

## Safety relays - PSR-SCP- 24UC/ESA4/3X1/1X2/B - 2963763

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Safety relay for emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, single or two-channel operation, 3 enabling current paths, nominal input voltage of 24 V AC/DC, plug-in screw terminal blocks

### Your advantages

- Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- Single and two-channel control
- 3 enabling current paths, 1 signaling current path
- Manually monitored and automatic activation in a single device



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 pc  |
| GTIN         | <br>4 017918 878085 |
| GTIN         | 4017918878085   |

### Technical data

#### Note

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

#### Dimensions

|        |          |
|--------|----------|
| Width  | 22.5 mm  |
| Height | 99 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) |
| Maximum altitude                               | ≤ 2000 m (Above sea level)                          |

# Safety relays - PSR-SCP- 24UC/ESA4/3X1/1X2/B - 2963763

## Technical data

### Input data

|   |  |
|---|--|
| Nominal input voltage $U_N$                   | 24 V AC/DC   |
| Input voltage range in reference to $U_N$     | 0.85 ... 1.1   |
| Typical input current at $U_N$                | 140 mA AC  |
|   | 65 mA DC   |
| Voltage at input/start and feedback circuit   | approx. 24 V DC  |
| Typical response time                         | 100 ms (automatic start)                                 |
| Typical release time                          | 45 ms (single-channel)                                   |
|   | 10 ms (two-channel)                                      |
| Concurrence input 1/2                         | $\infty$   |
| Recovery time                                 | 1 s  |
| Operating voltage display                     | Green LED  |
| Status display                                | Green LED  |
| Protective circuit                            | Surge protection Suppressor diode                        |
| Max. permissible overall conductor resistance | approx. 50 $\Omega$ (Input and start circuits at $U_N$ ) |

### Output data

|  |   |
|--|---|
| Contact type                                 | 3 enabling current paths                            |
|  | 1 signaling current path                            |
| Contact material                             | AgSnO <sub>2</sub> , + 0.2 $\mu$ m Au               |
| Maximum switching voltage                    | 250 V AC/DC   |
| Minimum switching voltage                    | 15 V AC/DC  |
| Limiting continuous current                  | 6 A (N/O contact)                                   |
| Maximum inrush current                       | 6 A   |
| Inrush current, minimum                      | 25 mA   |
| Sq. Total current                            | $72 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2)$ |
| Interrupting rating (ohmic load) max.        | 144 W (24 V DC, $\tau = 0$ ms)                      |
|  | 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)                   |
| 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   |
| Mechanical service life                      | approx. $10^7$ cycles                               |
| Switching capacity (360/h cycles)            | 6 A (24 V DC)                                       |
|  | 5 A (230 V AC)                                      |
| Output fuse                                  | 10 A gL/gG NEOZED (N/O contact)                     |
|  | 6 A gL/gG NEOZED (N/C contact)                      |

# Safety relays - PSR-SCP- 24UC/ESA4/3X1/1X2/B - 2963763

## Technical data

### General

|   |  |
|---|--|
| Relay type                                  | Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3 |
| Nominal operating mode                      | 100% operating factor  |
| Net weight                                  | 200.7 g  |
| Mounting position                           | any  |
| Mounting type                               | DIN rail mounting  |
| Degree of protection                        | IP20   |
| Min. degree of protection of inst. location | IP54   |
| Housing color                               | yellow   |

### Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection                            |
| pluggable                        | Yes   |
| 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                                   |
| Stripping length                 | 7 mm  |
| Screw thread                     | M3  |

### Safety-related characteristic data

|   |                         |
|---|-------------------------|
| Stop category                               | 0                       |
| 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)                      | e                       |
| Category                                    | 4                       |
| 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 insulation (safe isolation, reinforced insulation, and 6 kV between A1-A2/logic/enabling and signaling current paths) |
| Degree of pollution            | 2  |
| Overvoltage category           | III  |
| Shock                          | 15g  |
| Vibration (operation)          | 10 Hz ... 150 Hz, 2g   |

### Environmental Product Compliance

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

# Safety relays - PSR-SCP- 24UC/ESA4/3X1/1X2/B - 2963763

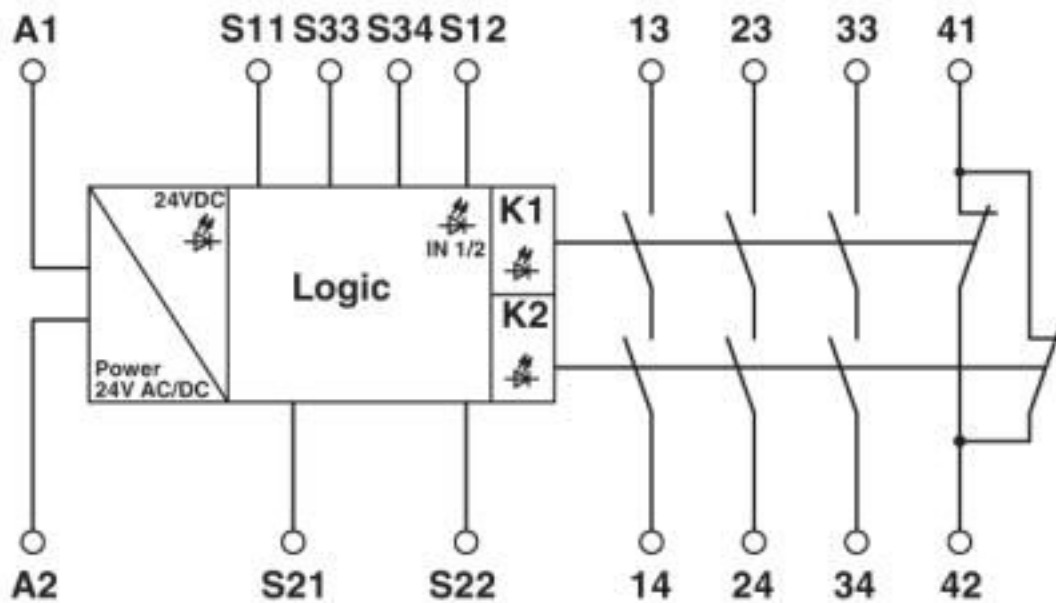
## Technical data

### Environmental Product Compliance

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

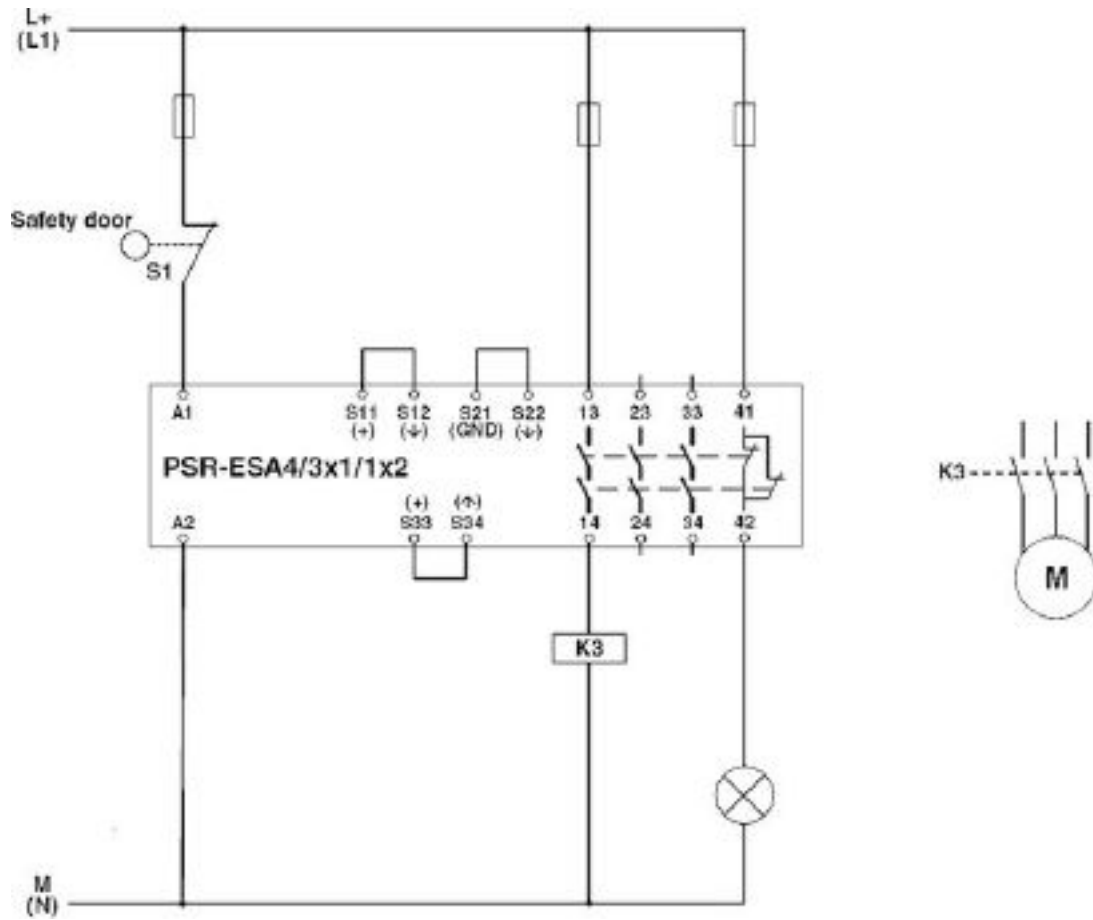
## Drawings

Circuit diagram



# Safety relays - PSR-SCP- 24UC/ESA4/3X1/1X2/B - 2963763

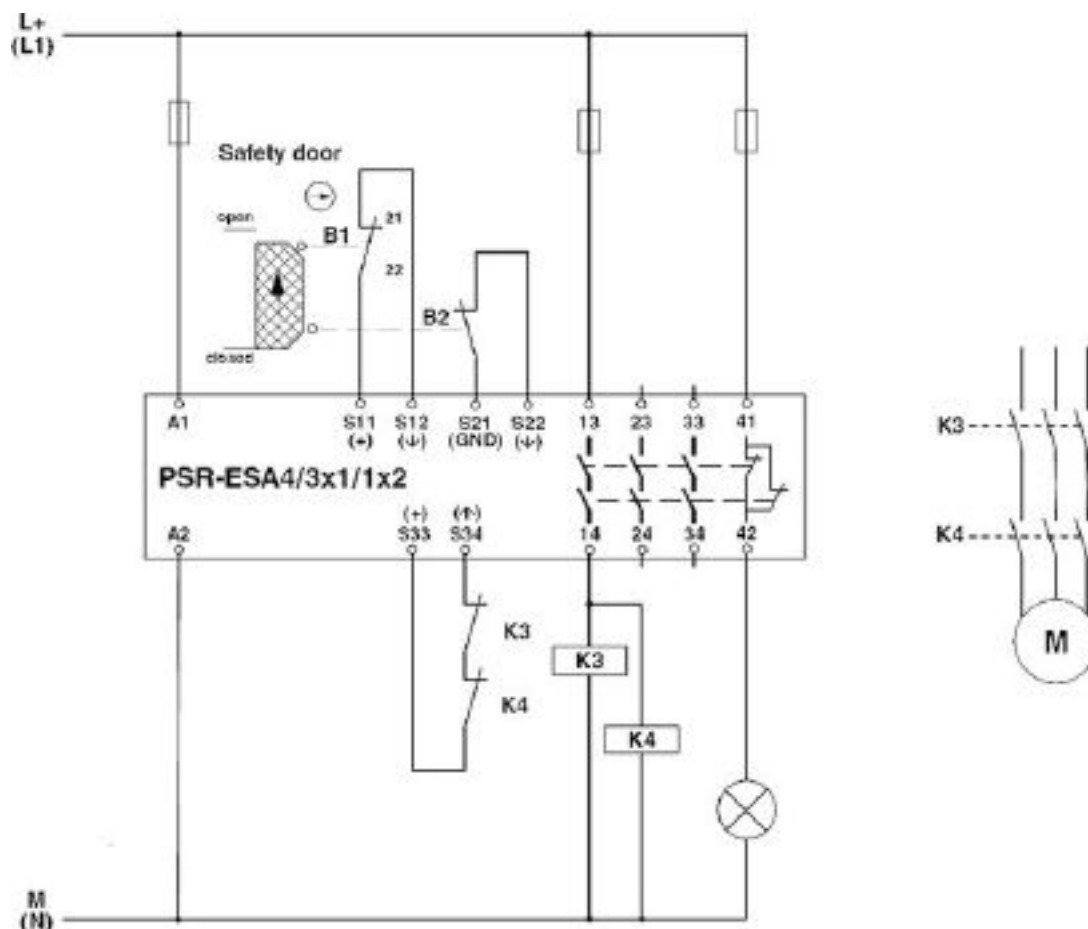
Circuit diagram



Single-channel safety door monitoring

# Safety relays - PSR-SCP- 24UC/ESA4/3X1/1X2/B - 2963763

Circuit diagram



Two-channel safety door monitoring

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371819 |
| eCl@ss 4.0    | 40020600 |
| eCl@ss 4.1    | 40020600 |
| eCl@ss 5.0    | 27371900 |
| eCl@ss 5.1    | 27371900 |
| eCl@ss 6.0    | 27371800 |
| eCl@ss 7.0    | 27371819 |
| eCl@ss 8.0    | 27371819 |
| eCl@ss 9.0    | 27371819 |

ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000196 |
| ETIM 3.0 | EC001449 |

# Safety relays - PSR-SCP- 24UC/ESA4/3X1/1X2/B - 2963763

## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC001449 |
| ETIM 5.0 | EC001449 |
| ETIM 6.0 | EC001449 |
| ETIM 7.0 | EC001449 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211901 |
| UNSPSC 7.0901 | 39121501 |
| UNSPSC 11     | 39121501 |
| UNSPSC 12.01  | 39121501 |
| UNSPSC 13.2   | 39121501 |
| UNSPSC 18.0   | 39122205 |
| UNSPSC 19.0   | 39122205 |
| UNSPSC 20.0   | 39122205 |
| UNSPSC 21.0   | 39122205 |

## Approvals

### Approvals

#### Approvals

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

#### Ex Approvals

### Approval details






|                   |  |                  |
|-------------------|--|------------------|
| Functional Safety |  | 968/EZ 404.02/15 |
|-------------------|--|------------------|

|                   |  |                  |
|-------------------|--|------------------|
| Functional Safety |  | 968/EZ 404.02/15 |
|-------------------|--|------------------|

|           |  |   |
|-----------|--|---|
| UL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> FILE E 140324 |
|-----------|--|---|

## Safety relays - PSR-SCP- 24UC/ESA4/3X1/1X2/B - 2963763

### Approvals

|                   |   |   |                          |
|-------------------|---|---|--------------------------|
| cUL Listed        |    | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324            |
| Functional Safety |    |   | 01/205/0652.01/15        |
| EAC               |    |   | EAC-Zulassung            |
| EAC               |    |   | RU C-<br>DE.A*30.B.01082 |
| cULus Listed      |  |   |                          |

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

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



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Phoenix Contact:](#)

[2963763](#)