

# PSR-M-EF6-SDOR4-PI - Extension module



1104983

<https://www.phoenixcontact.com/us/products/1104983>

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Safe extension module with 4 safe relay outputs, 4 reset inputs, TBUS interface, up to SIL 3, Cat. 4/PL e, pluggable Push-in 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

- Cost-effective safety solution with a high level of adaptability to individual requirements
- Fast startup, thanks to easy hardware and software configuration
- Machine downtimes minimized with comprehensive, easy-to-understand diagnostics
- Tool-free and time-saving installation thanks to Push-in technology
- Low housing width of just 22.6 mm
- Up to Cat. 4/PL e in accordance with ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508
- Suitable for elevator applications in accordance with EN 81-20

## Commercial data

Item number	1104983
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN02
Product key	DNA362
GTIN	4055626973425
Weight per piece (including packing)	226 g
Weight per piece (excluding packing)	192 g
Customs tariff number	85371098
Country of origin	IT

## Technical data

### Notes

#### Note on application

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

Product type	Safety device
Application	Safe shutdown
Control	1 and 2 channel

#### Insulation characteristics

Protection class	III
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#### Insulation characteristics

Overvoltage category	II
Degree of pollution	2

#### Times

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

### Electrical properties

Maximum power dissipation for nominal condition	7.07 W
Nominal operating mode	100% operating factor
Interfaces	DIN rail TBUS for connection to the master module, supplied as standard
Rated surge voltage/insulation	Basic insulation 4 kV between all current paths and housing

#### Supply

Designation	A1/A2
Rated control circuit supply voltage $U_S$	19.2 V DC ... 28.8 V DC
Rated control circuit supply voltage $U_S$	24 V DC -20 % / +20 % (external fuse, typically 4 A)
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

### Input data

#### Digital: Reset inputs (FBK1, FBK2, FBK3, FBK4)

Description of the input	IEC 61131-2 Type 2
Number of inputs	4
Input voltage range "0" signal	0 V DC ... 5 V DC

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Input voltage range "1" signal	11 V DC ... 28.8 V DC
Input current range "0" signal	< 1 mA
Filter time	250 ms ±2 ms (Test pulse rate > 500 ms)
Cable length	max. 100 m (per input)
Max. permissible overall conductor resistance	1.2 kΩ (Input and reset circuit at U <sub>S</sub> )
Current consumption	typ. 10 mA (typ. with U <sub>S</sub> ) max. 13 mA (at a control voltage of 28.8 V DC)

## Output data

Relay: 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 switching type	4 safe outputs
Switching voltage	min. 10 V AC/DC max. 250 V AC/DC (Observe the load curve)
Switching capacity	min. 200 mW
Inrush current	min. 20 mA max. 6 A
Limiting continuous current	4 A (observe derating)
Sq. Total current	64 A <sup>2</sup> (with 4 x 1-channel, observe derating) 32 A <sup>2</sup> (for 2 x 2-channel, observe derating)
Switching frequency	0.5 Hz
Mechanical service life	40x 10 <sup>6</sup> switching cycles
Output fuse	4 A gL/gG

## Connection data

Connection technology

pluggable	yes
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Conductor connection

Connection method	Push-in 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 ... 14
Stripping length	10 mm

## Signaling

Status display	4 x LED (yellow) 4 x LED (green, red) 1 x LED (green), 2 x LED (orange)
Operating voltage display	1 x LED (green)
Error indication	2 x LED (red)

## Dimensions

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Width	22.61 mm
Height	107.74 mm
Depth	113.6 mm

## Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	Polyamide PA non-reinforced

## Characteristics

### Safety data

Stop category	0
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### Safety data: EN ISO 13849

Performance level (PL)	e (2-channel wiring)
	c (1-channel wiring)

### Safety data: IEC 61508 - High-demand for 2-channel wiring

Safety Integrity Level (SIL)	3
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### Safety data: IEC 61508 - High-demand for 1-channel wiring

Safety Integrity Level (SIL)	1
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### Safety data: EN IEC 62061

Safety Integrity Level (SIL)	3 (2-channel wiring)
	1 (1-channel wiring)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-10 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-20 °C ... 85 °C
Maximum altitude	≤ 2000 m (Above sea level)
Max. permissible humidity (storage/transport)	95 % (non-condensing)
Max. permissible relative humidity (operation)	95 % (non-condensing)
Shock	10g for $\Delta t = 16$ ms (continuous shock, 1000 shocks in each space direction)
Vibration (operation)	10 Hz ... 150 Hz, amplitude 0.15 mm, 2g

## Approvals

### CE

Identification	CE-compliant
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## Mounting

Mounting type	DIN rail mounting
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Assembly note	Observe derating
Mounting position	vertical or horizontal

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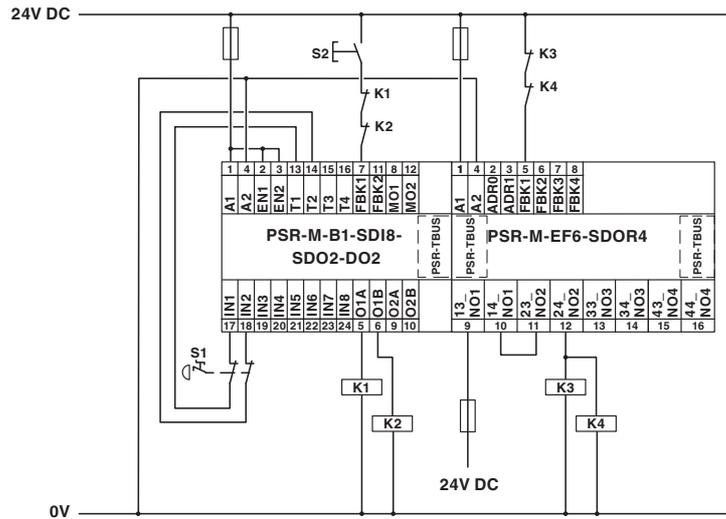


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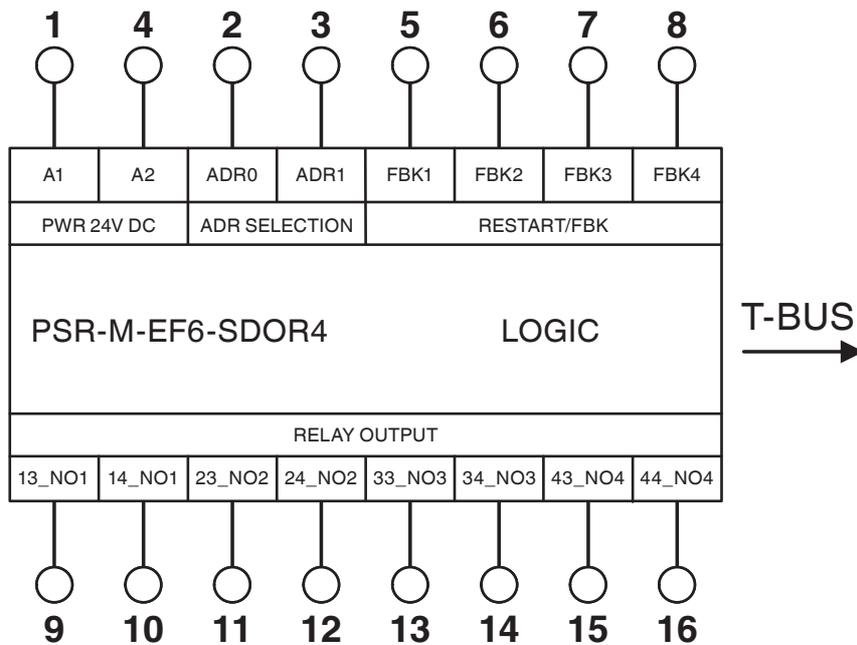
## Drawings

Application drawing



## Example application

Block diagram



## Block diagram

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1104983>



### Functional Safety

Approval ID: Z10 029429 0013



### cULus Listed

Approval ID: E238705

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## Classifications

### ECLASS

ECLASS-13.0	27371819
ECLASS-15.0	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, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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