

# Coupling relay - PSR-SPP-120UC/URM/5X1/2X2 - 2981415

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Safe coupling relay with force-guided contacts, 5 N/O contacts, 2 N/C contacts, 1-channel, width: 22.5 mm, pluggable Push-in terminal block


The figure shows a version with a screw connection

## Your advantages

- Suitable up to category 1, PL c (EN ISO 13849-1), SILCL 1 (EN 62061), SIL 1 (IEC 61508)
- Safe readback due to force-guided signal contact in accordance with EN 50205
- Easy proof test according to IEC 61508 thanks to integrated signal contact
- One or two-channel activation
- 5 enabling current paths, 2 confirmation current paths
- 120 V variant



## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 pc  |
| GTIN         | <br>4 046356 051675 |
| GTIN         | 4046356051675   |

## Technical data

### Dimensions

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

### Ambient conditions

|  |   |
|--|---|
| Ambient temperature (operation)                | -20 °C ... 55 °C                                    |
| Ambient temperature (storage/transport)        | -40 °C ... 85 °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)                          |

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## Technical data

### Input data

|  |   |
|--|---|
| Rated control circuit supply voltage $U_s$ | 120 V AC/DC -20 % ... +10 %                     |
| Rated control supply current $I_s$         | typ. 11 mA                                      |
| Power consumption at $U_s$                 | typ. 1.32 W                                     |
| Inrush current                             | typ. 600 mA ( $\Delta t = 200 \mu s$ at $U_s$ ) |
| Typ. starting time with $U_s$              | typ. 20 ms (when controlled via A1)             |
| Typical release time                       | typ. 20 ms (when controlled via A1)             |
| Recovery time                              | < 500 ms  |
| Operating voltage display                  | 1 x green LED                                   |
| Protective circuit                         | Surge protection Varistor                       |
| Maximum switching frequency                | 0.5 Hz  |

### Output data

|   |  |
|---|--|
| Contact type                                  | 5 enabling current paths<br>2 confirmation current paths   |
| Contact material                              | AgSnO <sub>2</sub>   |
| Maximum switching voltage                     | 230 V AC/DC (Observe the load curve)   |
| Minimum switching voltage                     | 5 V AC/DC  |
| Limiting continuous current                   | 6 A (N/O contact)<br>3 A (N/C contact)   |
| Maximum inrush current                        | 6 A  |
| Inrush current, minimum                       | 10 mA  |
| Sq. Total current                             | 72 A <sup>2</sup>  |
| Interrupting rating (ohmic load) max.         | 144 W (N/O contact, 24 V DC, $\tau = 0$ ms)<br>288 W (N/O contact, 48 V DC, $\tau = 0$ ms)<br>240 W (N/O contact, 60 V DC, $\tau = 0$ ms)<br>110 W (N/O contact, 110 V DC, $\tau = 0$ ms)<br>88 W (N/O contact, 220 V DC, $\tau = 0$ ms)<br>1380 VA (N/O contact, 230 V AC, $\tau = 0$ ms) |
| Maximum interrupting rating (inductive load)  | 42 W (N/O contact, 24 V DC, $\tau = 40$ ms)<br>42 W (N/O contact, 48 V DC, $\tau = 40$ ms)<br>42 W (N/O contact, 60 V DC, $\tau = 40$ ms)<br>42 W (N/O contact, 110 V DC, $\tau = 40$ ms)<br>42 W (N/O contact, 220 V DC, $\tau = 40$ ms)  |
| Switching capacity                            | min. 50 mW   |
| Mechanical service life                       | 10x 10 <sup>6</sup> cycles   |
| Switching capacity (360/h cycles)             | 4 A (24 V (DC13))<br>4 A (250 V (AC15))  |
| Switching capacity according to IEC 60947-5-1 | 3 A (24 V (DC13))<br>3 A (250 V (AC15))  |
| Output fuse                                   | 10 A gL/gG (N/O contact)   |

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## Technical data

### Output data

|  |  |
|--|--|
|  | 4 A gL/gG (N/O contact, for low-demand applications) |
|  | 6 A gL/gG (N/C contact)                              |

### General

|   |  |
|---|--|
| Relay type                                  | Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3 |
| Nominal operating mode                      | 100% operating factor  |
| Net weight                                  | 135.88 g   |
| Mounting position                           | vertical or horizontal   |
| Mounting type                               | DIN rail mounting  |
| Degree of protection                        | IP20   |
| Min. degree of protection of inst. location | IP54   |
| Housing material                            | PBT  |
| Housing color                               | yellow   |

### Connection data

|                                       |                     |
|---------------------------------------|---------------------|
| Connection method                     | Push-in 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                               | 0                       |
| Designation                                 | IEC 61508 - High demand |
| Safety Integrity Level (SIL)                | 1                       |
| Designation                                 | IEC 61508 - Low demand  |
| Safety Integrity Level (SIL)                | 1                       |
| Designation                                 | EN ISO 13849            |
| Performance level (PL)                      | c                       |
| Category                                    | 1                       |
| Safety Integrity Level Claim Limit (SIL CL) | 1                       |

### Standards and Regulations

|                                |   |
|--------------------------------|---|
| Designation                    | Air clearances and creepage distances between the power circuits  |
| Standards/regulations          | DIN EN 50178  |
| Rated insulation voltage       | 250 V   |
|                                | 250 V   |
| Rated surge voltage/insulation | 4 kV basic insulation (4 kV safe isolation, reinforced insulation between A1/A2, 13/14, 23/24, 33/34 to 43/44, 53/54, 61/62, 71/72) |

## Coupling relay - PSR-SPP-120UC/URM/5X1/2X2 - 2981415

### Technical data

#### Standards and Regulations

|                       |   |
|-----------------------|---|
| Degree of pollution   | 2   |
| Overvoltage category  | III   |
| Shock                 | 15g (In the event of stress caused by shock, contact reactions are possible for up to 2 ms.)                      |
| Vibration (operation) | 10 Hz ... 150 Hz, 2g (In the event of stress caused by vibration, contact reactions are possible for up to 1 ms.) |
| Conformance           | CE-compliant  |

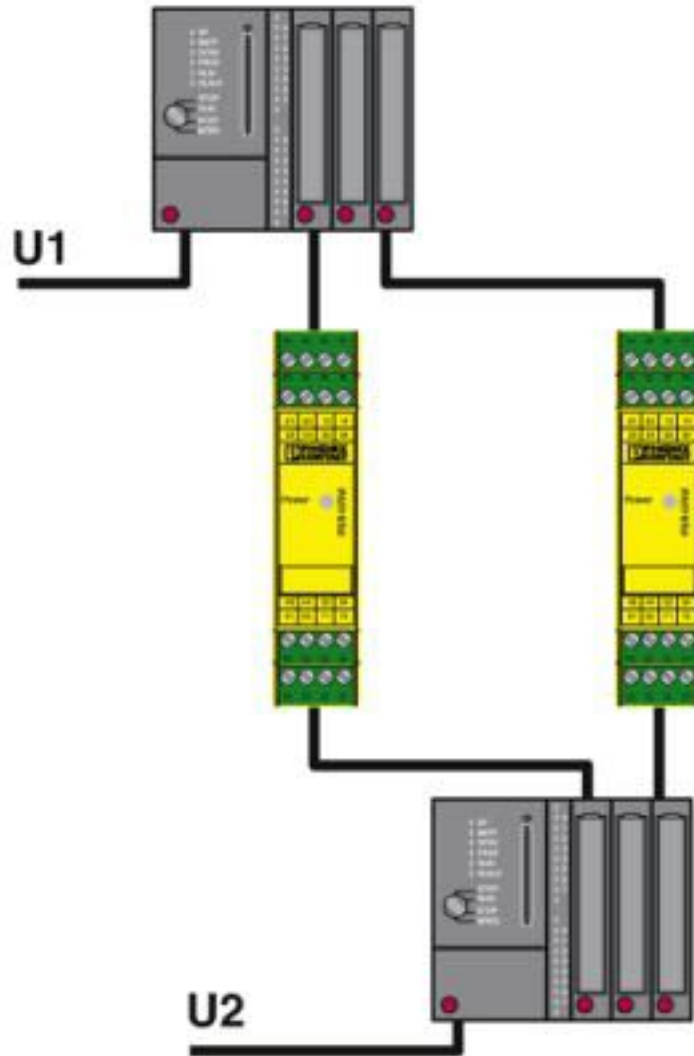
#### Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

### Drawings

# Coupling relay - PSR-SPP-120UC/URM/5X1/2X2 - 2981415

Application drawing



Reliable signal exchange between two systems with confirmation function.

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371601 |
| eCl@ss 4.0    | 27371100 |
| eCl@ss 4.1    | 27371100 |
| eCl@ss 5.0    | 27371600 |
| eCl@ss 5.1    | 27371600 |
| eCl@ss 6.0    | 27371600 |
| eCl@ss 7.0    | 27371601 |
| eCl@ss 8.0    | 27371601 |

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 9.0 | 27371601 |
|------------|----------|

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001449 |
| ETIM 3.0 | EC001449 |
| ETIM 4.0 | EC001449 |
| ETIM 5.0 | EC001437 |
| ETIM 6.0 | EC001437 |
| ETIM 7.0 | EC001437 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211901 |
| UNSPSC 7.0901 | 39121501 |
| UNSPSC 11     | 39121501 |
| UNSPSC 12.01  | 39121501 |
| UNSPSC 13.2   | 39121501 |
| UNSPSC 18.0   | 39122334 |
| UNSPSC 19.0   | 39122334 |
| UNSPSC 20.0   | 39122334 |
| UNSPSC 21.0   | 39122334 |

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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>

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