

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
Catalog page	Page 233 (C-6-2019)
GTIN	4017918996802
Weight per piece (including packing)	233.86 g
Weight per piece (excluding packing)	169.88 g
Customs tariff number	85371098
Country of origin	DE

Technical data

Notes

Note on application	Only for industrial use
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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

Data management status

Article revision	14
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Electrical properties

Maximum power dissipation for nominal condition	2.02 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

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	84 mA
Typical response time	20 ms
Typical release time range	0.5 s ... 38 s ± 20 % (BG rating to max. 30 s)
Recovery time	1 s
Protective circuit	Surge protection; Suppressor diode Fuse; PTC resistor
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

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



2981512

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

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	$50 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$
Interrupting rating (ohmic load) max.	114 W (24 V DC, $\tau = 0 \text{ ms}$, N/C contact 65/66: 72 W)
	288 W (48 V DC, $\tau = 0 \text{ ms}$, N/C contact 65/66: 144 W)
	77 W (110 V DC, $\tau = 0 \text{ ms}$)
	88 W (220 V DC, $\tau = 0 \text{ ms}$)
	1500 VA (250 V AC, $\tau = 0 \text{ ms}$, N/C contact 65/66: 750 VA)
Maximum interrupting rating (inductive load)	48 W (24 V DC, $\tau = 40 \text{ ms}$)
	40 W (48 V DC, $\tau = 40 \text{ ms}$)
	35 W (110 V DC, $\tau = 40 \text{ ms}$)
	33 W (220 V DC, $\tau = 40 \text{ ms}$)
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
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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

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

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

Characteristics

Safety data

Stop category	1
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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)
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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
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)

Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	IEC 60664-1
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Mounting

Mounting type	DIN rail mounting
Mounting position	any

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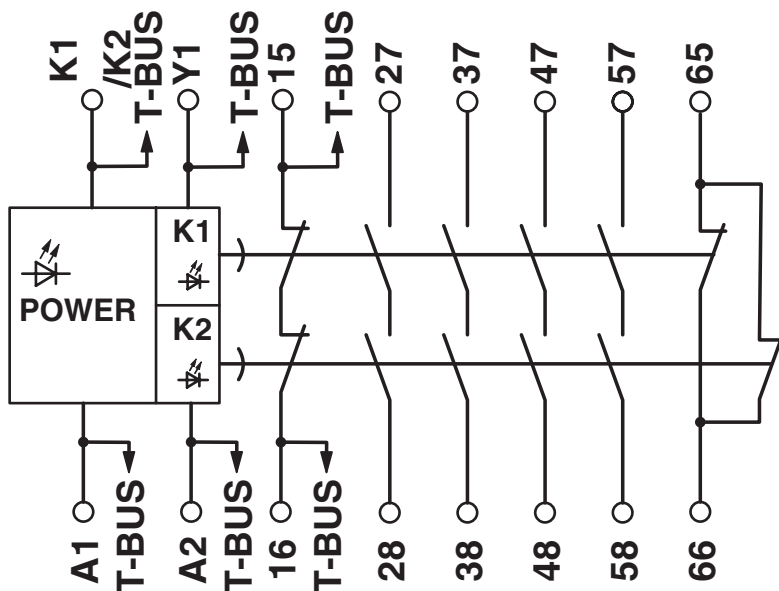


2981512

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Drawings

Circuit diagram




Approvals


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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/EZ 366.05/23



Functional Safety
Approval ID: 968/EZ 366.05/23

cULus Listed

Classifications

ECLASS

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

ETIM

ETIM 9.0	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

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Accessories

PSR-TBUS - DIN rail bus connectors

2890425

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

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



PSR-TBUS-TP - DIN rail bus connectors

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)



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



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PSR-TBUS - 1PCS - DIN rail bus connectors

1326060

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

DIN rail 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 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

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