PSR-SCP- 24DC/ESD/4X1/30 - Safety relays

2981800

https://www.phoenixcontact.com/us/products/2981800

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 documentation. Our general terms of use for downloads are valid.



Safety relay for emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e in accordance with EN ISO 13849, automatic or manual activation, 2 N/O contacts with a dropout delay of 0.1 s ... 30 s, plug-in screw connection terminal block

Your advantages

- Maximum of 3 undelayed and 2 dropout delay contacts
- Manually monitored and automatic activation
- Up to Cat. 3/4 and PL d/e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508
- For emergency stop and safety door monitoring, plus evaluation of light grids
- 1- and 2-channel control
- Protective labels to prevent manipulation of the set time (PSR-ESD-300) or electronic protection against manipulation (PSR-ESD-30)
- Fixed delay times of 0.1 s ... 300 s

ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	2981800
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA131
GTIN	4046356117968
Weight per piece (including packing)	192 g
Weight per piece (excluding packing)	170.97 g
Customs tariff number	85371098
Country of origin	DE

Technical data

Product properties

Product type	Safety relays
Product family	PSRclassic
Application	Emergency stop
	Safety door
	Light grid
Set comprises	1217839 PSR-SCP-24DC/ESD/4X1/30-SET35
Control	1 and 2 channel
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	II, III (See the section “Insulation coordination”)
Degree of pollution	2

Times

Typical response time	150 ms (Monitored/manual and auto-start)
Typical release time	20 ms (Undelayed contacts)
	100 ms (delayed contacts)
Delay time range	0.1 s ... 30 s ±30 % (adjustable)
Recovery time	330 ms (Restart)
	1 s (Electric torque)

Electrical properties

Maximum power dissipation for nominal condition	25.8 W (U_S = 26,4 V, I_L^2 = 120 A²)
Nominal operating mode	100% operating factor
Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / basic insulation

Supply

Rated control circuit supply voltage U_S	24 V DC -15 %; +10 %
Rated control supply current I_S	typ. 75 mA
Inrush current	typ. 250 mA
Protective circuit	Suppressor diode

Input data

Digital: Sensor circuit (S12, S22)

Number of inputs	2
Max. permissible overall conductor resistance	500 Ω (Input and reset circuit at U_N)
Protective circuit	Suppressor diode
Current consumption	typ. 3 mA

Digital: Start circuit (S34, S35)

Number of inputs	2
Max. permissible overall conductor resistance	500 Ω (Input and reset circuit at U_N)
Protective circuit	Suppressor diode
Current consumption	typ. 7 mA

Output data

Relay: Enabling current paths (13/14, 23/24, 37/38, 47/48)

Number of outputs	2 (undelayed: 13/14, 23/24)
	2 (delayed: 37/38, 47/48)
Contact switching type	4 enabling current paths
Contact material	$AgSnO_2$
Switching voltage	max. 250 V AC/DC
	min. 15 V AC/DC
Switching power	min. 0.4 W
Inrush current	min. 25 mA
	max. 6 A
Switching capacity	3 A (24 V (DC13))
	3 A (250 V (AC15))
Limiting continuous current	6 A
Sq. Total current	120 A^2 (observe derating)
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms)
	288 W (48 V DC, τ = 0 ms)
	90 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)
	33 W (48 V DC, τ = 40 ms)
	25 W (110 V DC, τ = 40 ms)
	23 W (220 V DC, τ = 40 ms)
Output fuse	10 A gL/gG NEOZED (N/O contact)

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

Signaling

Status display	LED (green)
Error indication	K1/K2 and K3(t)/K4(t) LED, green

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 (EN 60204-1)	0 (Undelayed contacts)
Stop category	1 (delayed contacts)

Safety data: EN ISO 13849

Performance level (PL)	e

Safety data: IEC 61508 - High 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 ... 45 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Maximum altitude	≤ 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

CE

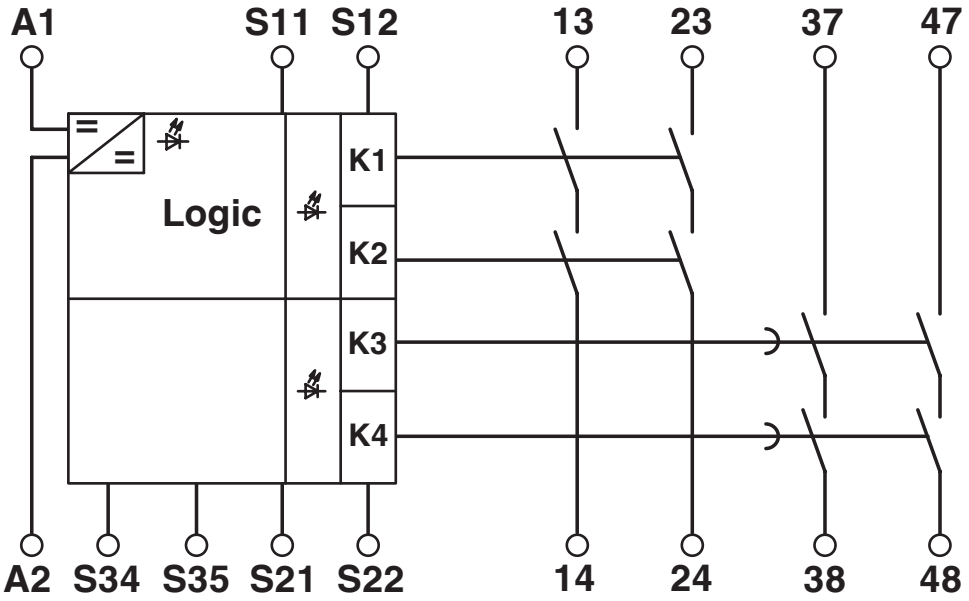
Identification	CE-compliant

Mounting

Mounting type	DIN rail mounting
Mounting position	any

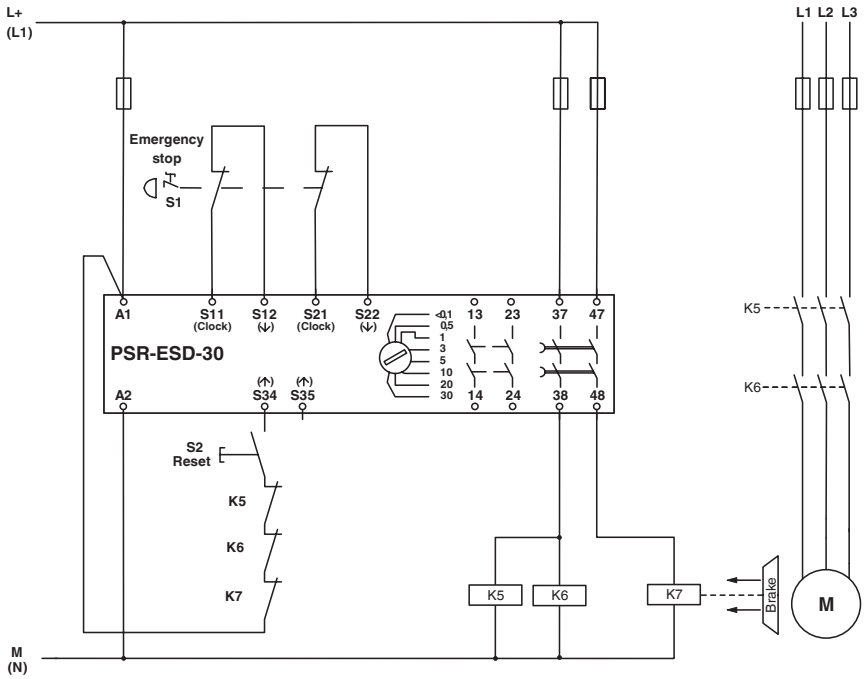
Drawings

Circuit diagram



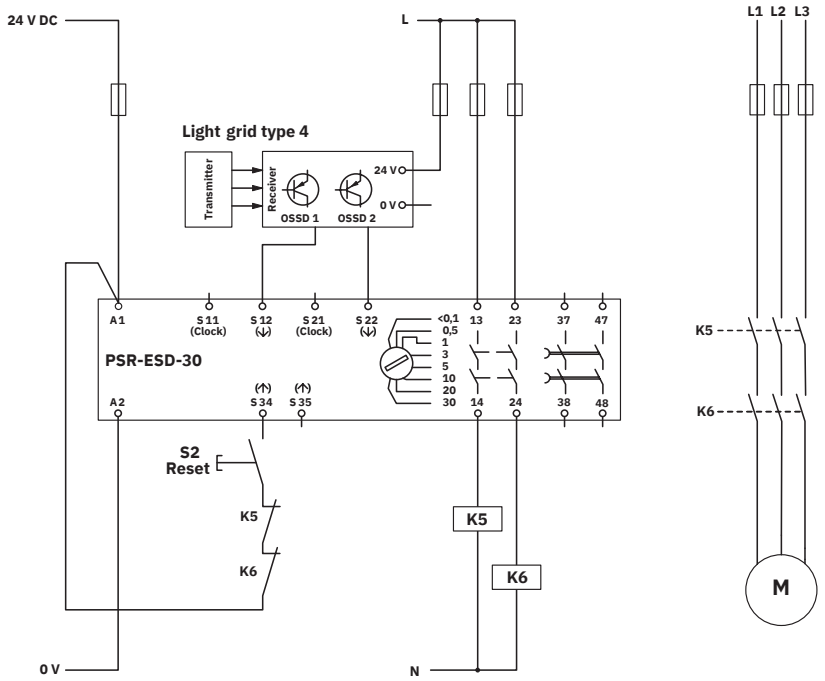
Block diagram

Circuit diagram



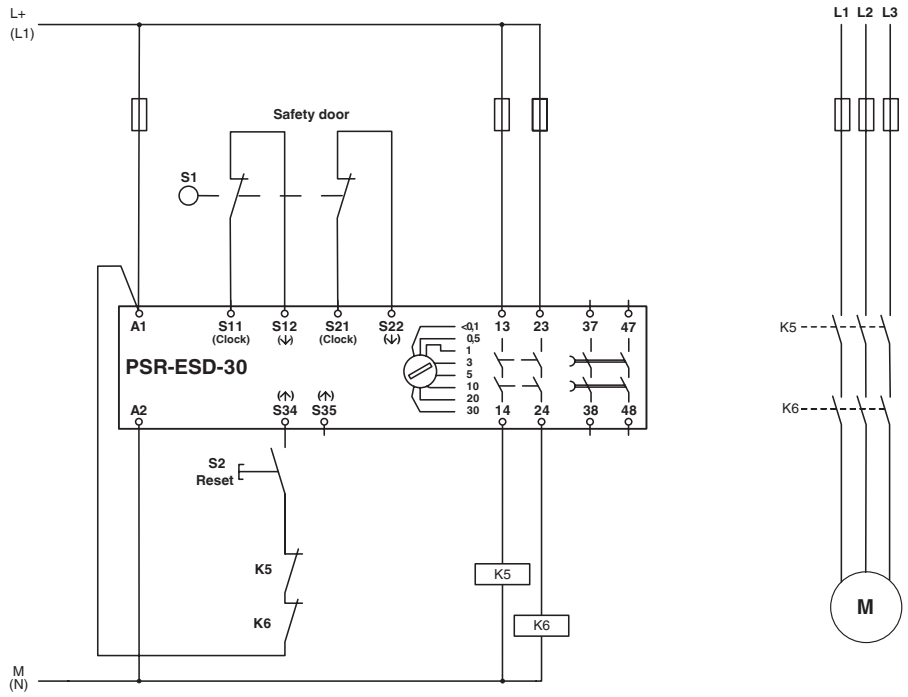
2-channel emergency stop monitoring

Circuit diagram



Light grid monitoring

Circuit diagram



Two-channel safety door monitoring

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2981800

Functional Safety
Approval ID: 968/EZ322.06/23

cULus Listed
Approval ID: E140324

Functional Safety
Approval ID: 01/205/0656.04/23

Classifications

ECLASS

ECLASS-13.0	27371819
ECLASS-15.0	27371819

ETIM

ETIM 10.0	EC001449

UNSPSC

UNSPSC 21.0	39122200

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	34, 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.)	1-Methyl-2-pyrrolidone (NMP)(CAS: 872-50-4)
	Lead(CAS: 7439-92-1)
SCIP	96910064-e2e8-4429-9b05-cc7d43907774

EF3.1 Climate Change

CO2e kg	3.314 kg CO2e

Phoenix Contact 2026 © - all rights reserved
https://www.phoenixcontact.com

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com