PHŒNIX CONTACT

Safety module - IB IL 24 PSDI 16-PAC - 2700994

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Safety-related digital input module, IP20 protection, for the SafetyBridge V3 and PROFIsafe system. The module has 8 safe digital inputs for two-channel assignment or 16 safe digital inputs for single-channel assignment.

Product Description

The safety module is an input module from the Inline product range designed for use at any point within a SafetyBridge 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 eight safe digital inputs for two-channel assignment or sixteen digital inputs for single-channel assignment.

Your advantages

☑ SIL 3 according to IEC 61508/EN 61508

☑ SILCL 3 according to EN 62061

☑ PL e according to EN ISO 13849-1

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 678995
GTIN	4046356678995
Weight per Piece (excluding packing)	380.000 g
Custom tariff number	85389091
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

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Technical data

Dimensions

Width	48.8 mm
Height	141 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

Ambient conditions

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

Interfaces

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

Digital inputs

Input name	Digital inputs
Description of the input	IEC 61131-2 type 3
Connection method	Spring-cage connection
Connection technology	2, 3-wire
Number of inputs	8 (with two-channel assignment)
	16 (for single-channel assignment)
Input voltage	24 V DC (via clock outputs UT1 and UT2 or external supply)
Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Input voltage range	-3 V DC ... 30 V DC
Typical input current per channel	2.7 mA (at 24 V)

Power supply for module electronics

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

General

Mounting type	DIN rail

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Technical data

General

Net weight	222 g
Note on weight specifications	with connectors

Inline potentials

Designation	Communications power (U$_L$)
Supply voltage	7.5 V DC (see safety data)
Current consumption	max. 190 mA
Designation	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 consumption	typ. 15 mA (plus current consumption of the inputs when supplied via the clock outputs, plus current consumption of the connected initiators when via through the clock outputs)
	max. 415 mA
Designation	Segment circuit supply (U$_S$)

Safety-related characteristic data

Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	EN ISO 13849
Performance level (PL)	max. e (two channel; dependent in parameterization and wiring)
Category	max. 4 (two channel; dependent in parameterization and wiring)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	max. 3 (two channel; dependent in parameterization and wiring)

Standards and Regulations

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

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Classifications

eCl@ss

eCl@ss 4.0	27240404
eCl@ss 4.1	27240404

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Classifications

eCl@ss

eCl@ss 5.0	27242204
eCl@ss 5.1	27242600
eCl@ss 6.0	27242600
eCl@ss 7.0	27242604
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

ETIM

ETIM 2.0	EC001433
ETIM 3.0	EC001599
ETIM 4.0	EC001599
ETIM 5.0	EC001599
ETIM 6.0	EC001599
ETIM 7.0	EC001599

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	39121311
UNSPSC 12.01	39121311
UNSPSC 13.2	32151602

Approvals

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Functional Safety / Functional Safety / UL Listed / cUL Listed / PROFIsafe / Functional Safety / PROFIsafe / cULus Listed

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Ex Approvals

Approval details

Functional Safety		968/EZ 424.05/17

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Approvals

Functional Safety	FS		968/EZ 650.02/17

UL Listed	UL LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324

cUL Listed	cUL LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324

PROFIsafe	Z20122

Functional Safety	FS		968/EZ 424.05/17

PROFIsafe	Z20207

cULus Listed	c UL us LISTED	