

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

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)	171.8 g
Weight per piece (excluding packing)	142 g
Customs tariff number	85364900
Country of origin	DE

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Technical data

Notes

Note on application

Note on application

Only for industrial use

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

Restart time	< 1 s (Boot time)
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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 A ² , R _{contact} = 0.1 Ω _{IEC 60947})
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.)

Input data

General

Rated control circuit supply voltage U _S	24 V AC/DC -15 % / +10 %
Power consumption at U _S	typ. 1.2 W
Rated control supply current I _S	typ. 47 mA
Input voltage range	20.4 V AC/DC ... 26.4 V AC/DC
Inrush current	typ. 350 mA DC (Δt < 1 μs at U _s) typ. 350 mA AC (Δt = 2 ms at U _s)
Typ. starting time with U _s	typ. 20 ms (when controlled via A1)
Typical release time	typ. 20 ms (when controlled via A1)
Recovery time	< 500 ms
Maximum switching frequency	0.5 Hz

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Protective circuit	Surge protection; Varistor
Operating voltage display	1 x LED (green)

Output data

Contact switching type	5 enabling current paths 1 confirmation current path
Contact material	AgSnO ₂
Maximum switching voltage	230 V AC/DC (Observe the load curve)
Minimum switching voltage	5 V AC/DC
Limiting continuous current	6 A (N/O contact) 6 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 (N/O contact, 24 V DC, $\tau = 0$ ms) 288 W (N/O contact, 48 V DC, $\tau = 0$ ms) 240 W (N/O contact, 60 V DC, $\tau = 0$ ms) 110 W (N/O contact, 110 V DC, $\tau = 0$ ms) 88 W (N/O contact, 220 V DC, $\tau = 0$ ms) 1380 VA (N/O contact, 230 V AC, $\tau = 0$ ms)
Maximum interrupting rating (inductive load)	42 W (N/O contact, 24 V DC, $\tau = 40$ ms) 42 W (N/O contact, 48 V DC, $\tau = 40$ ms) 42 W (N/O contact, 60 V DC, $\tau = 40$ ms) 42 W (N/O contact, 110 V DC, $\tau = 40$ ms) 42 W (N/O contact, 220 V DC, $\tau = 40$ ms)
Switching power	min. 50 mW
Switching capacity (360/h cycles)	4 A (24 V (DC13)) 4 A (230 V (AC15))
Output fuse	10 A gL/gG (N/O contact) 4 A gL/gG (N/O contact, for low-demand applications) 6 A gL/gG (N/C contact)

Connection data

Connection technology	
pluggable	yes
Conductor connection	
Connection method	Screw connection
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3
Tightening torque	0.6 Nm

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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	0

Safety data: EN ISO 13849	
Category	1
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 2 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

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Mounting type	DIN rail mounting
Mounting position	vertical or horizontal

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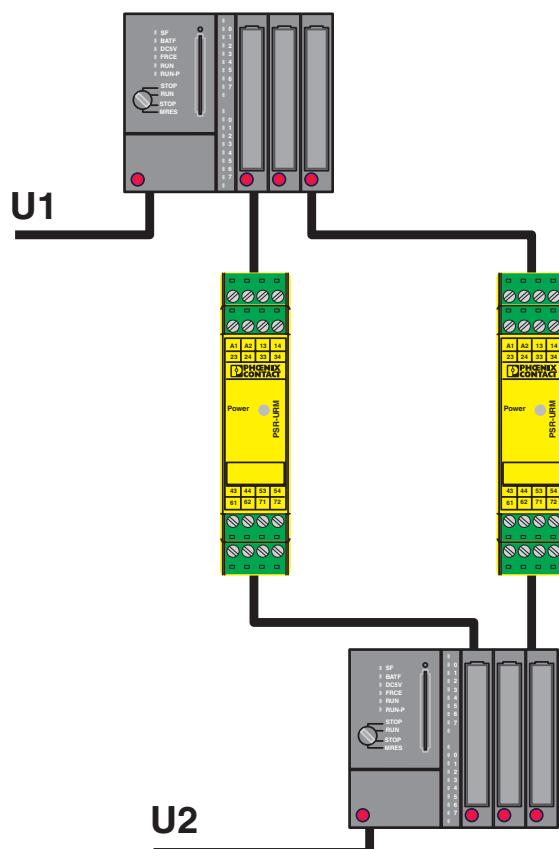
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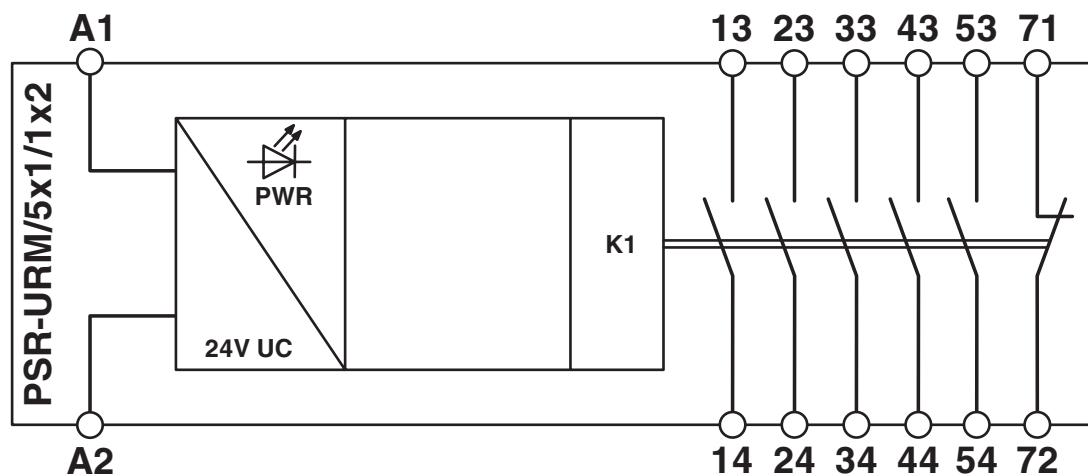
Drawings

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



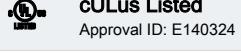
Functional Safety

Approval ID: 3535 2399



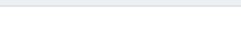
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Functional Safety

Approval ID: 4478015124312



Functional Safety

Approval ID: 4478015124312

Classifications

ECLASS

ECLASS-13.0	27371819
ECLASS-15.0	27371819
ECLASS-15.0 ASSET	27250101

ETIM

ETIM 9.0	EC001449
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UNSPSC

UNSPSC 21.0	39122200
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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

EF3.0 Climate Change

CO2e kg	2.942 kg CO2e
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com