

## Limit value switches - MINI MCR-SL-UI-REL-SP - 2864493

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MCR threshold value switch, with adjustable hysteresis and delay time, with spring-cage connection.  
Replacement part: 2902035 MINI MCR-2-UI-REL-PT.

### Your advantages

- ✓ Power supply possible via the foot element (TBUS)
- ✓ Highly-compact threshold value switch for switching analog limit values
- ✓ Status and error indication via two diagnostic LEDs
- ✓ PDT relay at output
- ✓ 3-way isolation
- ✓ Limit value can be freely adjusted via potentiometer on the front
- ✓ Input signal, hysteresis, and delay time can be configured via DIP switches
- ✓ Operating current/closed circuit current switch-over



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 pc  |
| GTIN         | <br>4 017918 974886 |
| GTIN         | 4017918974886   |

### Technical data

#### Dimensions

|        |          |
|--------|----------|
| Width  | 6.2 mm   |
| Height | 93.1 mm  |
| Depth  | 102.5 mm |

#### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -20 °C ... 65 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Degree of protection                    | IP20             |

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## Technical data

### Ambient conditions

|                |   |
|----------------|---|
| Noise immunity | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |
|----------------|---|

### Input data

|                                   |                |
|-----------------------------------|----------------|
| Number of inputs                  | 1              |
| Voltage input signal              | 0 V ... 10 V   |
| Current input signal              | 0 mA ... 20 mA |
| max. input voltage                | 30 V           |
| Max. input current                | 100 mA         |
| Input resistance of voltage input | > 100 kΩ       |
| Input resistance current input    | 50 Ω           |

### Output data

|                   |   |
|-------------------|---|
| Number of outputs | 1 |
|-------------------|---|

### Switching output

|                                     |  |
|-------------------------------------|--|
| Output name                         | Relay output   |
| Contact type                        | 1 PDT  |
| Contact material                    | AgSnO <sub>2</sub> , hard gold-plated                  |
| Maximum switching voltage           | 250 V AC<br>240 V AC (UL)                              |
| Limiting continuous current         | 2 A  |
| Setting range of the response delay | 0 s ... 10 s (0 s; 1 s; 2 s; 3 s; 4 s; 6 s; 8 s; 10 s) |
| Internal hysteresis                 | 0.1 %; 1 %; 2.5 %; 5 %                                 |

### Power supply

|                          |   |
|--------------------------|---|
| Nominal supply voltage   | 24 V DC   |
| Supply voltage range     | 19.2 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)) |
| Max. current consumption | < 14 mA (at 24 V DC)  |
| Power consumption        | < 330 mW (at 24 V DC)   |

### Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Spring-cage connection                      |
| Stripping length                 | 8 mm  |
| 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 ... 12                                   |

### General

|                                 |            |
|---------------------------------|------------|
| No. of channels                 | 1          |
| Maximum temperature coefficient | < 0.02 %/K |
| Switching point accuracy        | < 0.05 %   |

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## Technical data

### General

|  |  |
|--|--|
| Electrical isolation                                   | Basic insulation according to EN 61010   |
| Overvoltage category                                   | II   |
| Degree of pollution                                    | 2  |
| Rated insulation voltage                               | 50 V AC/DC   |
| Test voltage input/power supply                        | 1.5 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  | green  |
| Housing material                                       | PBT  |
| Mounting position                                      | any  |
| Assembly instructions                                  | The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715. |
| Conformance  | CE-compliant   |
| ATEX   | # II 3 G Ex nA nC IIC T4 Gc X  |
| UL, USA  | Class I, Zone 2, AEx nA nC IIC T5  |
| UL, USA/Canada   | UL 508 Recognized  |
| UL, Canada   | Class I, Zone 2, Ex nA nC IIC T5 Gc  |
| GL   | GL EMC 2 D   |
| Fire protection for rail vehicles (DIN EN 45545-2) R22 | HL 1 - HL 2  |
| Fire protection for rail vehicles (DIN EN 45545-2) R23 | HL 1 - HL 2  |
| Fire protection for rail vehicles (DIN EN 45545-2) R24 | HL 1 - HL 2  |

### EMC data

|  |                          |
|--|--------------------------|
| Designation  | Electromagnetic RF field |
| Standards/regulations                                  | EN 61000-4-3             |
| Typical deviation from the measuring range final value | 5 %                      |
| Designation  | Fast transients (burst)  |
| Standards/regulations                                  | EN 61000-4-4             |
| Typical deviation from the measuring range final value | 5 %                      |
| Designation  | Conducted interferences  |
| Standards/regulations                                  | EN 61000-4-6             |
| Typical deviation from the measuring range final value | 5 %                      |

### Standards and Regulations

|                                  |                                |
|----------------------------------|--------------------------------|
| Electromagnetic compatibility    | Conformance with EMC directive |
| Noise emission                   | EN 61000-6-4                   |
| Connection in acc. with standard | CUL                            |
| Standards/regulations            | EN 61000-4-2                   |
| Designation                      | Electromagnetic RF field       |
| Standards/regulations            | EN 61000-4-3                   |

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## Technical data

### Standards and Regulations

|  |  |
|--|--|
|  | EN 61000-4-4                           |
|  | EN 61000-4-5                           |
| Designation  | Conducted interferences                |
| Standards/regulations                                  | EN 61000-4-6                           |
| Electrical isolation                                   | Basic insulation according to EN 61010 |
| Conformance  | CE-compliant                           |
| ATEX   | # II 3 G Ex nA nC IIC T4 Gc X          |
| UL, USA  | Class I, Zone 2, AEx nA nC IIC T5      |
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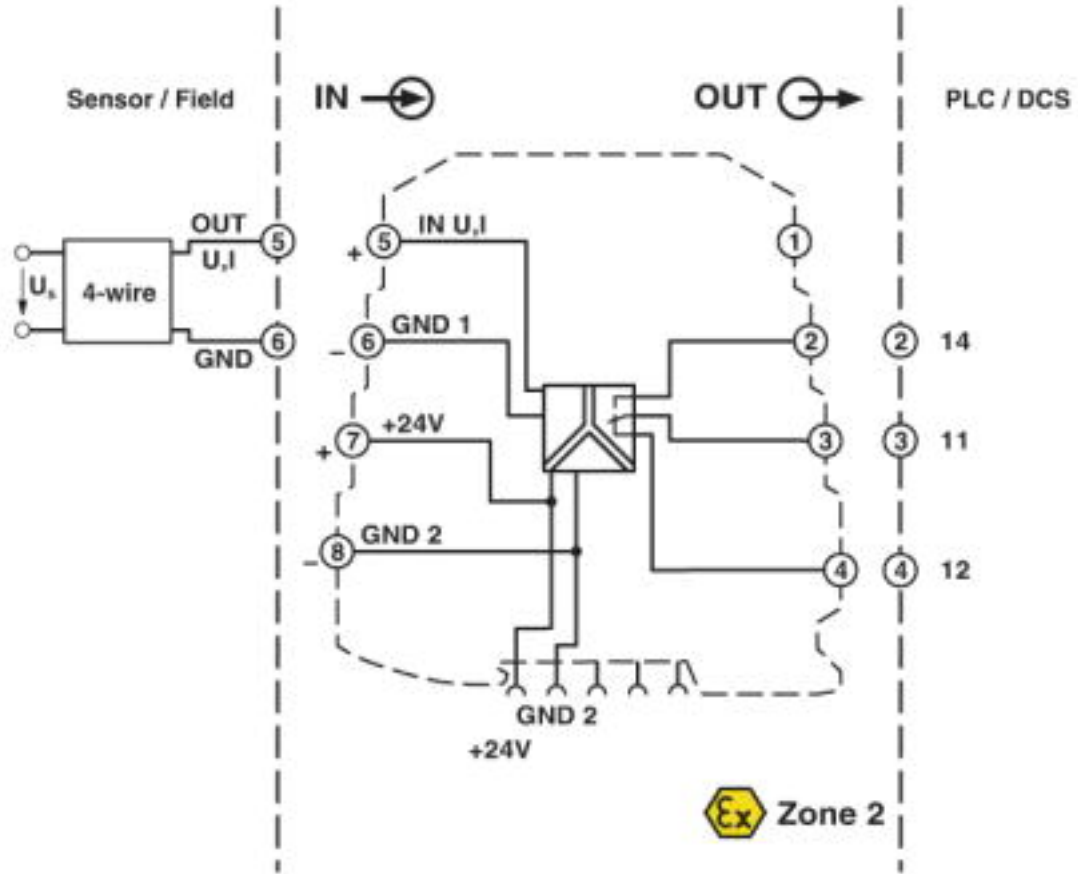
### Environmental Product Compliance

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

## Drawings

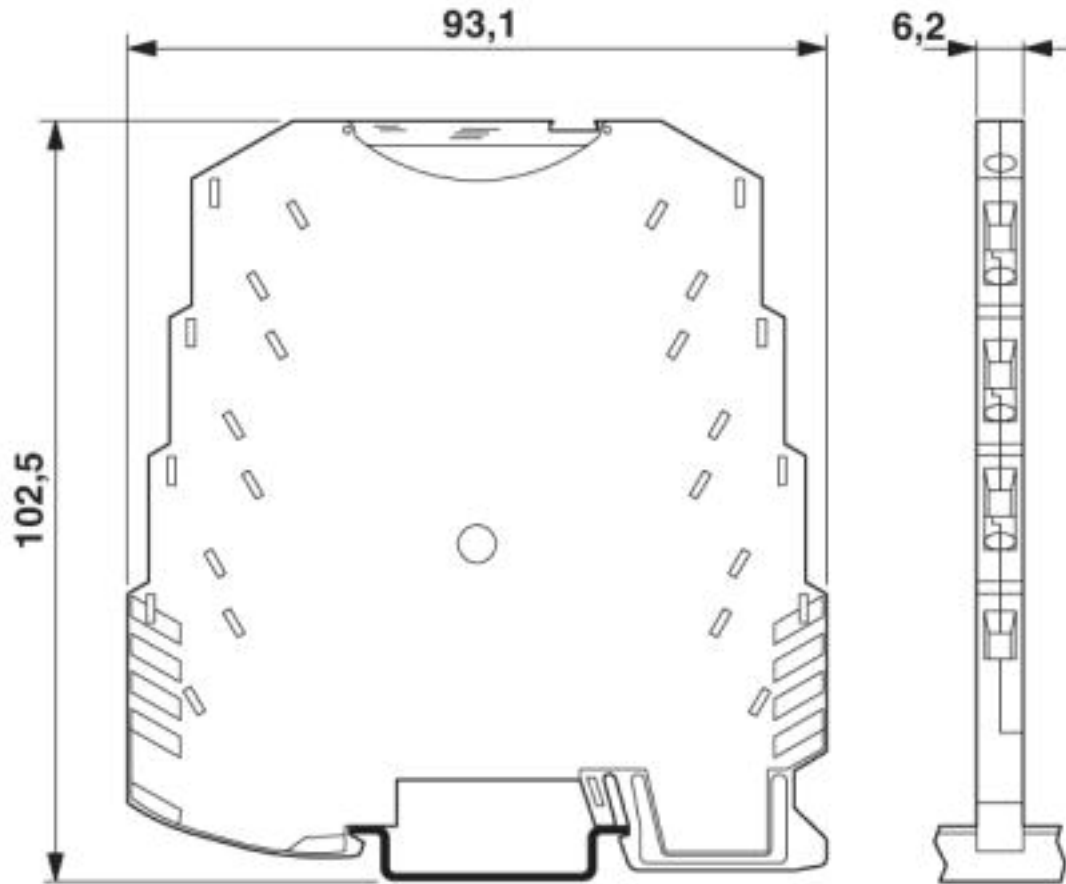
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Block diagram



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Dimensional drawing



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