

## Extension module - PSR-MC82-5NO-1NC-1DO-24DC-SP - 2702383

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


The figure shows a version with a screw connection

### Your advantages

- ✓ Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061 in conjunction with suitable evaluation device
- ✓ Low housing width of just 17.5 mm
- ✓ One or two-channel activation
- ✓ 5 enabling current paths, 1 confirmation current path, 1 digital signal output
- ✓ Automatic activation
- ✓ Time saving push-in connection, tools not required
- ✓ Potentials can be easily looped through – ideal for BUS applications
- ✓ Intuitive use through colour coded actuation lever
- ✓ Can be combined with the MSTB 2,5 range
- ✓ Quick and convenient testing using integrated test option



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 145488
GTIN	4055626145488
Weight per Piece (excluding packing)	210.100 g
Custom tariff number	85371098
Country of origin	Germany

### Technical data

Note

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### Technical data

#### Note

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

Width	17.5 mm
Height	116.6 mm
Depth	114.5 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 80 °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)

#### Power supply

Designation	A1/A2
Rated control circuit supply voltage $U_s$	24 V DC -20 % / +25 %
	19.2 V DC ... 30 V DC
Rated control supply current $I_s$	typ. 80 mA
Power consumption at $U_s$	typ. 1.92 W
Inrush current	30 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)
	Deactivate the switch-on pulses for safety applications.
Protective circuit	Surge protection Suppressor diode
	Reverse polarity protection Universal diode

#### Relay outputs: enabling current path

Output name	Enabling current paths
	23/24 ... 63/64
Output description	safety-related N/O contacts
Number of outputs	5 (undelayed)
Contact 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)
Limiting continuous current	6 A (observe derating)

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#### Relay outputs: enabling current path

Inrush current	min. 10 mA
	max. 6 A
Sq. Total current	64 A <sup>2</sup> (observe derating)
Switching capacity	min. 50 mW
Switching frequency	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 outputs: return current/signaling current path

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

#### Alarm outputs

Designation	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
Maximum inrush current	500 mA (Δt = 1 ms at U <sub>S</sub> )
Short-circuit protection	Yes

#### Times

Typical pickup time at US	< 50 ms (when controlled via A1/A2)
Typical response time at US	< 50 ms
Typical release time at US	< 25 ms (when controlled via A1/A2)
Recovery time	< 100 ms

#### General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Nominal operating mode	100% operating factor

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### General

Net weight	210.1 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing color	yellow
Status display	2 x green LEDs

### Connection capacity

Connection method	Push-in spring connection
pluggable	Yes
Conductor cross section solid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (only together with CRIMPFOX 6)
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (only together with CRIMPFOX 6)
Stripping length	8 mm

### Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High demand
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
Rated insulation voltage	250 V AC
	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV between all current paths
	Basic insulation 4 kV between all current paths and housing
	Safe isolation, reinforced insulation 6 kV between input circuits and enabling current paths 33/34, 43/44, and 63/64
Degree of pollution	2
Overvoltage category	III

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## Technical data

### Standards and Regulations

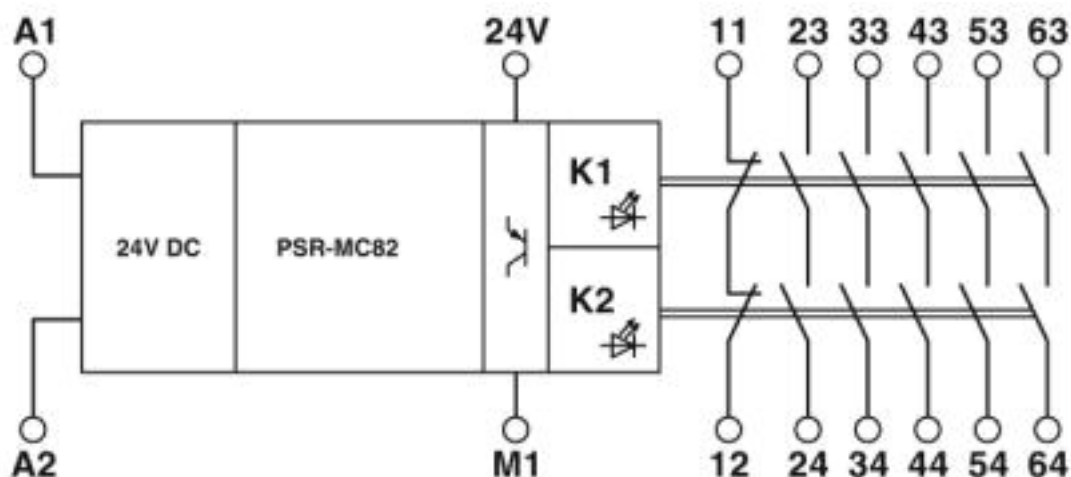
Shock	15g (In the event of stress caused by shock, contact reactions are possible for up to 6 ms.)
Vibration (operation)	10 Hz ... 150 Hz, 2g (In the event of stress caused by vibration, contact reactions are possible for up to 1 ms.)
Conformance	CE-compliant

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

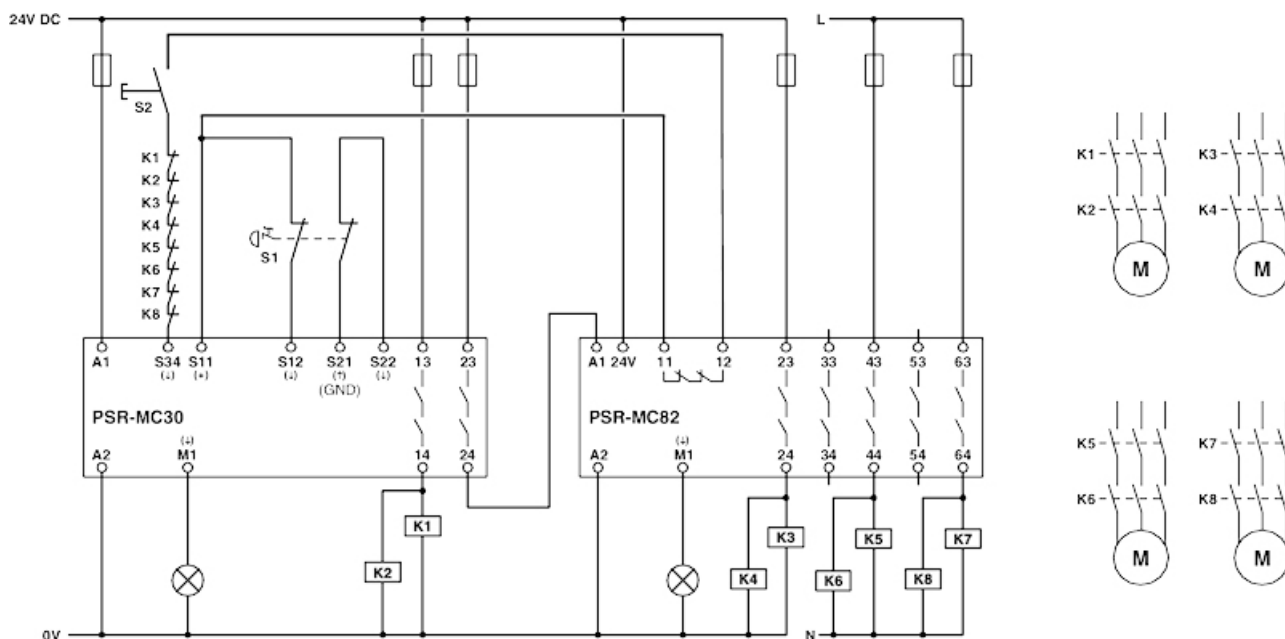
## Drawings

Block diagram



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Circuit diagram



## 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 3.0	EC001449
ETIM 4.0	EC001449

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## Classifications

### ETIM

ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449

### UNSPSC

UNSPSC 13.2	39121501
UNSPSC 18.0	39122205
UNSPSC 19.0	39122205
UNSPSC 20.0	39122205
UNSPSC 21.0	39122205

## Approvals

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#### Approvals

UL Listed / cUL Listed / Functional Safety / 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			44-205-15124303
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cULus Listed			
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