

Coupling relay - PSR-SPP- 24UC/URM/3X1/3X2 - 2981842

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Safe coupling relay with force-guided contacts, 3 N/O contacts, 3 N/C contacts, plug-in spring-cage terminal block, width: 22.5 mm


The figure shows a version with a screw connection

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
- 3 enabling current paths, 3 confirmation current paths



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 138611
GTIN	4046356138611

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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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. 45 mA
Power consumption at U_s	typ. 1.08 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. 15 ms (when controlled via A1)
Typical release time	typ. 15 ms (when controlled via A1)
Recovery time	< 500 ms
Operating voltage display	1 x green LED
Protective circuit	Surge protection Suppressor diode
Maximum switching frequency	0.5 Hz

Output data

Contact type	3 enabling current paths 3 signaling current paths
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) 3 A (N/C contact)
Maximum inrush current	8 A
Inrush current, minimum	10 mA
Sq. Total current	48 A ²
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 ⁶ 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)

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Output data

	6 A gL/gG (N/C contact)
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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	153 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 ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
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	4 kV / Basic isolation, (safe isolation, reinforced insulation and 6 kV between input circuit and enabling current paths.)

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Standards and Regulations

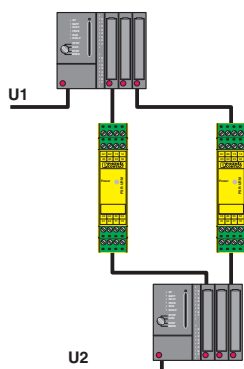
Degree of pollution	2
Overvoltage category	III
Shock	15g (In the event of stress caused by shock, contact reactions are possible for up to 2 ms.)
Vibration (operation)	10 Hz ...150 Hz, 2g (In the event of stress caused by vibration, contact reactions are possible for up to 1 ms.)
Conformance	CE-compliant

Environmental Product Compliance

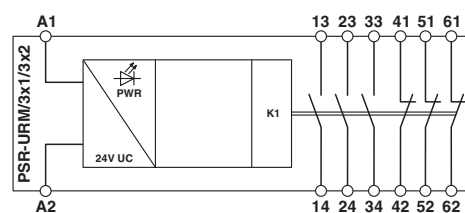
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Application drawing



Block diagram



Reliable signal exchange between two systems with confirmation function.

Approvals

Approvals

Approvals


UL Listed / cUL Listed / EAC / cULus Listed


Ex Approvals


Approval details


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Approvals

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