

# PSR-SCP- 24DC/MXF1/4X1/2X2/B - Safety relays



2902725

<https://www.phoenixcontact.com/us/products/2902725>

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 documentation. Our general terms of use for downloads are valid.



Multifunctional safety relay for emergency stop and safety doors up to SIL 3, Cat. 4, PL e, automatically or manually monitored activation, 4 N/O contacts, 3 safety functions, 2 shutdown levels, plug-in screw terminal block

## Your advantages

- 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
- 3 safety functions in one device
- Low housing width of only 22.5mm
- No software configuration required
- Also available with push-in connection

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2902725       |
| Packing unit                         | 1 pc          |
| Sales key                            | DN01          |
| Product key                          | DNA191        |
| GTIN                                 | 4046356673006 |
| Weight per piece (including packing) | 286.6 g       |
| Weight per piece (excluding packing) | 221 g         |
| Customs tariff number                | 85371098      |
| Country of origin                    | DE            |

## Technical data

### Product properties

|                         |  |
|-------------------------|--|
| Product type            | Safety relays  |
| Application             | Emergency stop   |
|                         | Safety door  |
| Control                 | 1 and 2 channel  |
| Mechanical service life | 10x 10 <sup>6</sup> 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 | 3 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 | 4 kV/basic isolation (safe isolation, reinforced insulation and 6 kV between input circuit, enabling current paths and safety circuit 1 (13/14, 23/24) and safety circuit 2 (43/44, 53/54).) |

### Input data

#### General

|   |   |
|---|---|
| Nominal input voltage $U_N$                 | 24 V DC   |
| Input voltage range in reference to $U_N$   | 0.85 ... 1.1  |
| Typical input current at $U_N$              | 125 mA (with actuated relays)   |
|   | 55 mA (Two-channel 24 V/0 V + max. 200 mA control (message outputs 32/62) with non-actuated relays) |
| Current consumption                         | typ. 5 mA ( $I_{max}/I_x$ inputs)   |
|   | 20 mA (in electric torque)  |
| Voltage at input/start and feedback circuit | 24 V -15 % / +10 % (first channel: 24 V; second channel: 0 V)                                       |
| Filter time                                 | max. 1.5 ms (Test pulse duration; for all equivalent inputs)  |
|   | min. 7.5 ms (Test pulse rate; for all equivalent inputs)  |
| Typical response time                       | 175 ms (monitored/manual start)   |
|   | 250 ms (automatic start)  |
| Typ. starting time with $U_s$               | 250 ms (when controlled via A1)   |
| Typical release time                        | 25 ms (when controlled via S11/I1,I3,I5 and S21/I2,I4,I6)   |
|   | 20 ms (when controlled via A1)  |
| Concurrence                                 | $\infty$  |
| Recovery time                               | 1 s (Availability time after activation of sensor circuit: 100ms)                                   |
| Maximum switching frequency                 | 0.5 Hz  |

# PSR-SCP- 24DC/MXF1/4X1/2X2/B - Safety relays



2902725

<https://www.phoenixcontact.com/us/products/2902725>

|   |                                    |
|---|------------------------------------|
| Protective circuit                            | Surge protection; Suppressor diode |
| Max. permissible overall conductor resistance | 100 Ω                              |
| Operating voltage display                     | 1 x LED (green)                    |
| Status display                                | 5 x LED (green)                    |

## Output data

|  |  |
|--|--|
| Contact switching type                       | 4 enabling current paths   |
|  | 2 semiconductor alarm outputs                                      |
| Contact material                             | AgCuNi, +0.2 ... 0.4 μm Au   |
| Maximum switching voltage                    | 250 V AC/DC  |
| Minimum switching voltage                    | 10 V AC/DC   |
| Limiting continuous current                  | 6 A (N/O contact)  |
|  | max. 100 mA (Alarm output (24 V DC))                               |
| Maximum inrush current                       | 6 A  |
| Inrush current, minimum                      | 10 mA  |
| Sq. Total current                            | $72 \text{ A}^2 (I_{\text{TH}}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$ |
| Interrupting rating (ohmic load) max.        | 1500 VA (250 V AC, τ = 0 ms)                                       |
|  | 66 W (220 V DC, τ = 0 ms)  |
|  | 66 W (110 V DC, τ = 0 ms)  |
|  | 100 W (48 V DC, τ = 0 ms)  |
|  | 144 W (24 V DC, τ = 0 ms)  |
| Maximum interrupting rating (inductive load) | 48 W (24 V DC, τ = 40 ms)  |
|  | 43 W (48 V DC, τ = 40 ms)  |
| Switching power min.                         | 0.1 W  |
| Switching capacity (360/h cycles)            | 5 A (0,1 Hz; DC13; 24 V)   |
| Switching capacity (3600/h cycles)           | 3 A (AC15; 230 V)  |
| Output fuse                                  | 6 A gL/gG NEOZED (N/O contact)                                     |
|  | 4 A gL/gG NEOZED (for low-demand applications)                     |

## Connection data

### Connection technology

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

### Conductor connection

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection                            |
| Conductor cross-section rigid    | 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  |

## Dimensions

|        |          |
|--------|----------|
| Width  | 22.5 mm  |
| Height | 112.2 mm |

|       |          |
|-------|----------|
| Depth | 114.5 mm |
|-------|----------|

## Material specifications

|       |        |
|-------|--------|
| Color | yellow |
|-------|--------|

## Characteristics

### Safety data

|                            |                        |
|----------------------------|------------------------|
| Stop category (EN 60204-1) | 0 (acc. to EN 60204-1) |
|----------------------------|------------------------|

### Safety data: EN ISO 13849

|                        |  |
|------------------------|--|
| Performance level (PL) | e (5 A DC13; 3 A AC15; 8760 cycles/year) |
|------------------------|--|

### Safety data: EN 50156

|                              |   |
|------------------------------|---|
| Safety Integrity Level (SIL) | 3 |
|------------------------------|---|

### Safety data

|                              |   |
|------------------------------|---|
| Safety Integrity Level (SIL) | 3 |
|------------------------------|---|

### Safety data

|                              |   |
|------------------------------|---|
| Safety Integrity Level (SIL) | 3 |
|------------------------------|---|

### Safety data

|                              |   |
|------------------------------|---|
| Safety Integrity Level (SIL) | 3 |
|------------------------------|---|

## Environmental and real-life conditions

### Ambient conditions

|  |   |
|--|---|
| Degree of protection                           | IP20  |
| Min. degree of protection of inst. location    | IP54  |
| Ambient temperature (operation)                | -20 °C ... 45 °C (see derating curve)               |
| Ambient temperature (storage/transport)        | -25 °C ... 85 °C                                    |
| Maximum altitude                               | ≤ 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) |

## Standards and regulations

### Air clearances and creepage distances between the power circuits

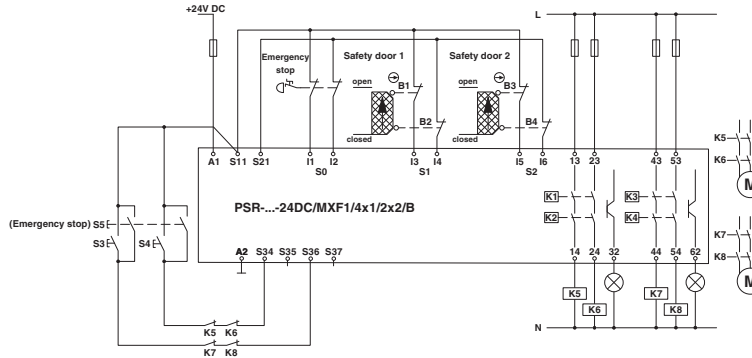
|                       |             |
|-----------------------|-------------|
| Standards/regulations | IEC 60664-1 |
|-----------------------|-------------|

## Mounting

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

Drawings

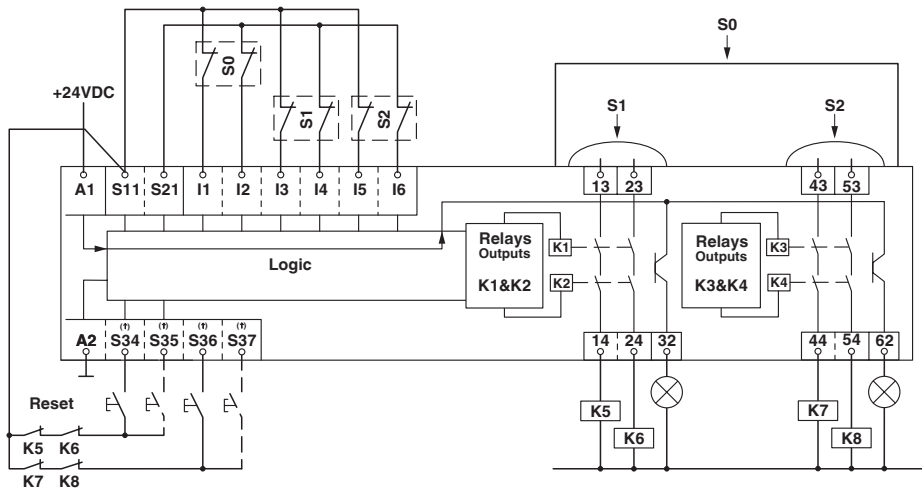
Application drawing



Circuit diagram



Circuit diagram



Circuit diagram



# PSR-SCP- 24DC/MXF1/4X1/2X2/B - Safety relays



2902725

<https://www.phoenixcontact.com/us/products/2902725>

## Classifications

### UNSPSC

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

2902725

<https://www.phoenixcontact.com/us/products/2902725>

## Environmental product compliance

### 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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)