

# PSR-SCP- 24DC/URD3/4X1/2X2 - Extension module



2981512

<https://www.phoenixcontact.com/us/products/2981512>

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1-channel contact extension with TBUS interface, 4 N/O contacts, 1 N/C contact, 1 confirmation current path, adjustable dropout delay of 0.5 ... 30 s, Cat. 3, PL e in accordance with EN ISO 13849, plug-in screw terminal blocks, width: 22.5 mm

## Your advantages

- Up to Cat. 3/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508
- Each with 4 enabling, 1 signaling, and 1 confirmation current path, all with dropout delay
- 1-channel control

## Commercial data

Item number	2981512
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA233
GTIN	4017918996802
Weight per piece (including packing)	191.3 g
Weight per piece (excluding packing)	169.88 g
Customs tariff number	85371098
Country of origin	DE

## Technical data

### Product properties

Product type	Safety relays
Product family	PSRclassic
Application	Extension module
Control	1-channel
Mechanical service life	approx. $10^7$ 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

Typical response time	typ. 20 ms (For $U_S$ manual, monitored start)
	typ. 150 ms (For $U_S$ autostart)
Typical release time	typ. 20 ms (At $U_S$ on demand via sensor circuit)
Delay time range	0.5 s ... 38 s $\pm 20$ %
Recovery time	1 s (following demand of the safety function)

### Electrical properties

Nominal operating mode	100% operating factor
Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / basic isolation (safe isolation, reinforced insulation and 6 kV between input circuit/N/C contacts and enabling current paths).

### Supply

Rated control circuit supply voltage $U_S$	24 V DC -15 % / +10 %
Rated control supply current $I_S$	typ. 84 mA (at $U_S$ )
Power consumption at $U_S$	typ. 2 W
Protective circuit	Serial protection against polarity reversal
	Suppressor diode

### Input data

#### Digital: K1/K2

Description of the input	safety-related
Protective circuit	Suppressor diode

### Output data

#### Relay: Enabling current paths (27/28, 37/38, 47/48, 57/58)

Output description	2 N/O contacts in series, safety-related, floating
Number of outputs	4

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Contact switching type	4 enabling current paths
Contact material	AgSnO <sub>2</sub>
Switching voltage	min. 15 V AC/DC
	max. 250 V AC/DC
Switching power	min. 0.4 W
Inrush current	min. 25 mA AC/DC
	max. 6 A
Switching capacity (360/h cycles)	5 A (AC15)
Switching capacity (3600/h cycles)	3 A (AC15)
	3 A (DC13)
Limiting continuous current	6 A
Sq. Total current	50 A <sup>2</sup> (observe derating)
Switching frequency	1 Hz
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms, N/C contact 65/66: 72 W)
	288 W (48 V DC, τ = 0 ms, N/C contact 65/66: 144 W)
	77 W (110 V DC, τ = 0 ms)
	88 W (220 V DC, τ = 0 ms)
	1500 VA (250 V AC, τ = 0 ms, N/C contact 65/66: 750 VA)
Maximum interrupting rating (inductive load)	48 W (24 V DC, τ = 40 ms)
	40 W (48 V DC, τ = 40 ms)
	35 W (110 V DC, τ = 40 ms)
	33 W (220 V DC, τ = 40 ms)
Output fuse	10 A gL/gG NEOZED (High demand)
	4 A gL/gG (Low demand)

## Relay: Confirmation current path (15/16)

Output description	2 NC in series, non-floating, safety-related
Number of outputs	1
Contact switching type	1 confirmation current path
Contact material	AgSnO <sub>2</sub>
Switching voltage	max. 26.4 V
Switching frequency	1 Hz

## Relay: Signaling current path (65/66)

Output description	2 N/C contacts parallel, non-safety-related, floating
Number of outputs	1
Contact switching type	1 signaling current path
Contact material	AgSnO <sub>2</sub>
Switching voltage	min. 15 V
	max. 250 V AC/DC
Switching power	min. 0.4 W
Inrush current	min. 25 mA
	max. 3 A
Limiting continuous current	3 A
Switching frequency	1 Hz

## Connection data

### Connection technology

pluggable	yes
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### Conductor connection

Connection method	Screw connection
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3

## Signaling

Status display	2 x LED (green)
Operating voltage display	1 x LED (green)

## Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

## Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	PA

## Characteristics

### Safety data

Stop category (EN 60204-1)	1
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### Safety data: EN ISO 13849

Performance level (PL)	e (In conjunction with suitable evaluating device)
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### Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
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### Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
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### Safety data: EN IEC 62061

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54

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Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °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)

## Mounting

Mounting type	DIN rail mounting
Mounting position	any

Drawings

Circuit diagram



Block diagram

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2981512>



**cULus Listed**

Approval ID: E140324



**Functional Safety**

Approval ID: 968/EZ 366.05/23

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## Classifications

### ECLASS

ECLASS-13.0	27371819
ECLASS-15.0	27371819

### ETIM

ETIM 10.0	EC001449
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### UNSPSC

UNSPSC 21.0	39122200
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	34, 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	11f0d21c-c86b-42e9-be12-2e177edf80f7

### EF3.1 Climate Change

CO2e kg	3.093 kg CO2e
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Phoenix Contact USA  
 586 Fulling Mill Road  
 Middletown, PA 17057, United States  
 (+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)