

## Extension module - PSR-M-EF6-SDOR4-SC - 1104982

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Safe extension module with 4 safe relay outputs, 4 reset inputs, TBUS interface, up to SILCL 3, cat. 4/PL e, SIL 3, pluggable screw terminal block, TBUS connector included

### Product Description


The configurable and individually scalable PSRmodular safety system is a flexible safety solution for monitoring your machine or system. The safe extension module provides the system with additional safe relay outputs.

### Your advantages

- ✓ Economical safety solution with a high level of adaptability to individual requirements
- ✓ Fast startup, thanks to easy hardware and software configuration
- ✓ Machine downtime minimized with comprehensive, easy-to-understand diagnostics
- ✓ Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- ✓ Suitable for lift applications according to EN 81-20
- ✓ Narrow housing width of just 22.6 mm



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 971278
GTIN	4055626971278
Weight per Piece (excluding packing)	240.000 g
Custom tariff number	85371098
Country of origin	Italy

### Technical data

#### Dimensions

Width	22.61 mm
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### Technical data

#### Dimensions

Height	112.58 mm
Depth	113.6 mm

#### Power supply

Designation	A1/A2
Rated control circuit supply voltage $U_S$	24 V DC -20 % / +20 % (external fuse, typically 4 A)
	19.2 V DC ... 28.8 V DC
Rated control supply current $I_S$	typ. 120 mA
Power consumption at $U_S$	typ. 2.88 W
Inrush current	2 A ( $\Delta t = 1$ ms at $U_S$ )
Filter time	typ. 5 ms (at A1 in the event of voltage dips at $U_S$ )
Protective circuit	Serial protection against polarity reversal
	Suppressor diode

#### Digital inputs

Input name	Reset inputs
	FBK1, FBK2, FBK3, FBK4
Description of the input	IEC 61131-2 type 3
Number of inputs	4
Input voltage range "0" signal	0 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 28.8 V DC
Input current range "0" signal	< 1 mA
Current consumption	typ. 10 mA (typically with $U_S$ )
	max. 13 mA (at a control voltage of 28.8 V DC)
Filter time	250 ms $\pm$ 2 ms (Test pulse rate > 500 ms)
Max. permissible overall conductor resistance	1.2 k $\Omega$ (Input and reset circuit at $U_S$ )
Cable length	max. 100 m (per input)
Protective circuit/component	Suppressor diode

#### Relay outputs: enabling current path

Output name	Enabling current paths
	13_NO1/14_NO1, 23_NO2/24_NO2, 33_NO3/34_NO3, 43_NO4/44_NO4
Output description	safety-related N/O contacts
Number of outputs	4 (1 NO per output)
Contact type	4 safe outputs
Switching voltage	min. 10 V AC/DC
	max. 250 V AC/DC (Observe the load curve)
Limiting continuous current	4 A (observe derating)
Inrush current	min. 20 mA

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#### Relay outputs: enabling current path

	max. 6 A
Sq. Total current	64 A <sup>2</sup> (for 4x single-channel, observe derating)
	32 A <sup>2</sup> (for 2x two-channel, observe derating)
Switching capacity	min. 200 mW
Switching frequency	0.5 Hz
Mechanical service life	40x 10 <sup>6</sup> switching cycles
Switching capacity according to IEC 60947-5-1	3 A (250 V (AC15))
	2 A (24 V (DC13))
Output fuse	4 A gL/gG

#### Times

Response time	see user manual
Restart time	min. 5 s (Boot time)
	max. 10 s (Boot time)

#### General

Nominal operating mode	100% operating factor
Net weight	204 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Assembly instructions	Observe derating
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Protection class	III (EN 50178)
Housing material	Polyamide PA non-reinforced
Housing color	yellow
Operating voltage display	1 x green LED
Status display	4 x LED (yellow)
	4 x LED (green, yellow, red)
	1 x LED (green), 2 x LED (orange)
Indication	2 x LED (red)

#### Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid	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

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#### Connection data

Stripping length	7 mm
Screw thread	M3
Torque	0.5 Nm ... 0.6 Nm

#### Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High-demand for 2-channel wiring
Safety Integrity Level (SIL)	3
Designation	IEC 61508 - High-demand for 1-channel wiring
Safety Integrity Level (SIL)	1
Designation	EN ISO 13849
Performance level (PL)	e (2-channel wiring)
	c (1-channel wiring)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	3 (2-channel wiring)
	1 (1-channel wiring)

#### Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	EN 50178
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV between all current paths and housing
Degree of pollution	2
Overvoltage category	II
Conformance	CE-compliant

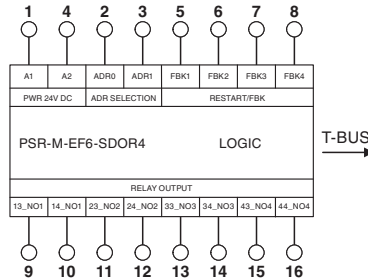
#### Environmental Product Compliance

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

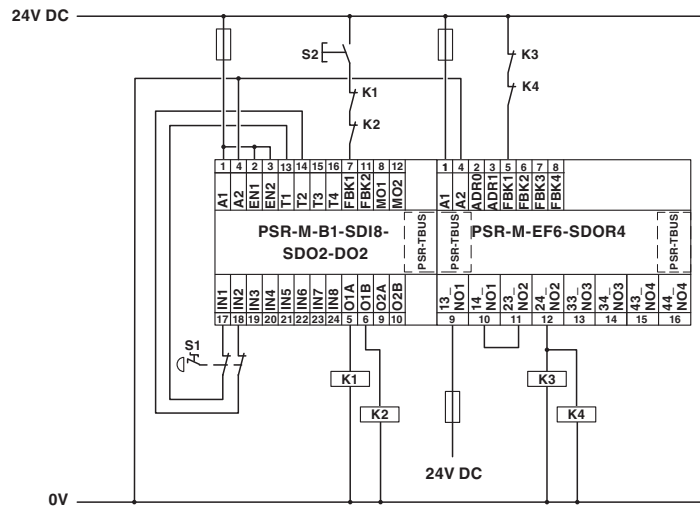
### Drawings

# Extension module - PSR-M-EF6-SDOR4-SC - 1104982

Block diagram



Application drawing



## Classifications

eCl@ss

eCl@ss 10.0.1	27371819
eCl@ss 11.0	27371819
eCl@ss 9.0	27371819

## Approvals

Approvals

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## Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

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Ex Approvals

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## 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 238705
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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 238705
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cULus Listed			
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## Accessories

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Coding element

Coding profile - CP-MSTB - 1734634

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



Coding section - CR-MSTB - 1734401

Coding section, inserted into the recess in the header or the inverted plug, red insulating material



