

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://download.phoenixcontact.com>)



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, 2 enabling current paths, nominal input voltage of 24 V AC/DC, plug-in spring-cage terminal blocks

The figure shows a version with a screw connection

Product Features

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



Key commercial data

package_quantity	1
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

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
Typical input current at U_N	65 mA DC
Voltage at input/start and feedback circuit	approx. 24 V DC
Typical response time	20 ms (Monitored/manual start)

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

Technical data

Input data

Typical release time	45 ms (single-channel)
Typical release time	10 ms (two-channel)
Concurrence input 1/2	Infinite
Recovery time	1 s
Max. permissible overall conductor resistance	approx. 50 Ω (Input and start circuits at U _N)

Output data

Contact type	2 enabling current paths
Contact type	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)
Maximum inrush current	6 A
Inrush current, minimum	25 mA
Sq. Total current	$72 A^2 (I_{TH}^2 = I_1^2 + I_2^2)$
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms)
Interrupting rating (ohmic load) max.	288 W (48 V DC, τ = 0 ms)
Interrupting rating (ohmic load) max.	77 W (110 V DC, τ = 0 ms)
Interrupting rating (ohmic load) max.	88 W (220 V DC, τ = 0 ms)
Interrupting rating (ohmic load) max.	1500 VA (250 V AC, τ = 0 ms)
Maximum interrupting rating (inductive load)	48 W (24 V DC, τ = 40 ms)
Maximum interrupting rating (inductive load)	40 W (48 V DC, τ = 40 ms)
Maximum interrupting rating (inductive load)	35 W (110 V DC, τ = 40 ms)
Maximum interrupting rating (inductive load)	35 W (220 V DC, τ = 40 ms)
Switching capacity min.	0.4 W
Output fuse	10 A gL/gG NEOZED (N/O contact)
Output fuse	6 A gL/gG NEOZED (N/C contact)

General

Relay type	Electromechanically forcibly guided, dust-proof relay.
Mechanical service life	Approx. 10 ⁷ cycles
Mounting position	Any
Category according to EN 13849-1	4
Stop category	0
Name	Air and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
Rated surge voltage / insulation	6 kV / Safe isolation, increased insulation
Rated insulation voltage	250 V
Pollution degree	2
Surge voltage category	III

Connection data

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

Technical data

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm
Connection method	Spring-cage conn.

classifications

eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371901
eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 7.0	27371819
eCl@ss 8.0	27371819

ETIM

ETIM 2.0	EC000196
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449

UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39121501

approvals

UL Listed / GOST / cUL Listed / Functional Safety / cULus Listed /

Approval details



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

approvals

GOST 

cUL Listed 

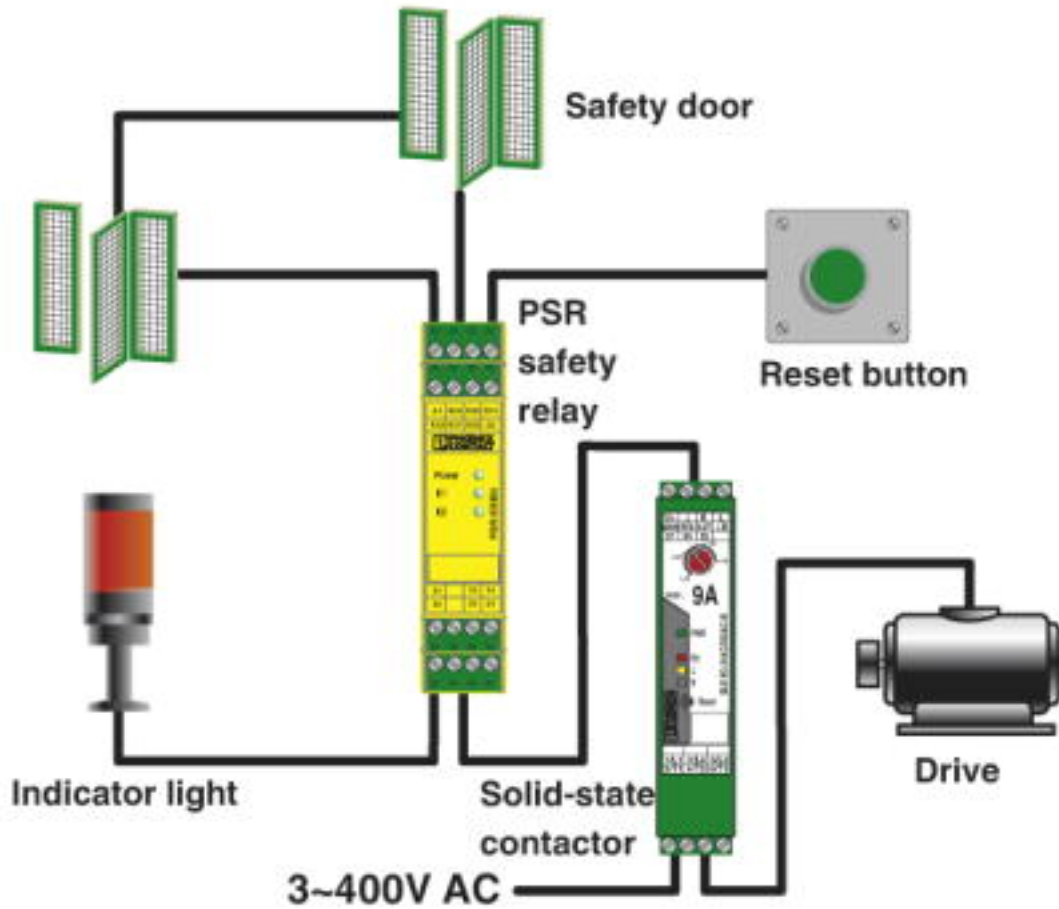
Functional Safety

cULus Listed 

Drawings

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

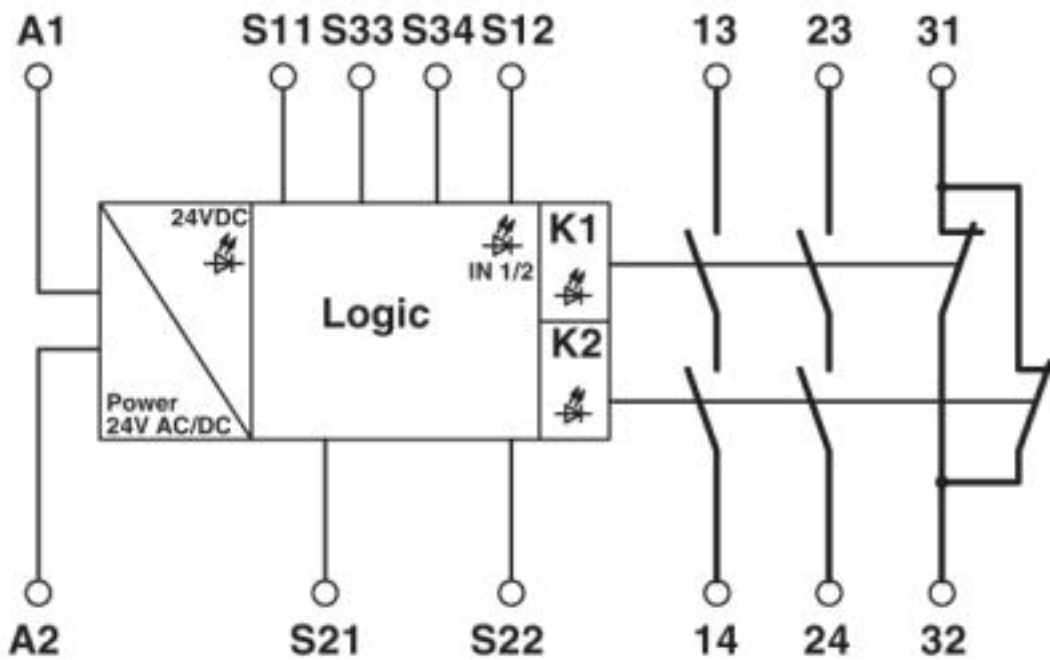
Application drawing



Example of a safety door application with a PSR safety relay PSR-ESM4.

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

Circuit diagram



1 = logics

© Phoenix Contact 2013 - all rights reserved
<http://www.phoenixcontact.com>