

Safety module - IB IL 24 PSDO 8-PAC

2985631

<https://www.phoenixcontact.com/us/products/2985631>



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Safety-related digital output module, IP20 degree of protection, for SafetyBridge, INTERBUS-Safety, and PROFIsafe systems. The module has four safe digital outputs for two-channel assignment or eight safe digital outputs for single-channel assignment

Product Description

The safety module is an output module from the Inline product range designed for use at any point within a SafetyBridge, INTERBUS-Safety or PROFIsafe 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 digital outputs for single-channel assignment.

Your advantages

- 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	2985631
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C18
Product Key	DNA431
Catalog Page	Page 267 (C-6-2019)
GTIN	4046356131605
Weight per Piece (including packing)	341 g
Weight per Piece (excluding packing)	245.6 g
Customs tariff number	85389091
Country of origin	DE

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Technical Data

Dimensions

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

Material specifications

Color	yellow
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Interfaces

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

System properties

Module	
ID code (dec.)	167
ID code (hex)	A7
Length code (hex)	04
Length code (dec)	04
Process data channel	8 Byte
Input address area	8 Byte ((Operating mode: SafetyBridge))
Output address area	8 Byte ((Operating mode: SafetyBridge))
Register length	8 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-conductor

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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
Maximum output current per module	3 A (See technical data)
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	144 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
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)

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

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Conductor connection

Connection method	Spring-cage connection
Conductor cross section solid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16

Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16

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)
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Mounting

Mounting type	DIN rail mounting
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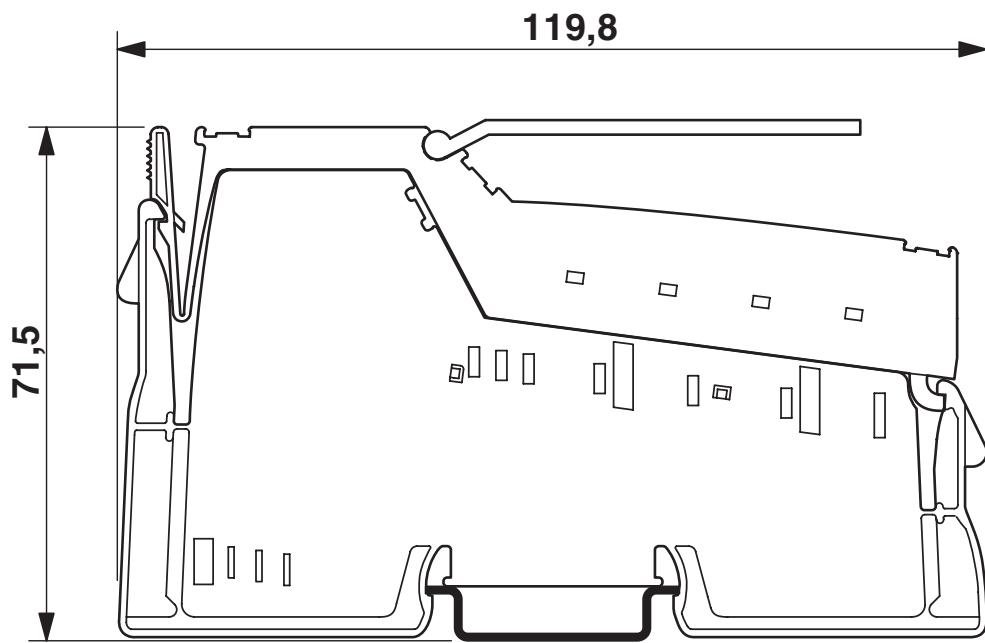
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Drawings

Dimensional drawing



Dimensions (in mm)

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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

PROFIsafe

Approval ID: Z20081



Functional Safety

Approval ID: Z20209



Functional Safety

Approval ID: 968/EZ 650.02/17



Functional Safety

Approval ID: 968/EZ 650.04/20

cULus Listed

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Classifications

ECLASS

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

ETIM

ETIM 8.0	EC001599
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UNSPSC

UNSPSC 21.0	32151600
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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"

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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



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Labeling field

Labeling field - IB IL FIELD 8 - 2727515

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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



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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



Filter terminal block

Filter terminal block - PSR-FTB/20/86 - 2904477

<https://www.phoenixcontact.com/us/products/2904477>

Terminal block for filtering test pulses from safe semiconductor outputs with adjustable filter values (20 µF/86 µF), as well as for EMC filtering of 24 V signals up to an amperage of 2 A.



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Filter terminal block

Filter terminal block - PSR-FTB/1.5/11.5 - 2904476

<https://www.phoenixcontact.com/us/products/2904476>



Terminal block for filtering test pulses from safe semiconductor outputs with adjustable filter values (1.5 μ F/11.5 μ F), as well as for EMC filtering of 24 V signals up to an amperage of 2 A.

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