IB IL 24 LPSDO 8 V2-PAC - Safety module

2700606

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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

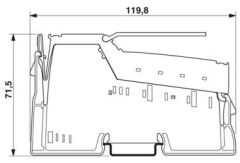
- Generation and monitoring of the SafetyBridge protocol
- Processing of the parameterized safety logic
- SIL 3 in accordance with EN IEC 62061
- SIL 3 according to IEC/EN 61508
- PL e in accordance with EN ISO 13849-1

Commercial data

Item number	2700606
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA411
GTIN	4046356585859
Weight per piece (including packing)	341.1 g
Weight per piece (excluding packing)	341.1 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	Only for industrial use
Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Mounting

Mounting type	DIN rail mounting

Material specifications

Color (Housing)	yellow (RAL 1018)
Material	PBT
Flammability rating according to UL 94	V-0

Interfaces

Inline local bus

No. of channels	2
Connection method	Inline data jumper
Transmission speed	500 kbps / 2 Mbps (can be switched)

System properties

SafetyBridge properties

Connection to I/O modules	max. 5 (safe digital I/O modules)
Logic memory	24 kByte

Programming data

Length code (hex)	18
ID code (dec.)	171

Length code (dec)	24
Process data channel	48 Byte ((Operating mode: SafetyBridge 24 words))
Input address area	48 Byte ((Operating mode: SafetyBridge 24 words))
Output address area	48 Byte ((Operating mode: SafetyBridge 24 words))
Parameter channel (PCP)	0 Byte ((Operating mode: SafetyBridge 24 words))
Register length (bus)	48 Byte ((Operating mode: SafetyBridge 24 words))

Fieldbus data telegram

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
Design of digital output	Semiconductor
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
	SafetyBridge technology
Type	modular
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)
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

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

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

Inline connector

Connection method	Spring-cage connection
pluggable	yes
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)

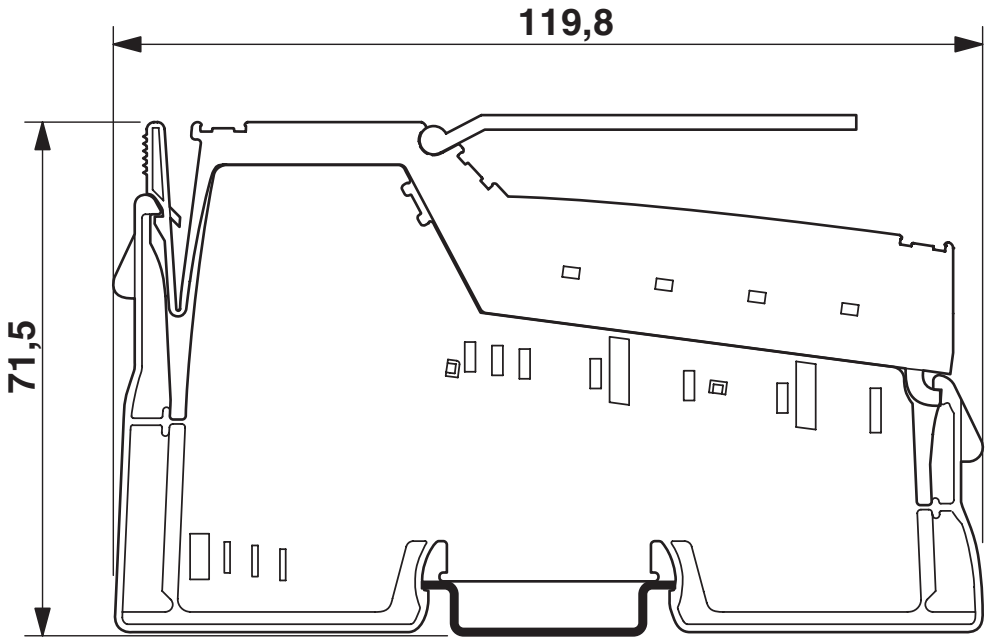
Characteristics

Safety data: EN ISO 13849

Performance level (PL)	max. e (two channel; dependent in parameterization and wiring)

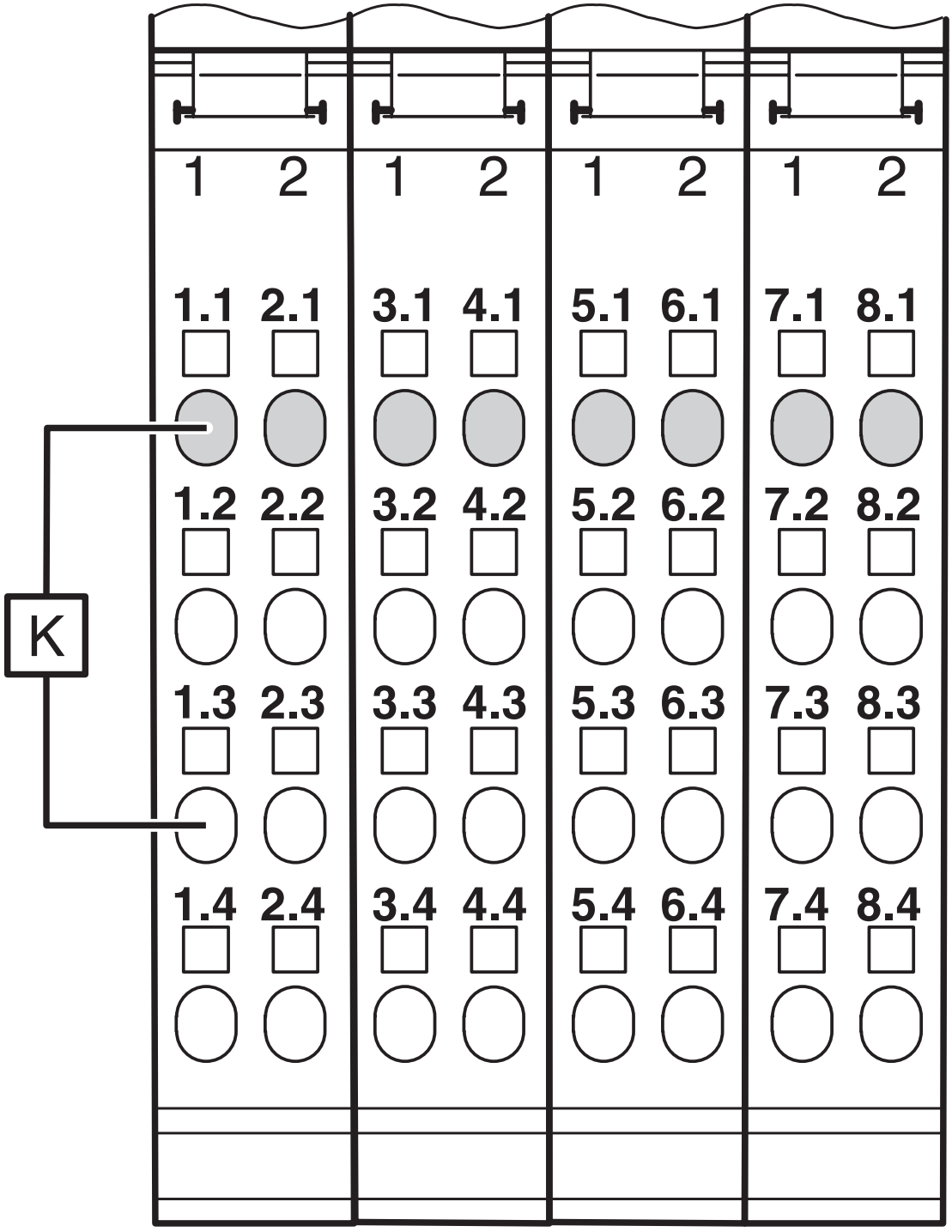
Drawings

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/us/products/2700606

cULus Listed
Approval ID: E140324

Functional Safety
Approval ID: 968/FSP 2449.00/22

Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0 ASSET	27250101
ECLASS-15.0	27242604

ETIM

ETIM 10.0	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	fda748a5-8db0-4947-9b3d-802f6fb43a8f

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