# PSR-SCP- 24UC/THC4/2X1/1X2 - Safety relays

2963721

https://www.phoenixcontact.com/au/products/2963721

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Safety relay for two-hand control devices in accordance with ISO 13851 type IIIC to SIL 3 or Cat. 4, PL e in accordance with EN ISO 13849, synchronous activation monitoring < 0.5 s, 2 N/O contacts, 1 N/C contact, safe isolation, width: 22.5 mm, pluggable screw terminal block

## Your advantages

- For two-hand controls in accordance with ISO 13851 type IIIC
- Up to Cat. 4/PL e in accordance with ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508
- 2 channel control
- Synchronous activation monitoring < 0.5 s
- Automatic activation
- Two enabling and one signaling current path

## Commercial data

| | |
|---|---|
| Item number | 2963721 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DNA141 |
| Product key | DNA141 |
| Catalog page | Page 231 (C-6-2019) |
| GTIN | 4017918818692 |
| Weight per piece (including packing) | 220.25 g |
| Weight per piece (excluding packing) | 163.12 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 | Two-hand control |
| | Safety door |
| Mechanical service life | approx. $10^7$ cycles |
| Relay type | Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3 |

Insulation characteristics

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

## Electrical properties

| | |
|---|---|
| Maximum power dissipation for nominal condition | 1.44 W |
| Nominal operating mode | 100% operating factor |
| Rated insulation voltage | 250 V |
| Rated surge voltage/insulation | 6 kV / Safe isolation, increased insulation |

## Input data

General

| | |
|---|---|
| Nominal input voltage $U_N$ | 24 V AC/DC |
| Input voltage range | 20.4 V AC/DC ... 26.4 V AC/DC |
| Input voltage range in reference to $U_N$ | 0.85 ... 1.1 |
| Typical input current at $U_N$ | 125 mA AC |
| | 60 mA DC |
| Voltage at input/start and feedback circuit | approx. 24 V DC |
| Typical response time | 50 ms |
| Typical release time | 20 ms |
| Concurrence | < 0.5 s |
| Recovery time | 1 s |
| Protective circuit | Fuse; PTC resistor |
| | Surge protection; Suppressor diode |
| Operating voltage display | Green LED |
| Status display | LED (green) |

## Output data

| | |
|---|---|
| Contact switching type | 2 enabling current paths |
| | 1 signaling current path |
| Contact material | $AgSnO_2$, + 0.2 µm Au |
| Maximum switching voltage | 250 V AC/DC |
| Minimum switching voltage | 15 V AC/DC |
| Limiting continuous current | 6 A (N/O contact) |
| | 5 A (N/C contact) |
| Maximum inrush current | 6 A |
| Inrush current, minimum | 25 mA |
| Interrupting rating (ohmic load) max. | 144 W (24 V DC, τ = 0 ms) |
| | 288 W (48 V DC, τ = 0 ms) |
| | 110 W (110 V DC, τ = 0 ms) |
| | 88 W (220 V DC, τ = 0 ms) |
| | 1500 VA (250 V AC, τ = 0 ms) |
| Maximum interrupting rating (inductive load) | 42 W (24 V DC, τ = 40 ms) |
| | 42 W (48 V DC, τ = 40 ms) |
| | 42 W (110 V DC, τ = 40 ms) |
| | 42 W (220 V DC, τ = 40 ms) |
| Switching capacity min. | 0.4 W |
| Switching capacity (360/h cycles) | 4 A (24 V DC) |
| | 4 A (230 V AC) |
| Switching capacity (3600/h cycles) | 2.5 A (24 V (DC13)) |
| | 3 A (230 V (AC15)) |
| Output fuse | 10 A gL/gG NEOZED (N/O contact) |
| | 6 A gL/gG NEOZED (N/C contact) |

Relay

| | |
|---|---|
| Output description | safety-related N/O contacts |
| Number of outputs | 2 |

## Connection data

Connection technology

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

Conductor connection

| | |
|---|---|
| Connection method | Screw connection |
| Conductor cross section rigid | 0.2 mm² ... 2.5 mm² |
| Conductor cross section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section AWG | 24 ... 12 |
| Stripping length | 7 mm |
| Screw thread | M3 |

## Dimensions

| | |
|---|---|
| Width | 22.5 mm |
| Height | 99 mm |

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

## Material specifications

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

## Characteristics

Safety data

| | |
|---|---|
| Stop category | 0 |
| Type class | IIIC |

Safety data: EN ISO 13849

| | |
|---|---|
| Category | 4 |
| Performance level (PL) | e |

Safety data: IEC 61508 - High demand

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

Safety data: IEC 61508 - Low demand

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

Safety data: EN IEC 62061

| | |
|---|---|
| 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 ... 55 °C |
| 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

Conformity/Approvals

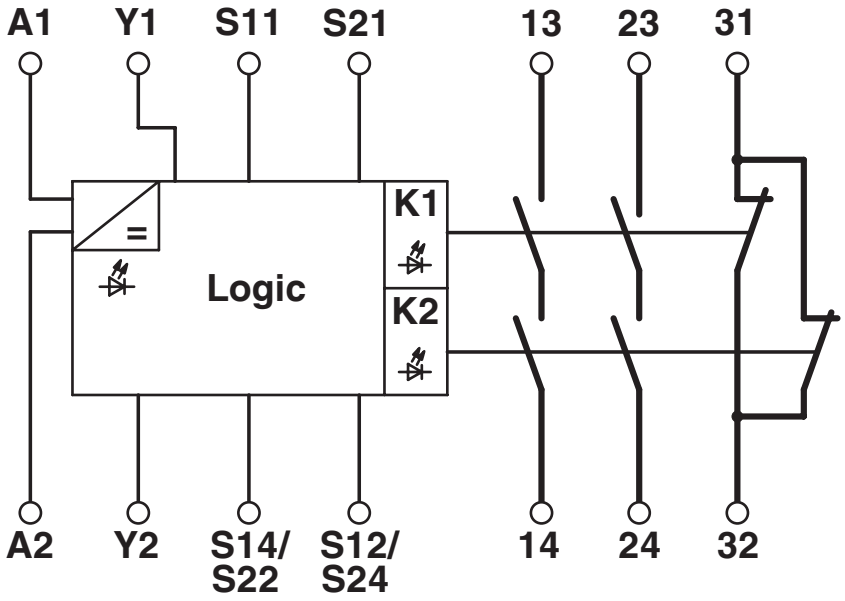
| | |
|---|---|
| Conformance | CE-compliant |

## Mounting

| | |
|---|---|
| Mounting type | DIN rail mounting |
| Mounting position | any |

## Drawings

Circuit diagram




Block diagram

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/au/products/2963721

**Functional Safety**
Approval ID: 01/205/0542.04/23

**cULus Listed**
Approval ID: E140324

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27371821 |

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC001452 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121100 |

## 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 | ad09c00b-7a7f-44ce-99b7-1943080c4694 |



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