

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

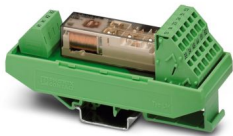


2981457

<https://www.phoenixcontact.com/us/products/2981457>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.

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

## Commercial data

Item number	2981457
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA162
GTIN	4017918987794
Weight per piece (including packing)	115.4 g
Weight per piece (excluding packing)	89 g
Customs tariff number	85364900
Country of origin	DE

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



2981457

<https://www.phoenixcontact.com/us/products/2981457>

## Technical data

### 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 <sup>6</sup> cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

### Insulation characteristics

Overvoltage category	III
Degree of pollution	2

### Times

Typ. starting time with U <sub>s</sub>	typ. 10 ms (with U <sub>s</sub> when controlled via A1)
Typical release time	typ. 10 ms (with U <sub>s</sub> when controlled via A1)
Restart time	< 1 s (Boot time)
Recovery time	< 500 ms

### Electrical properties

Maximum power dissipation for nominal condition	8.71 W (at U <sub>B</sub> = 26.4 V DC, U <sub>S</sub> = 24 V, I <sub>S</sub> = 52 mA, n = 1, I <sub>L</sub> <sup>2</sup> = 72 A <sup>2</sup> , R <sub>contact</sub> = 0.1 Ω <sub>max</sub> )
Nominal operating mode	100% operating factor
Rated insulation voltage	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

### Supply

Designation	A1/A2
Rated control circuit supply voltage U <sub>S</sub>	24 V AC/DC -20 % ... +10 %
Rated control supply current I <sub>S</sub>	typ. 52 mA
Power consumption at U <sub>S</sub>	typ. 1.25 W
Filter time	1 ms (at A1-A2; test pulse width)
	1 s (at A1-A2; test pulse rate)

### Output data

Relay: Enabling current paths (13/14, 23/24, 33/34, 43/44)

Number of outputs	4
Contact switching type	4 enabling current paths
Contact material	AgSnO <sub>2</sub>

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



2981457

<https://www.phoenixcontact.com/us/products/2981457>

Switching voltage	min. 5 V AC/DC
	max. 250 V AC/DC
Switching power	min. 50 mW
Inrush current	min. 10 mA
	max. 6 A
Switching capacity	5 A (AC15, 250 V)
	5 A (DC13, 24 V)
Limiting continuous current	6 A
Sq. Total current	72 A <sup>2</sup>
Switching frequency	max. 0.5 Hz
Mechanical service life	10x 10 <sup>6</sup> cycles
Interrupting rating (ohmic load) max.	see load limit curve
Maximum interrupting rating (inductive load)	48 W (N/O contact, 24 V DC, τ = 40 ms)
	40 W (N/O contact, 48 V DC, τ = 40 ms)
	36 W (N/O contact, 60 V DC, τ = 40 ms)
	35 W (N/O contact, 110 V DC, τ = 40 ms)
	33 W (N/O contact, 220 V DC, τ = 40 ms)
Output fuse	10 A gL/gG NEOZED
	4 A gL/gG NEOZED (Low demand)

Relay: Confirmation current paths (51/52, 61/62)

Number of outputs	2
Contact switching type	2 confirmation current paths
Contact material	AgSnO <sub>2</sub>
Switching voltage	min. 5 V AC/DC
	max. 250 V AC/DC
Switching power	min. 50 mW
Inrush current	min. 10 mA
	max. 6 A
Switching capacity	5 A (DC13, 24 V)
	5 A (AC15, 250 V)
Limiting continuous current	6 A
Sq. Total current	72 A <sup>2</sup>
Mechanical service life	10x 10 <sup>6</sup> cycles
Output fuse	6 A gL/gG NEOZED

## Connection data

Connection technology

pluggable	no
-----------	----

Conductor connection

Connection method	Spring-cage connection
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

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



2981457

<https://www.phoenixcontact.com/us/products/2981457>

Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (only together with CRIMPFOX 6)
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (only together with CRIMPFOX 6)
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

## Signaling

Operating voltage display	1 x LED (green)
---------------------------	-----------------

## Dimensions

Width	40 mm
Height	114.5 mm
Depth	50.1 mm

## Material specifications

Color (Housing)	green (RAL 6021)
-----------------	------------------

## Characteristics

### Safety data

Stop category (EN 60204-1)	0
----------------------------	---

### Safety data: EN ISO 13849

Performance level (PL)	c
------------------------	---

### Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	1
------------------------------	---

### Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	1
------------------------------	---

### Safety data

Safety Integrity Level (SIL)	1
------------------------------	---

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °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	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.)

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



2981457

<https://www.phoenixcontact.com/us/products/2981457>

## Approvals

CE

Certificate	CE-compliant
-------------	--------------

## Mounting

Mounting type	DIN rail mounting
Mounting position	vertical or horizontal

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

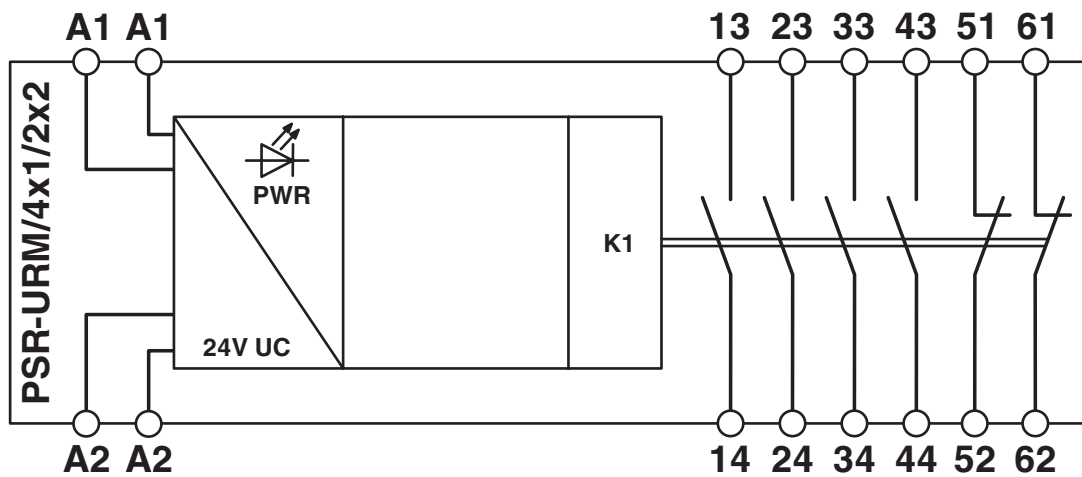


2981457

<https://www.phoenixcontact.com/us/products/2981457>

## Drawings

Block diagram



Block diagram

2981457

<https://www.phoenixcontact.com/us/products/2981457>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2981457>



### Functional Safety

Approval ID: 3535 2399



### Functional Safety

Approval ID: 4478015124312



### cULus Listed

Approval ID: E140324

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



2981457

<https://www.phoenixcontact.com/us/products/2981457>

## Classifications

### ECLASS

ECLASS-13.0	27371601
ECLASS-15.0	27371601

### ETIM

ETIM 10.0	EC001437
-----------	----------

### UNSPSC

UNSPSC 21.0	39122300
-------------	----------

2981457

<https://www.phoenixcontact.com/us/products/2981457>

## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### 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	1d9d8d0d-5a0a-4bbe-8a72-79c31e007769

### EF3.1 Climate Change

CO2e kg	1.933 kg CO2e
---------	---------------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)