

# AXL F SSDI8/4 1F - Safety module



2702263

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Axioline F, Digital input module, Functional safety, SafetyBridge technology, Digital inputs: 4 (for 2-channel assignment), 8 (for 1-channel assignment), 24 V DC, connection technology: 2-, 3-, 4-conductor, degree of protection: IP20

## Product description

The safety module is an input module from the Axioline F product range for use in a SafetyBridge technology V3 system. The safety module can be used as part of an Axioline F station at any point within an EtherCAT®, EtherNet/IP™, Sercos, Modbus, PROFINET or PROFIBUS system. The module has four safe digital inputs for two-channel assignment or eight safe digital inputs for single-channel assignment. Depending on the installation and parameterization, in the SafetyBridge technology V3 system the safety module can achieve the following safety integrity:

- Up to SIL 3 according to standard EN 61508
- Up to SIL 3 according to standard EN IEC 62061
- Up to Cat. 4/PL e according to standard EN ISO 13849-1

## Your advantages

- Cost-effective system configuration, as no safety PLC or safe fieldbus system is required
- Flexible use, thanks to compatibility with all bus couplers from the Axioline F range
- Reduced installation time, thanks to fast wiring and easy handling
- Easy configuration using the free SAFECONF software
- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508

## Commercial data

Item number	2702263
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA521
GTIN	4055626066813
Weight per piece (including packing)	347.6 g
Weight per piece (excluding packing)	347.6 g
Customs tariff number	85389091
Country of origin	DE

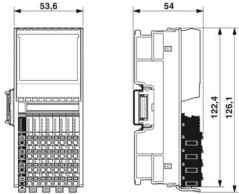
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## Technical data

### Dimensions

Dimensional drawing	
Width	53.6 mm
Height	126.1 mm
Depth	54 mm
Note on dimensions	Housing dimensions

### Notes

#### Note on application

Note on application	Only for industrial use
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### Interfaces

#### Axioline F local bus

No. of channels	1
Connection method	Bus base module

### System properties

#### Module

Input address area	8 Byte
Output address area	8 Byte
Required parameter data	1 Byte
Required configuration data	7 Byte

### Input data

#### Digital:

Input name	Digital inputs
Description of the input	IEC 61131-2 type 3
Number of inputs	4 (for 2-channel assignment) 8 (for 1-channel assignment)
Cable length	max. 1000 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	2-, 3-, 4-conductor
Input voltage	24 V DC (via clock outputs T1 and T2 or external supply)

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Input voltage range	-3 V DC ... 30.2 V DC
Nominal input voltage $U_{IN}$	24 V DC
Nominal input current at $U_{IN}$	typ. 4.2 mA
Typical input current per channel	4.2 mA
Input filter time	1.5 ms
	3 ms (Default)
	5 ms
	15 ms

## Product properties

Product type	I/O component
Product family	Axioline F
Application	Functional safety
	SafetyBridge technology
Type	modular

## Electrical properties

Transmission medium	Copper
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### Potentials

Protective circuit	Protection against polarity reversal, EMC protective circuit, undervoltage detection
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### Potentials: Axioline F local bus supply ( $U_{BUS}$ )

Supply voltage	5 V DC (via bus base module)
Current draw	max. 310 mA
	typ. 280 mA (all inputs set; supply by $U_I$ of 19.2 V DC ... 30 V DC)

### Potentials: Supply for digital input modules ( $U_I$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30.2 V DC (including all tolerances, including ripple)
Current draw	typ. 9 mA (all inputs set; supply from $U_I$ with 30 V DC; without supply to the sensors via clock supplies T1 and T2)

## Connection data

### Connection technology

Connection name	Axioline F connector
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### Axioline F connector

Connection method	Push-in connection
Conductor cross-section, rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.2 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

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## Ambient conditions

Ambient temperature (operation)	-35 °C ... 60 °C (Mounting position: any)
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 108 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (up to 3500 m above sea level)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 75 % (on average, 85% infrequently, non-condensing)
Permissible humidity (storage/transport)	10 % ... 75 % (non-condensing)

## Standards and regulations

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

Mounting type	DIN rail mounting
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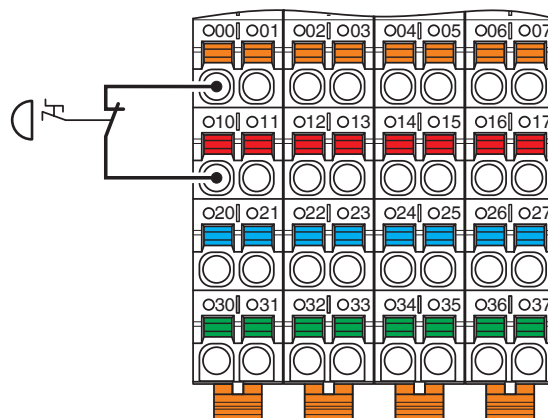
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## Drawings

Dimensional drawing



Connection diagram



Connection example for an emergency stop circuit

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2702263>



**DNV GL**

Approval ID: TAA00000DF

**BSH**

Approval ID: 840



**cULus Listed**

Approval ID: E238705



**Functional Safety**

Approval ID: 968/FSP 2449.00/22

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## Classifications

### ECLASS

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

### ETIM

ETIM 10.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## 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	20a4eb60-996c-41cb-a815-4850582f85d7

### EF3.1 Climate Change

CO2e kg	15.71 kg CO2e
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