

## Extension module - PSR-SPP- 24UC/URM4/5X1/2X2/B - 2981046

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

### Your advantages

- ✓ Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- ✓ Single and two-channel control



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 915520
GTIN	4017918915520
Weight per Piece (excluding packing)	237.800 g
Custom tariff number	85371098
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

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### Technical data

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Maximum altitude	max. 2000 m (Above sea level)

#### Input data

Rated control circuit supply voltage $U_s$	24 V AC/DC -15 % / +10 %
Rated control supply current $I_s$	typ. 81 mA AC
	typ. 71 mA DC
Power consumption at $U_s$	typ. 1.94 W (AC)
	typ. 1.7 W (DC)
Inrush current	175 mA ( $\Delta t = 5$ ms 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
Operating voltage display	1 x green LED
Protective circuit	Surge protection Varistor
Maximum switching frequency	1 Hz
Filter time	2 ms (at A1 in the event of voltage dips at $U_s$ )

#### Output data

Contact type	5 enabling current paths
	1 confirmation current path
	1 signaling current path
Contact material	AgSnO <sub>2</sub>
Maximum switching voltage	250 V AC/DC (Observe the load curve)
Minimum switching voltage	5 V AC/DC
Limiting continuous current	6 A (N/O contact, pay attention to the derating)
	6 A (N/C contact)
Maximum inrush current	20 A ( $\Delta t \# 100$ ms)
Inrush current, minimum	10 mA
Sq. Total current	72 A <sup>2</sup> (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)

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### Technical data

#### Output data

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
Mechanical service life	10x 10 <sup>6</sup> cycles
Switching capacity (360/h cycles)	4 A (24 V DC)
	4 A (230 V AC)
Output fuse	10 A gL/gG (N/O contact)
	6 A gL/gG (N/C contact)

#### General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Nominal operating mode	100% operating factor
Net weight	20.4 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Degree of protection	IP20
	IP54
Min. degree of protection of inst. location	IP54
Housing material	PBT
Housing color	yellow

#### Connection data

Connection method	Spring-cage connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

#### Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High demand

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### Technical data

#### Safety-related characteristic data

Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3 (In conjunction with suitable evaluating device)
Designation	EN ISO 13849
Performance level (PL)	e (In conjunction with suitable evaluating device)
Category	4 (In conjunction with suitable evaluating device)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	3 (In conjunction with suitable evaluating device)

#### Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
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
Degree of pollution	2
Overvoltage category	III
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g
Conformance	CE-compliant

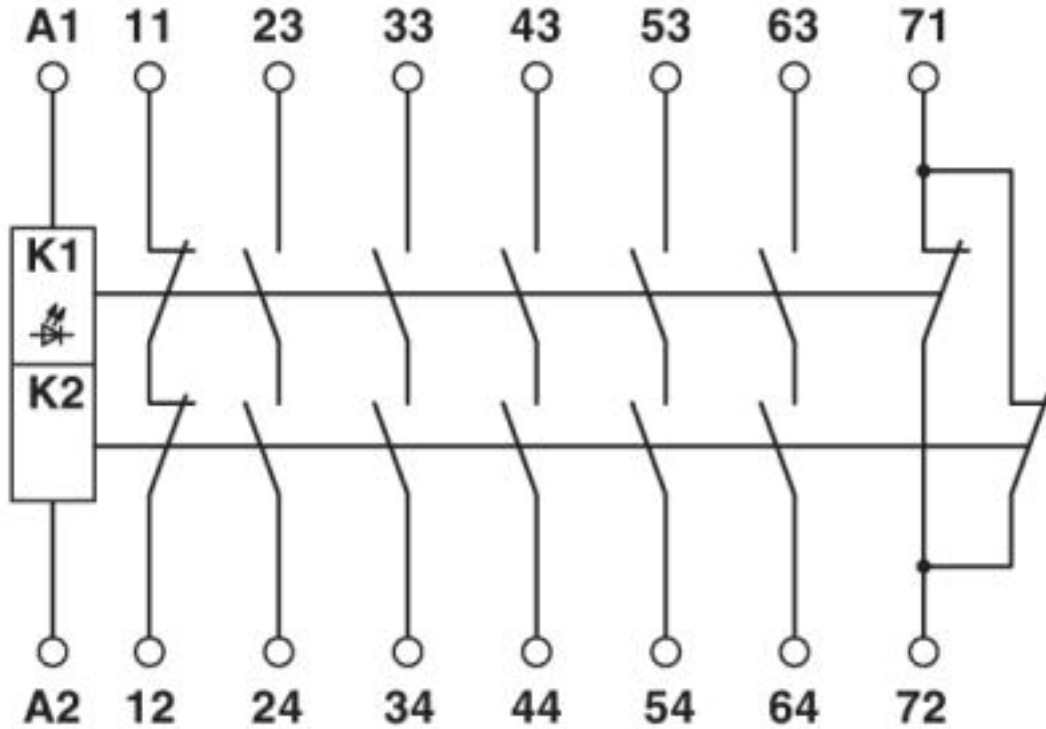
#### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

### Drawings

# Extension module - PSR-SPP- 24UC/URM4/5X1/2X2/B - 2981046

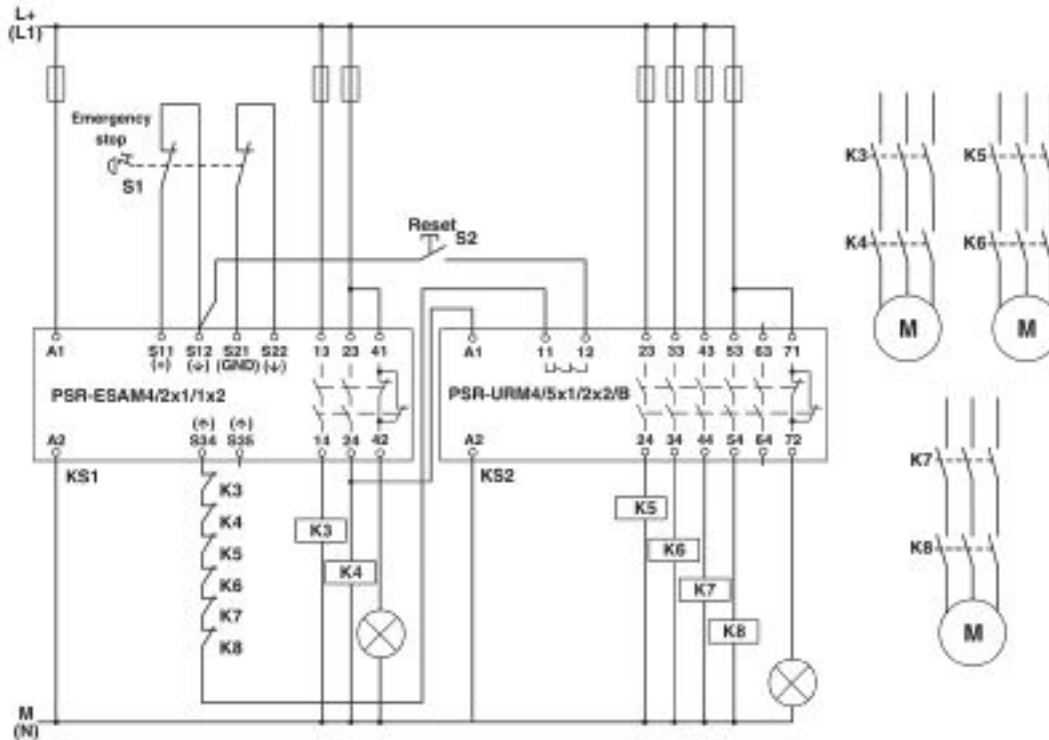
Circuit diagram



Block diagram

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Circuit diagram



Two-channel emergency stop monitoring with contact extension

## Classifications

eCl@ss

eCl@ss 4.0	40020600
eCl@ss 4.1	40020600
eCl@ss 5.0	27371900
eCl@ss 5.1	27371900
eCl@ss 6.0	27371800
eCl@ss 7.0	27371819
eCl@ss 8.0	27371819
eCl@ss 9.0	27371819

ETIM

ETIM 2.0	EC001449
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449

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## Classifications

### ETIM

ETIM 6.0	EC001449
ETIM 7.0	EC001449

### UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39121501

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / Functional Safety / EAC / EAC / cULus Listed

#### Ex Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140324
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140324
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Functional Safety			968/FSP 1265.00/16
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EAC			EAC-Zulassung
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### Approvals

EAC		RU C- DE.A*30.B.01082
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cULus Listed	
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