

## Extension module - PSR-SPP- 24DC/URD3/4X1/2X2 - 2981525

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Single-channel contact extension with TBUS interface, 4 N/O contacts, 1 N/C contact, 1 confirmation current path, adjustable dropout delay of 0.5 - 30 s, Cat. 3, PL e according to EN ISO 13849, plug-in spring-cage terminal block, width: 22.5 mm

The figure shows a version with a screw connection

### Why buy this product

- Up to Cat. 3/PL d according to ISO 13849-1, SILCL 2 according to IEC 62061, SIL 2 according to IEC 61508
- Each with 4 enabling, 1 signaling, and 1 confirmation current path, all with dropout delay
- Single-channel control



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 STK   |
| GTIN         | <br>4 017918 996819 |

### Technical data

#### Note

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

#### Dimensions

|        |          |
|--------|----------|
| Width  | 22.5 mm  |
| Height | 112 mm   |
| Depth  | 114.5 mm |

#### Ambient conditions

|  |   |
|--|---|
| Ambient temperature (operation)                | -20 °C ... 55 °C                                    |
| Ambient temperature (storage/transport)        | -40 °C ... 70 °C                                    |
| Max. permissible relative humidity (operation) | 75 % (on average, 85% infrequently, non-condensing) |
| Max. permissible humidity (storage/transport)  | 75 % (on average, 85% infrequently, non-condensing) |

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## Technical data

### Ambient conditions

|                  |                               |
|------------------|-------------------------------|
| Maximum altitude | max. 2000 m (Above sea level) |
|------------------|-------------------------------|

### Input data

|   |  |
|---|--|
| Nominal input voltage $U_N$               | 24 V DC  |
| Input voltage range in reference to $U_N$ | 0.85 ... 1.1                                       |
| Typical input current at $U_N$            | 84 mA  |
| Typical response time                     | 20 ms  |
| Typical release time range                | 0.5 s ... 38 s $\pm 20$ % (BG rating to max. 30 s) |
| Recovery time                             | 1 s  |
| Status display                            | Green LED  |

### Output data

|  |  |
|--|--|
| Contact type                                 | 4 delayed enabling current paths                             |
|  | 1 delayed signaling current path                             |
|  | 1 delayed confirmation current path                          |
| Contact material                             | AgSnO <sub>2</sub>   |
| Minimum switching voltage                    | 15 V AC/DC   |
| Maximum switching voltage                    | 250 V AC/DC  |
| Limiting continuous current                  | 6 A (N/O contact)  |
|  | 3 A (N/C contact)  |
| Inrush current, minimum                      | 25 mA  |
| Maximum inrush current                       | 6 A (N/O contact)  |
|  | 3 A (N/C contact)  |
| Sq. Total current                            | $50 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$  |
| Interrupting rating (ohmic load) max.        | 114 W (24 V DC, $\tau = 0$ ms, N/C contact 65/66: 72 W)      |
|  | 288 W (48 V DC, $\tau = 0$ ms)                               |
|  | 77 W (110 V DC, $\tau = 0$ ms)                               |
|  | 88 W (220 V DC, $\tau = 0$ ms)                               |
|  | 1500 VA (250 V AC, $\tau = 0$ ms, N/C contact 65/66: 750 VA) |
| Maximum interrupting rating (inductive load) | 48 W (24 V DC, $\tau = 40$ ms)                               |
|  | 40 W (48 V DC, $\tau = 40$ ms)                               |
|  | 35 W (110 V DC, $\tau = 40$ ms)                              |
|  | 33 W (220 V DC, $\tau = 40$ ms)                              |
| Switching capacity min.                      | 0.4 W  |
| Output fuse                                  | 10 A gL/gG NEOZED (N/O contact)                              |
|  | 4 A gL/gG NEOZED (N/C contact)                               |

### General

|                         |   |
|-------------------------|---|
| Relay type              | Electromechanical relay with forcibly guided contacts in accordance with EN 50205 |
| Mechanical service life | Approx. $10^7$ cycles   |
| Net weight              | 234.5 g   |

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### Technical data

#### General

|   |                   |
|---|-------------------|
| Mounting type                               | DIN rail mounting |
| Degree of protection                        | IP54              |
|   | IP20              |
| Min. degree of protection of inst. location | IP54              |
| Mounting position                           | any               |
| Control                                     | single-channel    |

#### Connection data

|                                       |                        |
|---------------------------------------|------------------------|
| Connection method                     | Spring-cage connection |
| pluggable                             | Yes                    |
| Conductor cross section solid min.    | 0.2 mm <sup>2</sup>    |
| Conductor cross section solid max.    | 1.5 mm <sup>2</sup>    |
| Conductor cross section flexible min. | 0.2 mm <sup>2</sup>    |
| Conductor cross section flexible max. | 1.5 mm <sup>2</sup>    |
| Conductor cross section AWG min.      | 24                     |
| Conductor cross section AWG max.      | 16                     |
| Stripping length                      | 8 mm                   |

#### Safety-related characteristic data

|   |                         |
|---|-------------------------|
| Stop category                               | 1                       |
| Designation                                 | IEC 61508 - High demand |
| Safety Integrity Level (SIL)                | 3                       |
| Designation                                 | IEC 61508 - Low demand  |
| Safety Integrity Level (SIL)                | 3                       |
| Designation                                 | EN ISO 13849            |
| Performance level (PL)                      | d                       |
| Category                                    | 3                       |
| Designation                                 | EN 62061                |
| Safety Integrity Level Claim Limit (SIL CL) | 3                       |

#### Standards and Regulations

|                                |  |
|--------------------------------|--|
| Designation                    | Air clearances and creepage distances between the power circuits   |
| Standards/regulations          | DIN EN 50178/VDE 0160  |
| Rated insulation voltage       | 250 V  |
| Rated surge voltage/insulation | 4 kV / basic isolation (safe isolation, reinforced insulation and 6 kV between input circuit/N/C contacts and enabling current paths). |
| Degree of pollution            | 2  |
| Overvoltage category           | III  |

#### Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
|------------|----------|

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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.1 | 27371102 |
| eCl@ss 5.0 | 27371901 |
| eCl@ss 5.1 | 27371901 |
| eCl@ss 6.0 | 27371819 |
| eCl@ss 7.0 | 27371819 |
| eCl@ss 8.0 | 27371819 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001449 |
| ETIM 3.0 | EC001449 |
| ETIM 4.0 | EC001449 |
| ETIM 5.0 | EC001449 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211901 |
| UNSPSC 7.0901 | 39121501 |
| UNSPSC 11     | 39121501 |
| UNSPSC 12.01  | 39121501 |
| UNSPSC 13.2   | 39121501 |

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / Functional Safety / EAC / Functional Safety / Functional Safety / Functional Safety / cULus Listed

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#### Ex Approvals

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#### Approvals submitted

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### Approval details



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## Approvals


Functional Safety

EAC

Functional Safety

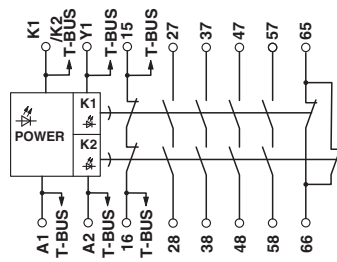
Functional Safety

Functional Safety

cULus Listed 

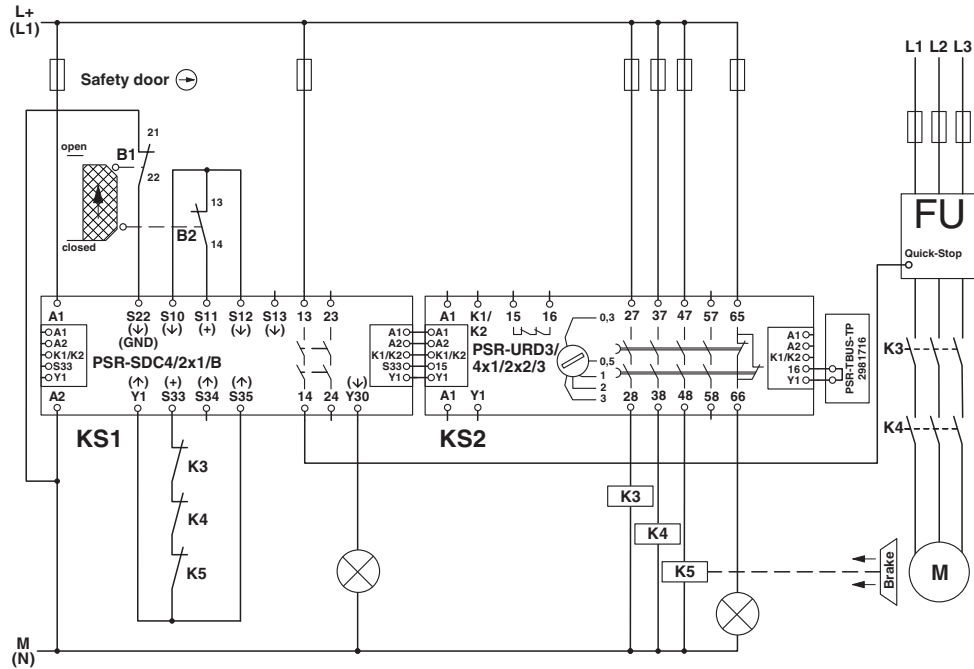
## Drawings

Circuit diagram



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Circuit diagram



Two-channel safety door monitoring with contact extension

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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>