

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



2981363

<https://www.phoenixcontact.com/pc/products/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 IEC 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)

Commercial data

Item number	2981363
Packing unit	10 pc
Minimum order quantity	1 pc
Product key	DNA162
Catalog page	Page 247 (C-6-2019)
GTIN	4017918946906
Weight per piece (including packing)	61.55 g
Weight per piece (excluding packing)	56.667 g
Customs tariff number	85364900
Country of origin	DE

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Technical data

Notes

Note on application

Note on application	Only for industrial use
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Product properties

Product type	Coupling relay
Product family	PSRclassic
Application	Safe switch off
	High demand
	Low demand
Control	1 and 2 channel
Mechanical service life	10x 10 ⁶ cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

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 , $R_{\text{contact}} = 0.1 \Omega$ )
Nominal operating mode	100% operating factor

Air clearances and creepage distances between the power circuits

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).

Input data

General

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

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Output data

Contact switching 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)
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 in accordance with 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 rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3
Tightening torque	0.6 Nm

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

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Color (Housing)	green (RAL 6021)
Housing material	PC

Characteristics

Safety data

Stop category	0
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Safety data: EN ISO 13849

Category	1
Performance level (PL)	c

Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	1
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Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	1
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Safety data

Safety Integrity Level (SIL)	1
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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

Approvals

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

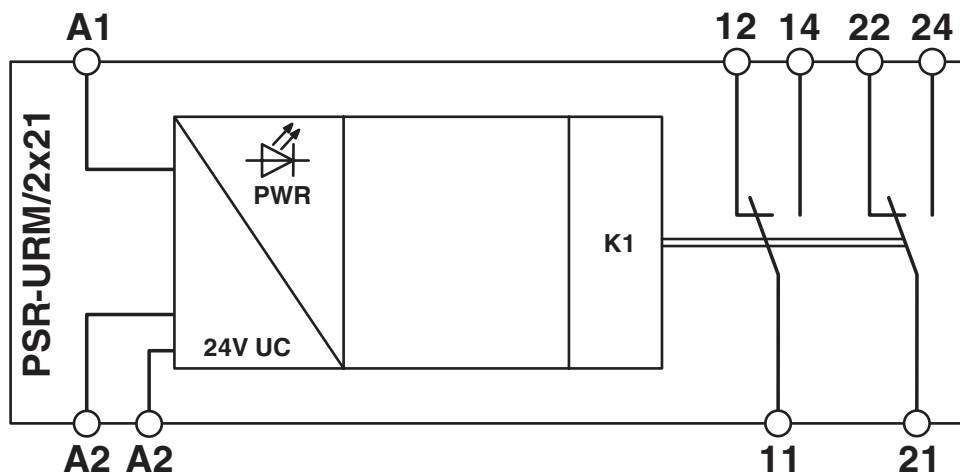
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Drawings

Block diagram



Block diagram

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/2981363>



UL Listed

Approval ID: E140324



cUL Listed

Approval ID: E140324



Functional Safety

Approval ID: 3535 2399



Functional Safety

Approval ID: 4478015124312

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27371601
ECLASS-12.0	27371601
ECLASS-13.0	27371601

ETIM

ETIM 9.0	EC001437
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UNSPSC

UNSPSC 21.0	39122300
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a)

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	37f55c9f-7a41-4cde-9ed4-046226b658b1

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