

# IB IL 24 PSDO 4/4-PAC - Safety module



2916493

<https://www.phoenixcontact.com/us/products/2916493>

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Safety digital output module, IP20 degree of protection, for the SafetyBridge-, INTERBUS-Safety- and the PROFIsafe system. It has four safe digital outputs which include one positive and one negative switching output each depending on the parameterization.

## 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 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 four digital outputs for single-channel assignment.

## 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	2916493
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA431
GTIN	4046356286626
Weight per piece (including packing)	355.4 g
Weight per piece (excluding packing)	247.7 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

### Notes

#### Note on application

Note on application	Only for industrial use
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### Material specifications

Color (Housing)	yellow (RAL 1018)
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### Interfaces

#### Inline local bus

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

### System properties

#### Programming data (LocalbusSlave)

Length code (hex)	04
ID code (dec.)	167
Length code (dec)	04
Process data channel	8 Byte ((Operating mode: SafetyBridge))
Input address area	8 Byte ((Operating mode: SafetyBridge))
Output address area	8 Byte ((Operating mode: SafetyBridge))
Parameter channel (PCP)	0 Byte ((Operating mode: SafetyBridge))
Register length (bus)	8 Byte ((Operating mode: SafetyBridge))

#### Fieldbus data telegram

Required parameter data	1 Byte ((Operating mode: SafetyBridge))
Required configuration data	5 Byte ((Operating mode: SafetyBridge))

## Output data

### Digital:

Output name	Digital outputs
Output description	+/- switching
Connection method	Spring-cage connection
Connection technology	2-, 3-conductor
Number of outputs	4 (for 2-channel assignment, +/- switching)
	4 (for 1-channel assignment, + switching)
	4
Protective circuit	Overload protection, short-circuit protection of outputs
Output voltage	24 V DC ( $U_S - 1$ V)
Output current	max. 3 A (Total current of all outputs)
Maximum output current per channel	2 A
Max. current carrying capacity per output	See technical data
Maximum output current per module	3 A (See technical data)
Nominal output voltage	24 V DC
Behavior with inductive overload	Output can be destroyed

## Product properties

Product type	I/O component
Product family	Inline
Application	Functional safety
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

Transmission medium	Copper
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### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC (see safety data)
Current draw	max. 230 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. 3.03 A
	typ. 30 mA (all outputs set including actuator current)

### Potentials: Segment circuit supply ( $U_S$ )

Supply voltage	24 V
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### Supply: Module electronics

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

### Inline connector

Connection method	Spring-cage connection
pluggable	yes
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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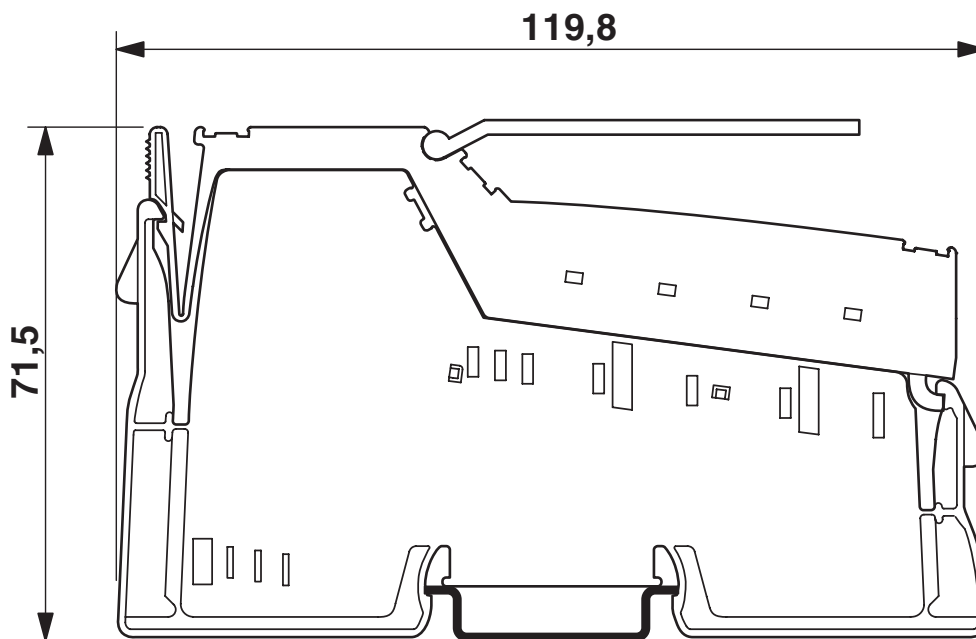


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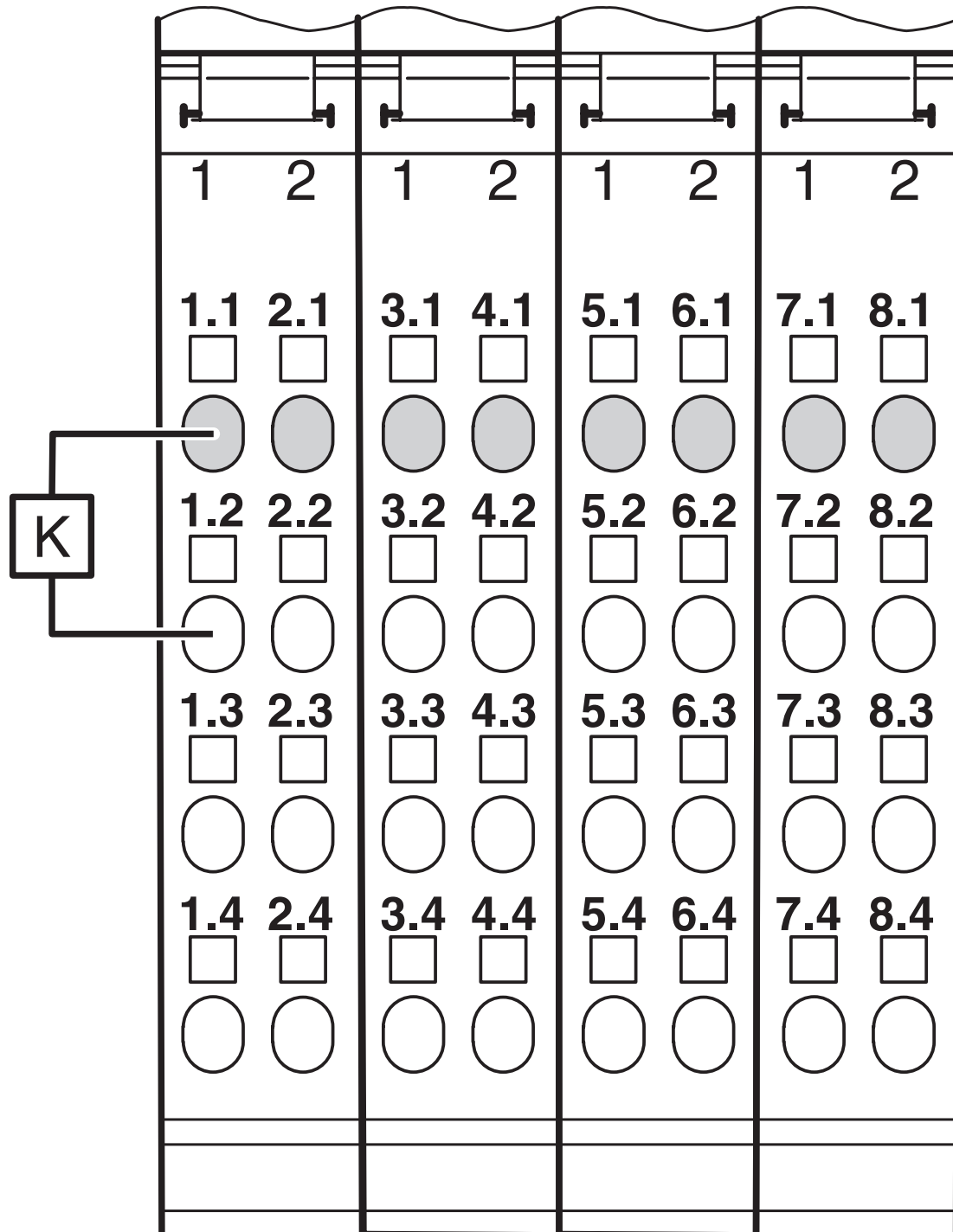
## Drawings

Dimensional drawing



Dimensions (in mm)

Connection diagram



Example connection of a contactor

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2916493>

### PROFIsafe

Approval ID: Z20080



### cULus Listed

Approval ID: E140324



### Functional Safety

Approval ID: 968/FSP 2449.00/22

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## Classifications

### ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604
ECLASS-15.0 ASSET	27250101

### ETIM

ETIM 10.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	f250c5bb-1062-4e9b-a2bf-64f5b8acc7c2

### EF3.1 Climate Change

CO2e kg	13.158 kg CO2e
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