

# PSR-MC82-5NO-1NC-1DO-24DC-SC - Extension module



2702382

<https://www.phoenixcontact.com/gb/products/2702382>

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Contact extension up to SIL 3, Cat. 4, PL e in conjunction with suitable evaluation device, 5 enabling current paths,  $U_S = 24 \text{ V DC}$ , plug-in screw terminal block

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## Your advantages

- Up to Cat. 4/PL e in accordance with ISO 13849-1, SIL 3 in accordance with EN IEC 62061 in conjunction with suitable evaluation device
- Low housing width of just 17.5 mm
- 1- and 2-channel control
- 5 enabling current paths, 1 confirmation current path, 1 digital signal output
- Automatic activation

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## Technical data

### Notes

#### Note on application

Note on application	Only for industrial use
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### Product properties

Product type	Safety relays
Product family	PSRmini
Application	Extension module
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

#### Data management status

Article revision	06
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#### Times

Typical response time	< 50 ms (Monitored/manual and auto-start)
Typ. starting time with $U_S$	< 50 ms (when controlled via A1/A2)
Typical release time	< 25 ms (when controlled via A1/A2)
Recovery time	< 100 ms

### Electrical properties

Maximum power dissipation for nominal condition	15.2 W (at $U_S = 30$ V, $I_L^2 = 64$ A <sup>2</sup> )
Nominal operating mode	100% operating factor

#### Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V AC
	250 V AC
Rated surge voltage/insulation	

#### Supply

Designation	A1/A2
Rated control circuit supply voltage $U_S$	19.2 V DC ... 30 V DC
Rated control circuit supply voltage $U_S$	24 V DC -20 % / +25 %
Rated control supply current $I_S$	typ. 80 mA
Power consumption at $U_S$	typ. 1.92 W
Inrush current	typ. 125 mA ( $\Delta t = 7$ ms at $U_S$ )
Filter time	4 ms (at A1 in the event of voltage dips at $U_S$ )
	max. 1 ms (at A1/A2, test pulse width, blanking pulses/dark test)
	5 ms (at A1/A2, test pulse rate, blanking pulses/dark test)
	Where test pulse width < 1 ms: test pulse rate = 5 x test pulse width
	max. 1 ms (at A1/A2, test pulse width, switch-on pulses/light test)
	10 ms (at A1/A2; test pulse rate; switch-on pulses/light test)

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	Deactivate the switch-on pulses for safety applications.
Protective circuit	Surge protection; Suppressor diode
	Reverse polarity protection; Universal diode

## Output data

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

Output description	safety-related N/O contacts
Number of outputs	5 (undelayed)
Contact switching type	5 enabling current paths
Contact material	AgSnO <sub>2</sub>
Switching voltage	min. 5 V AC/DC
	max. 24 V DC (Enabling current path 23/24)
	max. 250 V AC/DC (all other enabling current paths, observe load curve)
Switching capacity	min. 50 mW (5 V / 10 mA)
Inrush current	min. 10 mA
	max. 20 A (≤ 100 ms)
Switching capacity in accordance with IEC 60947-5-1	3 A (24 V (DC13))
	3 A (250 V (AC15))
Limiting continuous current	6 A (observe derating)
Sq. Total current	64 A <sup>2</sup> (observe derating)
Switching frequency	max. 0.5 Hz
Mechanical service life	10x 10 <sup>6</sup> cycles
Output fuse	10 A gL/gG
	6 A gL/gG (for low-demand applications)

Relay: Confirmation current path (11/12)

Output description	Safety-related N/C contacts
Number of outputs	1 (undelayed)
Contact switching type	1 confirmation current path
Contact material	AgSnO
Switching voltage	min. 5 V AC/DC
	max. 24 V DC
Switching capacity	min. 50 mW
Inrush current	min. 10 mA
	max. 100 mA
Limiting continuous current	100 mA
Switching frequency	max. 0.5 Hz
Mechanical service life	10x 10 <sup>6</sup> cycles

Signal: M1

Output description	non-safety-related
Number of outputs	1 (digital, PNP)
Voltage	typ. 23 V DC (U <sub>S</sub> - 1 V)
Current	max. 100 mA

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Maximum inrush current	500 mA ( $\Delta t = 1 \text{ ms}$ at $U_s$ )
Short-circuit protection	Yes

## Connection data

### Connection technology

pluggable	yes
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### Conductor connection

Connection method	Screw connection
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3

## Signaling

Status display	2 x LED (green)
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## Dimensions

Width	17.5 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 (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

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Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-20 °C ... 60 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 80 °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 (In the event of stress caused by shock, contact reactions are possible for up to 6 ms.)
Vibration (operation)	10 Hz ... 150 Hz, 2g (In the event of stress caused by vibration, contact reactions are possible for up to 1 ms.)

## 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	See derating curve
Mounting position	vertical or horizontal

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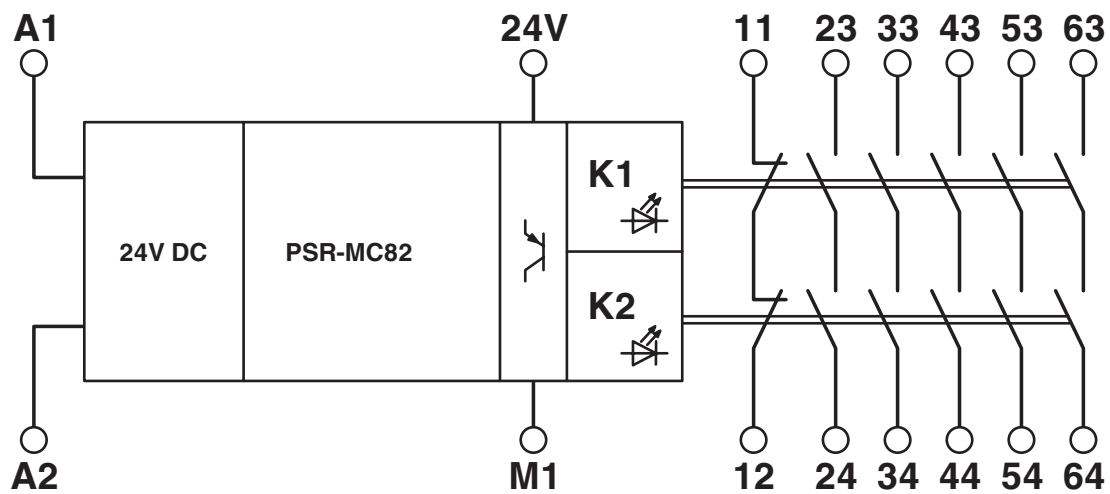
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## Drawings

Circuit diagram



Block diagram



Block diagram

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2702382>



### UL Listed

Approval ID: E140324



### cUL Listed

Approval ID: E140324



### Functional Safety

Approval ID: 44-205-15124303



### EAC

Approval ID: RU\*-DE\*B.00606/20



### Functional Safety

Approval ID: 44-780-15124303

### cULus Listed

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## Classifications

### ECLASS

ECLASS-11.0	27371819
ECLASS-12.0	27371819
ECLASS-13.0	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	5cc21dee-aeaf-4113-b01b-485afa7da360

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