

Extension module - PSR-SPP- 24UC/URM4/5X1/2X2/B



2981046

<https://www.phoenixcontact.com/us/products/2981046>

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Single or two-channel contact extension, 5 N/O contacts, 1 N/C contact, 1 confirmation current path, width: 22.5 mm, pluggable Push-in terminal block

Your advantages

- 1- and 2-channel control
- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with IEC 62061, SIL 3 in accordance with IEC 61508

Commercial Data

Item number	2981046
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C18
Product Key	DNA152
Catalog Page	Page 232 (C-6-2019)
GTIN	4017918915520
Weight per Piece (including packing)	207.4 g
Weight per Piece (excluding packing)	20.4 g
Customs tariff number	85371098
Country of origin	DE

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Technical Data

Product properties

Product type	Safety relays
Application	Extension module
Mechanical service life	10x 10 ⁶ cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

Insulation characteristics

Overvoltage category	III
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Electrical properties

Maximum power dissipation for nominal condition	2.21 W
Nominal operating mode	100% operating factor
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV: between all current paths and housing Safe isolation, reinforced insulation 6 kV: between A1/A2, 11/12, 23/24, 71/72 and 33/34, 43/44, 53/54, 63/64

Input data

General

Rated control circuit supply voltage U_S	24 V AC/DC -15 % / +10 %
Power consumption at U_S	typ. 1.94 W (AC)
	typ. 1.7 W (DC)
Rated control supply current I_S	typ. 81 mA AC
	typ. 71 mA DC
Inrush current	175 mA ($\Delta t = 5$ ms at U_S)
Filter time	2 ms (at A1 in the event of voltage dips at U_S)
Typ. starting time with U_S	< 20 ms (when controlled via A1)
Typical release time	< 20 ms (when controlled via A1)
Recovery time	< 1 s
Maximum switching frequency	1 Hz
Protective circuit	Surge protection; Varistor
Operating voltage display	1 x green LED

Output data

Contact type	5 enabling current paths
	1 signaling current path
	1 confirmation current path
Contact material	AgSnO ₂
Maximum switching voltage	250 V AC/DC (Observe the load curve)
Minimum switching voltage	5 V AC/DC

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Limiting continuous current	6 A (N/O contact, pay attention to the derating)
	6 A (N/C contact)
Maximum inrush current	20 A ($\Delta t \leq 100$ ms)
Inrush current, minimum	10 mA
Sq. Total current	72 A ² (observe derating)
Interrupting rating (ohmic load) max.	144 W (24 V DC, $\tau = 0$ ms)
	288 W (48 V DC, $\tau = 0$ ms)
	110 W (110 V DC, $\tau = 0$ ms)
	88 W (220 V DC, $\tau = 0$ ms)
	1500 VA (250 V AC, $\tau = 0$ ms)
Maximum interrupting rating (inductive load)	42 W (24 V DC, $\tau = 40$ ms)
	42 W (48 V DC, $\tau = 40$ ms)
	42 W (110 V DC, $\tau = 40$ ms)
	42 W (220 V DC, $\tau = 40$ ms)
Switching capacity min.	50 mW
Switching capacity (360/h cycles)	4 A (24 V DC)
	4 A (230 V AC)
Switching capacity (3600/h cycles)	2.5 A (24 V (DC13))
	3 A (230 V (AC15))
Output fuse	10 A gL/gG (N/O contact)
	6 A gL/gG (N/C contact)

Connection data

Connection technology

pluggable	yes
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Conductor connection

Connection method	Push-in connection
Conductor cross section solid	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

Dimensions

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

Material specifications

Housing material	Polyamide
Housing color	yellow

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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

Equipment type	Type A
Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
Probability of a hazardous failure per hour (PFH _D)	1.02×10^{-10}
Proof test interval	240 Months
Duration of use	240 Months

Safety data: IEC 61508 - Low demand

Equipment type	Type A
Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
Probability of a hazardous failure on demand (PFD _{AVG})	1.50×10^{-4}
Proof test interval	84 Months
Duration of use	240 Months

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	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)
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g

Approval data

CE

Certificate	CE-compliant
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Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	DIN EN 50178/VDE 0160
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Mounting

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Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Mounting position	vertical or horizontal

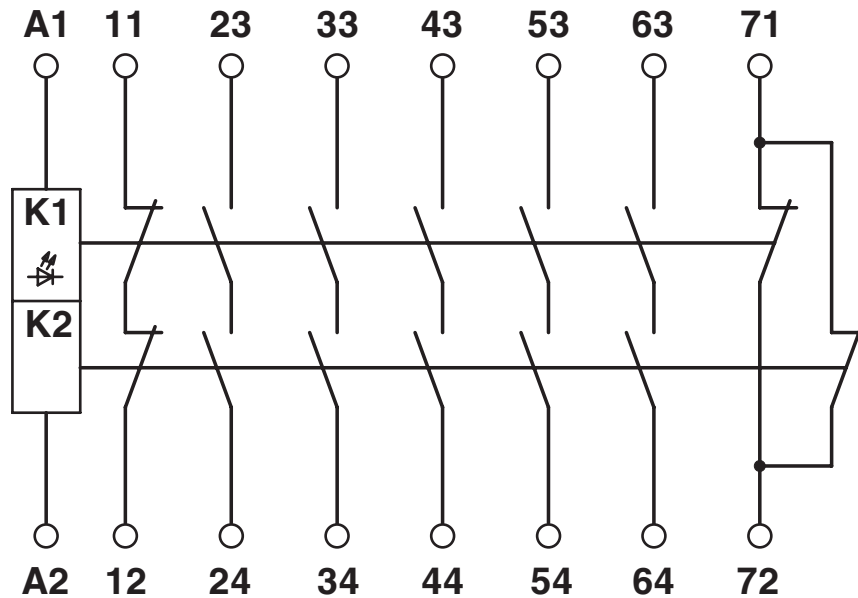
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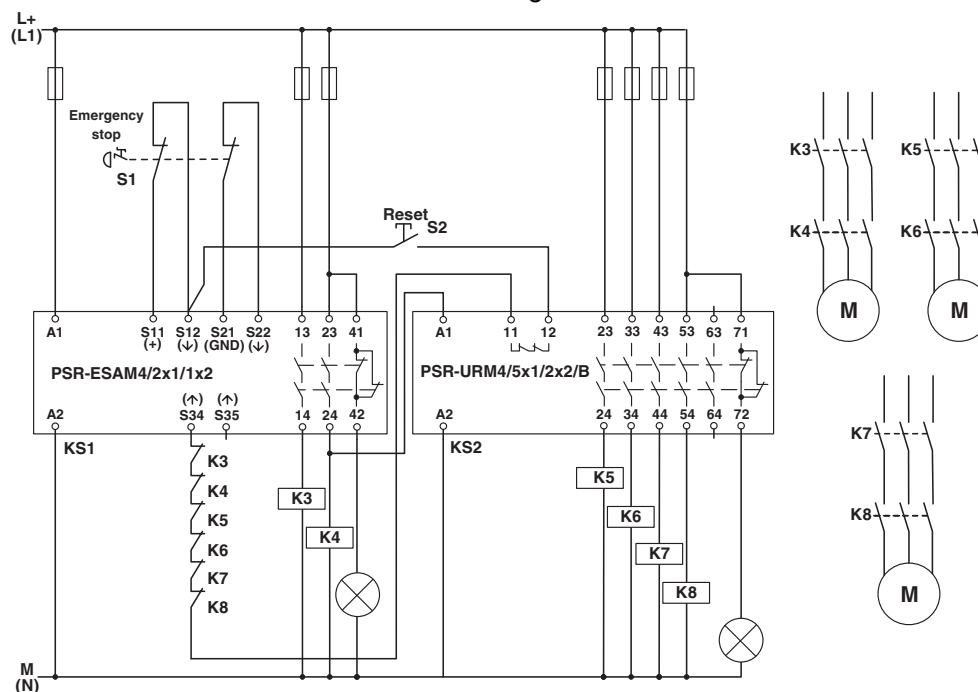
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Drawings

Circuit diagram



Circuit diagram



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Approvals



EAC

Approval ID: TR TS_D_01838-19



UL Listed

Approval ID: FILE E 140324



cUL Listed

Approval ID: FILE E 140324



Functional Safety

Approval ID: 968/FSP 1265.02/21



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Approval ID: 968/FSP 1265.02/21

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	27371819
ECLASS-10.0.1	27371819
ECLASS-11.0	27371819

ETIM

ETIM 8.0	EC001449
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UNSPSC

UNSPSC 21.0	39122200
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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