

Safety module - IB IL 24 LPSDO 8-PAC - 2916024

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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 and is used in a SafetyBridge system. The safety module can be used as a part of an Inline station at any point within an INTERBUS, PROFINET or PROFIBUS 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 outputs with two-channel occupancy or eight safe digital outputs with single-channel occupancy. In the SafetyBridge system, you can achieve the following safety integrity by using this safety module depending on the installation and parameterization:


- up to category 4 according to EN 954-1 standard,
- up to SIL 3 according to EN 61508 standard,
- up to SIL CL 3 according to EN 62061 standard,
- up to PL e according to EN ISO 13849-1 standard.

Your advantages

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



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 479110
GTIN	4046356479110

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
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Technical data

Dimensions

Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

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 hPa ... 108 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	66 hPa ... 108 kPa (up to 3500 m above sea level)
Degree of protection	IP20

Interfaces

Designation	Inline local bus
No. of channels	2
Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps

Digital outputs

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	2, 3, 4-wire
Number of outputs	4 (with two-channel assignment) 8 (for single-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
Behavior with inductive overload	Output can be destroyed

Power supply for module electronics

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

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Technical data

General

Mounting type	DIN rail
Color	yellow
Net weight	246.5 g
Note on weight specifications	with connectors
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

Inline potentials

Designation	Communications power (U_L)
Supply voltage	7.5 V DC (see safety data)
Current consumption	max. 230 mA (see safety data)
Designation	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 consumption	typ. 30 mA (all outputs set including actuator current)
	max. 6.03 A
Designation	Segment circuit supply (U_S)
Supply voltage	24 V (see safety data)

SafetyBridge properties

Connection to I/O modules	max. 3 (safe digital input modules)
Logic memory	6 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

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

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Classifications

eCl@ss

eCl@ss 10.0.1	27242604
eCl@ss 4.0	27240400
eCl@ss 4.1	27240400
eCl@ss 5.0	27250600
eCl@ss 5.1	27242900
eCl@ss 6.0	27242600
eCl@ss 7.0	27242604
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

ETIM

ETIM 3.0	EC001599
ETIM 4.0	EC001599
ETIM 5.0	EC001599
ETIM 6.0	EC001599
ETIM 7.0	EC001599

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	32151602
UNSPSC 18.0	32151602
UNSPSC 19.0	32151602
UNSPSC 20.0	32151602
UNSPSC 21.0	32151602

Approvals

Approvals

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

Ex Approvals

Approval details

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Approvals

Functional Safety		968/EZ 424.05/17
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UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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Functional Safety		968/EZ 424.05/17
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cULus Listed	
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Accessories

Accessories

Connector set

Connector set - IB IL 24 SDO 8-PLSET/CP - 2916927



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

Labeling panel

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



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Accessories

Labeling field - IB IL FIELD 8 - 2727515

Labeling field, width: 48.8 mm



Parameterization memory

Program / configuration memory - SD FLASH 2GB EASY SAFE BASIC - 2403297



Program and configuration memory, plug-in, 2 GB, with license key and application program for easy web-based configuration and startup of a SafetyBridge solution.

Program / configuration memory - SD FLASH 2GB EASY SAFE PRO - 2403298



Program and configuration memory, plug-in, 2 GB, with license key and application program for easy web-based configuration and startup of a SafetyBridge solution including communication via Modbus/TCP, PROFINET, and e-mail.

Terminal marking

Insert strip - ESL 62X10 - 0809492



Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems: Laser printer, mounting type: insert, lettering field size: 62 x 10 mm, Number of individual labels: 72

Insert strip - ESL 62X46 - 0809502



Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems: Laser printer, mounting type: insert, lettering field size: 62 x 46 mm, Number of individual labels: 120

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