PSR-SPP- 24DC/URD3/4X1/2X2/3 - Extension module

2981745

https://www.phoenixcontact.com/us/products/2981745

1-channel contact extension with TBUS interface, 4 N/O contacts, 1 N/C contact, 1 confirmation current path, the contacts have an off-delay (0.3 ... 3 s), Cat. 3, PL e in accordance with EN ISO 13849, width: 22.5 mm, pluggable Push-in terminal block

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

Commercial data

Item number	2981745
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA233
GTIN	4046356103688
Weight per piece (including packing)	235.2 g
Weight per piece (excluding packing)	197.1 g
Customs tariff number	85371098
Country of origin	DE

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Technical data

Notes

Note on application

Note on application	Only for industrial use

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

Electrical properties

Maximum power dissipation for nominal condition	2.02 W
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).

Input data

General

Nominal input voltage U_N	24 V DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	94 mA
Typical response time	20 ms
Typical release time range	0.3 s ... 3 s +50 % (adjustable)
Recovery time	1 s
Protective circuit	Fuse; PTC resistor
	Surge protection; Suppressor diode
Operating voltage display	Green LED
Status display	LED (green)

Output data

Contact switching type	4 delayed enabling current paths
	1 delayed signaling current path
	1 delayed confirmation current path

Contact material	$AgSnO_2$
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	15 V AC/DC
Limiting continuous current	6 A (N/O contact)
	3 A (N/C contact)
Maximum inrush current	6 A (N/O contact)
	3 A (N/C contact)
Inrush current, minimum	25 mA
Sq. Total current	50 A^2 ($I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2$)
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)
Switching capacity min.	0.4 W
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

Conductor connection

Connection method	Push-in connection
Conductor cross-section rigid	0.2 mm² ... 1.5 mm²
Conductor cross-section flexible	0.2 mm² ... 1.5 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm² (only together with CRIMPFOX 6)
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm² (only together with CRIMPFOX 6)
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

Dimensions

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

Material specifications

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

Characteristics

Safety data

Stop category	1

Safety data: EN ISO 13849

Category	3 (In conjunction with suitable evaluating device)
Performance level (PL)	e (In conjunction with suitable evaluating device)

Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)

Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)

Safety data: EN IEC 62061

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)

Environmental and real-life conditions
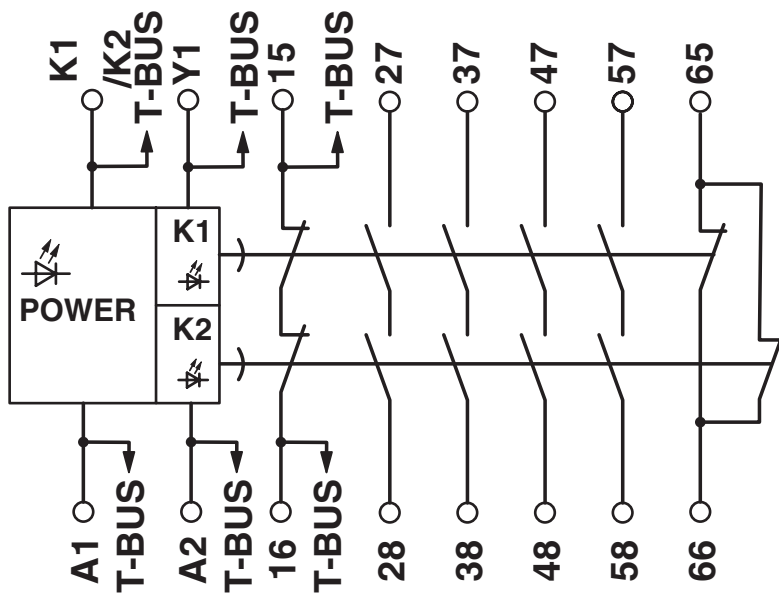
Ambient conditions

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	max. 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

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Drawings

Circuit diagram

Block diagram

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2981745

cULus Listed
Approval ID: E140324

Functional Safety
Approval ID: 968/EZ 366.05/23

Classifications

ECLASS

ECLASS-13.0	27371819
ECLASS-15.0	27371819
ECLASS-15.0 ASSET	27250101

ETIM

ETIM 9.0	EC001449

UNSPSC

UNSPSC 21.0	39122200

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	bd324e43-a959-4144-90d2-61c1c6a49b60

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Accessories

PSR-TBUS - DIN rail bus connector

2890425

https://www.phoenixcontact.com/us/products/2890425

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

PSR-TBUS-TP - DIN rail bus connector

2981716

https://www.phoenixcontact.com/us/products/2981716

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 connector

1326060

https://www.phoenixcontact.com/us/products/1326060

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

CRIMPFOX 6 - Crimping pliers

1212034

https://www.phoenixcontact.com/us/products/1212034

Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm^2 ... 6.0 mm^2, lateral entry, trapezoidal crimp