

PSR-SCP-24DC/URML4/3X1/1X2/B - Extension module



2903583

<https://www.phoenixcontact.com/us/products/2903583>

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Single or two-channel contact extension for OSSD signals (e.g., light grid), 3 N/O contacts, 1 N/C contact, up to Cat. 4 PL e according to EN ISO 13849, SIL 3 according to EN IEC 62061, plug-in screw terminal blocks, 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	2903583
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA152
Catalog page	Page 232 (C-6-2019)
GTIN	4046356751698
Weight per piece (including packing)	180.45 g
Weight per piece (excluding packing)	149.69 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)

Electrical 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

Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / Basic isolation, (safe isolation, reinforced insulation and 6 kV between input circuit and enabling current paths.)

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 , $\Delta t = 3$ 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	∞
Max. permissible overall conductor resistance	50 Ω
Protective circuit	Suppressor diode
Current consumption	38 mA (typical, at 24 V)

Output data

Relay: Enabling current paths (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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Contact switching type	3 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
Switching capacity in accordance with IEC 60947-5-1	5 A (AC15)
	6 A (DC13)
Limiting continuous current	6 A (Observe derating and load limit curve)
Sq. Total current	72 A ² (observe derating)
Switching frequency	max. 0.5 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 (41/42)

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. 10 V AC/DC
	max. 250 V AC
Switching capacity	min. 100 mW
Inrush current	min. 10 mA
	max. 6 A
Switching capacity in accordance with IEC 60947-5-1	1.5 A (AC15)
	2 A (DC13)
Limiting continuous current	6 A
Sq. Total current	36 A ²
Switching frequency	max. 0.5 Hz
Mechanical service life	10x 10 ⁶ cycles
Output fuse	6 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

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Screw thread	M3
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Signaling

Status display	2 x green LEDs
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Dimensions

Width	22.5 mm
Height	112.2 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
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
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Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	3
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Safety data: EN IEC 62061

Safety Integrity Level (SIL)	3
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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	≤ 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

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Identification	CE-compliant
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Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	DIN EN 60947-1
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Mounting

Mounting type	DIN rail mounting
Mounting position	vertical or horizontal

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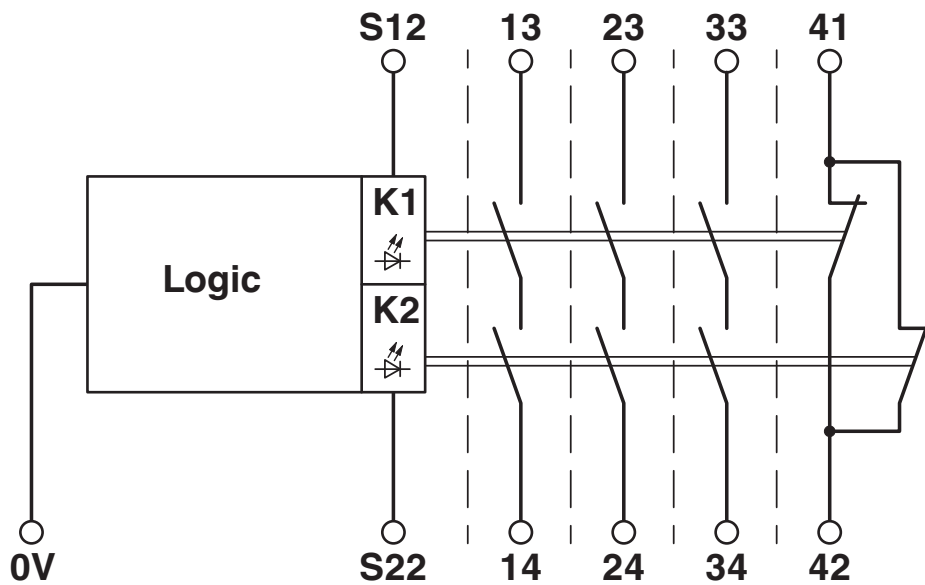


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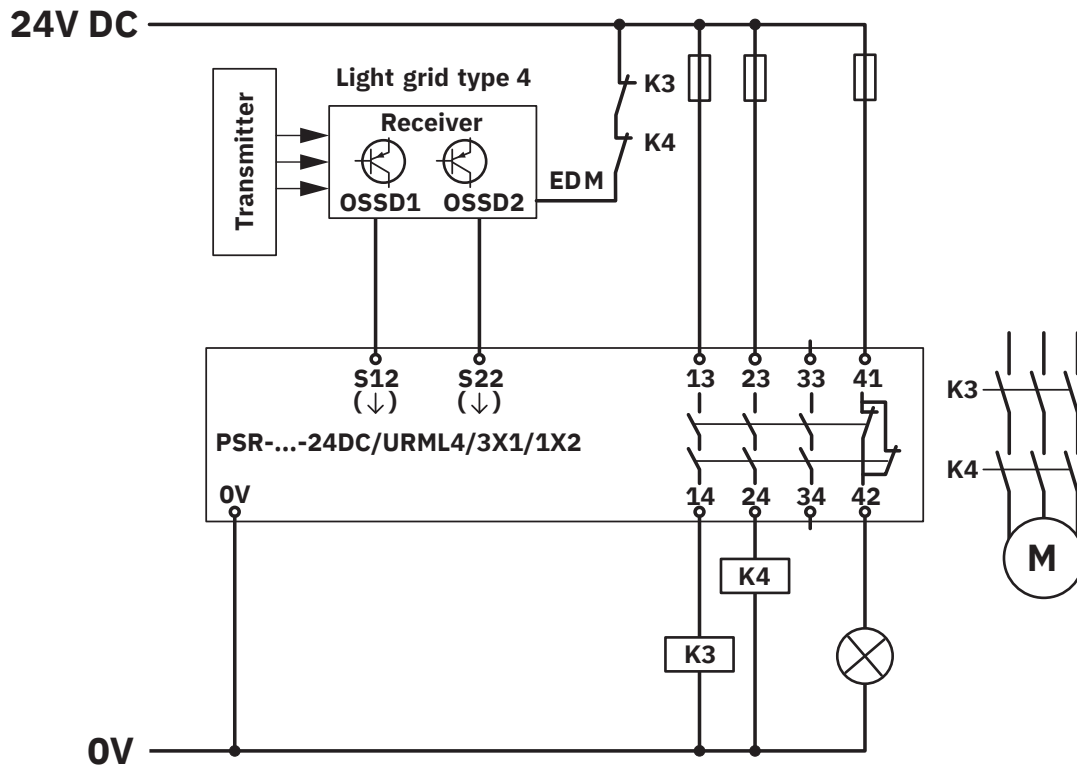
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Drawings

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

Functional Safety

Approval ID: 968/EZ409.04/22

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	f88307cd-b54b-425b-9486-66fd8dba0571

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Accessories

CP-MSTB - Coding profile

1734634

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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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