AXL SE FSDI8/3 - Safety module

1090203

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CRA-READY



Axioline Smart Elements, Digital input module, Functional safety, Failsafe over EtherCAT®, Safe digital inputs: 4 (2-channel assignment), 8 (1-channel assignment), 24 V DC, connection technology: 3-conductor, degree of protection: IP20; The product is being prepared for compliance with the Cyber Resilience Act (CRA).

Product description

This Smart Element is a safe input module for use in an EtherCAT® system.

Your advantages

- Up to SIL 3 in accordance with EN 61508
- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061
- 8 safe inputs for 1-channel assignment
- 4 safe inputs for 2-channel assignment

ELEKTROGERÄTE RÜCKNAHME

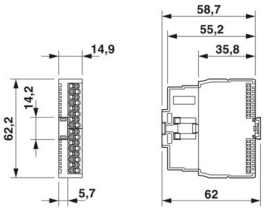
Commercial data

Item number	1090203
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNA821

Product key	DNA821
GTIN	4055626899268
Weight per piece (including packing)	48.43 g
Weight per piece (excluding packing)	36 g
Customs tariff number	85389091
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	14.9 mm
Height	62.2 mm
Depth	62 mm

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	Plug-in mounting (Smart Element slot)
Mounting position	any

Material specifications

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

Interfaces

FSoE

Number of interfaces	1
Connection method	Card edge connector

System properties

Programming data

Input address area	6 Byte (FSoE)
Output address area	6 Byte (FSoE)

Fieldbus data telegram

Required configuration data	6 Byte

Input data

Digital:

Input name	Safe digital inputs
Description of the input	EN 61131-2, type 3
Number of inputs	4 (2-channel assignment)
	8 (1-channel assignment)
Cable length	max. 200 m (200 m from the clock output to the safe input (total based on forward and return path))
Connection method	Push-in connection
Connection technology	3-conductor
Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	typ. 2.7 mA
Input filter time	1.5 ms
	3 ms (Default)
	5 ms
	15 ms
Protective circuit	Polarity reversal protection of the inputs; Diode

Product properties

Product type	I/O component
Product family	Axioline Smart Elements
Application	Functional safety
	Failsafe over EtherCAT®
Type	modular
Mounting position	any
Operating mode	FSoE
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)

Insulation characteristics

Overvoltage category	II (IEC 60664-1)
Pollution degree	2 (EN 60664-1)

Electrical properties

Maximum power dissipation for nominal condition	typ. 520 mW

Potentials

Protection	external fusing via the system in which the Smart Element is used
Protective circuit	Surge protection of the supply voltage; electronic (35 V, 0.5 s)
	Polarity reversal protection of the supply voltage; via the system in which the Smart Element is used

Potentials: Axioline F local bus supply (U_{Bus})

Supply voltage	5 V DC (via bus base module)

Current draw	max. 140 mA (at U_{Bus} 5 V DC)
	typ. 101 mA (at U_{Bus} 5 V DC)

Potentials: Communications power supply of the Smart Elements (U_{SE})

Supply voltage	using card edge connectors

Potentials: I/O supply (U_P)

Supply voltage	24 V DC (using card edge connectors)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 12 mA (Power supply from U_p with 30 V DC, all inputs set, without power supply to the sensors via clock supplies OUT_T1 and OUT_T2)
	typ. 9 mA (Power supply from U_p with 24 V DC, all inputs set, without power supply to the sensors via clock supplies OUT_T1 and OUT_T2)
Current consumption	min. 8 mA (Power supply from U_p with 19.2 V DC, all inputs set, without power supply to the sensors via clock supplies OUT_T1 and OUT_T2)
Power consumption	min. 154 mW

Connection data

Connection technology

Connection name	I/O
Note on the connection method	Note the specification in the section Conductor cross-sections, and stripping and insertion lengths.

I/O

Connection method	Push-in connection
Note on the connection method	Note the specification in the section Conductor cross-sections, and stripping and insertion lengths.
Conductor cross-section, rigid	0.25 mm² ... 1.5 mm²
Conductor cross-section, flexible	0.25 mm² ... 1.5 mm²
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP20
Degree of protection at installation location	min. IP54
Air pressure (operation)	70 kPa ... 108 kPa
Air pressure (storage/transport)	66 kPa ... 108 kPa
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Mechanical test

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	30g
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g

Standards and regulations

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

Air clearances and creepage distances

Air clearances and creepage distances	IEC 60664-1

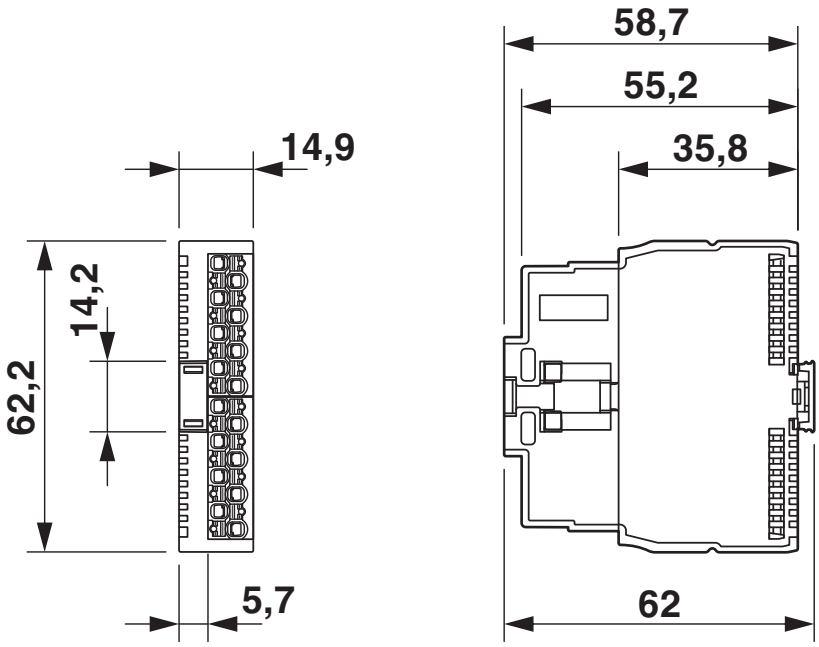
Characteristics

Safety data: EN ISO 13849-1

Performance level (PL)	d (1-channel assignment)
	e (2-channel assignment)

Drawings

Dimensional drawing



Dimensions

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1090203

cULus Listed
Approval ID: E238705

Functional Safety
Approval ID: 968/FSP 2625.00/23

Classifications

ECLASS

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

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	516adb35-dc51-421d-9d13-63526f047090

EF3.1 Climate Change

CO2e kg	11.56 kg CO2e

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