

Safety relays - PSR-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

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 according to EN ISO 13849, single or two-channel operation, 3 enabling current paths, nominal input voltage of 120 V AC/DC, plug-in screw terminal blocks


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 592024
GTIN	4046356592024
Weight per Piece (excluding packing)	240.000 g
Custom tariff number	85371098
Country of origin	Germany

Technical data

Note

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

Dimensions

Width	22.5 mm
-------	---------

Safety relays - PSR-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

Technical data

Dimensions

Height	99 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)
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

Safety relays - PSR-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

Technical data

Output data

Sq. Total current	72 A ² ($I_{TH}^2 = I_1^2 + I_2^2 + I_3^2$)
Interrupting rating (ohmic load) max.	144 W (24 V DC, $\tau = 0$ ms)
	230 W (48 V DC, $\tau = 0$ ms)
	68 W (110 V DC, $\tau = 0$ ms)
	88 W (220 V DC, $\tau = 0$ ms)
	2000 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)
	33 W (220 V DC, $\tau = 40$ ms)
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 forcibly guided contacts in accordance with IEC/EN 61810-3 (EN 50205)
Nominal operating mode	100% operating factor
Net weight	178.19 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	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12

Safety-related characteristic data

Stop category	0
---------------	---

Safety relays - PSR-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

Technical data

Safety-related characteristic data

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
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

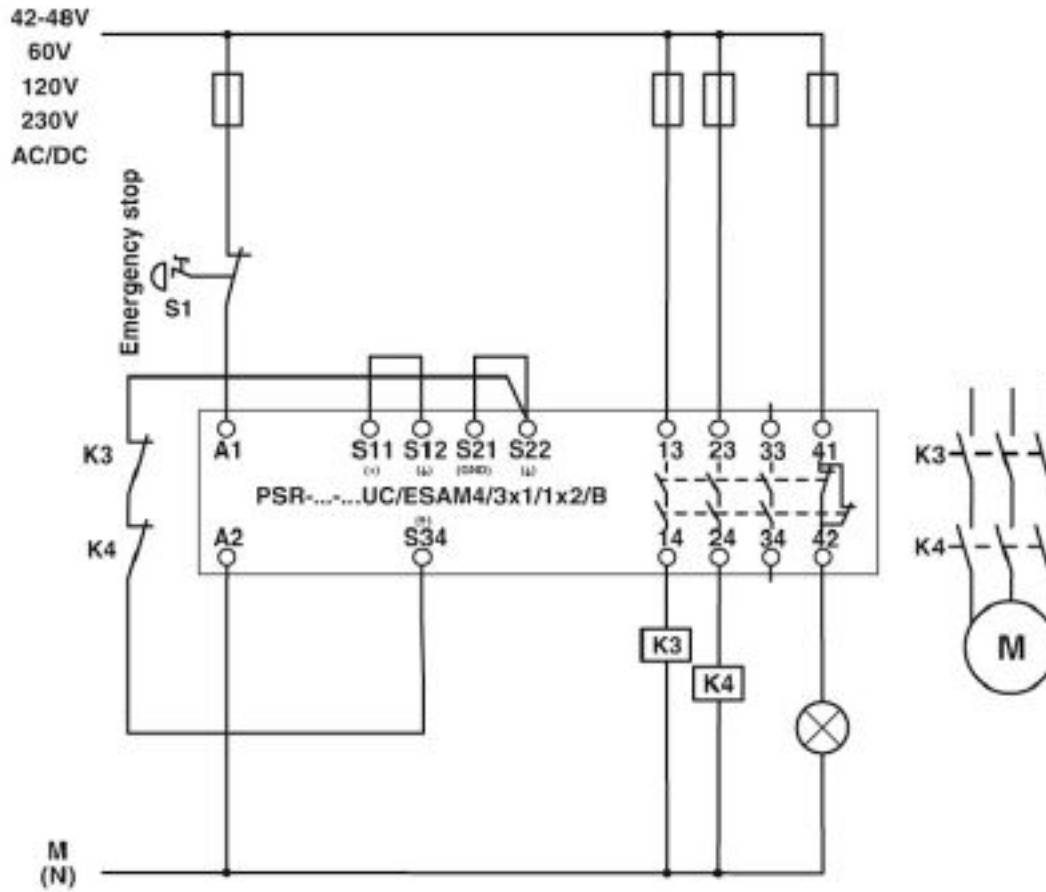
Environmental Product Compliance

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-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

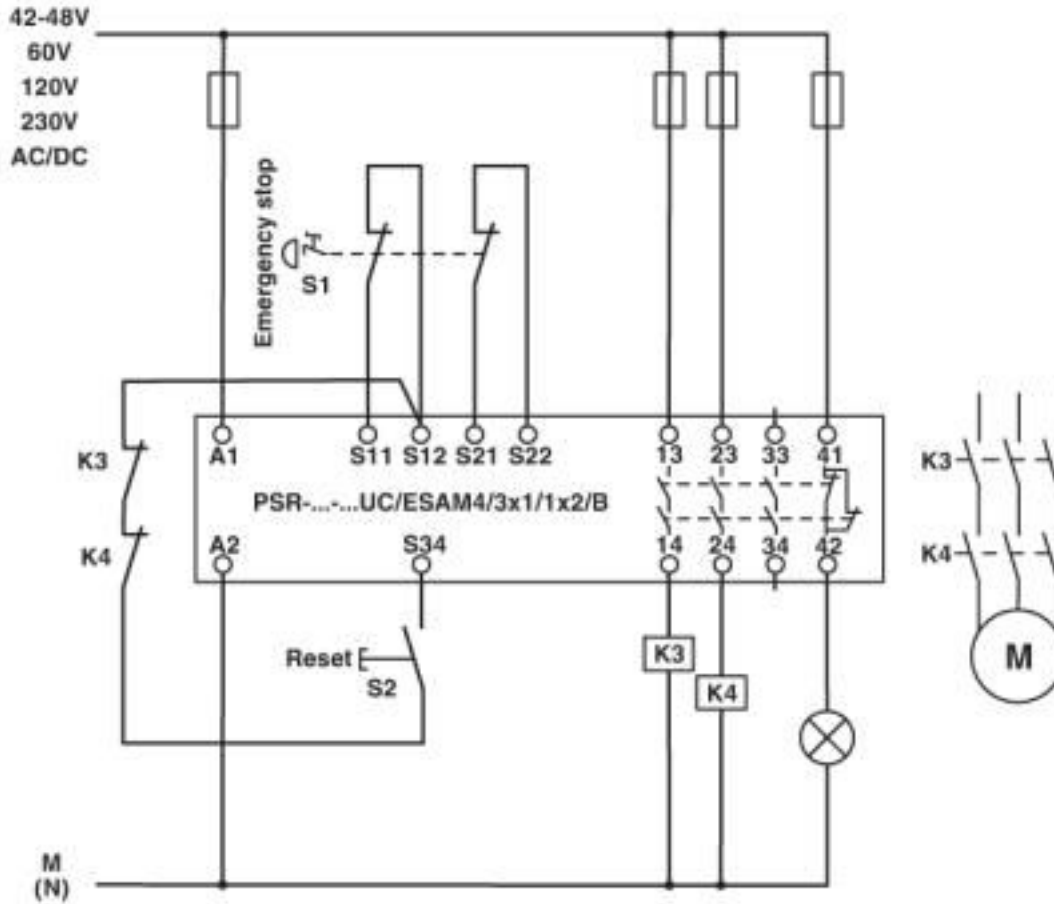
Application drawing



Single-channel emergency stop monitoring

Safety relays - PSR-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

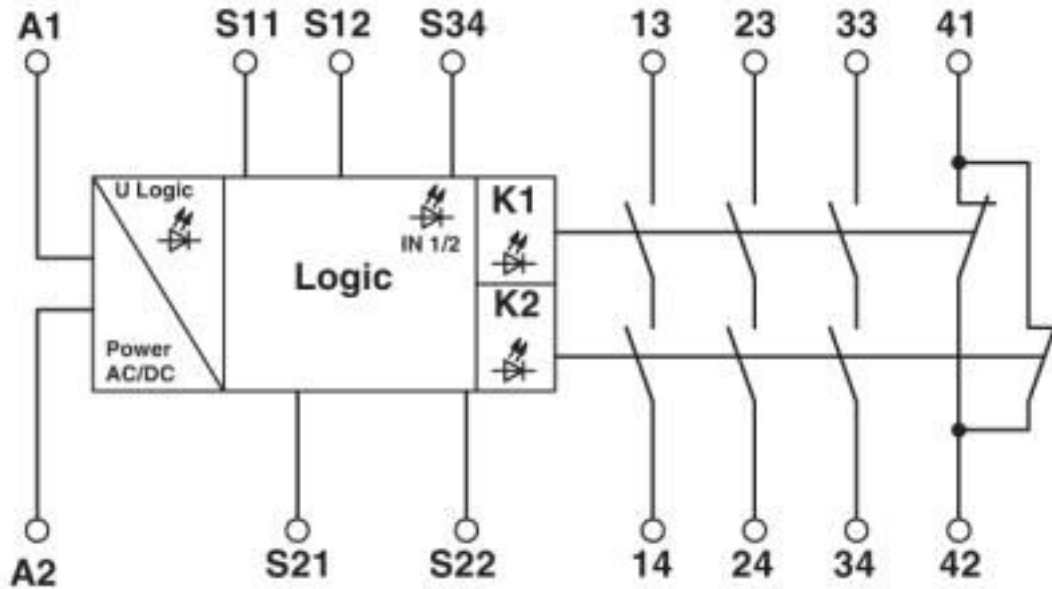
Application drawing



Two-channel emergency stop monitoring

Safety relays - PSR-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

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

Safety relays - PSR-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

Classifications

UNSPSC

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

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
-----	--	--	---------------

Safety relays - PSR-SCP-120UC/ESAM4/3X1/1X2/B - 2901422

Approvals

EAC		RU C- DE.A*30.B.01082
-----	---	--------------------------

cULus Listed	
--------------	---