IB IL 24 PSDO 4/4-PAC - Safety module

2916493

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Safety digital output module, IP20 degree of protection, for the SafetyBridge-, INTERBUS-Safety- and the PROFIsafe system. It has four safe digital outputs which include one positive and one negative switching output each depending on the parameterization.

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 four digital outputs for single-channel assignment.

Your advantages

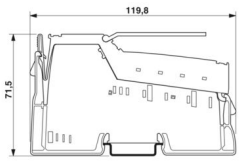
- SIL□3 according to IEC□61508/EN□61508
- SIL 3 in accordance with EN□IEC 62061
- PL e in accordance with EN ISO 13849-1

Commercial data

Item number	2916493
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA431
Catalog page	Page 267 (C-6-2019)
GTIN	4046356286626
Weight per piece (including packing)	355.4 g
Weight per piece (excluding packing)	247.7 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

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
Output description	+/- switching
Connection method	Spring-cage connection
Connection technology	2-, 3-conductor
Number of outputs	4 (for 2-channel assignment, +/- switching)
	4 (for 1-channel assignment, + switching)

	4
Protective circuit	Overload protection, short-circuit protection of outputs
Output voltage	24 V DC (U_S - 1 V)
Output current	max. 3 A (Total current of all outputs)
Maximum output current per channel	2 A
Maximum output current per module	3 A (See technical data)
Nominal output voltage	24 V DC
Behavior with inductive overload	Output can be destroyed
Output name	Digital outputs
Output description	+/- switching
Connection method	Spring-cage connection
Connection technology	2-, 3-conductor
Number of outputs	4 (for 2-channel assignment, +/- switching)
	4 (for 1-channel assignment, + switching)
	4
Protective circuit	Overload protection, short-circuit protection of outputs
Output voltage	24 V DC (U_S - 1 V)
Output current	max. 3 A (Total current of all outputs)
Maximum output current per channel	2 A
Maximum output current per module	3 A (See technical data)
Nominal output voltage	24 V DC
Behavior with inductive overload	Output can be destroyed

Product properties

Type	modular
Product type	I/O component
Product family	Inline
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	78 W
Transmission medium	Copper

Potentials: Communications power (U_L)

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

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. 3.03 A
	typ. 30 mA (all outputs set including actuator current)

Potentials: Segment circuit supply (U_S)

Supply voltage	24 V

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

Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

ETIM

ETIM 9.0	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"

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