

2903584

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1- or 2-channel contact extension for OSSD signals (e.g., light grid), 3 N/O contacts, 1 N/C contact, up to Cat. 4 PL e in accordance with EN ISO 13849, SIL 3 in accordance with EN IEC 62061, pluggable Push-in terminal block, width: 22.5 mm

Product description

The contact extension device is specifically designed for use in conjunction with electrosensitive protective equipment such as light grids. These systems generally have clocked OSSD signals which enable cross circuits in the cabling to be detected. The relay is resistant to the test pulses generated by the electrosensitive protective equipment receiver. Applications up to PL e or SIL 3 can therefore be implemented without the need for additional traceability to the device on the EDM circuit.

Commercial data

Item number	2903584
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA152
Catalog page	Page 232 (C-6-2019)
GTIN	4046356751704
Weight per piece (including packing)	180.07 g
Weight per piece (excluding packing)	147.56 g
Customs tariff number	85371098
Country of origin	DE



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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			
Typical response time	125 ms (For U _s autostart)		
Typical release time	10 ms (on demand via the sensor circuit)		
Recovery time	1 s (following demand of the safety function)		
ectrical properties			
Maximum power dissipation for nominal condition	16.44 W (U _S = 26.4 V, I _L ² = 72 A ² , P _{Total max} = 2.04 W + 14.4 W)		
Nominal operating mode	100% operating factor		
Air clearances and creepage distances between the power circuits			
	250 V		
Rated insulation voltage	200 1		

Input data

Digital: Logic (S12, S22)

Description of the input	safety-related
Number of inputs	2
Input voltage range "0" signal	0 V DC 5 V DC
Input voltage range "1" signal	20.4 V 26.4 V
Input current range "0" signal	0 mA 2 mA
Inrush current	max. 110 mA (typically with U_S , Δt = 3 ms)
Filter time	max. 2 ms (Test pulse width low test pulses, at 100 ms test pulse rate)
	No brightness test pulses / high test pulses permitted.
Concurrence	œ
Max. permissible overall conductor resistance	50 Ω
Protective circuit	Suppressor diode
Current consumption	38 mA (typical, at 24 V)

Output data

	(10)11	00/04	00/04
Relay: Enabling current path	s (13/14	, 23/24,	33/34)

Output description	2 N/O contacts each in series, safety-related, floating
Number of outputs	3



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ontact switching type	3 enabling current paths
ntact material	AgSnO ₂
vitching voltage	min. 10 V
	max. 250 V AC
vitching capacity	min. 100 mW
rush current	min. 10 mA
	max. 6 A
witching capacity in accordance with IEC 60947-5-1	5 A (AC15)
	6 A (DC13)
miting continuous current	6 A (Observe derating and load limit curve)
q. Total current	72 A ² (observe derating)
witching frequency	max. 0.5 Hz
lechanical service life	10x 10 ⁶ cycles
Output fuse	10 A gL/gG
	4 A gL/gG (for low-demand applications)
ay: Signaling current path (41/42)	
ay: Signaling current path (41/42) Dutput description	2 N/C contacts parallel, non-safety-related, floating
	2 N/C contacts parallel, non-safety-related, floating
Putput description umber of outputs	
Output description	1
Output description lumber of outputs contact switching type contact material	1 1 signaling current path
Putput description number of outputs contact switching type contact material	1 1 signaling current path AgSnO ₂
Output description lumber of outputs contact switching type contact material witching voltage	1 1 signaling current path AgSnO2 min. 10 V AC/DC
Output description lumber of outputs contact switching type contact material witching voltage witching capacity	1 1 signaling current path AgSnO2 min. 10 V AC/DC max. 250 V AC
Output description	1 1 signaling current path AgSnO2 min. 10 V AC/DC max. 250 V AC min. 100 mW
Dutput description lumber of outputs contact switching type contact material witching voltage witching capacity mush current	1 1 signaling current path AgSnO ₂ min. 10 V AC/DC max. 250 V AC min. 100 mW min. 10 mA
uutput description umber of outputs ontact switching type ontact material witching voltage witching capacity urush current	1 1 signaling current path AgSnO2 min. 10 V AC/DC max. 250 V AC min. 100 mW min. 10 mA max. 6 A
Autput description Jumber of outputs contact switching type contact material witching voltage witching capacity mush current witching capacity in accordance with IEC 60947-5-1	1 1 signaling current path AgSnO ₂ min. 10 V AC/DC max. 250 V AC min. 100 mW min. 10 mA max. 6 A 1.5 A (AC15)
Output description lumber of outputs contact switching type contact material witching voltage witching capacity	1 1 signaling current path AgSnO2 min. 10 V AC/DC max. 250 V AC min. 100 mW min. 10 mA max. 6 A 1.5 A (AC15) 2 A (DC13)
Dutput description lumber of outputs contact switching type contact material witching voltage witching capacity mush current witching capacity in accordance with IEC 60947-5-1 imiting continuous current	1 1 signaling current path AgSnO2 min. 10 V AC/DC max. 250 V AC min. 100 mW min. 10 mA max. 6 A 1.5 A (AC15) 2 A (DC13) 6 A
Putput description lumber of outputs contact switching type contact material witching voltage witching capacity mush current witching capacity in accordance with IEC 60947-5-1 imiting continuous current iq. Total current	$ \begin{array}{ c c c } 1 \\ 1 & \text{signaling current path} \\ \hline AgSnO_2 \\ \hline min. 10 V AC/DC \\ \hline max. 250 V AC \\ \hline min. 100 mW \\ \hline min. 100 mW \\ \hline min. 10 mA \\ \hline max. 6 A \\ \hline 1.5 A (AC15) \\ 2 A (DC13) \\ \hline 6 A \\ \hline 36 A^2 \\ \hline \end{array} $

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 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)		



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Conductor cross-section AWG	24 16
Stripping length	8 mm
gnaling	
Status display	2 x green LEDs
mensions	
Width	22.5 mm
Height	117.5 mm
Depth	114.5 mm
aterial specifications	
Color (Housing)	yellow (RAL 1018)
Housing material	Polyamide
naracteristics	
Safety data	
Stop category	0
Safety data: EN ISO 13849	
Category	4
Performance level (PL)	e (5 A DC13; 5 A AC15; 8760 switching cycles/year)
Safety data: IEC 61508 - High demand	
Safety Integrity Level (SIL)	3
Safety data: IEC 61508 - Low demand	
Safety Integrity Level (SIL)	3
Safety data: EN IEC 62061	
Safety Integrity Level (SIL)	3
nvironmental 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	≤ 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



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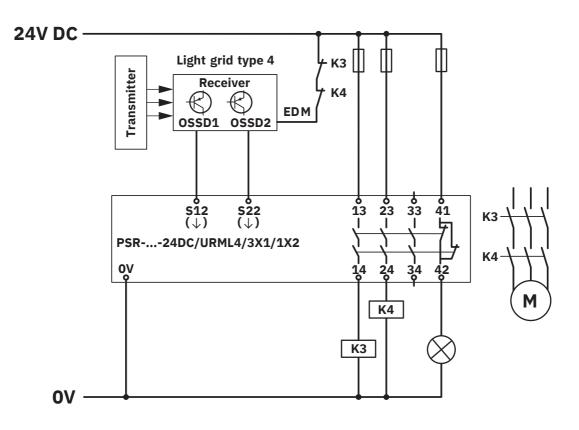
CE			
Identification	CE-compliant		
Standards and regulations			
Air clearances and creepage distances between the power circuits			
Standards/regulations	DIN EN 60947-1		
Mounting			
Mounting type	DIN rail mounting		
Mounting position	vertical or horizontal		

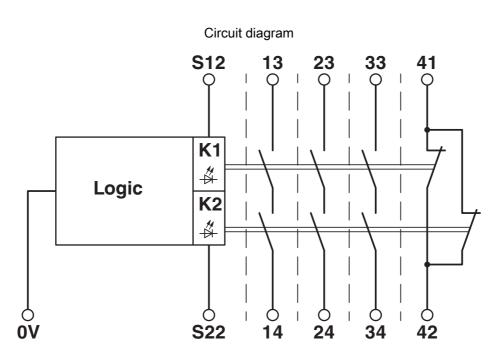


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Drawings

Circuit diagram







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Approvals

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ERC	EAC Approval ID: RU C-DE.A*30.B.01082
	UL Listed Approval ID: FILE E 140324
<u>®</u>	CUL Listed Approval ID: FILE E 140324
AF	Functional Safety Approval ID: 01/205/5265.03/22
cl	JLus Listed



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Classifications

ECLASS

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

ETIM

	ETIM 9.0	EC001449		
UN	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)-l
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	64277b0b-6944-4767-95cd-4099a6ed308d



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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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