

# IB IL 24 SDI 8-PAC - Safety module



2985657

<https://www.phoenixcontact.com/us/products/2985657>

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Safe, decentral, digital input module, IP20 degree of protection for the Inline product range. This module has four safe digital inputs with two-channel occupancy or eight safe digital inputs with single-channel occupancy.

## Product description

The safety module is an input module from the Inline product range and can be used in an INTERBUS-Safety system. The safety module can be used as a part of an Inline station at any point within an INTERBUS-Inline system. The transmission speed of the safety module can be set to 500 kBaud or 2 Mbaud using a switch. Only one transmission speed must be used uniformly within an INTERBUS system. The module has four safe digital inputs with two-channel occupancy or eight safe digital inputs with single-channel occupancy.

The parameters of the inputs can be set in accordance with the application and make it possible to integrate sensors in the safe INTERBUS (INTERBUS-Safety).

In an INTERBUS Safety system, you can achieve the following safety integrity by using the safety module depending on the installation and parameterization:

- Up to category 4 according to the EN 954-1 standard
- Up to SIL 3 according to the standards EN 61508 and EN 62061
- Up to PL e according to the prEN ISO 13849-1 standard

The input data is exchanged between the safe INTERBUS controller and the module using safe messages (see UM DE INTERBUS-SAFETY SYS).

## Your advantages

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

## Commercial data

Item number	2985657
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DN03
Product key	DNA421
GTIN	4046356131629
Weight per piece (including packing)	243.1 g
Weight per piece (excluding packing)	216.11 g
Customs tariff number	85389091
Country of origin	DE

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## Technical data

### Dimensions

Width	48.8 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Material specifications

Color	yellow
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### Interfaces

#### Inline local bus

Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps (can be switched)

### System properties

#### Programming data

ID code (dec.)	175
Process data channel	see safety data

### Input data

#### Digital:

Input name	Digital inputs
Number of inputs	4 (for 2-channel assignment) 8 (for 1-channel assignment)
Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor
Input voltage	24 V DC (parameterizable; see technical data.)
Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Typical response time	See technical data

### Product properties

Product type	I/O component
Product family	Inline
Application	IB-Safety

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Type	modular
Diagnostics messages	Short-circuit or overload of the digital outputs Error message in diagnostics code (bus) and display by means of the LED on the motor

## Electrical properties

Maximum power dissipation for nominal condition	150 W
Transmission medium	Copper

### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC (see safety data)
Current draw	max. 230 mA (see safety data)

### Potentials: Main circuit supply ( $U_M$ )

Supply voltage	24 V DC (see safety data)
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### Potentials: Segment circuit supply ( $U_S$ )

Supply voltage	24 V (see safety data)
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### Supply: Module electronics

Supply voltage	24 V DC (via voltage jumper)
Supply voltage range	19.2 V DC ... 30 V DC

### Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply, incoming remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply, outgoing remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V supply (bus logics)/24 V supply (I/O)	500 V AC, 50 Hz, 1 min
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min

## Connection data

### Connection technology

Connection name	Inline connector
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### 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 hPa ... 108 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	66 hPa ... 108 kPa (up to 3000 m above sea level)

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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.)

## Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	DIN rail mounting
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## Environmental product compliance

EU REACH SVHC

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