

2981703

https://www.phoenixcontact.com/us/products/2981703

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1-channel contact extension with TBUS interface, 4 N/O contacts, 1 N/C contact, 1 confirmation current path, 2 sec. dropout delay, Cat. 3, PL d 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	2981703
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DN01
Product key	DNA232
Catalog page	Page 52 (C-8-2015)
GTIN	4046356101899
Weight per piece (including packing)	195 g
Weight per piece (excluding packing)	195 g
Customs tariff number	85371099
Country of origin	DE



#### 2981703

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## Technical data

#### Notes

Utilization restriction	
EMC note	EMC: class A product, see manufacturer's declaration in the
	download area

#### **Product properties**

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

#### **Electrical properties**

Maximum power dissipation for nominal condition	2.02 W
Nominal operating mode	100% operating factor
ir clearances and creepage distances between the power circuit	its
Rated insulation voltage	250 V

paths).

#### Input data

General	
Nominal input voltage U <sub>N</sub>	24 V DC
Input voltage range in reference to ${\rm U}_{\rm N}$	0.85 1.1
Typical input current at U <sub>N</sub>	84 mA
Typical response time	20 ms
Typical release time	2 s
Recovery time	1 s
Protective circuit	Surge protection; Suppressor diode
	Fuse; PTC resistor
Operating voltage display	Green LED
Status display	Green LED

### Output data

Contact switching type	4 delayed enabling current paths
	1 delayed signaling current path
	1 delayed confirmation current path
Contact material	AgSnO <sub>2</sub>
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	15 V AC/DC



#### 2981703

https://www.phoenixcontact.com/us/products/2981703

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)
nrush current, minimum	25 mA
Sq. Total current	50 A <sup>2</sup> ( $I_{TH}^{2} = I_{1}^{2} + I_{2}^{2} + I_{3}^{2} + I_{4}^{2}$ )
nterrupting rating (ohmic load) max.	114 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	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

Color	yellow

Characteristics



#### 2981703

https://www.phoenixcontact.com/us/products/2981703

Safety data	
Stop category	1
Safety data: EN ISO 13849	
Category	3
Performance level (PL)	d
Safety data: IEC 61508 - High demand	
Safety Integrity Level (SIL)	2
Safety data: EN IEC 62061	
Safety Integrity Level (SIL)	2

#### Environmental and real-life conditions

Ambient conditions	
Degree of protection	IP54
	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

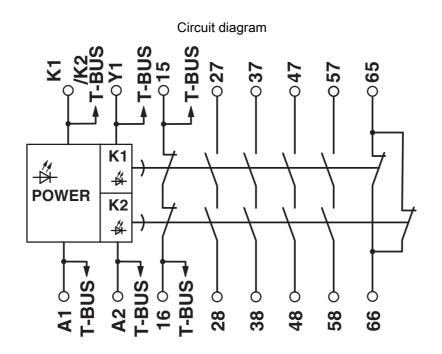
ļ	Air clearances and creepage distances between the power circuits	
	Standards/regulations	DIN EN 50178/VDE 0160
Mounting		
	Mounting type	DIN rail mounting
	Mounting position	any



2981703

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## Drawings





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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/monitori ng (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)





2981703

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PSR-TBUS - 1PCS - DIN rail bus connectors

#### 1326060

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



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