

# AXL SE FSDI8/3 - Safety module



1090203

<https://www.phoenixcontact.com/us/products/1090203>

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 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

## 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

## Commercial data

Item number	1090203
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
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

# AXL SE FSDI8/3 - Safety module

1090203

<https://www.phoenixcontact.com/us/products/1090203>

## 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
---------------------	-------------------------

### Material specifications

Color (Housing)	yellow (RAL 1018)
-----------------	-------------------

### Interfaces

#### FSoE

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

### 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))

1090203

<https://www.phoenixcontact.com/us/products/1090203>

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

## 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)

# AXL SE FSDI8/3 - Safety module



1090203

<https://www.phoenixcontact.com/us/products/1090203>

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)
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 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
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
---------------------------------------	-------------

# AXL SE FSDI8/3 - Safety module



1090203

<https://www.phoenixcontact.com/us/products/1090203>

## Mounting

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

# AXL SE FSDI8/3 - Safety module

1090203

<https://www.phoenixcontact.com/us/products/1090203>



## Drawings

Dimensional drawing



## Dimensions

# AXL SE FSDI8/3 - Safety module



1090203

<https://www.phoenixcontact.com/us/products/1090203>

## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1090203>



**cULus Listed**

Approval ID: E238705



**Functional Safety**

Approval ID: 968/FSP 2625.00/23

# AXL SE FSDI8/3 - Safety module



1090203

<https://www.phoenixcontact.com/us/products/1090203>

## 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
-------------	----------

1090203

<https://www.phoenixcontact.com/us/products/1090203>

## 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
---------	---------------

Phoenix Contact 2026 © - 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](mailto:info@phoenixcon.com)