

AXL SE FSDO4/2 2A - Safety module



1090205

<https://www.phoenixcontact.com/us/products/1090205>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Axioline Smart Elements, Digital output module, Functional safety, Failsafe over EtherCAT®, Safe digital outputs: 2 (2-channel assignment), 4 (1-channel assignment), 24 V DC, 2 A, connection technology: 2-conductor, degree of protection: IP20

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
- 4 safe outputs for 1-channel assignment
- 2 safe outputs for 2-channel assignment

Commercial data

Item number	1090205
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA831
GTIN	4055626898834
Weight per piece (including packing)	48.43 g
Weight per piece (excluding packing)	36 g
Customs tariff number	85389091
Country of origin	DE

AXL SE FSDO4/2 2A - Safety module



1090205

<https://www.phoenixcontact.com/us/products/1090205>

Technical data

Dimensions

Dimensional drawing	
Width	14.9 mm
Height	62.2 mm
Depth	62 mm

Notes

Note on application

Note on application Only for industrial use

Interfaces

FSoE

Number of interfaces	1
Connection method	Card edge connector
Transmission speed	See system in which you use the Smart Element.

System properties

Module

Input address area	6 Byte (FSoE)
Output address area	6 Byte (FSoE)
Required configuration data	5 Byte

Output data

Digital:

Output name	Safe digital outputs
Output description	EN 61131-2
Connection method	Push-in connection
Connection technology	2-conductor
Number of outputs	2 (2-channel assignment) 4 (1-channel assignment)
Protective circuit	Short-circuit protection, overload protection of the outputs; electronic
Output voltage	24 V DC
Output current	max. 2 A (per output)

AXL SE FSDO4/2 2A - Safety module



1090205

<https://www.phoenixcontact.com/us/products/1090205>

Maximum output current per channel	2 A
Maximum output current per module	4 A
Nominal output voltage	24 V DC
Load min.	1.5 kΩ (at nominal voltage)
Output voltage when switched off	< 5 V
Output current when switched off	< 2 mA
Nominal load, inductive	48 VA (1 H; 12 Ω; at nominal voltage)
Nominal load, ohmic	48 W (12 Ω, at nominal voltage)
Switching frequency	1 Hz (0.2 Hz at > 1 A)
Reverse voltage resistance to short pulses	no
Behavior with overload	Switch-off of the relevant output, restart upon acknowledgment
Behavior with inductive overload	Output can be destroyed

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

Insulation characteristics

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

Electrical properties

Maximum power dissipation for nominal condition	typ. 871 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. 120 mA (at U_{Bus} 5 V DC) typ. 93 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)

AXL SE FSDO4/2 2A - Safety module

1090205

<https://www.phoenixcontact.com/us/products/1090205>



Current draw	max. 30 mA ((Supply from U_P with 30 V DC, all outputs set, without supply to the actuators)) typ. 25 mA ((Supply from U_P with 24 V DC, all outputs set, without supply to the actuators))
Power consumption	min. 403 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.

Conductor connection

Connection method	Push-in connection
Conductor cross-section rigid	0.25 mm ² ... 1.5 mm ²
Conductor cross-section flexible	0.25 mm ² ... 1.5 mm ²
Conductor cross-section AWG	24 ... 16
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Stripping length	8 mm

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 mm ² ... 1.5 mm ²
Conductor cross-section, flexible	0.25 mm ² ... 1.5 mm ²
Conductor cross-section AWG	24 ... 16
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
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)

Standards and regulations

AXL SE FSD04/2 2A - Safety module

1090205

<https://www.phoenixcontact.com/us/products/1090205>



Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
Air clearances and creepage distances	
Air clearances and creepage distances	IEC 60664-1

Mounting

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

AXL SE FSD04/2 2A - Safety module

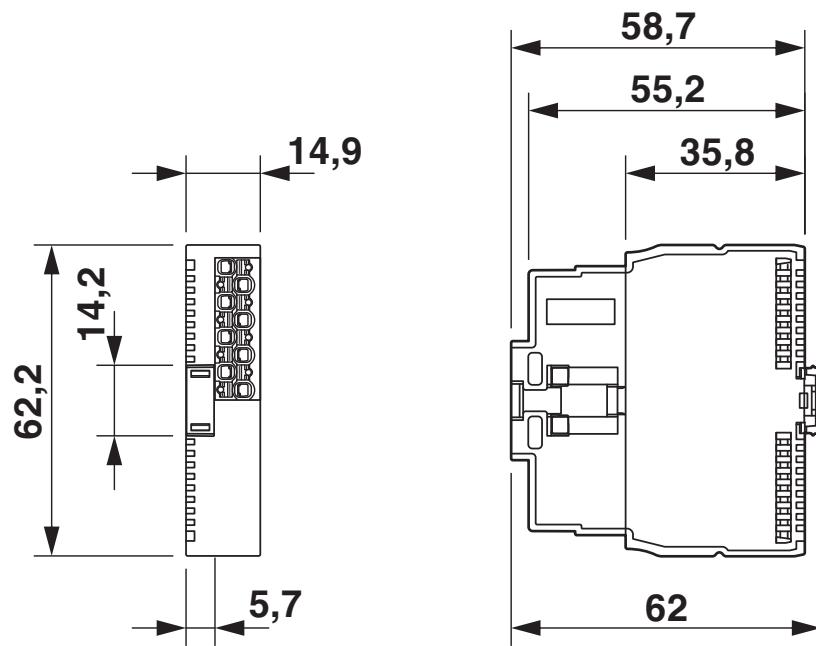
1090205

<https://www.phoenixcontact.com/us/products/1090205>



Drawings

Dimensional drawing



Dimensions

AXL SE FSDO4/2 2A - Safety module

1090205

<https://www.phoenixcontact.com/us/products/1090205>



Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1090205>



cULus Listed

Approval ID: E238705



Functional Safety

Approval ID: 968/FSP 2625.00/23

AXL SE FSD04/2 2A - Safety module

1090205

<https://www.phoenixcontact.com/us/products/1090205>



Classifications

ECLASS

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

ETIM

ETIM 9.0	EC001599
----------	----------

AXL SE FSDO4/2 2A - Safety module

1090205

<https://www.phoenixcontact.com/us/products/1090205>



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)
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol(CAS: 79-94-7)
SCIP	18039558-d47d-4a24-bf59-844d5a423746

Phoenix Contact 2025 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com