IB IL 24 LPSDO 8 V3-PAC - Safety module

2701625

https://www.phoenixcontact.com/au/products/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 system. The safety module can be used as part of an Inline station at any point within an INTERBUS, EtherCAT®, 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.

Your advantages

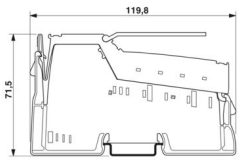
- SIL 3 in accordance with EN IEC 62061
- SIL 3 according to IEC/EN 61508
- PL e in accordance with EN ISO 13849-1
- Processing of the parameterized safety logic
- Generation and monitoring of the SafetyBridge protocol

Commercial data

Item number	2701625
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNA411
Product key	DNA411
Catalog page	Page 265 (C-6-2019)
GTIN	4046356770033
Weight per piece (including packing)	343.04 g
Weight per piece (excluding packing)	343 g
Customs tariff number	85389091
Country of origin	DE

Technical data

Dimensions

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

Notes

Note on application

Note on application	Only for industrial use

Interfaces

Inline local bus

Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps (can be switched)

System properties

SafetyBridge properties

Connection to I/O modules	max. 16 (safe digital I/O modules)
Logic memory	30 kByte

Module

ID code (dec.)	171
ID code (hex)	AB
Length code (hex)	18
Length code (dec)	24
Process data channel	48 Byte
Input address area	48 Byte ((Operating mode: SafetyBridge 24 words))
Output address area	48 Byte ((Operating mode: SafetyBridge 24 words))
Register length	48 Byte
Required parameter data	1 Byte ((Operating mode: SafetyBridge 24 words))
Required configuration data	5 Byte ((Operating mode: SafetyBridge 24 words))

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)
	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

Product type	I/O component
Product family	Inline
Application	Functional safety
Type	modular
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

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

Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply, incoming remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply, outgoing remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V supply (bus logics)/24 V supply (I/O)	500 V AC, 50 Hz, 1 min
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min

Connection data

Connection technology

Connection name	Inline connector
pluggable	yes

Conductor connection

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

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

Environmental and real-life conditions

Ambient conditions

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

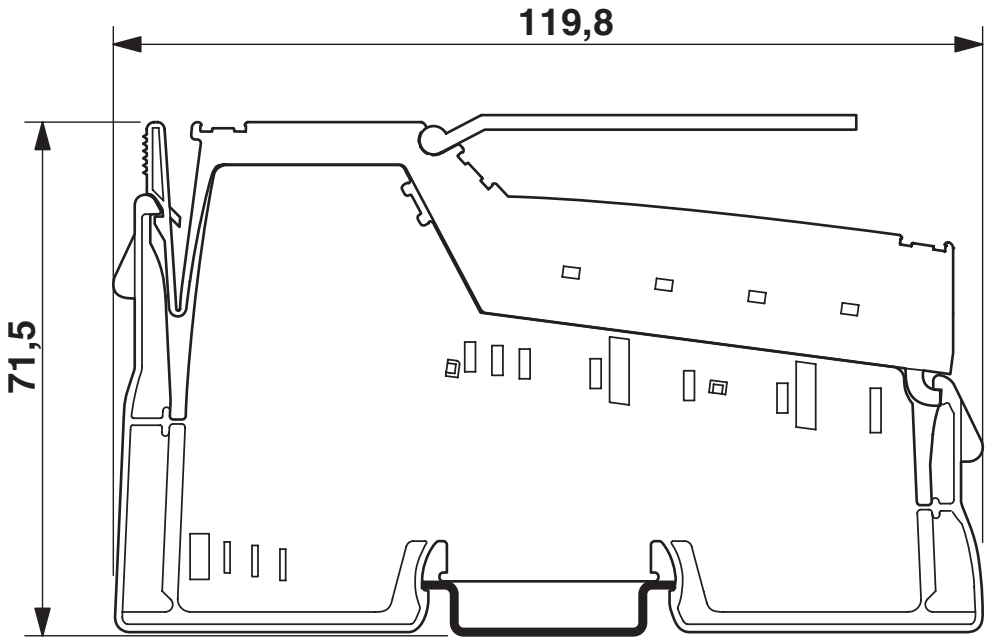
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Mounting

Mounting type	DIN rail mounting

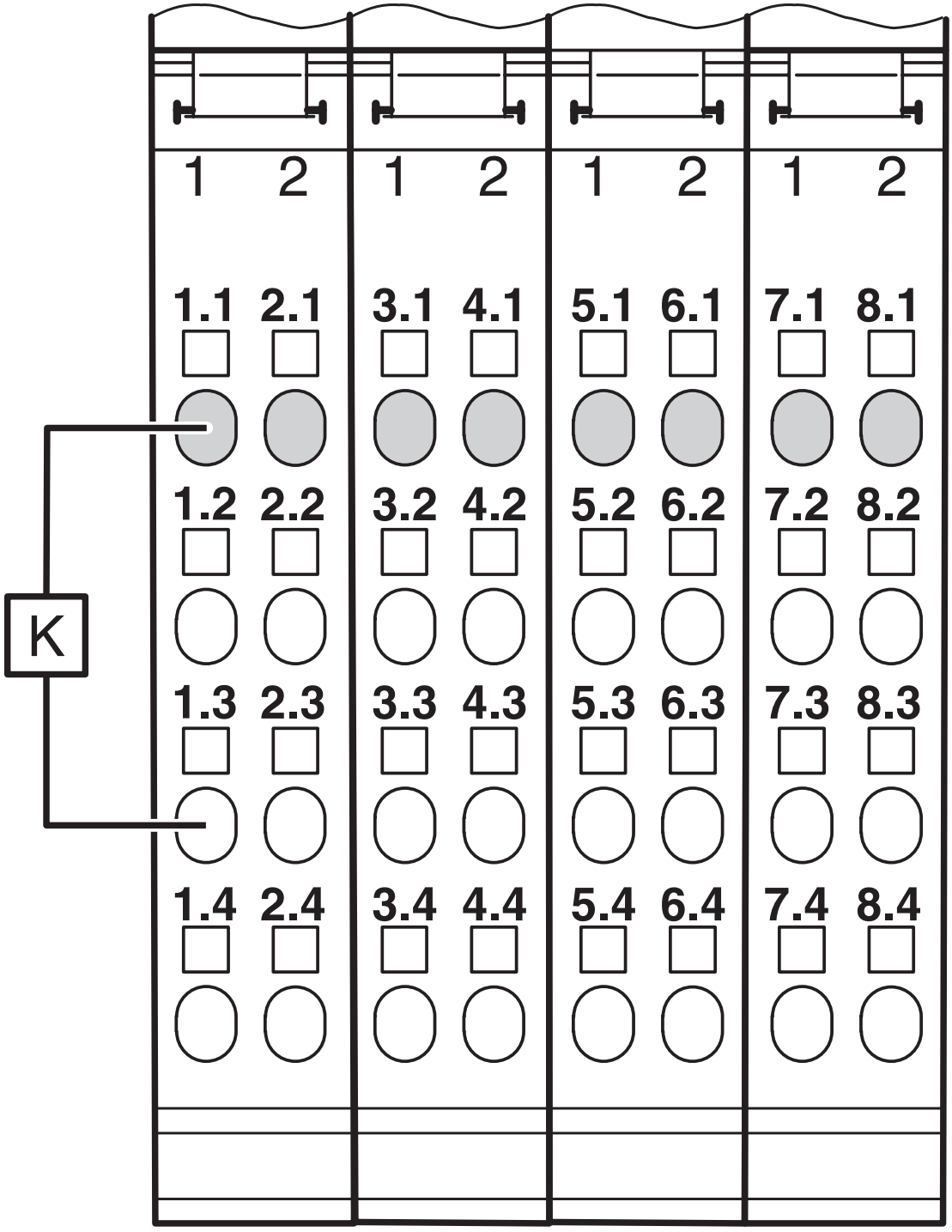
Drawings

Dimensional drawing



Dimensions (in mm)

Connection diagram



Example connection of a contactor

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/au/products/2701625

Functional Safety
Approval ID: 968/FSP 2449.00/22

cULus Listed
Approval ID: E140324

Classifications

ECLASS

ECLASS-13.0	27242604

ETIM

ETIM 9.0	EC001599

UNSPSC

UNSPSC 21.0	32151600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	6cffb74e-0982-416f-940f-b72e41aba8b5

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