

# Safety module - AXL F PSDO8/3 1F



2701560

<https://www.phoenixcontact.com/pc/products/2701560>

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Axioline F, Digital output module, Functional safety, PROFIsafe, only for connection to Phoenix Contact or Siemens controller, Digital outputs: 4 (for 2-channel assignment), 8 (for 1-channel assignment), 2 A, connection technology: 2-, 3-conductor, degree of protection: IP20

## Product Description

The safety module is an output module from the Axioline F product range designed for use in a PROFIsafe system. The module has four safe digital outputs for two-channel assignment or eight safe digital outputs for single-channel assignment. The outputs can be parameterized according to the application and enable the integration of actuators in the PROFIsafe system.

## Your advantages

- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with IEC 62061, SIL 3 in accordance with IEC 61508

## Commercial Data

Item number	2701560
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DNA531
Catalog Page	Page 271 (C-6-2019)
GTIN	4046356769938
Weight per Piece (including packing)	256.7 g
Weight per Piece (excluding packing)	222 g
Customs tariff number	85389091
Country of origin	DE

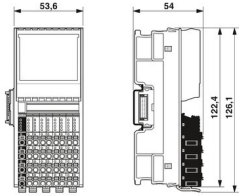
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2701560

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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

### Material specifications

Color	zinc yellow RAL 1018
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### Interfaces

#### Axioline F local bus

Connection method	Bus base module
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### System properties

#### Module

Input address area	5 Byte
Output address area	5 Byte
Required parameter data	22 Byte ((I-and F-parameters))
Required configuration data	10 Byte

### Output data

#### Digital

Output name	Digital outputs
Connection method	Direct plug-in technology
Connection technology	2-, 3-conductor
Number of outputs	4 (for 2-channel assignment) 8 (for 1-channel assignment)
Number of outputs	8
Protective circuit	Overload protection, freewheeling circuit for inductive loads, Discharge circuit for accelerated discharge of capacitive loads
Output voltage	24 V DC
Output current	max. 2 A (per channel) max. 1.5 A (per channel according to CUL <sub>US</sub> )

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2701560

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	max. 4 A (per group)
	max. 3 A (per group according to $CUL_{US}$ )
	max. 8 A (Total current of all outputs; Please observe the notes in the user manual.)
	max. 6 A (Total current of all outputs according to $CUL_{US}$ )
Maximum output current per channel	2 A
Maximum output current per module / terminal block	8 A
Permissible cable length	max. 1000 m (Forward and return line in total)
Behavior with overload	Affected output is disabled and a diagnostic message is generated.

## Product properties

Type	modular
Product type	I/O component
Application	Functional safety
	PROFIsafe
	only for connection to Phoenix Contact or Siemens controller

## Electrical properties

Maximum power dissipation for nominal condition	24.12 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. 280 mA
	typ. 260 mA (all outputs set; supply by $U_O$ of 19.2 V DC ... 30 V DC)

### Potentials: Supply for digital output modules ( $U_O$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	typ. 25 mA (all outputs set; supply from $U_O$ with 30 V DC; without supply to the actuators)

## Connection data

### Connection technology

Connection name	Axioline F connector
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### Conductor connection

Connection method	Push-in connection
Conductor cross section solid	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

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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

## 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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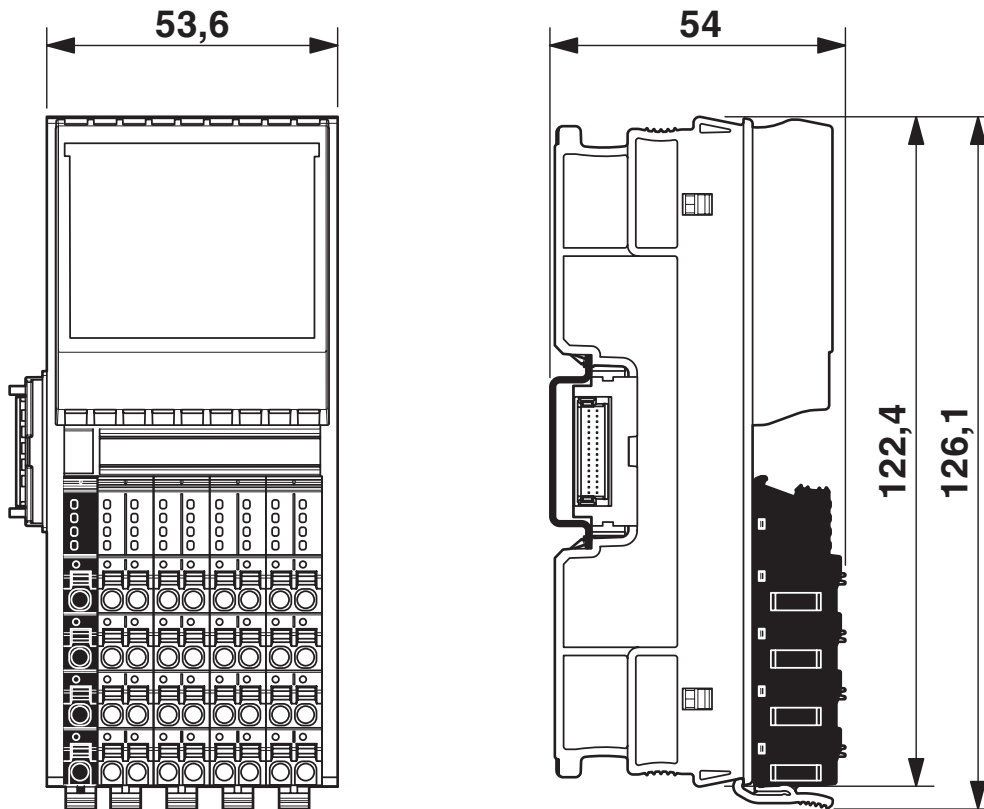
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2701560

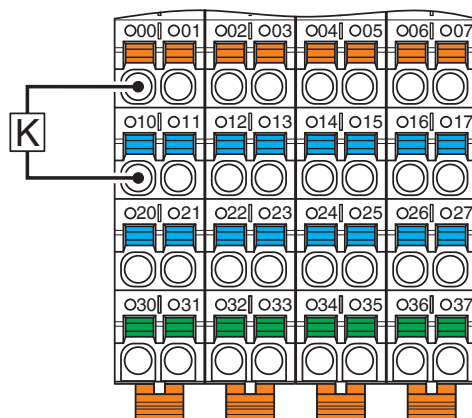
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## Drawings

Dimensional drawing



Connection diagram



Example connection of a contactor

# Safety module - AXL F PSDO8/3 1F



2701560

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## Approvals



**DNV GL**

Approval ID: TAA00000DF



**UL Listed**

Approval ID: FILE E 238705



**cUL Listed**

Approval ID: FILE E 238705

**BSH**

Approval ID: 840



**Functional Safety**

Approval ID: 968/EZ 650.04/20

**PROFIsafe**

Approval ID: Z20121



**Functional Safety**

Approval ID: 968/EZ 650.04/20



**Functional Safety**

Approval ID: 968/EZ 650.00/14

**cULus Listed**

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## Classifications

### ECLASS

ECLASS-9.0	27242604
ECLASS-10.0.1	27242604
ECLASS-11.0	27242604

### ETIM

ETIM 8.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"



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## Accessories

### Bus connector

Bus connector - AXL F BS F - 2688129

<https://www.phoenixcontact.com/pc/products/2688129>

Axioline F bus base module for housing type F



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### Zack marker strip

Zack marker strip - ZB 20,3 AXL UNPRINTED - 0829579

<https://www.phoenixcontact.com/pc/products/0829579>



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

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2701560

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## Zack Marker strip, flat

Zack Marker strip, flat - ZBF 10/5,8 AXL UNPRINTED - 0829580

<https://www.phoenixcontact.com/pc/products/0829580>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 10.15 mm, lettering field size: 4 of 10.15 x 5 mm and 1 of 5.8 x 5 mm, Number of individual labels: 50

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## Insert label

Insert label - EMT (35X46)R - 0801604

<https://www.phoenixcontact.com/pc/products/0801604>



Insert label, for marking the Axioline F series from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: insert, lettering field size: 35 x 46 mm, Number of individual labels: 500

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2701560

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## Insert label

Insert label - EMT (35X46)R YE - 0801605

<https://www.phoenixcontact.com/pc/products/0801605>



Insert label, for marking the Axioline F series from Phoenix Contact, Roll, yellow, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: insert, lettering field size: 35 x 46 mm, Number of individual labels: 500

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## Screwdriver

Screwdriver - SZS 0,4X2,5 VDE - 1205037

<https://www.phoenixcontact.com/pc/products/1205037>



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

2701560

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## Crimping pliers

Crimping pliers - CRIMPFOX 6 - 1212034

<https://www.phoenixcontact.com/pc/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

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## Crimping pliers

Crimping pliers - CRIMPFOX DUO 10 - 1031721

<https://www.phoenixcontact.com/pc/products/1031721>



Crimping pliers, type of contact: Insulated and uninsulated ferrules, min. cross section: 0.14 mm<sup>2</sup>, max. cross section: 10 mm<sup>2</sup>, for TWIN ferrules up to 2 x 4 mm<sup>2</sup>, automatic cross section adjustment, rotating die, lateral and frontal insertion, compression: Trapezoidal crimp, black/green

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2701560

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## Crimping pliers

Crimping pliers - CRIMPFOX 10T-F - 1134913

<https://www.phoenixcontact.com/pc/products/1134913>



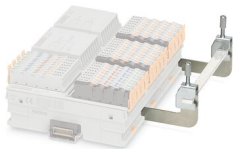
Crimping pliers, type of contact: Insulated and uninsulated ferrules, standards/specifications: DIN 46228-1, DIN 46228-4, min. cross section: 0.14 mm<sup>2</sup>, max. cross section: 10 mm<sup>2</sup>, For TWIN ferrules up to 2 x 4 mm<sup>2</sup>, automatic cross section adjustment, frontal insertion, compression: Trapezoidal crimp, black

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## Shield connection

Shield connection - AXL SHIELD SET - 2700518

<https://www.phoenixcontact.com/pc/products/2700518>



Axoline shield connection set (contains 2 shield bus holders and 2 SK 5 shield connection clamps)

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