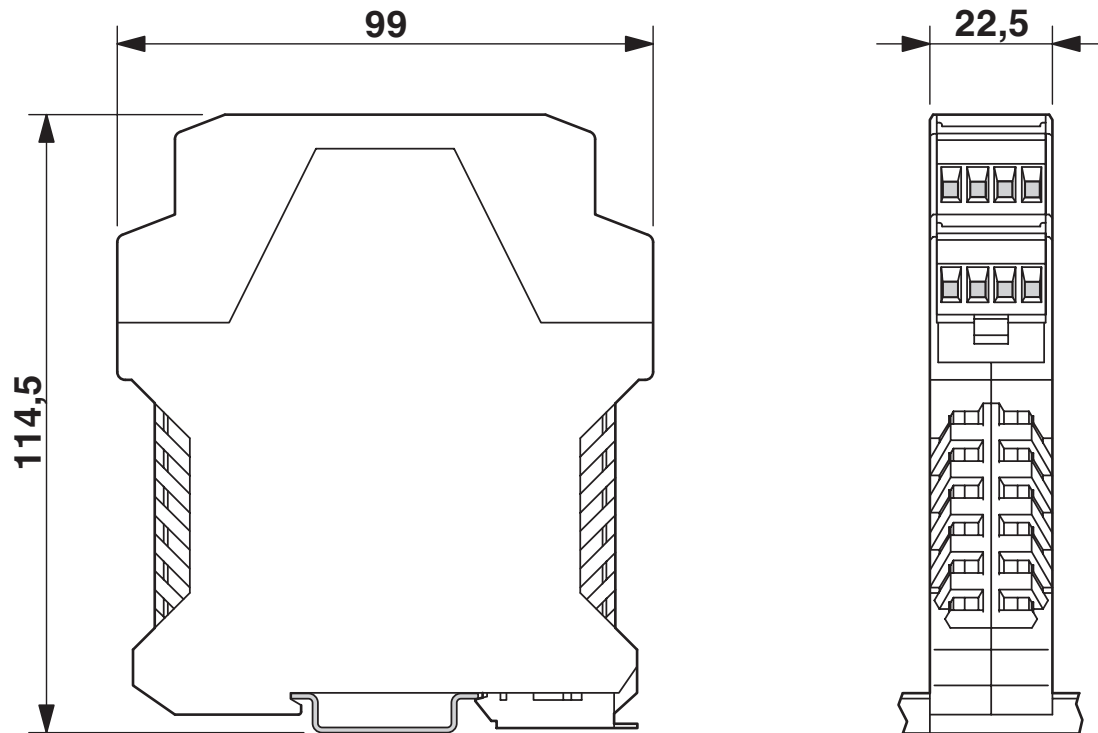
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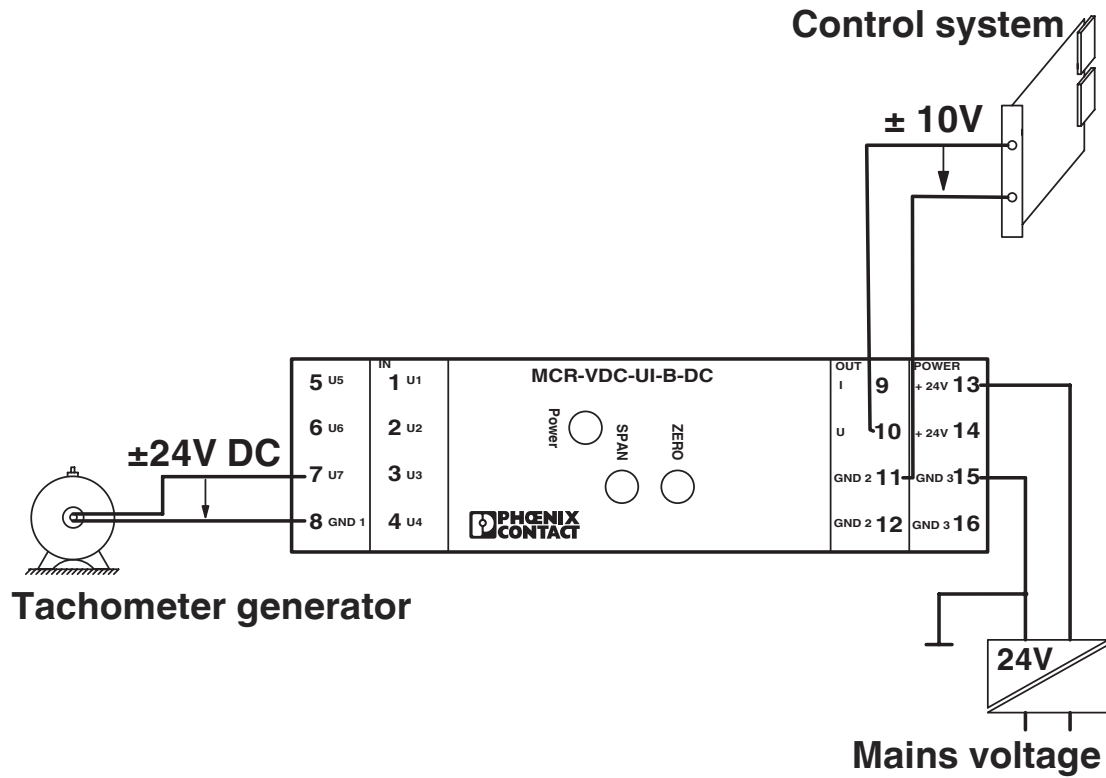
Noise immunity	EN 61000-6-2
Noise emission	
Standards/regulations	EN 61000-6-4

Drawings

Dimensional drawing

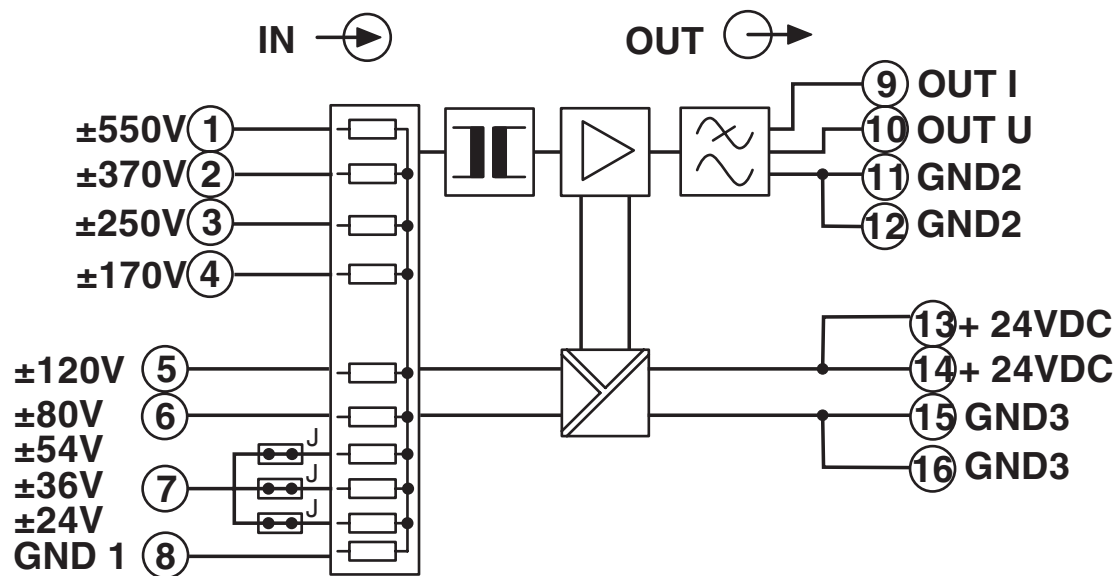


Application drawing



Voltage measurement in case of ungrounded circuits

Circuit diagram



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Environmental product compliance

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.)	No substance above 0.1 wt%
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