

# PSR-SCP- 24DC/URM4/4X1/2X2/B - Extension module



2981677

<https://www.phoenixcontact.com/in/products/2981677>

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1-channel contact extension with TBUS interface, 4 N/O contacts, 1 N/C contact, 1 confirmation current path, undelayed, Cat. 4, PL e in accordance with EN ISO 13849, plug-in screw terminal blocks, width: 22.5 mm

## Your advantages

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

## Commercial Data

Item number	2981677
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DNA
Product Key	DNA231
Catalog Page	Page 233 (C-6-2019)
GTIN	4046356081535
Weight per Piece (including packing)	226 g
Weight per Piece (excluding packing)	196.9 g
Customs tariff number	85371098
Country of origin	DE

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## Technical Data

### Product properties

Product type	Safety relays
Product family	PSRclassic
Application	Extension module
Mechanical service life	approx. $10^7$ cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

### Electrical properties

Maximum power dissipation for nominal condition	1.01 W
Nominal operating mode	100% operating factor

Air clearances and creepage distances between the power circuits

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).

### Input data

#### General

Rated control circuit supply voltage $U_S$	24 V DC
Voltage range with reference to $U_S$	0.9 ... 1.1
Rated control supply current $I_S$	42 mA
Typical response time	10 ms
Typical release time	10 ms
Recovery time	1 s
Protective circuit	Surge protection; Suppressor diode
Status display	Green LED

### Output data

Contact type	4 enabling current paths
	1 signaling current path
	1 confirmation current path
Contact material	AgSnO <sub>2</sub>
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	15 V AC/DC
Limiting continuous current	6 A (N/O contact, DC1/AC1)
	3 A (N/C contact)
Maximum inrush current	6 A (N/O contact, DC1/AC1)
	3 A (N/C contact)
Inrush current, minimum	25 mA
Sq. Total current	$72 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$

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Interrupting rating (ohmic load) max.	144 W (24 V DC, $\tau = 0$ ms, N/C contact 61/62: 72 W)
	288 W (48 V DC, $\tau = 0$ ms, N/C contact 61/62: 144 W)
	77 W (110 V DC, $\tau = 0$ ms)
	88 W (220 V DC, $\tau = 0$ ms)
	1500 VA (250 V AC, $\tau = 0$ ms, N/C contact 61/62: 750 VA)
Maximum interrupting rating (inductive load)	48 W (24 V DC, $\tau = 40$ ms)
	40 W (48 V DC, $\tau = 40$ ms)
	35 W (110 V DC, $\tau = 40$ ms)
	33 W (220 V DC, $\tau = 40$ ms)
Switching capacity min.	0.4 W
Switching capacity in accordance with IEC 60947-5-1	5 A (DC13)
	5 A (AC15)
Switching capacity (360/h cycles)	6 A (24 V DC)
	5 A (230 V AC)
Switching capacity (3600/h cycles)	3 A (24 V (DC13))
	3 A (230 V (AC15))
Output fuse	10 A gL/gG NEOZED (N/O contact)
	4 A gL/gG NEOZED (N/C contact)

## 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

## Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

## Material specifications

Housing material	Polyamide
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## Characteristics

### Safety data

Stop category	0
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Safety data: EN ISO 13849

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Category	4 (In conjunction with suitable evaluating device)
Performance level (PL)	e (In conjunction with suitable evaluating device)

## Safety data: IEC 61508 - High demand

Designation	The data only applies if the safety function is demanded at least once a year.
Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
Probability of a hazardous failure per hour (PFH <sub>D</sub> )	$9.7 \times 10^{-11}$ (In conjunction with suitable evaluating device)
Proof test interval	240 Months
Duration of use	240 Months

## Safety data: IEC 61508 - Low demand

Designation	The data is only valid if the demand rate is no more than once a year.
Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
Probability of a hazardous failure on demand (PFD <sub>AVG</sub> )	$1.37 \times 10^{-4}$ (In conjunction with suitable evaluating device)
Proof test interval	76 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 ... 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)

## Standards and regulations

### Air clearances and creepage distances between the power circuits

Standards/regulations	IEC 60947-1
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## Mounting

Mounting type	DIN rail mounting
Mounting position	any
Connection method	Screw connection

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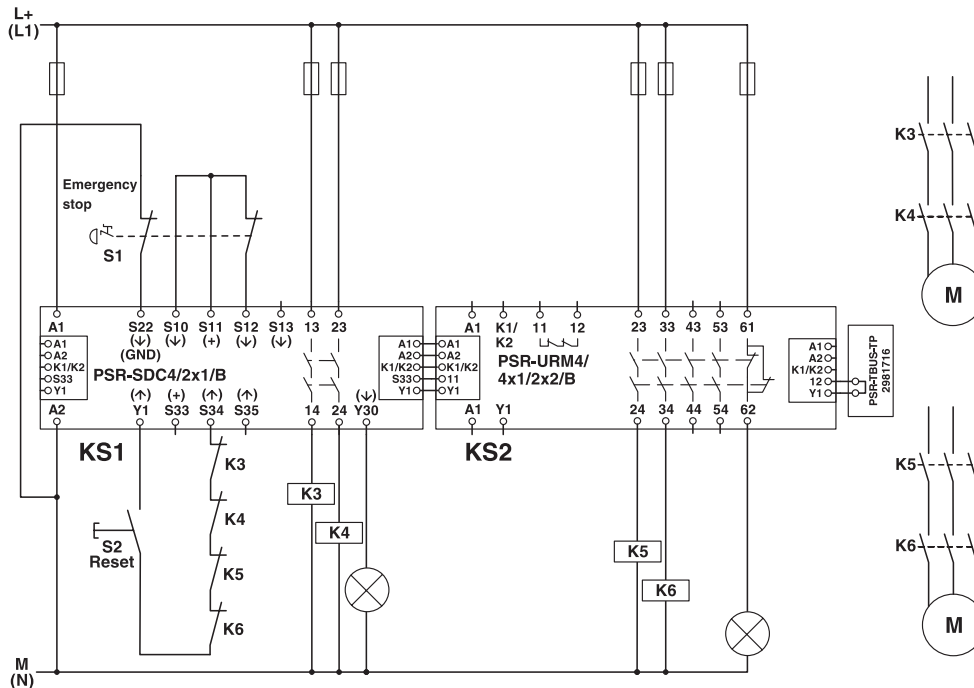


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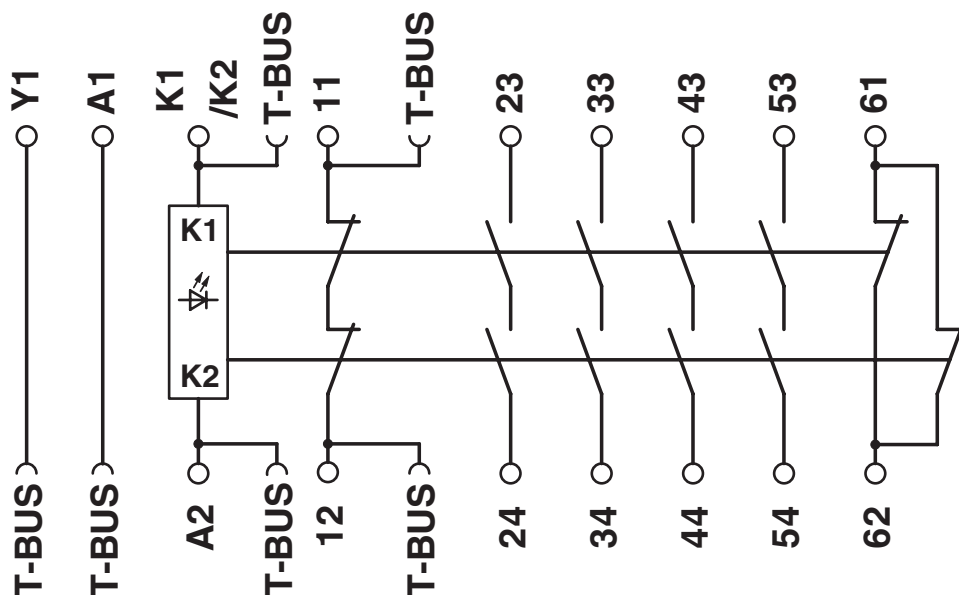
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## Drawings

Circuit diagram



Circuit diagram



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## Approvals



**EAC**

Approval ID: EAC-Zulassung



**EAC**

Approval ID: RU C-DE.A\*30.B.01082



**UL Listed**

Approval ID: FILE E 140324



**cUL Listed**

Approval ID: FILE E 140324



**Functional Safety**

Approval ID: 968/FSP 1678.00/18



**EAC**

Approval ID: TR TS\_D\_01838-19

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## Classifications

### ECLASS

ECLASS-11.0	27371819
ECLASS-12.0	27371819
ECLASS-13.0	27371819

### ETIM

ETIM 8.0	EC001449
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### UNSPSC

UNSPSC 21.0	39122200
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
	Hexahydromethylphthalic anhydride
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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## Accessories

### PSR-TBUS - DIN rail bus connectors

2890425

<https://www.phoenixcontact.com/in/products/2890425>

DIN rail connector for safety switching devices, for supplying/controlling/monitoring (depending on the module)



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### PSR-TBUS-TP - DIN rail bus connectors

2981716

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Blind plug for the PSR-TBUS DIN rail connector used with the modular safety relay system (PSR-SDC4)



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## PSR-TBUS - 1PCS - DIN rail bus connectors

1326060

<https://www.phoenixcontact.com/in/products/1326060>

DIN rail connector for safety switching devices, for supplying/controlling/monitoring (depending on the module)



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