

Safety relays - PSR-SPP-120UC/ESAM4/3X1/1X2/B - 2901425

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, 3 enabling current paths, nominal input voltage: 120 V AC/DC, pluggable Push-in terminal block


The figure shows 120 UC version

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
- Manually monitored and automatic activation in a single device
- 3 enabling current paths, 1 signaling current path
- Single and two-channel control
- Basic insulation



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 592031
GTIN	4046356592031

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)	-25 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)

Safety relays - PSR-SPP-120UC/ESAM4/3X1/1X2/B - 2901425

Technical data

Ambient conditions

Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Maximum altitude	≤ 2000 m (Above sea level)

Input data

Input voltage range	110 V AC/DC ... 120 V AC/DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	38 mA
Voltage at input/start and feedback circuit	~ 24 V DC
Typical response time	40 ms (man. start)
Typ. starting time with U_s	330 ms (when controlled via A1)
Typical release time	60 ms (when controlled via A1)
	20 ms (when controlled via S11/S12 and S21/S22)
Concurrence input 1/2	∞
Recovery time	1 s
Operating voltage display	Green LED
Status display	Green LED
Protective circuit	Surge protection Varistor 275 V _{RMS} (A1-A2)
	Surge protection Varistor
Maximum switching frequency	0.5 Hz
Max. permissible overall conductor resistance	50 Ω

Output data

Contact type	3 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	10 V AC/DC
Limiting continuous current	6 A (N/O contact)
	5 A (N/C contact)
Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	72 A ²
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms)
	230 W (48 V DC, τ = 0 ms)
	68 W (110 V DC, τ = 0 ms)
	88 W (220 V DC, τ = 0 ms)
	2000 VA (250 V AC, τ = 0 ms)
Maximum interrupting rating (inductive load)	48 W (24 V DC, τ = 40 ms)
	40 W (48 V DC, τ = 40 ms)
	35 W (110 V DC, τ = 40 ms)
	33 W (220 V DC, τ = 40 ms)

Safety relays - PSR-SPP-120UC/ESAM4/3X1/1X2/B - 2901425

Technical data

Output data

Switching capacity min.	100 mW
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)

General

Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3
Nominal operating mode	100% operating factor
Net weight	175.62 g
Mounting position	any
Mounting type	DIN rail mounting
Degree of protection	IP20
Min. degree of protection of inst. location	IP54

Connection data

Connection method	Push-in connection
pluggable	Yes
Conductor cross section solid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross-section AWG	24 ... 16
Conductor cross-section flexible with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ² (only together with CRIMPFOX 6)
Conductor cross-section flexible with ferrule and plastic sleeve	0.25 mm ² ... 1.5 mm ² (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
Designation	EN 50156
Safety Integrity Level (SIL)	3

Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
-------------	--

Safety relays - PSR-SPP-120UC/ESAM4/3X1/1X2/B - 2901425

Technical data

Standards and Regulations

Standards/regulations	DIN EN 50178/VDE 0160
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	4 kV / basic insulation (safe isolation, reinforced insulation, and 6 kV between A1-A2/logic/enabling and signaling current paths)
Degree of pollution	2
Overvoltage category	III
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g

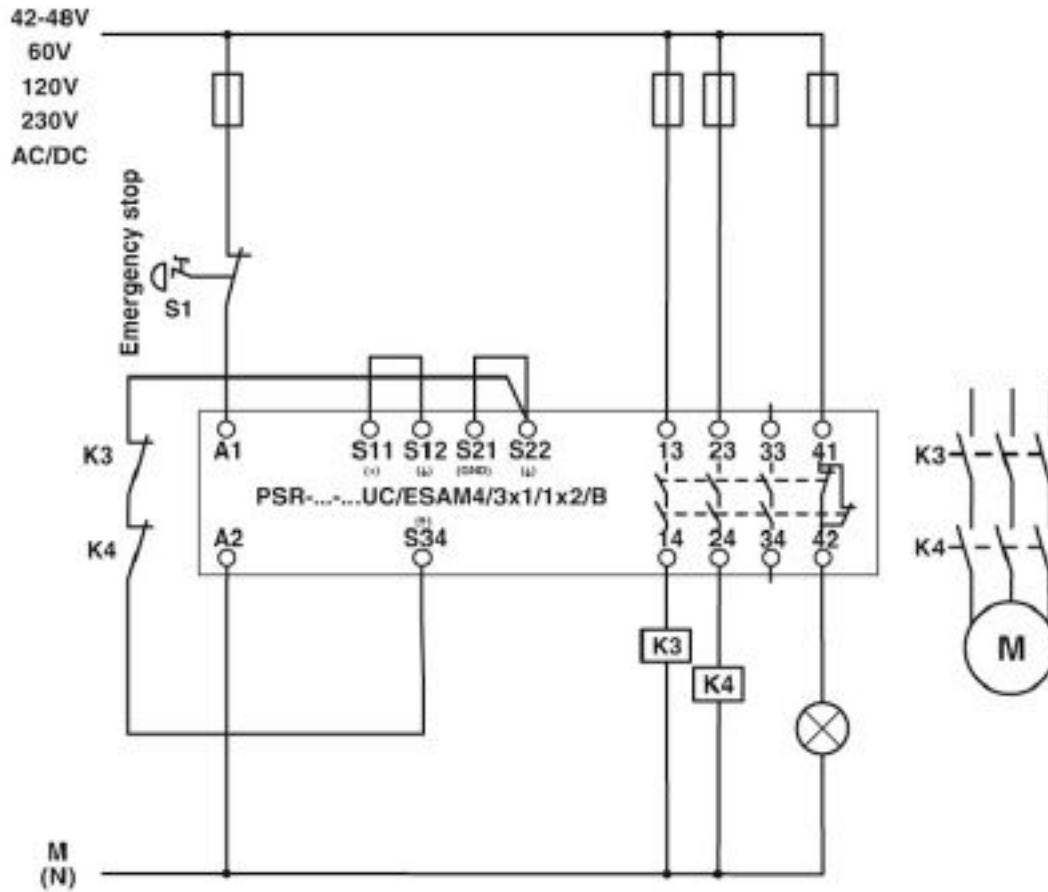
Environmental Product Compliance

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

Safety relays - PSR-SPP-120UC/ESAM4/3X1/1X2/B - 2901425

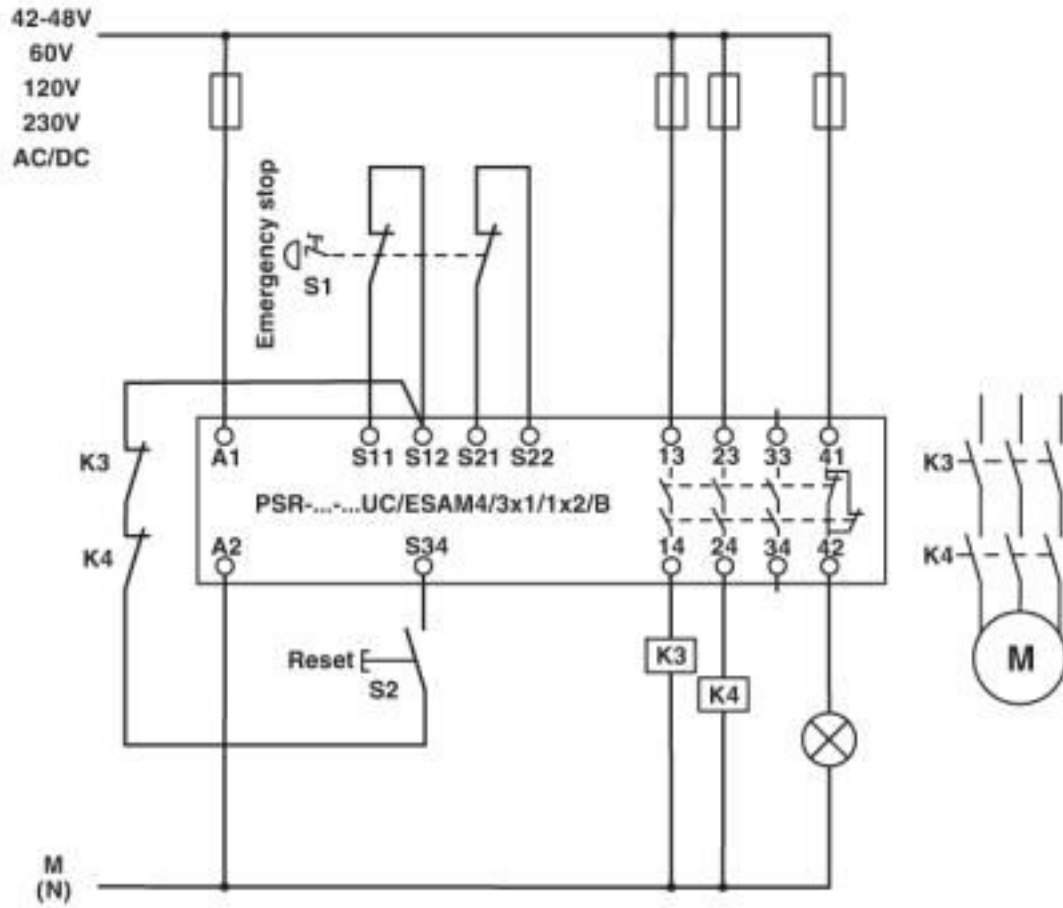
Application drawing



Single-channel emergency stop monitoring

Safety relays - PSR-SPP-120UC/ESAM4/3X1/1X2/B - 2901425

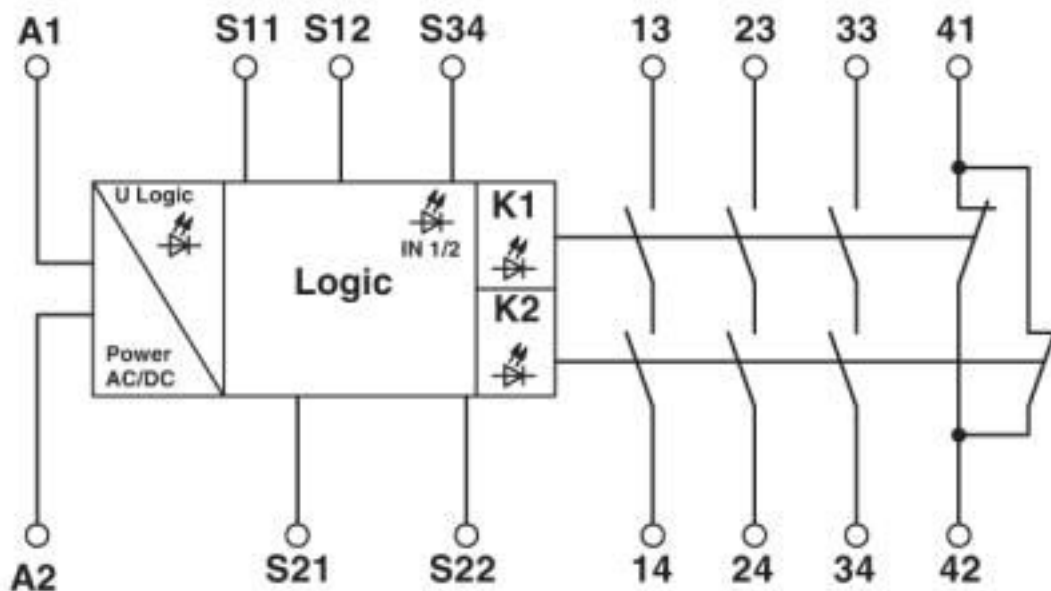
Application drawing



Two-channel emergency stop monitoring

Safety relays - PSR-SPP-120UC/ESAM4/3X1/1X2/B - 2901425

Circuit diagram



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 3.0	EC001449
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

Safety relays - PSR-SPP-120UC/ESAM4/3X1/1X2/B - 2901425

Classifications

UNSPSC

UNSPSC 18.0	39122205
UNSPSC 19.0	39122205
UNSPSC 20.0	39122205
UNSPSC 21.0	39122205

Approvals

Approvals

Approvals

UL Listed / cUL Listed / Functional Safety / EAC / EAC / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
-----------	--	---	---------------

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
------------	--	---	---------------

Functional Safety			01/205/5117.01/16
-------------------	--	--	-------------------

EAC			EAC-Zulassung
-----	--	--	---------------

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](#) [22-060X](#) [C200HNC112](#) [C200HOD214](#) [C500CN812N](#) [4NK0AQY](#)
[1100X](#) [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-22V024](#) [CS AR-22V230](#) [CS AR-46V024](#) [750136](#) [PSR-MS21-1NO-1DO-24DC-SC](#)
[600PSR-165/300-CU](#) [SR6V6K18](#) [SR4M4005](#) [BPS 36-1](#) [BP34 - 101057553](#) [2TLA010033R3000](#) [2TLA010033R2000](#) [2TLA010033R0000](#)
[2TLA010028R1000](#) [2TLA010017R0100](#) [2TLA010026R0400](#) [SCR 2-W22-2.5](#)