

## Coupling relay - PSR-SPF- 24UC/URM/4X1/2X2 - 2981457

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Safe coupling relay with force-guided contacts, 4 N/O contacts, 2 N/C contacts, fixed spring-cage terminal block, width: 40 mm




### Why buy this product

- ✓ 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
- ✓ 4 enabling current paths, 2 confirmation current paths



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 017918 987794
GTIN	4017918987794

### Technical data

#### Note

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

Width	40 mm
Height	114.5 mm
Depth	50.1 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)

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## Technical data

### Ambient conditions

Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Maximum altitude	≤ 2000 m (Above sea level)

### Input data

Rated control circuit supply voltage $U_s$	24 V AC/DC -20 % / +10 %
Rated control supply current $I_s$	typ. 52 mA
Power consumption at $U_s$	typ. 1.25 W
Typ. starting time with $U_s$	typ. 10 ms (when controlled via A1)
Typical release time	typ. 10 ms (when controlled via A1)
Recovery time	< 500 ms
Operating voltage display	1 x green LED
Maximum switching frequency	0.5 Hz

### Output data

Contact type	4 enabling current paths
	2 confirmation current paths
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
Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	72 A <sup>2</sup>
Interrupting rating (ohmic load) max.	For additional values, see load curve
Maximum interrupting rating (inductive load)	48 W (N/O contact, 24 V DC, $\tau = 40$ ms)
	40 W (N/O contact, 48 V DC, $\tau = 40$ ms)
	36 W (N/O contact, 60 V DC, $\tau = 40$ ms)
	35 W (N/O contact, 110 V DC, $\tau = 40$ ms)
	33 W (N/O contact, 220 V DC, $\tau = 40$ ms)
Switching capacity	min. 50 mW
Mechanical service life	10x 10 <sup>6</sup> cycles
Switching capacity according to IEC 60947-5-1	5 A (24 V (DC13))
	5 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	117 g

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## Technical data

### General

Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing color	green

### Connection data

Connection method	Spring-cage connection
pluggable	no
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
Safety Integrity Level Claim Limit (SIL CL)	1

### 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	Safe isolation, reinforced insulation 6 kV between input circuit (A1/A2) and all output current paths
	Basic insulation 4 kV between all output current paths
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 2 ms.)
Conformance	CE-compliant

# Coupling relay - PSR-SPF- 24UC/URM/4X1/2X2 - 2981457

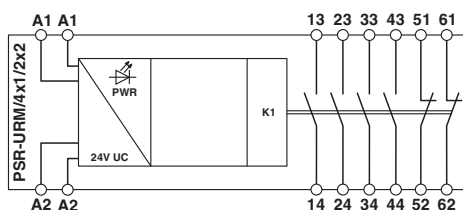
## Technical data

### Environmental Product Compliance

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

## Drawings

Block diagram



## Approvals

### Approvals

#### Approvals

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

#### 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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### Approvals

cULus Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

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