

## Coupling relay - PSR-SPP- 24UC/URM/5X1/1X2 - 2981965

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


The figure shows the PSR-SCP-24UC/URM /5X1/1X2 2981952 variant

### Your advantages

- Suitable up to category 1, PL c (EN ISO 13849-1), SILCL 1 (EN 62061), SIL 1 (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
- One or two-channel activation
- 5 enabling current paths, 1 confirmation current path



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 343572
GTIN	4046356343572

### Technical data

#### Note

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

Width	22.5 mm
Height	114.5 mm
Depth	112 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
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## Technical data

### Ambient conditions

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)
Maximum altitude	max. 2000 m (Above sea level)

### Input data

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 ( $\Delta t < 1 \mu s$ at $U_s$ )
	typ. 350 mA AC ( $\Delta t = 2$ 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
Operating voltage display	1 x green LED
Protective circuit	Surge protection Varistor
Maximum switching frequency	0.5 Hz

### Output data

Contact type	5 enabling current paths
	1 signaling current path
Contact material	AgSnO <sub>2</sub>
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 <sup>2</sup>
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 capacity	min. 50 mW

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### Output data

Mechanical service life	10x 10 <sup>6</sup> cycles
Switching capacity (360/h cycles)	4 A (24 V (DC13))
	4 A (250 V (AC15))
Switching capacity according to IEC 60947-5-1	3 A (24 V (DC13))
	3 A (250 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)

### General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Nominal operating mode	100% operating factor
Net weight	173 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Degree of protection	IP20
	IP54
Min. degree of protection of inst. location	IP54
Housing material	PBT
Housing color	yellow

### Connection data

Connection method	Spring-cage connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

### Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	1
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	1
Designation	EN ISO 13849
Performance level (PL)	c
Category	1

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## Technical data

### Safety-related characteristic data

Safety Integrity Level Claim Limit (SIL CL)	1
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### Standards and Regulations

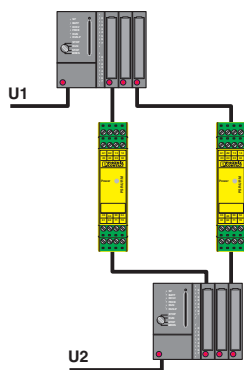
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Rated insulation voltage	250 V
	250 V
Rated surge voltage/insulation	4 kV / basic isolation (safe isolation, reinforced isolation and 6 kV between A1/A2, 53/54, 71/72 and 13/14, 23/24, 33/34, 43/44.)
Degree of pollution	2
Overvoltage category	III
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.)
Conformance	CE-compliant

### Environmental Product Compliance

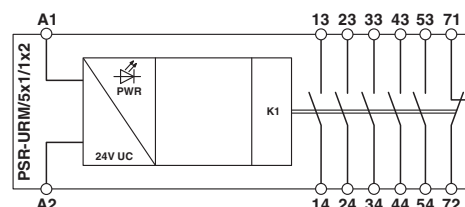
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Application drawing



Block diagram



Reliable signal exchange between two systems with confirmation function.

## Approvals

### Approvals

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UL Listed / cUL Listed / EAC / EAC / cULus Listed


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## Approvals

Ex Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140324
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140324
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EAC		EAC-Zulassung
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EAC		RU C- DE.A*30.B.01082
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cULus Listed		
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