

# IB IL 24 LPSDO 8 V3-PAC - Safety module



2701625

<https://www.phoenixcontact.com/in/products/2701625>

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Safety-related digital output module, IP20 protection, for the SafetyBridge system. The module has four safe digital outputs with two-channel occupancy or 8 safe digital outputs with single-channel occupancy

## Product Description

The safety module is an output module from the Inline product range designed for use in a SafetyBridge system. The safety module can be used as part of an Inline station at any point within an INTERBUS, EtherCAT®, DeviceNet™, CANopen®, EtherNet/IP™, Sercos, Modbus, PROFINET or PROFIBUS system. The transmission speed of the safety module can be set to 500 kBaud or 2 Mbaud using a switch. One transmission speed must be used consistently within a station. The module has four safe digital outputs for two-channel assignment or eight safe digital outputs for single-channel assignment.

## Your advantages

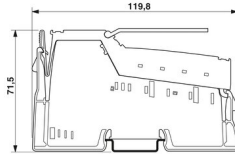
- SIL 3 in accordance with EN 62061
- SIL 3 according to IEC 61508/EN 61508
- PL e in accordance with EN ISO 13849-1
- Processing of the parameterized safety logic
- Generation and monitoring of the SafetyBridge protocol

## Commercial Data

Item number	2701625
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DNA
Product Key	DNA411
Catalog Page	Page 265 (C-6-2019)
GTIN	4046356770033
Weight per Piece (including packing)	343.04 g
Weight per Piece (excluding packing)	343 g
Customs tariff number	85389091
Country of origin	DE

## Technical Data

### Dimensions

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

### Interfaces

#### Inline local bus

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

### System properties

#### SafetyBridge properties

Connection to I/O modules	max. 16 (safe digital I/O modules)
Logic memory	60 kByte

#### Module

ID code (dec.)	171
ID code (hex)	AB
Length code (hex)	18
Length code (dec)	24
Process data channel	48 Byte
Input address area	48 Byte ((Operating mode: SafetyBridge 24 words))
Output address area	48 Byte ((Operating mode: SafetyBridge 24 words))
Register length	48 Byte
Required parameter data	1 Byte ((Operating mode: SafetyBridge 24 words))
Required configuration data	5 Byte ((Operating mode: SafetyBridge 24 words))

### Output data

#### Digital

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor 4 (for 2-channel assignment)

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Number of outputs	8 (for 1-channel assignment)
	8
Protective circuit	Overload protection, short-circuit protection of outputs
Output voltage	24 V DC ( $U_S - 1$ V)
Output current	max. 6 A (Total current of all outputs, -25 °C ... 50 °C)
	max. 4 A (Total current of all outputs, >50 °C ... 55 °C)
Maximum output current per group	3 A
Maximum output current per channel	2 A
Nominal output voltage	24 V DC
Nominal load, inductive	see safety data
Nominal load, lamp	see safety data
Nominal load, ohmic	see safety data
Behavior with inductive overload	Output can be destroyed

## Product properties

Type	modular
Product type	I/O component
Product family	Inline
Application	Functional safety
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
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### 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)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 6.03 A
	typ. 30 mA (all outputs set including actuator current)

### 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

## Connection data

### Connection technology

Connection name	Inline connector
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pluggable	yes
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## 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.)

## Standards and regulations

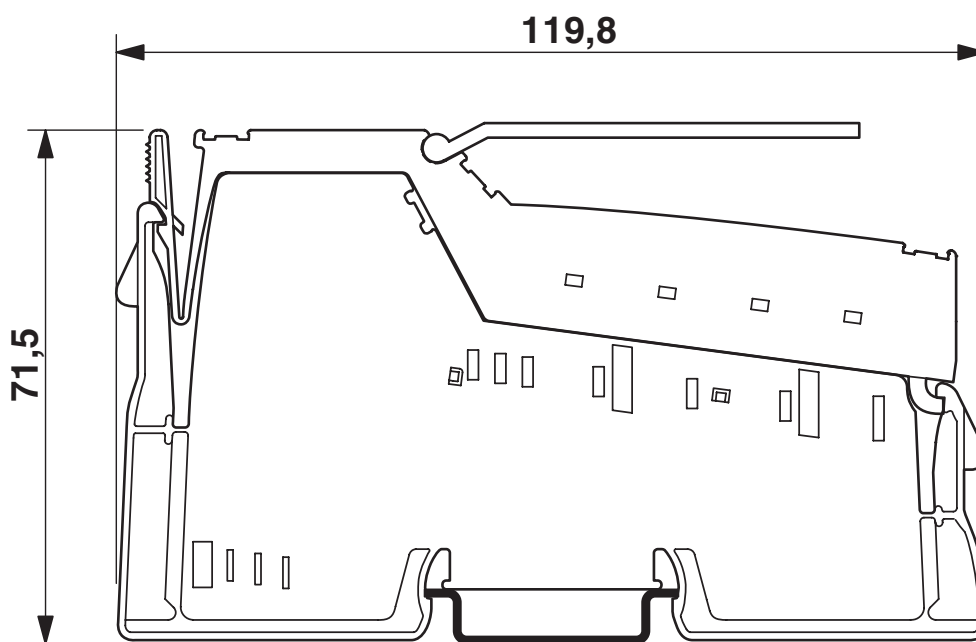
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	DIN rail mounting
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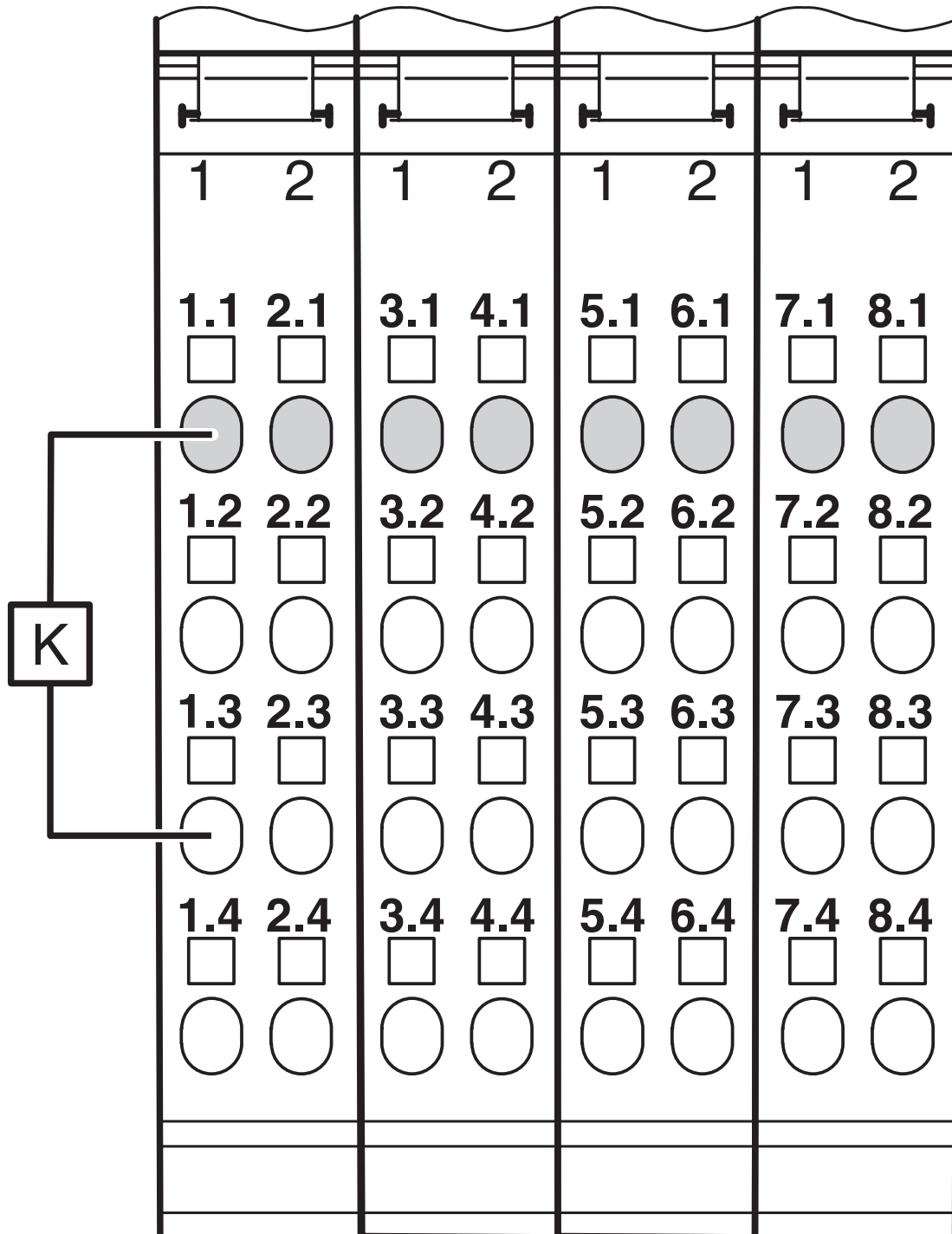
## Drawings

Dimensional drawing



Dimensions (in mm)

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



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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC001599
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### 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

### PSR-FTB/20/86 - Filter terminal block

2904477

<https://www.phoenixcontact.com/in/products/2904477>



Terminal block for filtering test pulses from safe semiconductor outputs with adjustable filter values (20  $\mu$ F/86  $\mu$ F), as well as for EMC filtering of 24 V signals up to an amperage of 2 A.

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### PSR-FTB/1.5/11.5 - Filter terminal block

2904476

<https://www.phoenixcontact.com/in/products/2904476>



Terminal block for filtering test pulses from safe semiconductor outputs with adjustable filter values (1.5  $\mu$ F/11.5  $\mu$ F), as well as for EMC filtering of 24 V signals up to an amperage of 2 A.

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## IB IL 24 SDO 8-PLSET/CP - Connector set

2916927

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



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