

## Voltage measuring transducers - MACX MCR-VDC - 2906242

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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



### Key Commercial Data

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                 |
| GTIN         |  |
| GTIN         | 4055626050928                                                                        |

### Technical data

#### Note

|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---------------------------------------------------------------------------|

#### Dimensions

|        |          |
|--------|----------|
| Width  | 22.5 mm  |
| Height | 112.8 mm |
| Depth  | 113.5 mm |

#### Ambient conditions

|                                         |                                   |
|-----------------------------------------|-----------------------------------|
| Ambient temperature (operation)         | -25 °C ... 60 °C                  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C (non-condensing) |
| Maximum altitude                        | $\leq 2000$ m                     |

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## Technical data

### Ambient conditions

|                                  |                                                                                   |
|----------------------------------|-----------------------------------------------------------------------------------|
| Permissible humidity (operation) | 10 % ... 95 % (non-condensing)                                                    |
| Degree of protection             | IP20                                                                              |
| Noise immunity                   | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |

### Input data

|                     |                        |
|---------------------|------------------------|
| Input voltage range | -550 V DC ... 550 V DC |
| Input resistance    | 5500 k $\Omega$        |
| Input voltage range | -370 V DC ... 370 V DC |
| Input resistance    | 3700 k $\Omega$        |
| Input voltage range | -250 V DC ... 250 V DC |
| Input resistance    | 2500 k $\Omega$        |
| Input voltage range | -170 V DC ... 170 V DC |
| Input resistance    | 1700 k $\Omega$        |
| Input voltage range | -120 V DC ... 120 V DC |
| Input resistance    | 1200 k $\Omega$        |
| Input voltage range | -80 V DC ... 80 V DC   |
| Input resistance    | 800 k $\Omega$         |
| Input voltage range | -54 V DC ... 54 V DC   |
| Input resistance    | 800 k $\Omega$         |
| Input voltage range | -36 V DC ... 36 V DC   |
| Input resistance    | 800 k $\Omega$         |
| Input voltage range | -24 V DC ... 24 V DC   |
| Input resistance    | 240 k $\Omega$         |
| Nom. voltage        | $\pm$ 660 V DC         |

### Output data

|                                 |                   |
|---------------------------------|-------------------|
| Output name                     | Voltage output    |
| Voltage output signal           | -10 V ... 10 V    |
| Max. output voltage             | $\leq$ 11 V       |
| Load/output load voltage output | $>$ 10 k $\Omega$ |
| Ripple                          | 50 mV             |
| Output name                     | Current output    |
| Current output signal           | -20 mA ... 20 mA  |
| Max. output current             | $\leq$ 22 mA      |
| Load/output load current output | $<$ 500 $\Omega$  |

### Power supply

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

### Connection data

# Voltage measuring transducers - MACX MCR-VDC - 2906242

## Technical data

### 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 % (of measuring range end value)                                              |
| Maximum temperature coefficient | < 0.015 %/K                                                                       |
| Alignment zero                  | ± 20 %                                                                            |
| Alignment span                  | ± 20 %                                                                            |
| Step response (10-90%)          | < 16 ms                                                                           |
| Test voltage                    | 5.3 kV AC (50 Hz, 1 min.)                                                         |
| Electromagnetic compatibility   | Conformance with EMC directive                                                    |
| Noise emission                  | EN 61000-6-4                                                                      |
| Noise immunity                  | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |
| Color                           | gray                                                                              |
| Mounting position               | any                                                                               |
| Assembly instructions           | Can be aligned with spacing = 10 mm                                               |
| Conformance                     | CE-compliant                                                                      |
| UL, USA/Canada                  | UL 61010 Listed                                                                   |

### Standards and Regulations

|                               |                                        |
|-------------------------------|----------------------------------------|
| Electromagnetic compatibility | Conformance with EMC directive         |
| Noise emission                | EN 61000-6-4                           |
| Standards/regulations         | IEC 61010-1                            |
|                               | IEC 61010-2-030                        |
| Pollution degree              | 2                                      |
| Low Voltage Directive         | Conformance with Low Voltage Directive |
| Conformance                   | CE-compliant                           |
| UL, USA/Canada                | UL 61010 Listed                        |

### Conformance/approvals

|                |                 |
|----------------|-----------------|
| Designation    | CE              |
| Identification | CE-compliant    |
| Designation    | UL, USA/Canada  |
| Identification | UL 61010 Listed |

### Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

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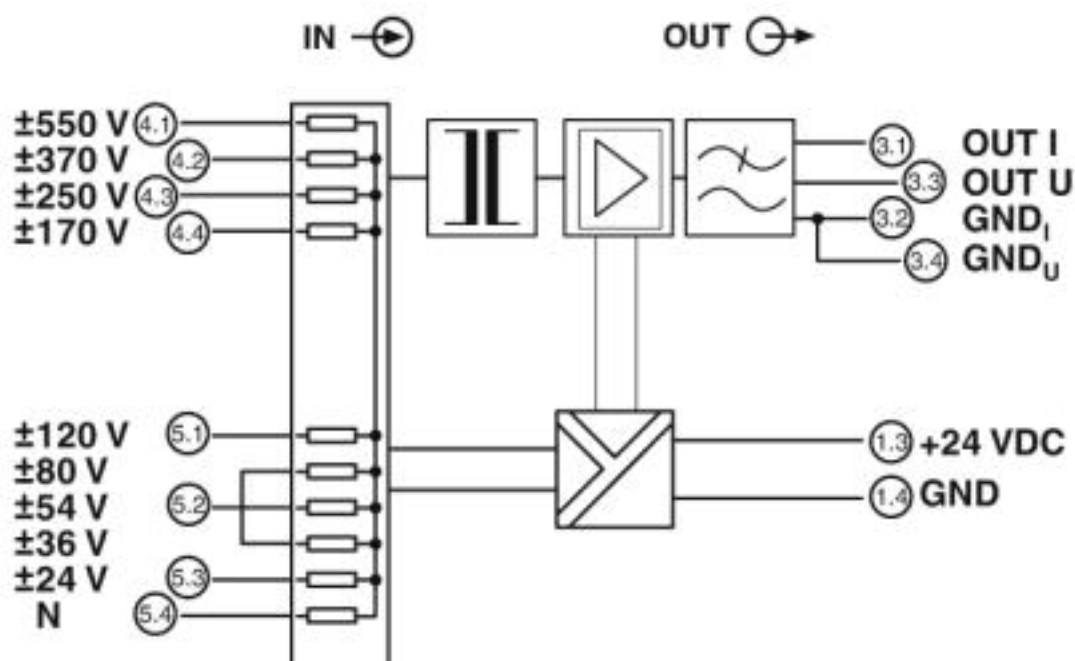
## Technical data

### Environmental Product Compliance

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

## Drawings

Block diagram



## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27271100 |
| 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 |

## Voltage measuring transducers - MACX MCR-VDC - 2906242

### Approvals

#### Approvals

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#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

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#### Ex Approvals

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#### Approval details

UL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 330267

cUL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 330267

EAC



RU\*DE.\*08.B.01852-19

cULus Listed



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