

1442021

<https://www.phoenixcontact.com/us/products/1442021>

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1-channel or 2-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 screw 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	1442021
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA152
GTIN	4063151824303
Weight per piece (including packing)	268.36 g
Weight per piece (excluding packing)	230.76 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	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

Times

Typ. starting time with U_s	< 25 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	16.7 W ($U_s = 26.4$ V, $I_L^2 = 72$ A ² , $P_{\text{Total max}} = 2.3$ W + 14.4 W)
Nominal operating mode	100% operating factor

Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V
	250 V
Rated surge voltage/insulation	See section "Insulation coordination"

Input data

Digital: A11, A12

Description of the input	safety-related
Number of inputs	2
Input voltage range "1" signal	19.2 V ... 26.4 V DC
Max. permissible overall conductor resistance	50 Ω
Protective circuit	Suppressor diode
Current consumption	typ. 39 mA

Output data

Relay: Enabling current paths (23/24 ... 63/64)

Output description	2 N/O contacts each in series, safety-related, floating
Number of outputs	5
Contact switching type	5 enabling current paths
Contact material	AgSnO ₂
Switching voltage	min. 10 V
	max. 250 V AC
Switching capacity	min. 100 mW
Inrush current	min. 10 mA
	max. 6 A

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Switching capacity in accordance with IEC 60947-5-1	3 A (AC15)
	5 A (DC13)
Limiting continuous current	6 A (observe derating)
Sq. Total current	72 A ² (observe derating)
Switching frequency	max. 1 Hz
Mechanical service life	10x 10 ⁶ cycles
Output fuse	10 A gL/gG
	4 A gL/gG (for low-demand applications)

Relay: Signaling current path (71/72)

Output description	2 N/C contacts parallel, non-safety-related, floating
Number of outputs	1
Contact switching type	1 signaling current path
Contact material	AgSnO ₂
Switching voltage	min. 5 V AC/DC
	max. 250 V AC/DC
Switching capacity	min. 50 mW
Inrush current	min. 10 mA
	max. 6 A
Switching capacity in accordance with IEC 60947-5-1	1.5 A (AC15)
	5 A (DC13)
Limiting continuous current	6 A
Sq. Total current	36 A ²
Switching frequency	max. 1 Hz
Mechanical service life	10x 10 ⁶ cycles
Output fuse	6 A (gL/gG)

Relay: Confirmation current path (11/12)

Output description	2 N/C contacts in series, floating
Number of outputs	1
Contact switching type	1 confirmation current path
Contact material	AgSnO ₂
Switching voltage	max. 250 V AC/DC
	min. 10 V
Switching capacity	min. 100 mW
Inrush current	max. 3 A
Switching capacity in accordance with IEC 60947-5-1	1.5 A (AC15)
	3 A (DC13)
Limiting continuous current	3 A
Sq. Total current	9 A ²
Switching frequency	max. 1 Hz
Output fuse	3 A (gL/gG)

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
Tightening torque	0.5 Nm ... 0.6 Nm

Signaling

Operating voltage display	2 x green LED
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Dimensions

Width	35 mm
Height	99 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

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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, amplitude 0.15 mm, 2g

Approvals

CE

Identification	CE-compliant
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Standards and regulations

Air clearances and creepage distances between the power circuits

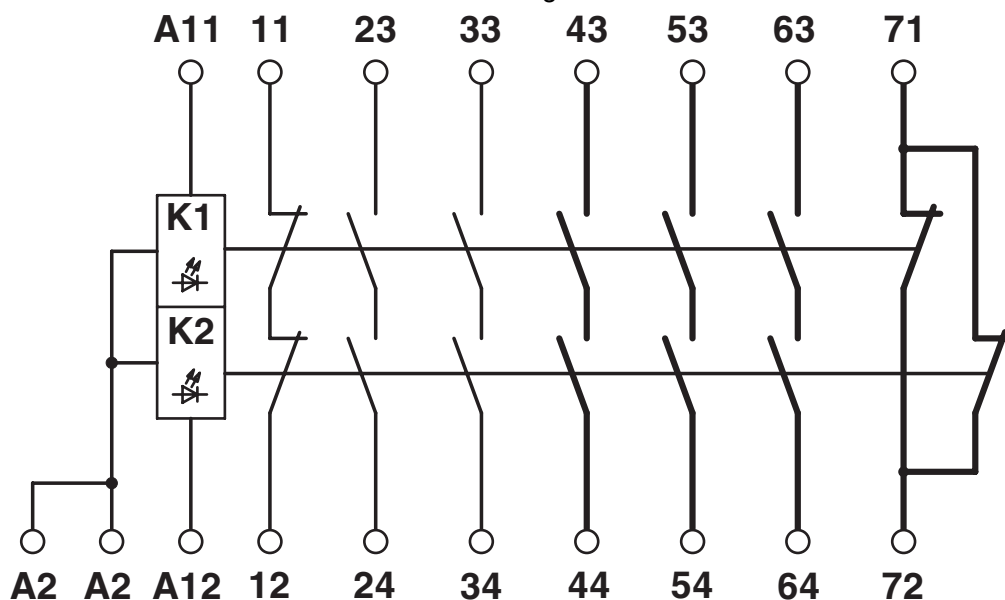
Standards/regulations	EN 60947-1
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Mounting

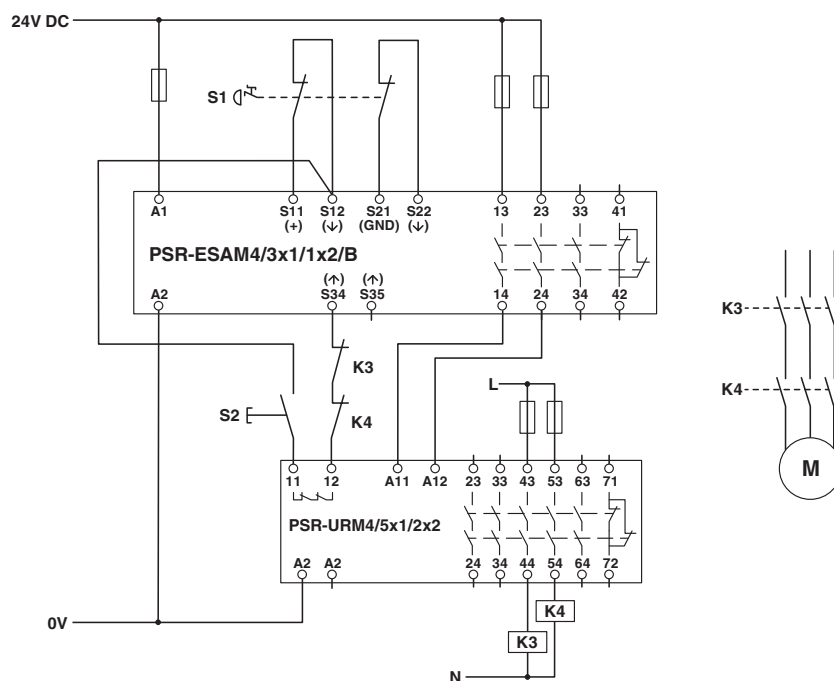
Mounting type	DIN rail mounting
Assembly note	Observe derating
Mounting position	vertical or horizontal

Drawings

Circuit diagram



Circuit diagram



Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1442021>



UL Listed
Approval ID: E140324



cUL Listed
Approval ID: E140324



Functional Safety
Approval ID: 968/FSP 2533.00/23



Functional Safety
Approval ID: 968/FSP 2533.00/23

cULus Listed

Classifications

ECLASS

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

ETIM

ETIM 9.0	EC001449
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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)

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Accessories

CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/us/products/1734634>

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



CR-MSTB - Coding section

1734401

<https://www.phoenixcontact.com/us/products/1734401>

Coding section, inserted into the recess in the header or the inverted plug, red insulating material



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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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