

# AXL F PSDI8/4 1F - Safety module



2701559

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Axioline F, Digital input module, Functional safety, PROFIsafe, only for connection to Phoenix Contact or Siemens controller, 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 designed for use in a PROFIsafe system. The module has four safe digital inputs for two-channel assignment or eight safe digital inputs for single-channel assignment. The inputs can be parameterized according to the application and enable sensors to be integrated into the PROFIsafe system.

## Your advantages

- 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	2701559
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA521
GTIN	4046356770026
Weight per piece (including packing)	257 g
Weight per piece (excluding packing)	222 g
Customs tariff number	85389091
Country of origin	DE

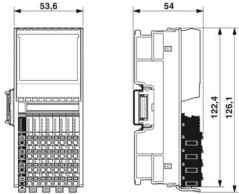
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## Technical data

### 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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### Material specifications

Color (Housing)	yellow (RAL 1018)
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### Interfaces

#### Axioline F local bus

Connection method	Bus base module
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### System properties

#### Programming data (LocalbusSlave)

Input address area	5 Byte
Output address area	5 Byte

#### Fieldbus data telegram

Required parameter data	22 Byte ((I-and F-parameters))
Required configuration data	10 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))

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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)
Input voltage range	-3 V DC ... 30 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
	PROFIsafe
	only for connection to Phoenix Contact or Siemens controller
Type	modular

## Electrical properties

Maximum power dissipation for nominal condition	2 W
Transmission medium	Copper

### 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 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)
Current consumption	9 mA

## Connection data

Connection technology	
Connection name	Axioline F connector
pluggable	yes

Axioline F connector

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Connection method	Push-in connection
pluggable	yes
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

## Environmental and real-life conditions

### 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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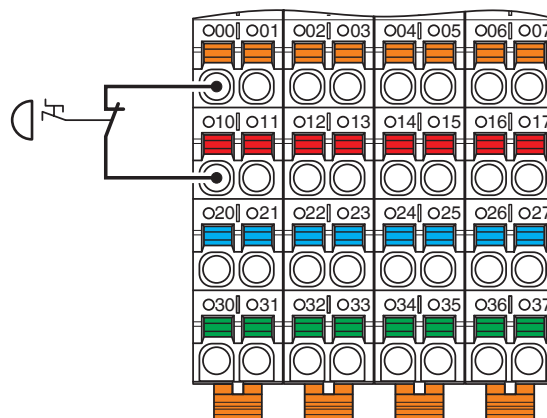


## Drawings

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/2701559>



**DNV GL**

Approval ID: TAA00000DF

**BSH**

Approval ID: 840



**cULus Listed**

Approval ID: E238705



**cULus Listed**

Approval ID: E238705

**PROFIsafe**

Approval ID: Z20119



**Functional Safety**

Approval ID: 968/EZ 650.04/20

**FS Thermoprocess**

Approval ID: 968 INS 799.01 25

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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	4f074b40-390c-417f-a38e-88d460eb2c47

### EF3.1 Climate Change

CO2e kg	8.357 kg CO2e
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