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Find the *Phoenix Contact PSR-SCP-24DC/ESD/5X1/1X2/300* at our website: *Click HERE*

Safety relays - PSR-SCP- 24DC/ESD/5X1/1X2/300 - 2981428

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Safety relay for emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e (EN ISO 13849), one- or two-channel operation, automatic or manual activation, 3 N/O contacts, 1 N/C contact, 2 N/O contacts with dropout delay of 0.2 s to 300 s, plug-in screw terminal block

Why buy this product

- Maximum of 3 undelayed and 2 dropout delay contacts
- Manually monitored and automatic activation
- Up to Cat. 3/4 and PL d/e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- For emergency stop and safety door monitoring, plus evaluation of light grids
- Single and two-channel control
- Adjustable delay time of 0.2 s ... 300 s (24 increments)
- Protective labels to prevent manipulation of the set time (PSR-ESD-300) or electronic protection against manipulation (PSR-ESD-30)

Key Commercial Data

Packing unit	1 STK
GTIN	4 017918 975227
GTIN	4017918975227
Weight per Piece (excluding packing)	472.400 g
Custom tariff number	85371099
Country of origin	Germany

Technical data

Note

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

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Technical data

Dimensions

Width	45 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 70 °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)
Shock	15g
Vibration (operation)	10 Hz ...150 Hz, 2g
Maximum altitude	≤ 2000 m (Above sea level)

Input data

Rated control circuit supply voltage U_S	24 V DC -15 % / +10 %
Power consumption at U_S	typ. 3.72 W
Rated control supply current I_S	typ. 155 mA
Inrush current	200 mA (at U_S)
Current consumption	< 40 mA (with U_s/I_x to S10)
	< 50 mA (with U_s/I_x to S12)
	> -40 mA (with U_s/I_x to S22)
	0 mA (with U_s/I_x to S34)
	< 5 mA (with U_s/I_x to S35)
Voltage at input/start and feedback circuit	24 V DC -15 % / +10 %
Typical response time	< 600 ms (automatic start)
	< 70 ms (manual start)
Typ. starting time with U_s	< 600 ms (when controlled via A1)
Typical release time	< 20 ms (when controlled via S11/S12 and S21/S22)
	< 20 ms (when controlled via A1)
Concurrence input 1/2	∞
Recovery time	< 1 s
Status display	4 x green LEDs
Maximum switching frequency	0.5 Hz
Max. permissible overall conductor resistance	approx. 22 Ω (Input and start circuits at U_S)
Filter time	1 ms (at A1 in the event of voltage dips at U_s)
	max. 1.5 ms (at S10, S12; test pulse width)
	7.5 ms (at S10, S12; test pulse rate)
	Test pulse rate = 5 x Test pulse width

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Technical data

Output data

Contact type	5 enabling current paths
	1 signaling current path
Contact material	$AgSnO_2$
Minimum switching voltage	5 V AC/DC
Maximum switching voltage	250 V AC/DC (Observe the load curve)
Limiting continuous current	6 A (N/O contact, pay attention to the derating)
	6 A (N/C contact)
Inrush current, minimum	10 mA
Maximum inrush current	20 A (Δt # 100 ms, undelayed contacts)
	8 A (delayed contacts)
Sq. Total current	55 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)
	110 W (110 V DC, τ = 0 ms, delayed contacts: 77 W)
	88 W (220 V DC, τ = 0 ms)
	1500 VA (250 V AC, τ = 0 ms, delayed contacts: 2000 VA)
Maximum interrupting rating (inductive load)	42 W (24 V DC, τ = 40 ms, delayed contacts: 48 W)
	42 W (48 V DC, τ = 40 ms, delayed contacts: 40 W)
	42 W (110 V DC, τ = 40 ms, delayed contacts: 35 W)
	42 W (220 V DC, τ = 40 ms, delayed contacts: 33 W)
Switching capacity min.	50 mW
Output fuse	10 A gL/gG (N/O contact)
	6 A gL/gG (N/C contact)

General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Mechanical service life	10 x 10^6 cycles
Nominal operating mode	100% operating factor
Net weight	430 g
Mounting type	DIN rail mounting
Mounting position	any
Degree of protection	IP54
	IP20
Min. degree of protection of inst. location	IP54
Control	one and two channel
Housing material	PBT
Housing color	yellow

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Technical data

Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

Safety-related characteristic data

Stop category	0
	1
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3 (for delayed contacts SIL 2)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3 (for delayed contacts SIL 2)
Designation	EN ISO 13849
Performance level (PL)	e (for delayed contacts PL d)
Category	4 (undelayed contacts)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	3 (for delayed contacts SILCL 2)

Standards and Regulations

Shock	15g
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	Basic insulation 4 kV: between all current paths and housing Safe isolation, reinforced insulation 6 kV: between 13/14, 23/24, 33/34, and the remaining current paths between 13/14, 23/24, 33/34 among one another
Degree of pollution	2
Overvoltage category	III
Vibration (operation)	10 Hz ...150 Hz, 2g
Conformance	CE-compliant

Environmental Product Compliance

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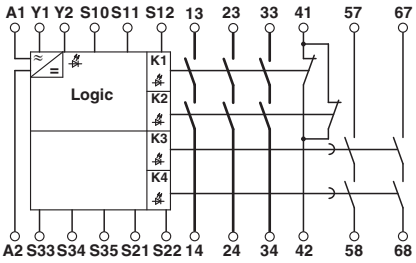
Technical data

Environmental Product Compliance

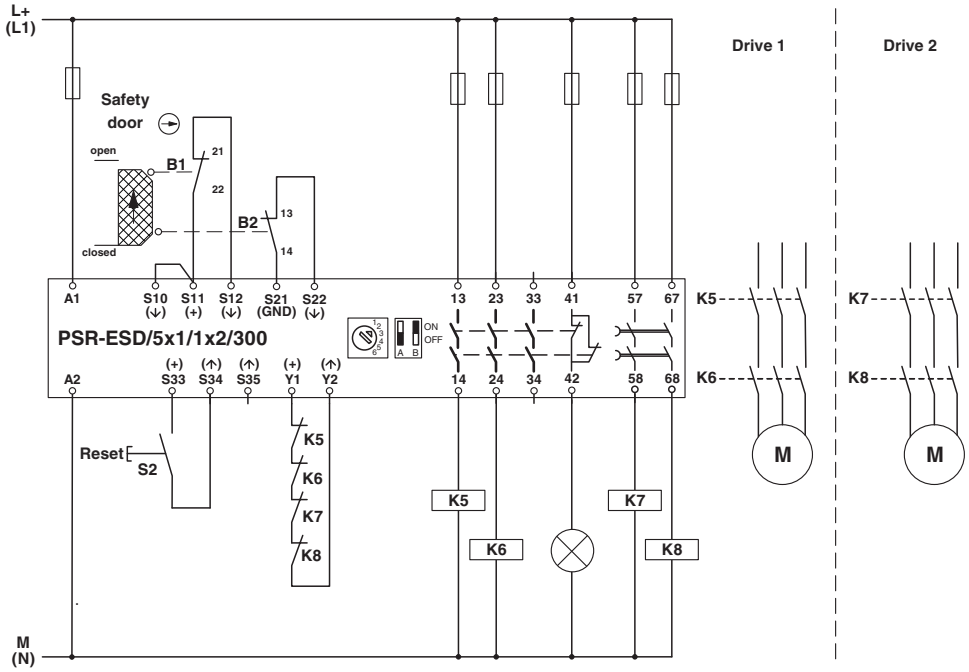
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

Circuit diagram



Circuit diagram



Two-channel safety door monitoring

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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
eCl@ss 9.0	27371819

ETIM

ETIM 2.0	EC001449
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449
ETIM 6.0	EC001449

UNSPSC

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

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

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Approvals

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Functional Safety 01/205/5347.01/16

EAC 7500651.22.01.00244

EAC EAC-Zulassung

cULus Listed

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