

# Safety module - IB IL 24 PSDO 4/4-PAC - 2916493

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Safety digital output module, IP20 degree of protection, for the 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 in an INTERBUS-Safety or PROFIsafe system. The safety module can be used as part of an Inline station at any point within an INTERBUS-Safety or PROFIsafe 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 a station.

The module has 4 safe digital outputs which includes one positive and one negative switching output depending on the parameterization. The outputs can be parameterized according to the application and enable the integration of actuators in the safe INTERBUS system (INTERBUS-Safety) and in the PROFIsafe system. Depending on the installation and parameterization, in these systems the safety module can achieve the following safety integrity:

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

## Product Features

- SIL 3 according to IEC 61508/EN 61508
- SIL CL 3 according to IEC 62061/DIN EN 62061
- PL e according to EN ISO 13849-1

## Key commercial data

GTIN	 4 046356 286626
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## Technical data

### Note:

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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### Interface

Fieldbus system	INTERBUS
Name	Inline local bus
Connection method	Inline data jumper
Transmission speed	500 kbaud/2 Mbaud, can be selected

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## Technical data

### Interface

Transmission speed	500 kBit/s / 2 MBit/s
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### Digital outputs

Output name	Digital outputs
Output description	+/- switching
Connection method	Spring-cage connection
Connection method	2, 3, 4-wire
Number of outputs	4 (for two-channel assignment, +/- switching)
Number of outputs	4
Protective circuit	Overload protection, short-circuit protection of outputs
Output voltage	24 V DC ( $U_S - 1 V$ )
Nominal output voltage	24 V DC
Output current	max. 3 A (Total current of all outputs)
Maximum output current per channel	2 A
Maximum output current per module	3 A (See technical data)

### Power supply for module electronics

Supply voltage	24 V DC (via voltage jumper)
Supply voltage range	19.2 V DC ... 30 V DC
Communications power $U_L$	7.5 V (via voltage jumper)
Current consumption	max. 230 mA (from the local bus)

### General data

Width	48.8 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions
Weight	200 g
Note on weight specifications	with male connectors
Mounting type	DIN rail
Ambient temperature (operation)	-25 °C ... 55 °C
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.)
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 mean sea level)
Degree of protection	IP20
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

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## Technical data

### General data

Test section	5 V supply, incoming remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min
Test section	5 V supply, outgoing remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min
Test section	7.5 V supply (bus logics)/24 V supply (I/O) 500 V AC 50 Hz 1 min
Test section	24 V supply (I/O) / functional earth ground 500 V AC 50 Hz 1 min
Category according to EN 13849-1	4
Diagnostics messages	Short-circuit / overload of the digital outputs Error message in diagnostics code (bus) and display by means of the LED on the motor

### Inline potential routing

Communications power $U_L$	7.5 V DC (see safety data)
Current consumption from $U_L$	max. 230 mA
Main circuit supply $U_M$	24 V DC
Supply voltage range $U_M$	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current consumption from $U_M$	typ. 30 mA (all outputs set including actuator current)
Current consumption from $U_M$	max. 3.03 A
Segment supply voltage $U_S$	24 V

## Classifications

### ETIM

ETIM 2.0	EC001433
ETIM 3.0	EC001617
ETIM 4.0	EC001599
ETIM 5.0	EC001599

### UNSPSC

UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	43201404
UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404

### eCl@ss

eCl@ss 4.0	27250308
eCl@ss 4.1	27250308
eCl@ss 5.0	27250308
eCl@ss 5.1	27242904

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## Classifications

eCl@ss

eCl@ss 6.0	27242604
eCl@ss 7.0	27242604

## Approvals

Approvals

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Approvals

UL Listed / cUL Listed / UL Listed / cUL Listed / Functional Safety / Functional Safety / cULus Listed

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Ex Approvals


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Approvals submitted


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## Approval details

UL Listed 

cUL Listed 

UL Listed 

cUL Listed 

Functional Safety

Functional Safety

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## Approvals



## Accessories

Accessories

Marking

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



Labeling field - IB IL FIELD 8 - 2727515

Labeling field, width: 48.8 mm



Insert strip - ESL 62X10 - 0809492

Insert strip, Sheet, white, Unlabeled, Can be labeled with: Office-Drucksysteme, Plotter: Laser printer, Mounting type: Insert, Lettering field: 62 x 10 mm



Insert strip - ESL 62X46 - 0809502

Insert strip, Sheet, white, Unlabeled, Can be labeled with: Office-Drucksysteme, Plotter: Laser printer, Mounting type: Insert, Lettering field: 62 x 46 mm



Plug/Adapter

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### Accessories

Connector set - IB IL 24 SDO 4/4-PLSET/CP - 2916053



Connector set (yellow), color coded, for safe SDO 4/4 boards.

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User manual - UM QS EN IB IL 24 PSDX - S7 - 2910648



User manual, English

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User manual - UM QS DE IB IL 24 PSDX - S7 - 2910651



User manual, german

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