PSR-SCP- 24UC/URM/5X1/1X2 - Coupling relay

2981952

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Safe coupling relay with force-guided contacts, 5 N/O contacts, 1 N/C contact, plug-in screw terminal block, width: 22.5 mm

Your advantages

- Up to Cat. 1/PL c in accordance with EN ISO 13849-1, SIL 1 in accordance with IEC 61508
- Safe readback due to force-guided signal contact in accordance with EN 50205
- Easy proof test according to IEC 61508 thanks to integrated signal contact
- 1 or 2-channel control
- 5 enabling current paths, 1 confirmation current path

ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	2981952
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA162
GTIN	4046356343343
Weight per piece (including packing)	166 g
Weight per piece (excluding packing)	142 g
Customs tariff number	85364900
Country of origin	DE

Technical data

Product properties

Product type	Coupling relay
Product family	PSRclassic
Application	Safe switch off
	High demand
	Low demand
Control	1 and 2 channel
Mechanical service life	10x 10^6 cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

Insulation characteristics

Overvoltage category	III
Degree of pollution	2

Times

Typ. starting time with U_s	typ. 20 ms (with Us / when controlled via A1)
Typical release time	typ. 20 ms (At Us/on demand via A1)
Restart time	< 1 s (Boot time)
Recovery time	< 500 ms

Electrical properties

Maximum power dissipation for nominal condition	8.56 W (at U_B = 26.4 V DC, U_S = 24 V, I_S = 47 mA, n = 1, I_L^2 = 72 A², $R_{contact}$ = 0.1 Ω
Nominal operating mode	100% operating factor
Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / basic isolation (safe isolation, reinforced isolation and 6 kV between A1/A2, 53/54, 71/72 and 13/14, 23/24, 33/34, 43/44.)

Supply

Rated control circuit supply voltage U_S	24 V AC/DC -15 % / +10 %
Rated control supply current I_S	typ. 47 mA
Power consumption at U_S	typ. 1.2 W
Inrush current	typ. 350 mA DC (Δt < 1 µs at U_s)
	typ. 350 mA AC (Δt = 2 ms at U_s)
Protective circuit	Surge protection
	Varistor

Output data

Relay: Enabling current paths (13/14, 23/24, 33/34, 43/44, 53/54)

Output description	2 N/O contacts in series, safety-related, floating
Number of outputs	5
Contact switching type	5 enabling current paths

Contact material	$AgSnO_2$
Switching voltage	min. 5 V AC/DC
	max. 250 V AC/DC
Switching power	min. 50 mW
Inrush current	min. 10 mA
	max. 6 A
Switching capacity	3 A (24 V (DC13))
	3 A (230 V (AC15))
Switching capacity (360/h cycles)	4 A (24 V (DC13))
	4 A (230 V (AC15))
Limiting continuous current	6 A
Sq. Total current	72 A^2
Switching frequency	max. 0.5 Hz
Interrupting rating (ohmic load) max.	144 W (N/O contact, 24 V DC, τ = 0 ms)
	288 W (N/O contact, 48 V DC, τ = 0 ms)
	240 W (N/O contact, 60 V DC, τ = 0 ms)
	110 W (N/O contact, 110 V DC, τ = 0 ms)
	88 W (N/O contact, 220 V DC, τ = 0 ms)
	1380 VA (N/O contact, 230 V AC, τ = 0 ms)
Maximum interrupting rating (inductive load)	42 W (N/O contact, 24 V DC, τ = 40 ms)
	42 W (N/O contact, 48 V DC, τ = 40 ms)
	42 W (N/O contact, 60 V DC, τ = 40 ms)
	42 W (N/O contact, 110 V DC, τ = 40 ms)
	42 W (N/O contact, 220 V DC, τ = 40 ms)
Output fuse	10 A gL/gG NEOZED
	4 A gL/gG NEOZED

Relay: Signaling current path (71/72)

Number of outputs	1
Contact switching type	1 signaling current path
Contact material	$AgSnO_2$
Switching voltage	min. 5 V AC/DC
	max. 250 V AC/DC
Switching power	min. 50 mW
Inrush current	min. 10 mA
	max. 6 A
Switching capacity	3 A (24 V (DC13))
	3 A (230 V (AC15))
Switching capacity (360/h cycles)	4 A (24 V (DC13))
	4 A (230 V (AC15))
Limiting continuous current	6 A
Sq. Total current	72 A^2
Switching frequency	max. 0.5 Hz
Output fuse	6 A gL/gG NEOZED

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
Tightening torque	0.6 Nm

Signaling

Operating voltage display	1 x LED (green)

Dimensions

Width	22.5 mm
Height	114.5 mm
Depth	99 mm

Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	PA

Characteristics

Safety data

Stop category (EN 60204-1)	0

Safety data: EN ISO 13849

Performance level (PL)	c

Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	1

Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	1

Safety data

Safety Integrity Level (SIL)	1

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	max. 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 (In the event of stress caused by shock, contact reactions are possible for up to 1 ms.)
Vibration (operation)	10 Hz ... 150 Hz, 2g (In the event of stress caused by vibration, contact reactions are possible for up to 1 ms.)

Approvals

CE

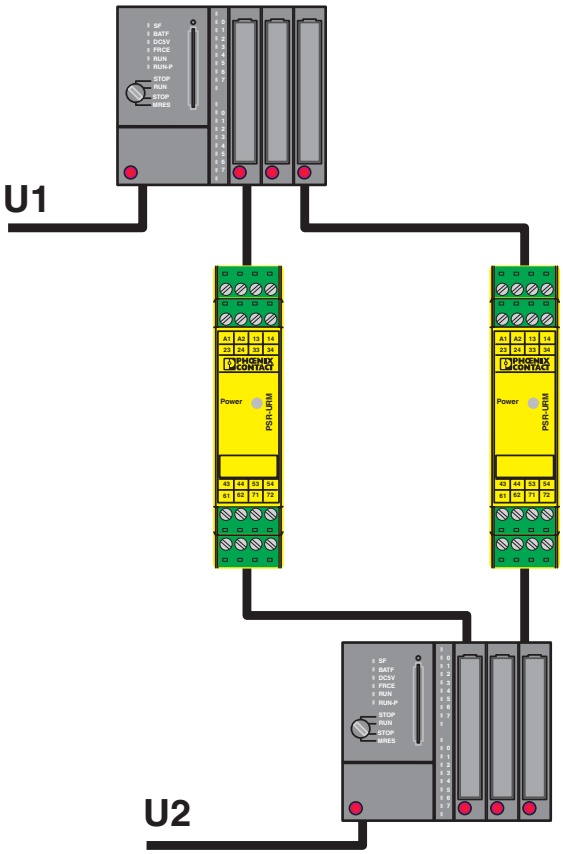
Certificate	CE-compliant

Mounting

Mounting type	DIN rail mounting
Mounting position	vertical or horizontal

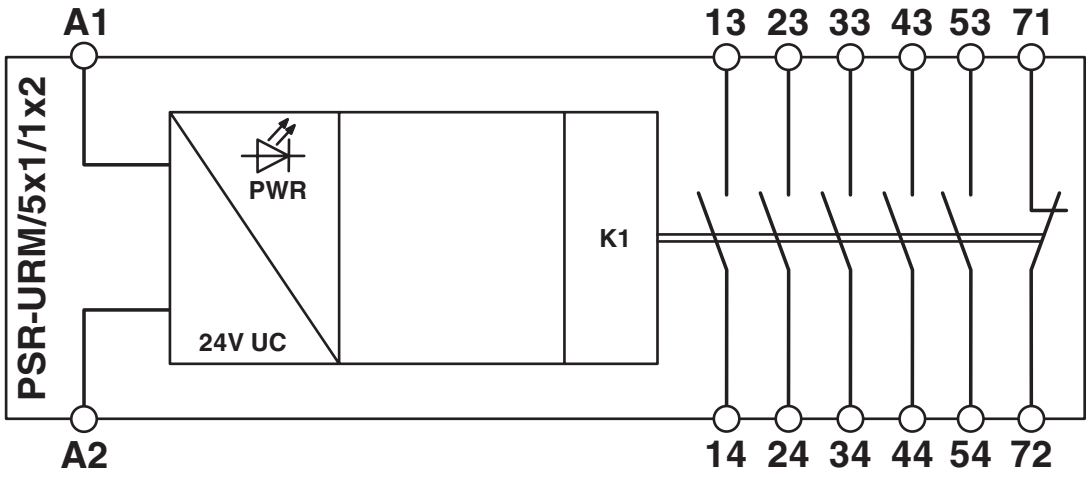
Drawings

Application drawing



Reliable signal exchange between two systems with confirmation function.

Block diagram



Block diagram

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2981952

Functional Safety
Approval ID: 3535 2399

Functional Safety
Approval ID: 4478015124312

cULus Listed
Approval ID: E140324

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	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.)	Lead(CAS: 7439-92-1)
SCIP	003ff684-57d0-4e3e-87ba-5bd5dc623931

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