Safety module - IB IL 24 LPSDO 8-PAC

2916024

https://www.phoenixcontact.com/us/products/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
- SIL 3 in accordance with EN 62061
- PL e in accordance with EN ISO 13849-1

Commercial Data

Item number	2916024
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C18
Product Key	DNA411
Catalog Page	Page 43 (AX-2011)
GTIN	4046356479110
Weight per Piece (including packing)	351.3 g
Weight per Piece (excluding packing)	246.5 g
Customs tariff number	85389091
Country of origin	DE

Technical Data

Dimensions

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

Material specifications

Color	yellow

Interfaces

Inline local bus

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

System properties

SafetyBridge properties

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

Module

ID code (dec.)	199
ID code (hex)	C7
Length code (hex)	12
Length code (dec)	18
Process data channel	30 Byte
Input address area	max. 30 Byte ((Operating mode: SafetyBridge))
Output address area	max. 30 Byte ((Operating mode: SafetyBridge))
Register length	32 Byte
Required parameter data	1 Byte ((Operating mode: SafetyBridge))
Required configuration data	5 Byte ((Operating mode: SafetyBridge))

Output data

Digital

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor
Number of outputs	4 (for 2-channel assignment)
	8 (for 1-channel assignment)
Number of outputs	8
Protective circuit	Overload protection, short-circuit protection of outputs

Output voltage	24 V DC (U_S - 1 V)
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 group	3 A
Maximum output current per channel	2 A
Nominal output voltage	24 V DC
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

Product properties

Type	modular
Product type	I/O component
Application	Functional safety
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

Maximum power dissipation for nominal condition	150 W
Transmission medium	Copper

Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (see safety data)
Current draw	max. 230 mA (see safety data)

Potentials: 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 draw	max. 6.03 A
	typ. 30 mA (all outputs set including actuator current)

Potentials: Segment circuit supply (U_S)

Supply voltage	24 V (see safety data)

Supply: Module electronics

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

Connection data

Connection technology

Connection name	Inline connector
pluggable	yes

Conductor connection

Connection method	Spring-cage connection

Conductor cross section solid	0.2 mm² ... 1.5 mm²
Conductor cross section flexible	0.2 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16

Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.2 mm² ... 1.5 mm²
Conductor cross section, flexible	0.2 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16

Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
Degree of protection	IP20
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)
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)

Mounting

Mounting type	DIN rail mounting

Approvals

UL Listed
Approval ID: FILE E 140324

cUL Listed
Approval ID: FILE E 140324

Functional Safety
Approval ID: 968/FSP 2449.00/22

Functional Safety
Approval ID: 968/FSP 2449.00/22

cULus Listed

Classifications

ECLASS

ECLASS-9.0	27242604
ECLASS-10.0.1	27242604
ECLASS-11.0	27242604

ETIM

ETIM 8.0	EC001599

UNSPSC

UNSPSC 21.0	32151600

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”

Accessories

Connector set

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

https://www.phoenixcontact.com/us/products/2916927

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

Labeling field

Labeling field - IB IL FIELD 2 - 2727501

https://www.phoenixcontact.com/us/products/2727501

Labeling field, width: 12.2 mm

Labeling field

Labeling field - IB IL FIELD 8 - 2727515

https://www.phoenixcontact.com/us/products/2727515

Labeling field, width: 48.8 mm

Insert strip

Insert strip - ESL 62X10 - 0809492

https://www.phoenixcontact.com/us/products/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

Insert strip - ESL 62X46 - 0809502

https://www.phoenixcontact.com/us/products/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: 15

Program / configuration memory

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

https://www.phoenixcontact.com/us/products/2403297

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

Program / configuration memory

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

https://www.phoenixcontact.com/us/products/2403298

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

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