

# IB IL 24 PSDOR 4-PAC - Safety module



2985864

<https://www.phoenixcontact.com/in/products/2985864>

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Safety-related decentralized relay output module, IP20 degree of protection, for SafetyBridge, INTERBUS-Safety, and PROFIsafe systems. The module has four safe relay outputs, each with two contacts.

## Product Description

The safety module is an output module from the Inline product range designed for use at any point within a SafetyBridge, INTERBUS-Safety or PROFIsafe system. The transmission speed can be set to 500 kBaud or 2 Mbaud on the safety module using a switch. One transmission speed must be used consistently within a station. The module has four safe relay outputs, each with two relay contacts.

## Your advantages

- SIL 3 according to IEC 61508/EN 61508
- SIL 3 in accordance with EN 62061
- PL e in accordance with EN ISO 13849-1

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2985864             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales Key                            | DNA                 |
| Product Key                          | DNA432              |
| Catalog Page                         | Page 268 (C-6-2019) |
| GTIN                                 | 4046356131599       |
| Weight per Piece (including packing) | 461.5 g             |
| Weight per Piece (excluding packing) | 386 g               |
| Customs tariff number                | 85389091            |
| Country of origin                    | DE                  |

## Technical Data

### Dimensions

|                    |                    |
|--------------------|--------------------|
| Width              | 73.2 mm            |
| Height             | 119.8 mm           |
| Depth              | 71.5 mm            |
| Note on dimensions | Housing dimensions |

### Interfaces

#### Inline local bus

|                    |                                     |
|--------------------|-------------------------------------|
| No. of channels    | 2                                   |
| Connection method  | Inline data jumper                  |
| Transmission speed | 500 kbps / 2 Mbps (can be switched) |

### System properties

#### Module

|                             |   |
|-----------------------------|---|
| ID code (dec.)              | 167                                     |
| ID code (hex)               | A7                                      |
| Length code (hex)           | 04                                      |
| Length code (dec)           | 04                                      |
| Process data channel        | 8 Byte                                  |
| Input address area          | 8 Byte ((Operating mode: SafetyBridge)) |
| Output address area         | 8 Byte ((Operating mode: SafetyBridge)) |
| Register length             | 8 Byte                                  |
| Required parameter data     | 1 Byte ((Operating mode: SafetyBridge)) |
| Required configuration data | 5 Byte ((Operating mode: SafetyBridge)) |

### Output data

#### Relay

|                   |   |
|-------------------|---|
| Number of outputs | 4 (Safety relays with 2 floating contacts each) |
| Connection method | Spring-cage connection                          |
| Contact type      | N/O contact                                     |

### Product properties

|                |                                |
|----------------|--------------------------------|
| Type           | modular                        |
| Product type   | I/O component                  |
| Product family | Inline                         |
| Application    | Functional safety<br>PROFIsafe |

### Electrical properties

|   |       |
|---|-------|
| Maximum power dissipation for nominal condition | 8.7 W |
|---|-------|

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|  |  |
|--|--|
| Transmission medium                          | Copper   |
| Potentials: Communications power ( $U_L$ )   |  |
| Supply voltage                               | 7.5 V DC (see safety data)   |
| Current draw                                 | max. 360 mA  |
| Potentials: Main circuit supply ( $U_M$ )    |  |
| Supply voltage                               | 24 V DC  |
| Supply voltage range                         | 19.2 V DC ... 30 V DC (including all tolerances, including ripple)     |
| Current draw                                 | max. 0.03 A<br>typ. 30 mA (all outputs set including actuator current) |
| Potentials: Segment circuit supply ( $U_S$ ) |  |
| Supply voltage                               | 24 V   |
| Supply: Module electronics                   |  |
| Supply voltage                               | 24 V DC (via voltage jumper)   |
| Supply voltage range                         | 19.2 V DC ... 30 V DC  |

## Connection data

### Connection technology

|                 |                  |
|-----------------|------------------|
| Connection name | Inline connector |
| pluggable       | yes              |

### Conductor connection

|                                  |   |
|----------------------------------|---|
| Connection method                | Spring-cage connection                      |
| Conductor cross section rigid    | 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      | 24 ... 16                                   |

### Inline connector

|                                   |   |
|-----------------------------------|---|
| Connection method                 | Spring-cage connection                      |
| Conductor cross section, rigid    | 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       | 24 ... 16                                   |

## Environmental and real-life conditions

### Ambient conditions

|  |   |
|--|---|
| Ambient temperature (operation)          | -25 °C ... 55 °C  |
| Degree of protection                     | IP20  |
| Air pressure (operation)                 | 80 kPa ... 108 kPa (up to 2000 m above sea level)   |
| Air pressure (storage/transport)         | 66 kPa ... 108 kPa (up to 3500 m above sea level)   |
| Ambient temperature (storage/transport)  | -25 °C ... 70 °C  |
| Permissible humidity (operation)         | 10 % ... 85 % (Take suitable measures against increased air humidity within the permitted temperature range.) |
| Permissible humidity (storage/transport) | 10 % ... 85 % (Take suitable measures against increased air humidity within the permitted temperature range.) |

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## Standards and regulations

Protection class

I (IEC 61140, EN 61140, VDE 0140-1)

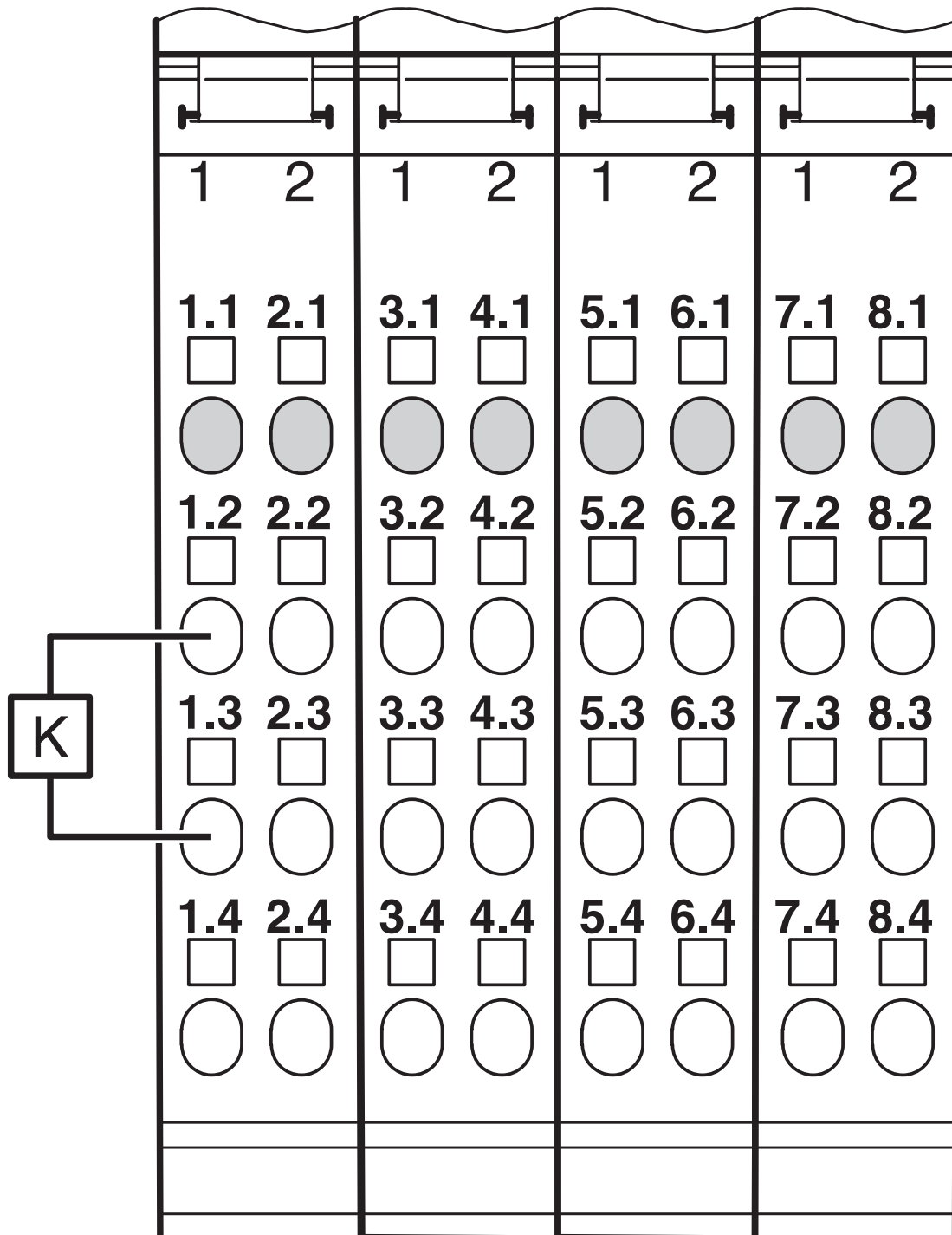
## Mounting

Mounting type

DIN rail mounting

Drawings

Connection diagram



Example connection of a contactor

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## Approvals



**UL Listed**

Approval ID: FILE E 140324



**cUL Listed**

Approval ID: FILE E 140324



**Functional Safety**

Approval ID: 968/FSP 2449.00/22



**Functional Safety**

Approval ID: 968/EZ 650.04/20



**Functional Safety**

Approval ID: 968/EZ 650.04/20

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27242604 |
| ECLASS-12.0 | 27242604 |
| ECLASS-13.0 | 27242604 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC001599 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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## Environmental Product Compliance

|            |  |
|------------|--|
| REACH SVHC | Lead 7439-92-1   |
| China RoHS | Environmentally Friendly Use Period = 50 years   |
|            | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |



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## Accessories

### IB IL 24 SDOR 4-PLSET/CP - Connector set

2916914

<https://www.phoenixcontact.com/in/products/2916914>

Connector set (yellow), color coded, for safe SDOR boards.



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### IB IL FIELD 2 - Labeling field

2727501

<https://www.phoenixcontact.com/in/products/2727501>

Labeling field, width: 12.2 mm



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## IB IL FIELD 8 - Labeling field

2727515

<https://www.phoenixcontact.com/in/products/2727515>

Labeling field, width: 48.8 mm



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## ESL 62X10 - Insert strip

0809492

<https://www.phoenixcontact.com/in/products/0809492>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems:  
Laser printer, mounting type: insert, lettering field size: 62 x 10 mm, Number of  
individual labels: 72



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## ESL 62X46 - Insert strip

0809502

<https://www.phoenixcontact.com/in/products/0809502>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems: Laser printer, mounting type: insert, lettering field size: 62 x 46 mm, Number of individual labels: 15



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## COM CAB MINI DIN - Connecting cable

2400127

<https://www.phoenixcontact.com/in/products/2400127>

Connecting cable, for connecting the controller to a PC (RS-232) for PC WORX with flow control, 3 m in length



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