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# Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

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Configurable potiposition transducer with plug-in connection technology for connecting potentiometers from 0 Ω ... 100 Ω to 0 kΩ ... 100 kΩ. Configurable via DIP switch or software. Screw connection technology, standard configuration

Figure shows MINI MCR-2-POT-UI-PT version

## Product description

Configurable, 3-way isolated potentiometer measuring transducer with plug-in connection technology. The measured values are converted into a linear and freely adjustable current or voltage signal. You can configure the device using one of the free software solutions. Default settings can also be made directly on the device by simply using the DIP switches (see configuration table). If it is not possible to fully utilize the potentiometer range, you can specify the upper and lower potentiometer values in the software. The measuring transducer supports fault monitoring and NFC communication.

## Key commercial data

| | |
|---|---|
| Packing unit | 1 pc |
| Weight per Piece (excluding packing) | 20.0 GRM |
| 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 |

### Dimensions

| | |
|---|---|
| Width | 6.2 mm |
| Height | 110.5 mm |
| Depth | 120.5 mm |

### Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 70 °C |

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## Technical data

### Ambient conditions

| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
|---|---|

### Input data

| Potentiometer | 100 Ω ... 100 kΩ |
|---|---|

### Output data

| Voltage output signal | 1 V ... 5 V (via DIP switch) |
|---|---|
| | 10 V ... 0 V (via DIP switch) |
| | 0 V ... 5 V (via DIP switch) |
| | 0 V ... 10 V (via DIP switch) |
| | 0 V ... 10.5 V (Can be set via software) |
| Current output signal | 0 mA ... 20 mA (via DIP switch) |
| | 4 mA ... 20 mA (via DIP switch) |
| | 20 mA ... 0 mA (via DIP switch) |
| | 20 mA ... 4 mA (via DIP switch) |
| | 0 mA ... 21 mA (Can be set via software) |
| Max. voltage output signal | approx. 12.3 V |
| Max. current output signal | 24.6 mA |
| Load/output load voltage output | $\geq$ 10 kΩ |
| Load/output load current output | $\leq$ 600 Ω (at 20 mA) |

### Power supply

| Supply voltage | 24 V DC |
|---|---|
| | 9.6 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715)) |
| Current consumption | 33 mA (24 V DC) |
| | 68 mA (12 V DC) |

### Connection data

| Single conductor/terminal point, solid, with ferrule, min. | 0.2 mm² |
|---|---|
| Single conductor/terminal point, solid, with ferrule, max. | 1.5 mm² |
| Single conductor/terminal point, solid, without ferrule, min. | 0.2 mm² |
| Single conductor/terminal point, solid, without ferrule, max. | 2.5 mm² |
| Conductor cross section flexible min. | 0.2 mm² |
| Conductor cross section flexible max. | 1.5 mm² |
| Min. AWG conductor cross section, flexible | 24 |
| Max. AWG conductor cross section, flexible | 12 |
| Stripping length | 10 mm |
| Screw thread | M3 |

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## Technical data

### Connection data

| Connection method | Screw connection |
|---|---|

### General

| Maximum transmission error | < 0.1 % (R < 240 Ω = < 0,2 %) |
|---|---|
| Maximum temperature coefficient | 0.01 %/K |
| Step response (10-90%) | < 60 ms |
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Housing material | PBT |
| Conformance | CE-compliant |
| ATEX | # II 3 G Ex nA IIC T4 Gc X |
| UL, USA / Canada | UL 508 Listed |

### EMC data

| Designation | Electromagnetic RF field |
|---|---|
| Standards/regulations | EN 61000-4-3 |
| Typical deviation from the measuring range final value | 0.2 % |
| Designation | Fast transients (burst) |
| Standards/regulations | EN 61000-4-4 |
| Typical deviation from the measuring range final value | 0.4 % |
| Designation | Conducted interferences |
| Standards/regulations | EN 61000-4-6 |
| Typical deviation from the measuring range final value | 0.2 % |

## Classifications

### eCl@ss

| eCl@ss 4.0 | 27210120 |
|---|---|
| eCl@ss 4.1 | 27210120 |
| eCl@ss 5.0 | 27210120 |
| eCl@ss 5.1 | 27210120 |
| eCl@ss 6.0 | 27210120 |
| eCl@ss 7.0 | 27210120 |
| eCl@ss 8.0 | 27210120 |

### ETIM

| ETIM 3.0 | EC001485 |
|---|---|
| ETIM 4.0 | EC001446 |

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## Classifications

### ETIM

| ETIM 5.0 | EC002653 |
|---|---|

### UNSPSC

| UNSPSC 6.01 | 30211506 |
|---|---|
| UNSPSC 7.0901 | 39121008 |
| UNSPSC 11 | 39121008 |
| UNSPSC 12.01 | 39121008 |
| UNSPSC 13.2 | 39121008 |

## Approvals

### Approvals

Approvals

UL Listed / cUL Listed / GL / cULus Listed

Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed
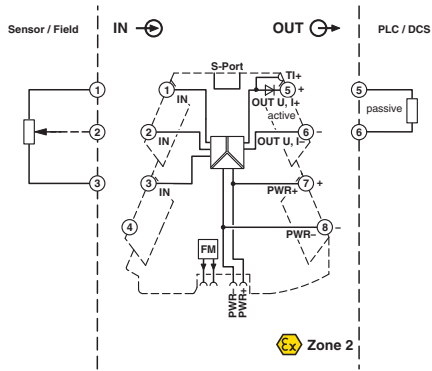
Approvals submitted

### Approval details

| UL Listed |
|---|

| cUL Listed |
|---|

| GL |
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| cULus Listed |
|---|

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## Drawings

Block diagram

Pictogram