

# Safety module - IB IL 24 PSDOR 4-PAC - 2985864

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Safety-oriented decentral relay output module, IP20 degree of protection, for the INTERBUS-Safety and the PROFIsafe system. This module has four safe digital relay outputs, each having two contacts.

## 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 four safe digital relay outputs, each with two relay contacts. 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.

The safety-related segment circuit can be switched on or off using suitable wiring.

When the output is switched off, the supply to the subsequent modules is disconnected safely.

The module also has two clock outputs with assigned alarm inputs for monitoring external contact extensions.

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 131599
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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

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## Technical data

### Interface

Transmission speed	500 kbaud/2 Mbaud, can be selected
Transmission speed	500 kBit/ / 2 MBit/s

### Digital outputs

Output name	Relay output
Connection method	Spring-cage connection
Connection method	2, 3, 4-wire
Number of outputs	4 (Safety relays)
Output voltage	24 V DC ( $U_S - 1 V$ )
Nominal output voltage	24 V DC (Inline connector)
Output current	max. 4 A (Inline connector, pro contact, observe derating)
Output current	max. 6 A (COMBICON connector, pro contact, observe derating)
Maximum output current per channel	4 A

### 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. 360 mA (from the local bus)

### General data

Width	73.2 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions
Weight	310 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	I, IEC 61140, EN 61140, VDE 0140-1
Test section	5 V supply, incoming remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min

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## Technical data

### General data

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 ( $U_M$ , $U_S$ ), GND, clock outputs/7.5 V supply (bus logic), relay outputs 500 V AC 50 Hz 1 min
Test section	COMBICON X3 relay outputs/COMBICON X4 relay outputs, Inline connector relay outputs, 7.5 V supply (bus logic), 24 V supply ( $U_M$ , $U_S$ ), GND, clock outputs, FE 2500 V AC 50 Hz 1 min
Test section	COMBICON X4 relay outputs/COMBICON X3 relay outputs, Inline connector relay outputs, 7.5 V supply (bus logic), 24 V supply ( $U_M$ , $U_S$ ), GND, clock outputs, 2500 V AC 50 Hz 1 min
Category according to EN 13849-1	4

### Inline potential routing

Communications power $U_L$	7.5 V DC (see safety data)
Current consumption from $U_L$	max. 360 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. 0.03 A
Segment supply voltage $U_S$	24 V

## Classifications

### ETIM

ETIM 3.0	EC001599
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	27240404
eCl@ss 4.1	27240404
eCl@ss 5.0	27242204

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## Classifications

eCl@ss

eCl@ss 5.1	27242604
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 / 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

# Safety module - IB IL 24 PSDOR 4-PAC - 2985864

## 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

## Safety module - IB IL 24 PSDOR 4-PAC - 2985864

### Accessories

Connector set - IB IL 24 SDOR 4-PLSET/CP - 2916914



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

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User manual - UM DE IB IL 24 PSDOR 4-PAC - 2910716



User manual, german

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User manual - UM EN IB IL 24 PSDOR 4-PAC - 2910729



User manual, English

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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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