# PSR-SPP- 24UC/URM4/5X1/2X2/B - Extension module

2981046

https://www.phoenixcontact.com/us/products/2981046

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Single or two-channel contact extension, 5 N/O contacts, 1 N/C contact, 1 confirmation current path, width: 22.5 mm, pluggable Push-in terminal block

## Your advantages

- 1- and 2-channel control
- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508

## Commercial data

| | |
|---|---|
| Item number | 2981046 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DN01 |
| Product key | DNA152 |
| GTIN | 4017918915520 |
| Weight per piece (including packing) | 207.4 g |
| Weight per piece (excluding packing) | 20.4 g |
| Customs tariff number | 85371098 |
| Country of origin | DE |

## Technical data

### Notes

Note on application

| | |
|---|---|
| Note on application | Only for industrial use |

### Product properties

| | |
|---|---|
| Product type | Safety relays |
| Product family | PSRclassic |
| Application | Extension module |
| Control | 1 and 2 channel |
| Mechanical service life | 10x $10^6$ cycles |
| Relay type | Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3 |

Insulation characteristics: Air clearances and creepage distances between the power circuits

| | |
|---|---|
| Overvoltage category | III |
| Degree of pollution | 2 |

### Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 2.21 W |
| Nominal operating mode | 100% operating factor |

Air clearances and creepage distances between the power circuits

| | |
|---|---|
| Rated insulation voltage | 250 V AC |
| Rated surge voltage/insulation | Basic insulation 4 kV:<br>between all current paths and housing<br>Safe isolation, reinforced insulation 6 kV:<br>between A1/A2, 11/12, 23/24, 71/72 and 33/34, 43/44, 53/54, 63/64 |

Supply

| | |
|---|---|
| Rated control circuit supply voltage $U_S$ | 24 V AC/DC -15 % / +10 % |
| Rated control supply current $I_S$ | typ. 81 mA (AC) |
| | typ. 71 mA (DC) |
| Power consumption at $U_S$ | typ. 1.94 W (AC) |
| | typ. 1.7 W (DC) |
| Inrush current | typ. 175 mA ($\Delta t$ = 5 ms at $U_s$) |
| Filter time | 2 ms (at A1 in the event of voltage dips at $U_s$) |
| Protective circuit | Surge protection; Varistor |

### Output data

Relay: Enabling current paths (23/24 ... 63/64)

| | |
|---|---|
| Number of outputs | 5 |
| Contact switching type | 5 enabling current paths |

| | |
|---|---|
| Contact material | $AgSnO_2$ |
| Switching voltage | min. 5 V AC/DC |
| | max. 250 V AC/DC |
| Switching power | min. 50 mW |
| Inrush current | min. 10 mA |
| | max. 20 A (Δt ≤ ms) |
| Switching capacity in accordance with IEC 60947-5-1 | 2.5 A (24 V (DC13)) |
| | 3 A (230 V (AC15)) |
| Switching capacity (360/h cycles) | 4 A (24 V DC) |
| | 4 A (230 V AC) |
| Limiting continuous current | 6 A (observe derating) |
| Sq. Total current | 72 $A^2$ (observe derating) |
| Switching frequency | max. 1 Hz |
| Interrupting rating (ohmic load) max. | Observe derating and load limit curve |
| Maximum interrupting rating (inductive load) | Observe derating and load limit curve |
| Output fuse | 10 A gL/gG |

Relay: Signaling current path (71/72)

| | |
|---|---|
| Number of outputs | 1 |
| Contact switching type | 1 signaling current path |
| Contact material | $AgSnO_2$ |
| Switching voltage | min. 5 V AC/DC |
| | max. 250 V AC/DC |
| Switching power | min. 50 mW |
| Inrush current | min. 10 mA |
| | max. 20 A (Δt ≤ ms) |
| Switching capacity in accordance with IEC 60947-5-1 | 2.5 A (24 V (DC13)) |
| | 3 A (230 V (AC15)) |
| Switching capacity (360/h cycles) | 4 A (24 V DC) |
| | 4 A (230 V AC) |
| Limiting continuous current | 6 A |
| Sq. Total current | 72 $A^2$ |
| Switching frequency | max. 1 Hz |
| Interrupting rating (ohmic load) max. | see load limit curve |
| Maximum interrupting rating (inductive load) | see load limit curve |
| Output fuse | 6 A (gL/gG) |

Relay: Confirmation current path (11/12)

| | |
|---|---|
| Number of outputs | 1 |
| Contact switching type | 1 confirmation current path |
| Contact material | $AgSnO_2$ |
| Switching voltage | max. 250 V AC/DC |
| | min. 5 V AC/DC |
| Switching power | min. 50 mW |
| Inrush current | max. 20 A (Δt ≤ ms) |

| | |
|---|---|
| Switching capacity in accordance with IEC 60947-5-1 | 2.5 A (24 V (DC13)) |
| | 3 A (230 V (AC15)) |
| Switching capacity (360/h cycles) | 4 A (24 V DC) |
| | 4 A (230 V AC) |
| Limiting continuous current | 6 A |
| Sq. Total current | 72 $A^2$ |
| Switching frequency | max. 1 Hz |
| Interrupting rating (ohmic load) max. | see load limit curve |
| Maximum interrupting rating (inductive load) | see load limit curve |
| Output fuse | 6 A (gL/gG) |

## Connection data

Connection technology

| | |
|---|---|
| pluggable | yes |

Conductor connection

| | |
|---|---|
| Connection method | Push-in connection |
| Conductor cross-section rigid | 0.2 mm² ... 1.5 mm² |
| Conductor cross-section flexible | 0.2 mm² ... 1.5 mm² |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 1.5 mm² (only together with CRIMPFOX 6) |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 0.25 mm² ... 1.5 mm² (only together with CRIMPFOX 6) |
| Conductor cross-section AWG | 24 ... 16 |
| Stripping length | 8 mm |

## Signaling

| | |
|---|---|
| Operating voltage display | 1 x LED (green) |

## Dimensions

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

## Material specifications

| | |
|---|---|
| Color (Housing) | yellow (RAL 1018) |
| Housing material | PA |

## Characteristics

Safety data

| | |
|---|---|
| Stop category (EN 60204-1) | 0 |

Safety data: EN ISO 13849

| | |
|---|---|
| Performance level (PL) | e (In conjunction with suitable evaluating device) |

Safety data: IEC 61508 - High demand

| | |
|---|---|
| Safety Integrity Level (SIL) | 3 (In conjunction with suitable evaluating device) |

Safety data: IEC 61508 - Low demand

| | |
|---|---|
| Safety Integrity Level (SIL) | 3 (In conjunction with suitable evaluating device) |

Safety data: EN IEC 62061

| | |
|---|---|
| Safety Integrity Level (SIL) | 3 (In conjunction with suitable evaluating device) |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |
| Min. degree of protection of inst. location | IP54 |
| Ambient temperature (operation) | -20 °C ... 55 °C (observe derating) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Maximum altitude | max. 2000 m (Above sea level) |
| Max. permissible humidity (storage/transport) | 75 % (on average, 85% infrequently, non-condensing) |
| Max. permissible relative humidity (operation) | 75 % (on average, 85% infrequently, non-condensing) |
| Shock | 15g |
| Vibration (operation) | 10 Hz ... 150 Hz, 2g |

## Approvals

CE

| | |
|---|---|
| Identification | CE-compliant |

## Standards and regulations

Air clearances and creepage distances between the power circuits

| | |
|---|---|
| Standards/regulations | IEC 60664-1 |

## Mounting

| | |
|---|---|
| Mounting type | DIN rail mounting |
| Assembly note | See derating curve |
| Mounting position | vertical or horizontal |

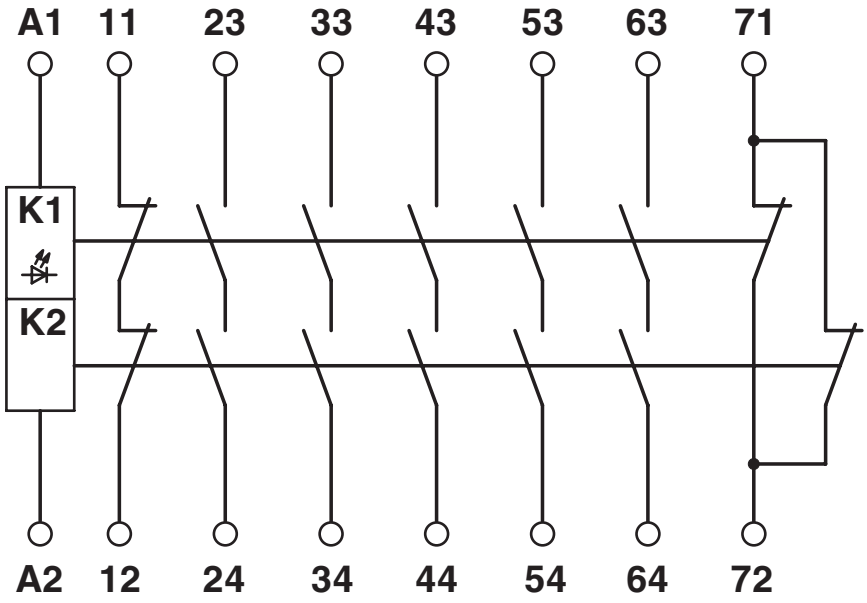
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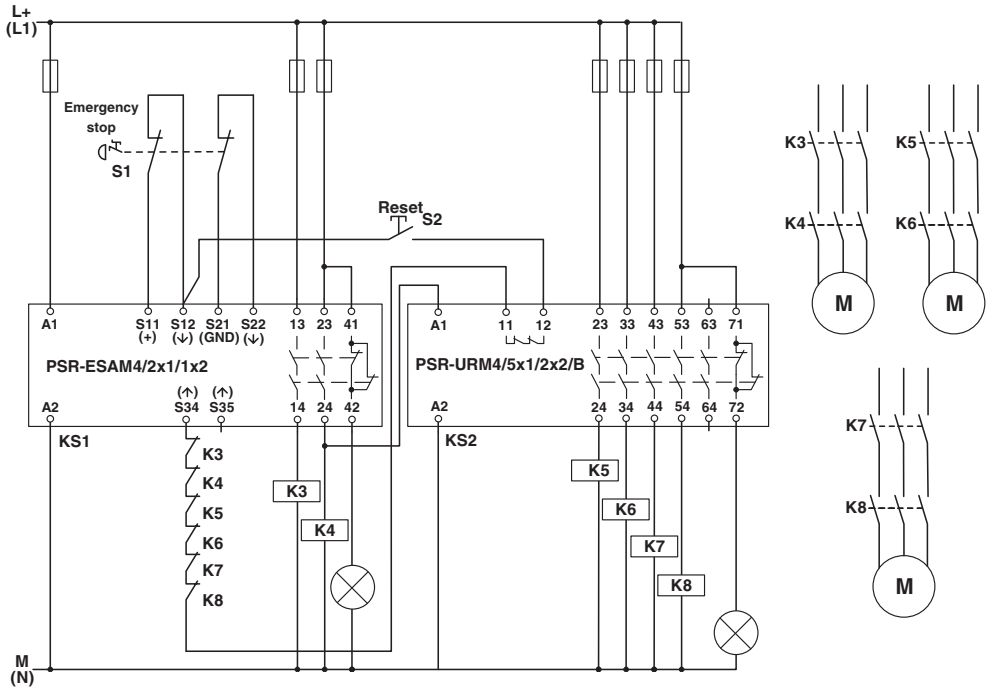
## Drawings

Circuit diagram




Block diagram

Circuit diagram




Two-channel emergency stop monitoring with contact extension

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27371819 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39122200 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | ef99455f-dd90-451d-b367-bc97d6785ff7 |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 3.96 kg CO2e |


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