

2964005

<https://www.phoenixcontact.com/us/products/2964005>

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Single-channel or two-channel contact extension, 5 N/O contacts, 1 N/C contact, 1 confirmation current path, together with basic device up to Cat. 4 PL e in accordance with EN ISO 13849 safe isolation, width: 35 mm, pluggable Push-in terminal block

Your advantages

- Five enabling, one signaling, and one confirmation current path
- 1- and 2-channel control
- Up to Cat. 4/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	2964005
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA152
Catalog page	Page 232 (C-6-2019)
GTIN	4017918904739
Weight per piece (including packing)	302.38 g
Weight per piece (excluding packing)	270.18 g
Customs tariff number	85371098
Country of origin	DE

Technical data

Product properties

Product type	Safety relays
Product family	PSRclassic
Application	Extension module
Mechanical service life	approx. 10^7 cycles
Relay type	Safety relay for contact extension

Times

Typ. starting time with U_S	< 20 ms (at U_S / when controlled via A11/A12)
Typical release time	< 20 ms (at U_S / when controlled via A11/A12)
Recovery time	< 1 s

Electrical properties

Maximum power dissipation for nominal condition	15.8 W ($U_S = 26.4$ V, $I_L^2 = 72$ A ² , $P_{Total\ max} = 1.4$ W + 14.4 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	See section "Insulation coordination"

Input data

General

Rated control circuit supply voltage U_S	24 V -20 % ... +10 %
Power consumption at U_S	1 W (with DC)
	1.2 W (with AC)
Rated control supply current I_S	typ. 39 mA (per channel, DC)
	typ. 50 mA (per channel, AC)
Inrush current	typ. 200 mA ($\Delta t = 2$ ms at U_S , per channel)
Protective circuit	Surge protection; Varistor (40 V breakdown voltage)

Output data

Contact switching type	5 enabling current paths
	1 confirmation current path
	1 signaling current path
Contact material	AgSnO ₂
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V AC/DC
Limiting continuous current	6 A (N/O contact)
	3 A (N/C contact 11/12)
	6 A (N/C contact 71/72)
Maximum inrush current	6 A
Inrush current, minimum	10 mA

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Sq. Total current	$72 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + \dots + I_5^2)$
Switching capacity min.	50 mW
Switching capacity in accordance with IEC 60947-5-1	3 A (AC15)
	5 A (DC13)
Output fuse	10 A gL/gG (N/O contact)
	6 A gL/gG (N/C contact)

Relay

Interrupting rating (ohmic load) max.	see load limit curve
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Connection data

Connection technology

pluggable	yes
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Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ² (only together with CRIMPFOX 6)
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ² (only together with CRIMPFOX 6)
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

Signaling

Operating voltage display	2 x green LED
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Dimensions

Width	35 mm
Height	112 mm
Depth	114.5 mm

Material specifications

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

Characteristics

Safety data

Stop category	0
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Safety data: EN ISO 13849

Category	4 (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 (observe derating)
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)
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g

Standards and regulations

Air clearances and creepage distances between the power circuits

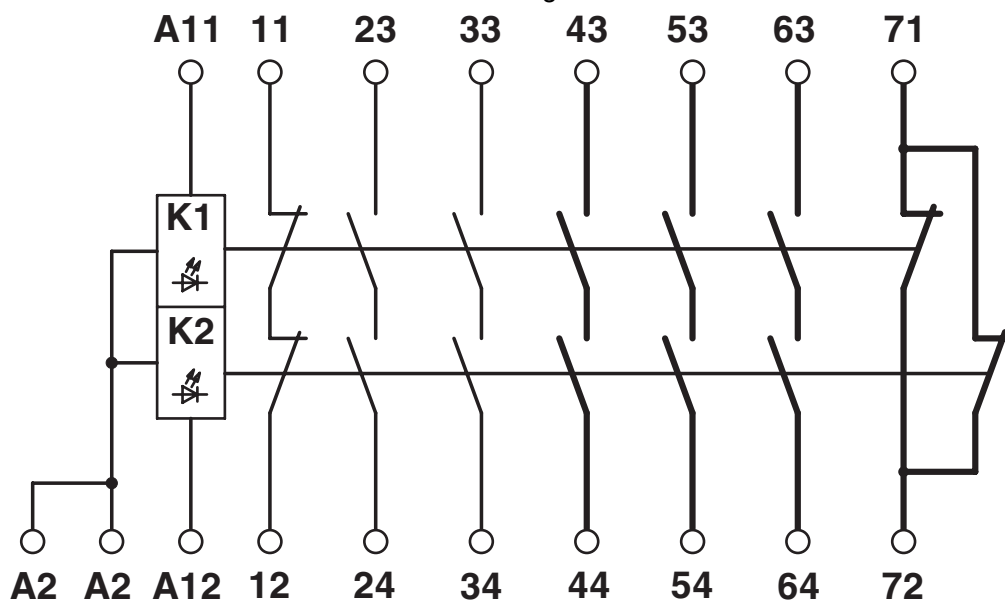
Standards/regulations	EN 60947-5-1
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Mounting

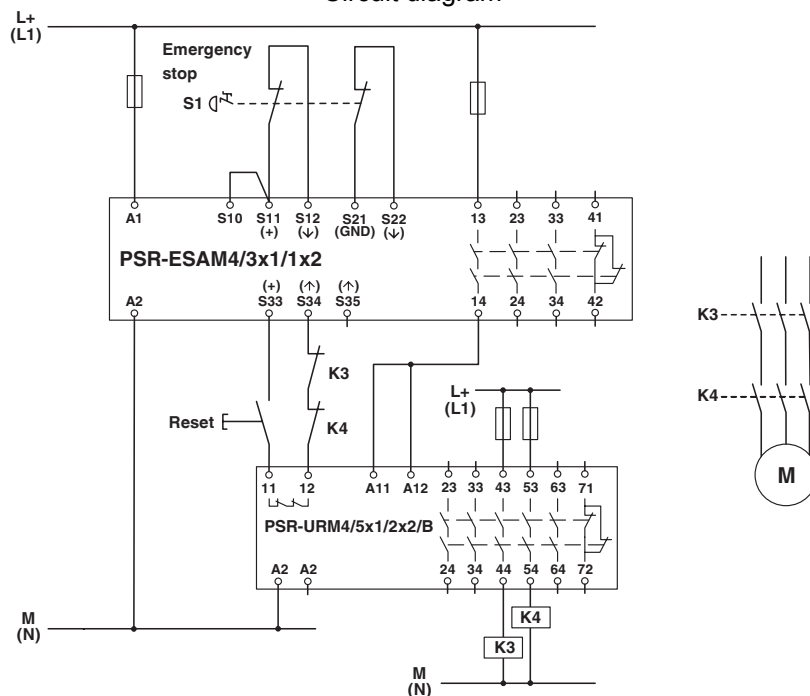
Mounting type	DIN rail mounting
Assembly note	Observe derating
Mounting position	vertical or horizontal

Drawings

Circuit diagram



Circuit diagram



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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

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27371819
ECLASS-13.0	27371819
ECLASS-12.0	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	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	01857381-50d7-4de5-a5e9-9eb7c843ccd1

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Accessories

CRIMPFOX 6 - Crimping pliers

1212034

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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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