

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

2981363

<https://www.phoenixcontact.com/de/produkte/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), SIL 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
- 1 or 2-channel control
- 2 changeover contacts (EN 50205 type B)

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Commercial Data

Item number	2981363
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to Order (non-returnable)
Sales Key	G1 - Relais
Product Key	DNA162
Catalog Page	Page 247 (C-6-2019)
GTIN	4017918946906
Weight per Piece (including packing)	61,49 g
Weight per Piece (excluding packing)	56,667 g
Customs tariff number	85364900
Country of origin	DE

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Technical Data

Product properties

Product type	Coupling relay
Application	Safe switch off
	High demand
	Low demand
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
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Times

Restart time	< 1 s (Boot time)
Recovery time	< 500 ms

Electrical properties

Maximum power dissipation for nominal condition	5.87 W (at $U_B = 26.4$ V DC, $U_S = 24$ V, $I_S = 30$ mA, $n = 1$, $I_L^2 = 50$ A ² , $R_{\text{contact}} = 0.1$ \square)
Nominal operating mode	100% operating factor
Rated insulation voltage	250 V
Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV/basic insulation (safe isolation, reinforced insulation, and 6 kV between logic and signaling current paths).

Input data

Rated control circuit supply voltage U_S	24 V AC/DC -15 % / +10 %
Power consumption at U_S	typ. 0.72 W
Rated control supply current I_S	typ. 30 mA
Input voltage range	20.4 V AC/DC ... 26.4 V AC/DC
Typ. starting time with U_S	typ. 10 ms
Typical release time	typ. 10 ms
Recovery time	< 500 ms
Maximum switching frequency	0.5 Hz
Operating voltage display	1 x yellow LED

Output data

Contact type	2 changeover contacts
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)

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Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	50 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)
	88 W (N/O contact, 110 V DC, $\tau = 0$ ms)
	110 W (N/O contact, 220 V DC, $\tau = 0$ ms)
	1500 VA (N/O contact, 230 V AC, $\tau = 0$ ms)
Switching capacity	min. 50 mW
Switching capacity according to IEC 60947-5-1	3 A (24 V (DC13))
	3 A (230 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)

Connection data

Connection technology

pluggable	no
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Conductor connection

Connection method	Screw connection
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12
Screw thread	M3
Torque	0.6 Nm

LED signaling

Operating voltage display	1 x yellow LED
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Dimensions

Width	17.5 mm
Height	75 mm
Depth	60.5 mm

Material specifications

Housing material	PBT
Housing color	green

Characteristics

Safety data

Stop category	0
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Safety data: EN ISO 13849

Category	1
Performance level (PL)	c

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Safety data: IEC 61508 - High demand

Equipment type	Type A
Safety Integrity Level (SIL)	1
Probability of a hazardous failure per hour (PFH _D)	6.67 x 10 ⁻⁷ (3 A AC15; 8760 switching cycles/year; 10 % of the total SIL)
Proof test interval	240 Months
Duration of use	240 Months

Safety data: IEC 61508 - Low demand

Equipment type	Type A
Safety Integrity Level (SIL)	1
Probability of a hazardous failure on demand (PFD _{AVG})	4.05 x 10 ⁻³
Proof test interval	56 Months
Duration of use	240 Months

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-20 °C ... 50 °C
Ambient temperature (storage/transport)	-20 °C ... 70 °C
Maximum altitude	≤ 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	N/O contact: 10g, N/C contact: 5g
Vibration (operation)	10 Hz ... 150 Hz, 2g

Approval data

CE

Certificate	CE-compliant
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Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	DIN EN 60947-1
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Mounting

Mounting type	DIN rail mounting
Mounting position	vertical or horizontal

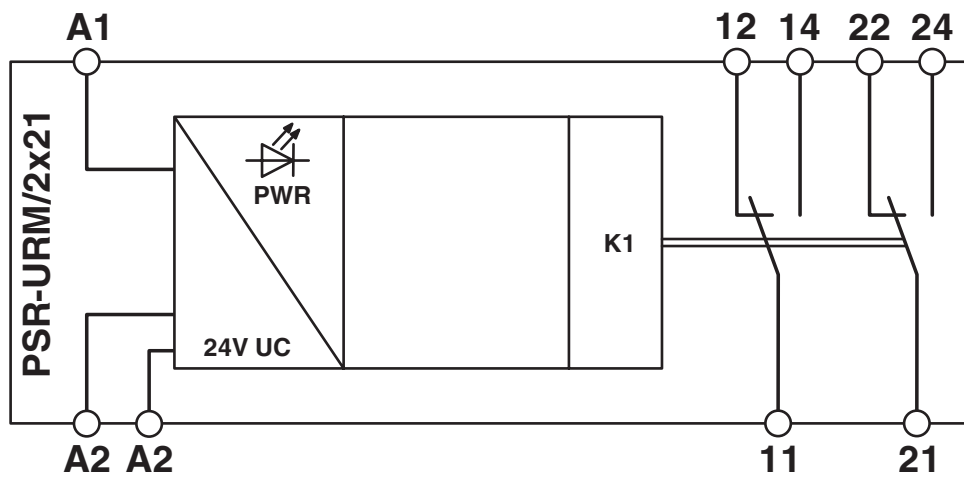
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Drawings

Block diagram



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Approvals



EAC

Approval ID: TR_TS_D_00573_c



UL Listed

Approval ID: FILE E 140324



cUL Listed

Approval ID: FILE E 140324



Functional Safety

Approval ID: 44-780-15124312



Functional Safety

Approval ID: 968/EL 649.01/15



Functional Safety

Approval ID: 968/EL 649.01/15

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	27371601
ECLASS-10.0.1	27371601
ECLASS-11.0	27371601

ETIM

ETIM 8.0	EC001437
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UNSPSC

UNSPSC 21.0	39122300
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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