

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



2702382

<https://www.phoenixcontact.com/us/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

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

Commercial data

Item number	2702382
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN01
Product key	DNA181
Catalog page	Page 228 (C-6-2019)
GTIN	4055626145471
Weight per piece (including packing)	220.77 g
Weight per piece (excluding packing)	185.49 g
Customs tariff number	85371098
Country of origin	DE

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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 ²)
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 ₂
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 ² (observe derating)
Switching frequency	max. 0.5 Hz
Mechanical service life	10x 10 ⁶ 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 ⁶ cycles

Signal: M1

Output description	non-safety-related
Number of outputs	1 (digital, PNP)
Voltage	typ. 23 V DC (U _S - 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 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
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

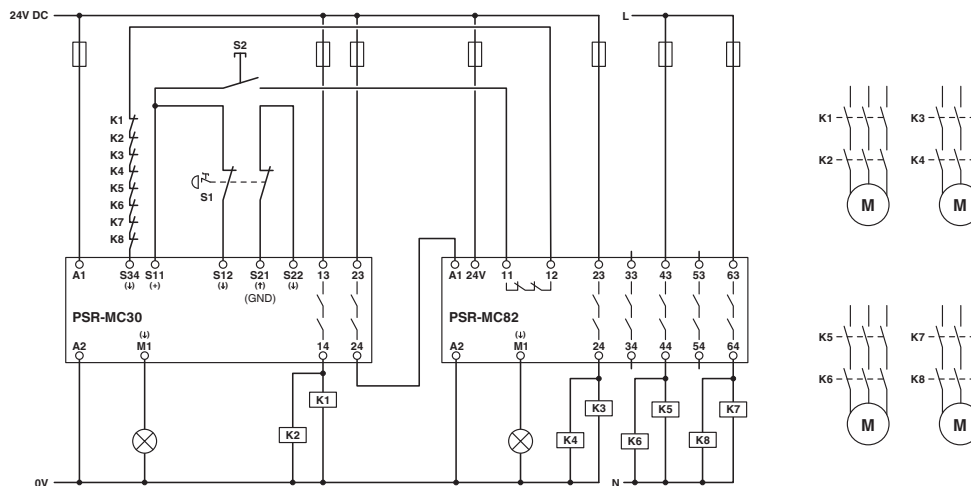
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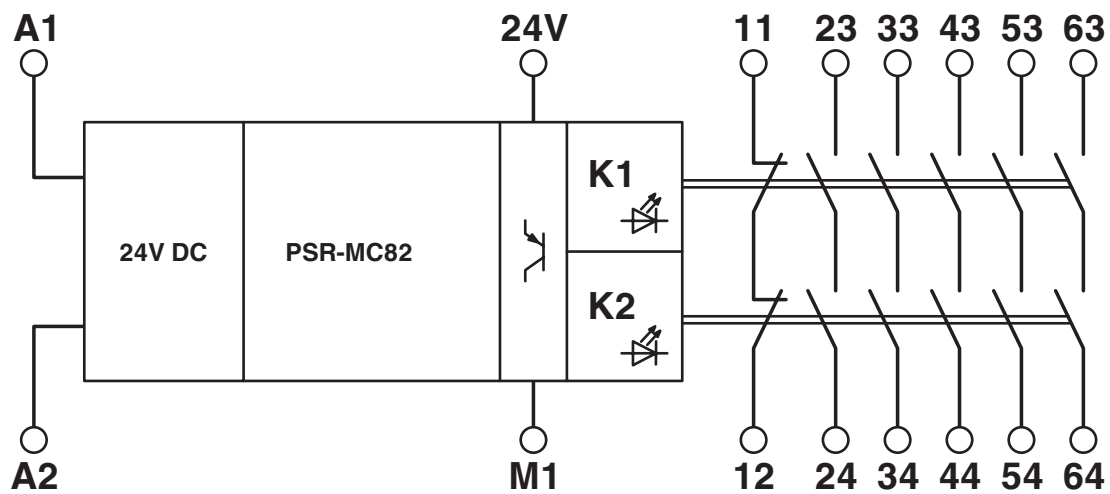
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Drawings

Circuit diagram



Block diagram



Block diagram

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Approvals


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 **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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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

<https://www.phoenixcontact.com/us/products/1212034>



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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