

# Voltage measuring transducers - MACX MCR-VDC



2906242

<https://www.phoenixcontact.com/pc/products/2906242>

Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.

---



MACX MCR voltage transducers for DC voltages of 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

# Voltage measuring transducers - MACX MCR-VDC



2906242

<https://www.phoenixcontact.com/pc/products/2906242>

## Commercial Data

Item number	2906242
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	CK4B21
Catalog Page	Page 238 (C-5-2019)
GTIN	4055626050928
Weight per Piece (including packing)	230.6 g
Weight per Piece (excluding packing)	211.7 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
----------	---

### Product properties

Product type	Voltage transducer
--------------	--------------------

#### Insulation characteristics

Pollution degree	2
------------------	---

### Electrical properties

Alignment span	± 20 %
Alignment zero	± 20 %
Electrical isolation	IEC 61010-2-30 (Measuring category II (1000 V)Measuring category III (600 V)Measuring category IV (300 V)) IEC 61010-1 (Overvoltage category III at 300 VOvervoltage category IV at 150 V)
Test voltage	5.3 kV AC (50 Hz, 60 s) 2.2 kV AC (50 Hz, 60 s)
Maximum power dissipation for nominal condition	1.2 W
Protective circuit	Surge protection; 33 V suppressor diode
Step response (10-90%)	< 16 ms
Maximum temperature coefficient	< 0.015 %/K
Maximum transmission error	< 1 % (of measuring range end value)

#### Supply

Nominal supply voltage	24 V DC (-20 % ... +25 %)
Supply voltage range	19.2 V DC ... 30 V DC
Max. current consumption	< 60 mA

### Input data

#### Measurement

Configurable/programmable	Yes
Input voltage range	-550 V DC ... 550 V DC
Input resistance of voltage input	5500 kΩ
Maximum input voltage	± 660 V DC
Impulse form	DC voltage

#### Measurement

Input voltage range	-370 V DC ... 370 V DC
Input resistance of voltage input	3700 kΩ

# Voltage measuring transducers - MACX MCR-VDC



2906242

<https://www.phoenixcontact.com/pc/products/2906242>

## Measurement

Input voltage range	-250 V DC ... 250 V DC
Input resistance of voltage input	2500 k $\Omega$

## Measurement

Input voltage range	-170 V DC ... 170 V DC
Input resistance of voltage input	1700 k $\Omega$

## Measurement

Input voltage range	-120 V DC ... 120 V DC
Input resistance of voltage input	1200 k $\Omega$

## Measurement

Input voltage range	-80 V DC ... 80 V DC
Input resistance of voltage input	800 k $\Omega$

## Measurement

Input voltage range	-54 V DC ... 54 V DC
Input resistance of voltage input	800 k $\Omega$

## Measurement

Input voltage range	-36 V DC ... 36 V DC
Input resistance of voltage input	800 k $\Omega$

## Measurement

Input voltage range	-24 V DC ... 24 V DC
Input resistance of voltage input	240 k $\Omega$

## Output data

### Signal: Voltage

Output name	Voltage output
Voltage output signal	-10 V ... 10 V
Max. voltage output signal	$\leq 11$ V
Load/output load voltage output	$> 10$ k $\Omega$
Ripple	50 mV

### Signal: Current

Output name	Current output
Current output signal	-20 mA ... 20 mA
Max. current output signal	$\leq 22$ mA
Load/output load current output	$< 500$ $\Omega$

## Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3

# Voltage measuring transducers - MACX MCR-VDC



2906242

<https://www.phoenixcontact.com/pc/products/2906242>

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

## Dimensions

Width	22.5 mm
Height	113 mm
Depth	114 mm

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C (non-condensing)
Altitude	≤ 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)

## Approval data

### CE

Certificate	CE-compliant
-------------	--------------

### CE

Certificate	UKCA-compliant
-------------	----------------

### CE

Identification	UL 61010 Listed
----------------	-----------------

## EMC data

Low Voltage Directive	Conformance with Low Voltage Directive
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.

## Standards and regulations

Standards/regulations	IEC 61010-1
	IEC 61010-2-030

## Mounting

Mounting type	DIN rail mounting
Assembly instructions	Can be aligned with spacing = 10 mm
Mounting position	any

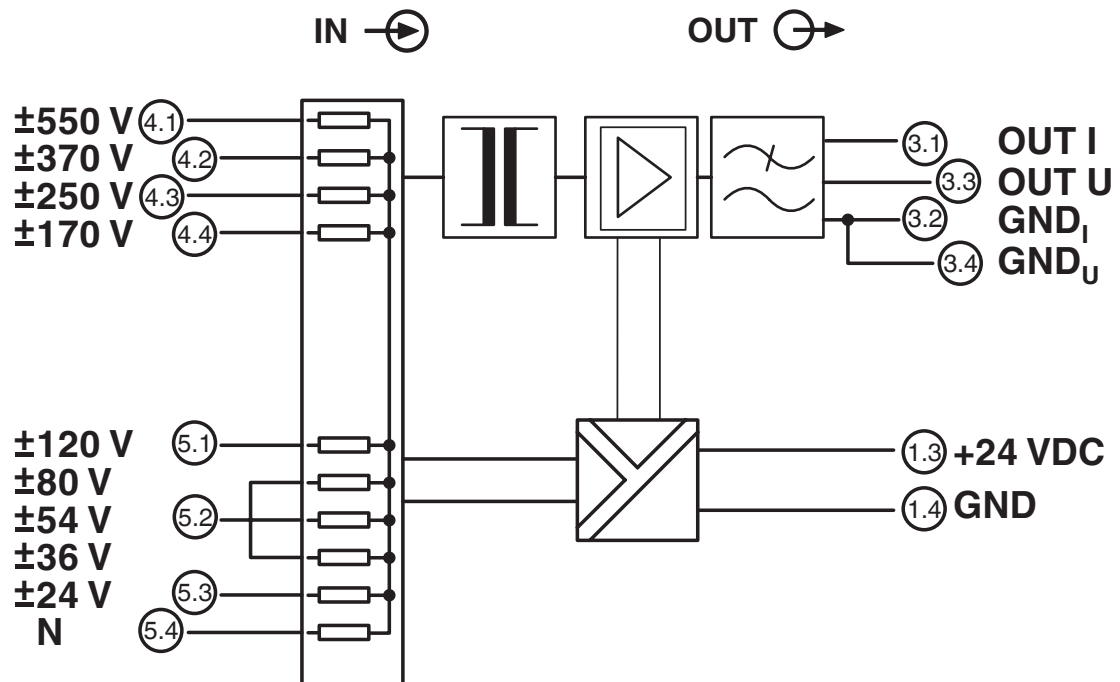
# Voltage measuring transducers - MACX MCR-VDC

2906242

<https://www.phoenixcontact.com/pc/products/2906242>

## Drawings

Block diagram



# Voltage measuring transducers - MACX MCR-VDC



2906242

<https://www.phoenixcontact.com/pc/products/2906242>

## Approvals



**EAC**

Approval ID: RU\*DE.\*08.B.01852-19



**UL Listed**

Approval ID: FILE E 330267



**cUL Listed**

Approval ID: FILE E 330267

**cULus Listed**

# Voltage measuring transducers - MACX MCR-VDC



2906242

<https://www.phoenixcontact.com/pc/products/2906242>

## Classifications

### ECLASS

ECLASS-9.0	27210125
ECLASS-10.0.1	27210125
ECLASS-11.0	27210125

### ETIM

ETIM 8.0	EC002477
----------	----------

### UNSPSC

UNSPSC 21.0	39121000
-------------	----------



# Voltage measuring transducers - MACX MCR-VDC



2906242

<https://www.phoenixcontact.com/pc/products/2906242>

## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

[info@phoenixcontact.com](mailto:info@phoenixcontact.com)