

## Coupling relay - PSR-SCF- 24UC/URM/2X21 - 2981363

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Safe coupling relay with force-guided contacts, 2 changeover contacts, 1-channel, fixed screw terminal block, width: 17.5 mm

### 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
- ✓ 2 changeover contacts (EN 50205 type B)



### Key Commercial Data

Packing unit	10 pc
GTIN	 4 017918 946906
GTIN	4017918946906

### Technical data

#### Note

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

Width	17.5 mm
Height	75 mm
Depth	60.5 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 50 °C
Ambient temperature (storage/transport)	-20 °C ... 70 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)

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### 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 -15 % / +10 %
Rated control supply current $I_s$	typ. 30 mA
Power consumption at $U_s$	typ. 0.72 W
Inrush current	typ. 350 mA DC ( $\Delta t < 1 \mu s$ at $U_s$ )
	typ. 350 mA AC ( $\Delta t = 2 \text{ ms}$ at $U_s$ )
Typ. starting time with $U_s$	typ. 10 ms
Typical release time	typ. 10 ms
Recovery time	< 500 ms
Operating voltage display	1 x yellow LED
Maximum switching frequency	0.5 Hz
Filter time	max. 1.5 ms (at S12; test pulse width)
	7.5 ms (at S12; test pulse rate)
	Test pulse rate = 5 x Test pulse width

### Output data

Contact type	2 PDT
Contact material	AgNi
Maximum switching voltage	230 V AC/DC (Observe the load curve)
Minimum switching voltage	5 V AC/DC
Limiting continuous current	5 A (N/O contact)
	3.5 A (N/C contact)
Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	50 A <sup>2</sup>
Interrupting rating (ohmic load) max.	144 W (N/O contact, 24 V DC, $\tau = 0 \text{ ms}$ )
	288 W (N/O contact, 48 V DC, $\tau = 0 \text{ ms}$ )
	88 W (N/O contact, 110 V DC, $\tau = 0 \text{ ms}$ )
	110 W (N/O contact, 220 V DC, $\tau = 0 \text{ ms}$ )
	1500 VA (N/O contact, 230 V AC, $\tau = 0 \text{ ms}$ )
Switching capacity	min. 50 mW
Mechanical service life	10x 10 <sup>6</sup> cycles
Switching capacity according to IEC 60947-5-1	3 A (24 V (DC13))
	3 A (250 V (AC15))
Output fuse	6 A gL/gG (N/O contact)
	4 A gL/gG (N/O contact, for low-demand applications)
	4 A gL/gG (N/C contact)

### General

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### General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Nominal operating mode	100% operating factor
Net weight	61.82 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing material	PBT
Housing color	green

### Connection data

Connection method	Screw connection
pluggable	no
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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
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	4 kV/basic insulation (safe isolation, reinforced insulation, and 6 kV between logic and signaling current paths).
Degree of pollution	2
Overvoltage category	III

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## Technical data

### Standards and Regulations

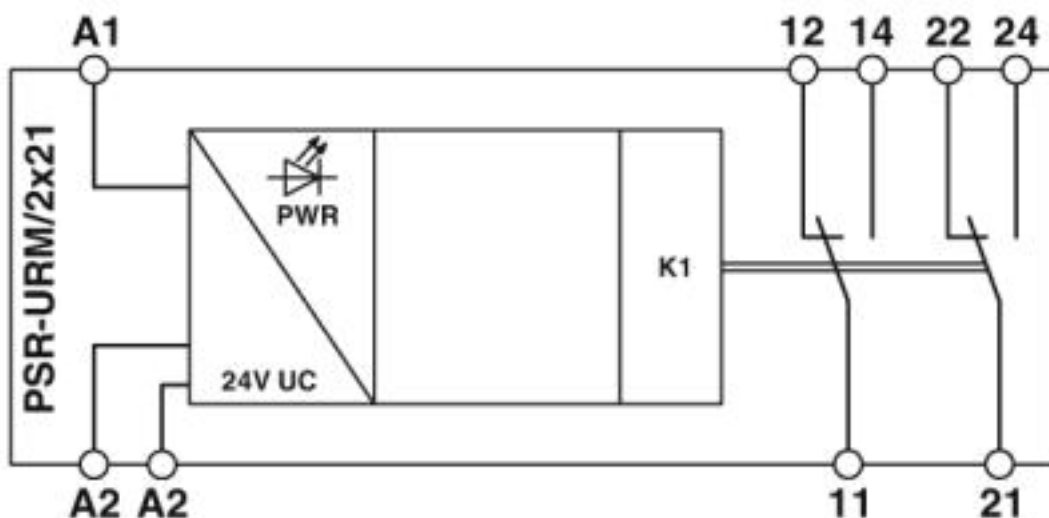
Shock	N/O contact: 10g, N/C contact: 5g (In the event of stress caused by shock, contact reactions are possible for up to 1 ms.)
Vibration (operation)	10 Hz ... 150 Hz, 2g (In the event of stress caused by vibration, contact reactions are possible for up to 1 ms.)
Conformance	CE-compliant

### Environmental Product Compliance

	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Block diagram



## Approvals

Approvals

Approvals

Functional Safety / UL Listed / cUL Listed / EAC / EAC / cULus Listed

Ex Approvals

## Approval details

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## Approvals

Functional Safety		968/EL 649.01/15
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
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
EAC		EAC-Zulassung
EAC		RU C- DE.A*30.B.01082
cULus Listed		

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