

## Safety module - IB IL 24 LPSDO 8 V3-PAC - 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 technology system. The safety module can be used as part of an Inline station at any point within an INTERBUS, 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. Depending on the installation and parameterization, in the SafetyBridge system the safety module can achieve the following safety integrity:

- Up to SIL 3 according to standard EN 61508
- Up to SIL CL 3 according to standard EN 62061
- Up to Cat. 4/PL e according to standard EN ISO 13849-1

### Product Features

- Generation and monitoring of the SafetyBridge protocol
- Processing of the parameterized safety logic

### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	360.0 g
Custom tariff number	85389091
Country of origin	Germany

### Technical data

#### Note

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

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

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## Technical data

### Ambient conditions

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

### Interfaces

Fieldbus system	INTERBUS
Designation	Inline local bus
Connection method	Inline data jumper
Transmission speed	500 kBit/s / 2MBit/s (can be switched)

### Digital outputs

Output name	Digital outputs
Connection method	Spring-cage connection
	2, 3, 4-wire
Number of outputs	4 (with two-channel assignment)
	8
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. 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 channel	2 A
Maximum output current per group	3 A
Nominal load, inductive	see safety data
Nominal load, lamp	see safety data
Nominal load, ohmic	see safety 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

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## Technical data

### General

Mounting type	DIN rail
Net weight	355.2 g
Note on weight specifications	with connectors
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 potentials

Communications power $U_L$	7.5 V DC (see safety data)
Current consumption from $U_L$	max. 230 mA (see safety data)
Main circuit supply $U_M$	24 V DC (see safety data)
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)
	max. 6.03 A
Segment circuit supply $U_S$	24 V (see safety data)

### SafetyBridge properties

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

### Safety-related characteristic data

Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	EN ISO 13849
Performance level (PL)	max. e (two channel; dependent in parameterization and wiring)
Category	max. 4 (two channel; dependent in parameterization and wiring)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	max. 3 (two channel; dependent in parameterization and wiring)

### Standards and Regulations

Test section	5 V supply, incoming remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min.
	5 V supply, outgoing remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min.
	7.5 V supply (bus logics)/24 V supply (I/O) 500 V AC 50 Hz 1 min.
	24 V supply (I/O) / functional earth ground 500 V AC 50 Hz 1 min.
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

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## Classifications

### eCl@ss

eCl@ss 4.0	27240409
eCl@ss 4.1	27240409
eCl@ss 5.0	27242205
eCl@ss 5.1	27242605
eCl@ss 6.0	27242605
eCl@ss 7.0	27242605
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

### ETIM

ETIM 3.0	EC001599
ETIM 4.0	EC002498
ETIM 5.0	EC001599

### UNSPSC

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

## Approvals

### Approvals

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#### Approvals

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

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### Approvals

UL Listed 

cUL Listed 

Functional Safety

cULus Listed 