

# Safety relays - PSR-SPP- 24UC/ESM4/2X1/1X2 - 2963705

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>)

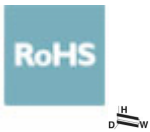


Safety relay for emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e in accordance with EN ISO 13849, 1- or 2-channel operation, 2 enabling current paths, nominal input voltage: 24 V AC/DC, pluggable Push-in terminal block


The figure shows a version with a screw connection

## Your advantages

- Up to Cat.4/PL e according to EN ISO 13849-1, SILCL 3 according to EN 62061, SIL 3 according to IEC 61508
- Single and two-channel control
- 2 enabling current paths, 1 signaling current path



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 904753
GTIN	4017918904753

## Technical data

### Note

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

### Dimensions

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Maximum altitude	≤ 2000 m (Above sea level)

### Input data

# Safety relays - PSR-SPP- 24UC/ESM4/2X1/1X2 - 2963705

## 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	20 ms (Monitored/manual 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	2 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	$72 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2)$
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)
	35 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-SPP- 24UC/ESM4/2X1/1X2 - 2963705

## 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	202.1 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	Push-in connection
pluggable	Yes
Conductor cross section solid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16
Conductor cross-section flexible with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (only together with CRIMPFOX 6)
Conductor cross-section flexible with ferrule and plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (only together with CRIMPFOX 6)
Stripping length	8 mm

### 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	6 kV / Safe isolation, increased insulation
Degree of pollution	2
Overvoltage category	III
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g

### Environmental Product Compliance

# Safety relays - PSR-SPP- 24UC/ESM4/2X1/1X2 - 2963705

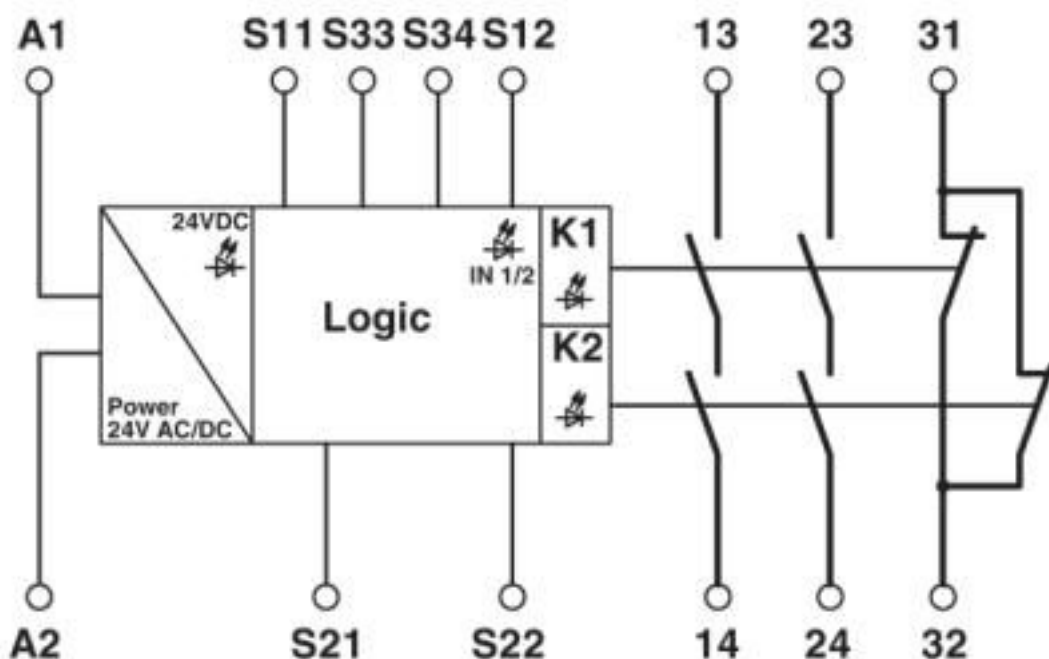
## Technical data

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

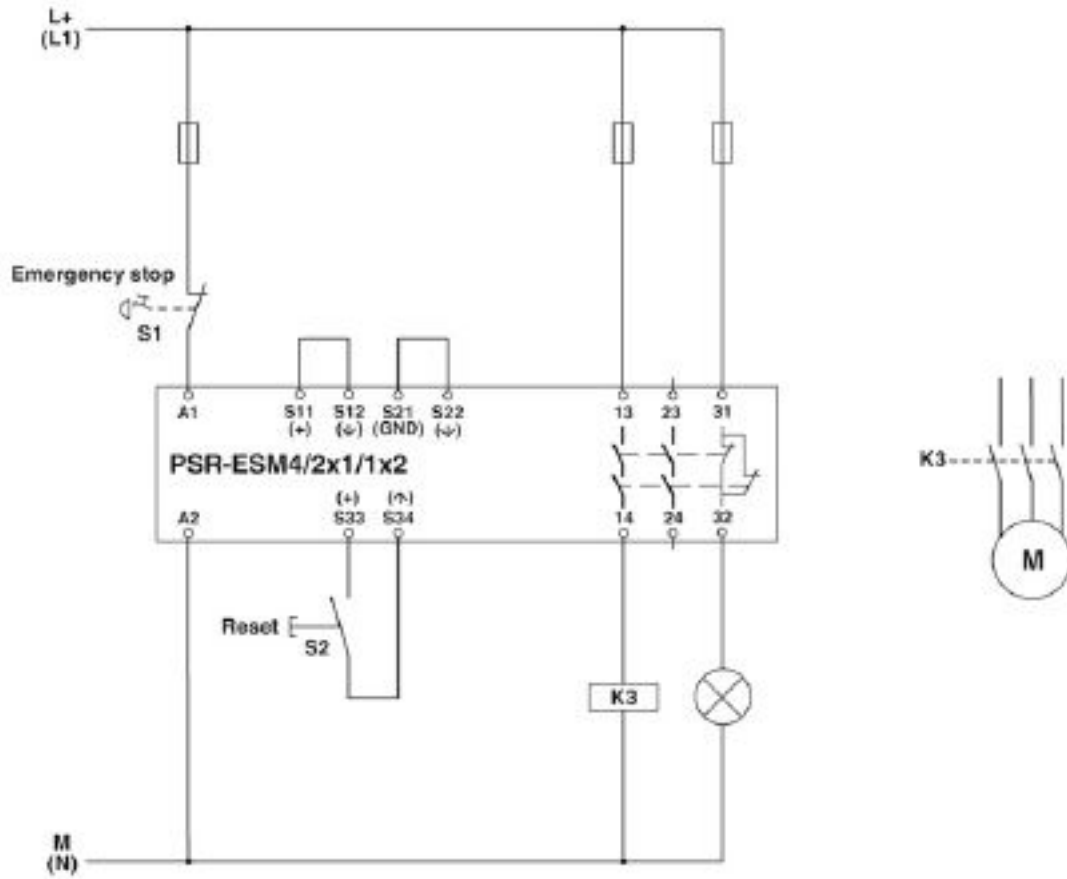
## Drawings

Circuit diagram



# Safety relays - PSR-SPP- 24UC/ESM4/2X1/1X2 - 2963705

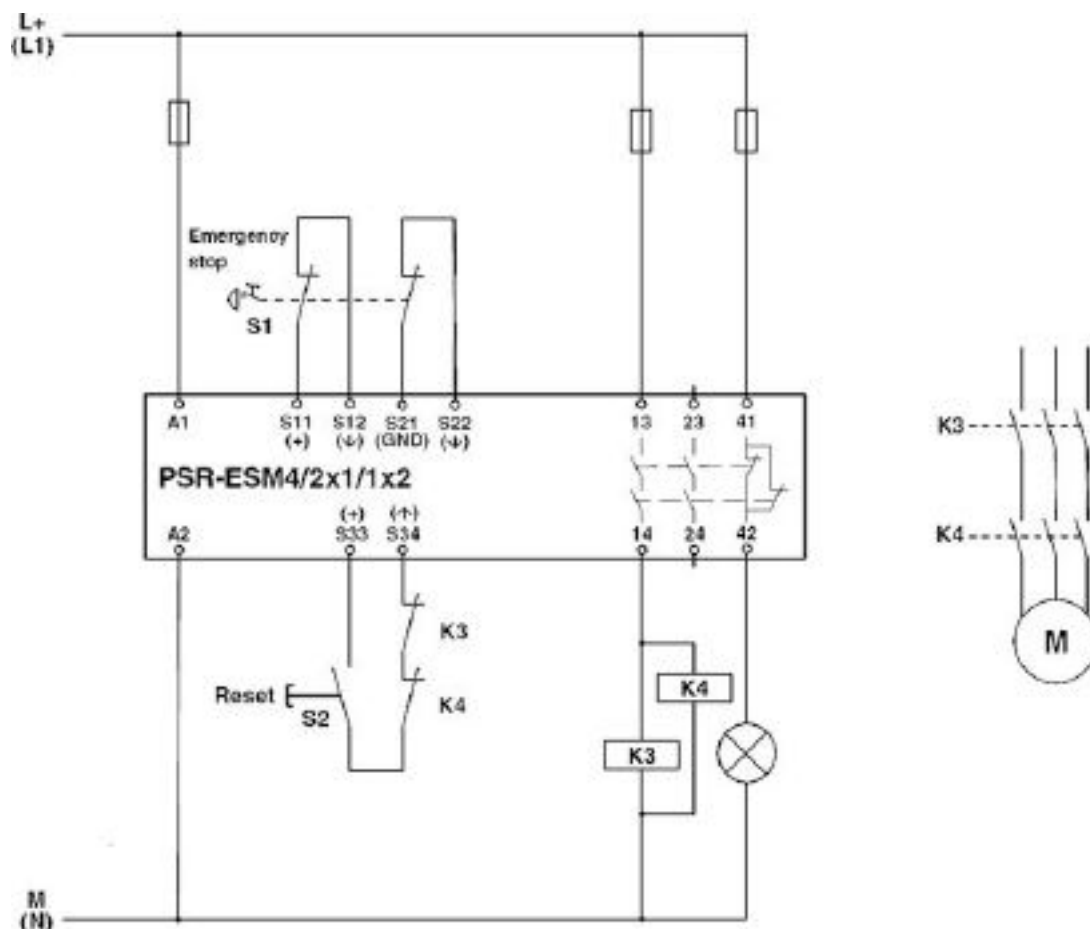
Circuit diagram



Single-channel emergency stop monitoring

# Safety relays - PSR-SPP- 24UC/ESM4/2X1/1X2 - 2963705

Circuit diagram



Two-channel emergency stop 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-SPP- 24UC/ESM4/2X1/1X2 - 2963705

## 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 / 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-SPP- 24UC/ESM4/2X1/1X2 - 2963705

### 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			RU C- 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>



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Safety Relays](#) category:*

*Click to view products by [Phoenix Contact](#) manufacturer:*

Other Similar products are found below :

[7-1618103-5](#) [1351-1X](#) [1618082-4](#) [1618111-1](#) [C200HDA003](#) [C200HMR432](#) [C200HMR832](#) [C200HMR833](#) [C28PEDRA](#) [20-050-36X](#)  
[C500ETL01](#) [C500OD415CN](#) [2-1618068-0](#) [9-1618103-2](#) [SP10-ETL01](#) [C200HNC112](#) [C200HOD214](#) [C500CN812N](#) [4NK0AQY](#) [1100-42X](#)  
[V23050A1012A551](#) [6-1618082-4](#) [7-1618103-6](#) [WTD-101X](#) [SP16DRD](#) [SP16DRA](#) [C500-CE243](#) [C500-IDS02-V1](#) [607.5111.020](#) [DOLD](#)  
[48173](#) [CS AR-02V024](#) [CS AR-20V024](#) [CS AR-22V024](#) [CS AR-22V230](#) [750136](#) [777512](#) [PSR-MS21-1NO-1DO-24DC-SC](#) [600PSR-](#)  
[165/300-CU](#) [SR6V6K18](#) [SR4M4005](#) [BPS 36-1](#) [BP34 - 101057553](#) [2TLA010033R3000](#) [2TLA010033R0000](#) [2TLA010028R1000](#)  
[2TLA010017R0100](#) [2TLA010026R0400](#) [2TLA020007R6900](#) [SCR 2-W22-2.5](#) [7S.34.9.110.4220](#)