

## Safety module - AXL F PSDI8/4 1F - 2701559

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Safety-related digital input module, degree of protection IP20, for use in PROFIsafe systems. The module has 4 safe digital inputs for two-channel assignment or 8 safe digital inputs for single-channel assignment.

### 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 SIL 3 according to EN 61508
- Up to SILCL 3 according to EN 62061
- Up to cat. 4/PL e according to EN ISO 13849-1



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 770026
GTIN	4046356770026

### Technical data

#### Dimensions

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

#### Ambient conditions

Ambient temperature (operation)	-35 °C ... 60 °C (Mounting position: any)
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)

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## Technical data

### Ambient conditions

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)
Degree of protection	IP20

### Connection data

Designation	Axioline F connector
Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16

### Interfaces

Designation	Axioline F local bus
Connection method	Bus base module

### Digital inputs

Input name	Digital inputs
Description of the input	IEC 61131-2 type 3
Connection method	Push-in connection
Connection technology	2, 3, 4-wire
Number of inputs	4 (with two-channel assignment) 8 (for single-channel assignment)
Nominal input voltage U <sub>IN</sub>	24 V DC
Nominal input current at U <sub>IN</sub>	typ. 4.2 mA
Input filter time	1.5 ms 3 ms (Default) 5 ms 15 ms
Cable length	max. 1000 m (200 m from the clock output to the safe input (total based on forward and return path))
Input voltage	24 V DC (via clock outputs T1 and T2 or external supply)
Input voltage range	-3 V DC ... 30.2 V DC
Typical input current per channel	4.2 mA

### General

Mounting type	DIN rail
Color	yellow
Net weight	222 g
Note on weight specifications	with connectors and bus base module

### Axioline potentials

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### Technical data

#### Axioline potentials

Designation	Axioline F local bus supply (U <sub>Bus</sub> )
Supply voltage	5 V DC (via bus base module)
Current consumption	typ. 280 mA (all inputs set; power supply by U <sub>I</sub> of 19.2 V DC to 30.2 V DC)
	max. 310 mA
Designation	Supply for digital input modules (U <sub>I</sub> )
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30.2 V DC (including all tolerances, including ripple)
Current consumption	typ. 9 mA (all inputs set; power supply by U <sub>I</sub> with 30.2 V DC; without power supply to the sensors via clock supplies T1 and T2)
Protective circuit	Protection against polarity reversal, EMC protective circuit, undervoltage detection

#### Safety-related characteristic data

Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	EN ISO 13849
Performance level (PL)	max. e (two channel; dependent in parameterization and wiring)
Category	max. 4 (two channel; dependent in parameterization and wiring)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	max. 3 (two channel; dependent in parameterization and wiring)

#### Standards and Regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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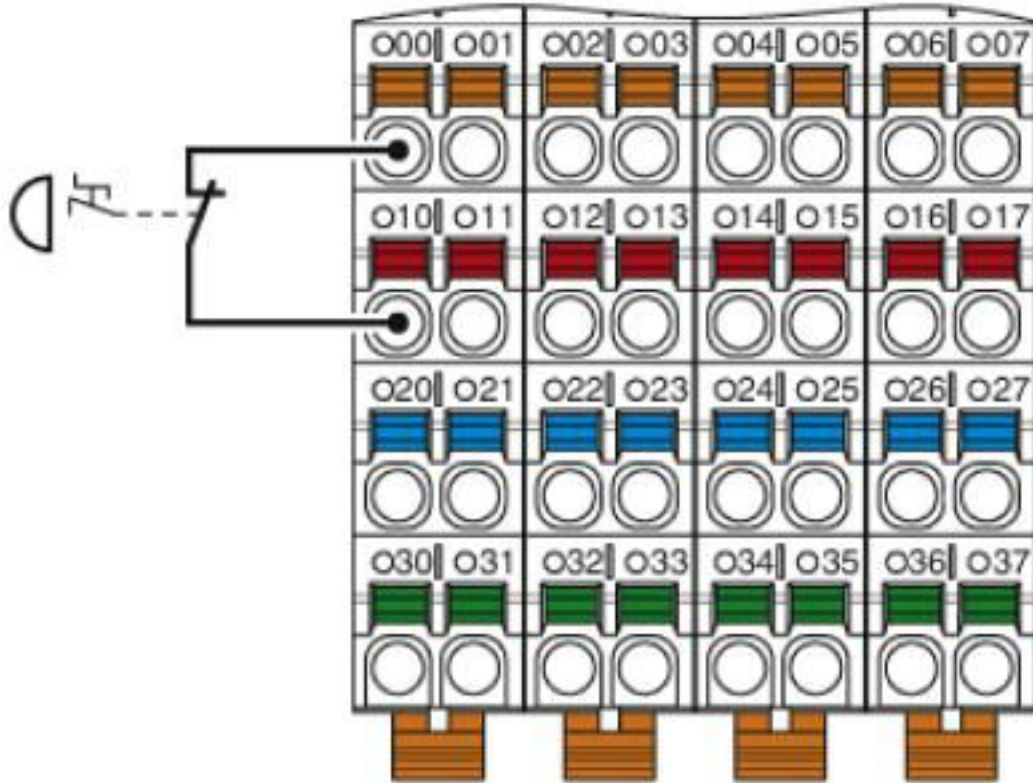
#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

### Drawings

# Safety module - AXL F PSDI8/4 1F - 2701559

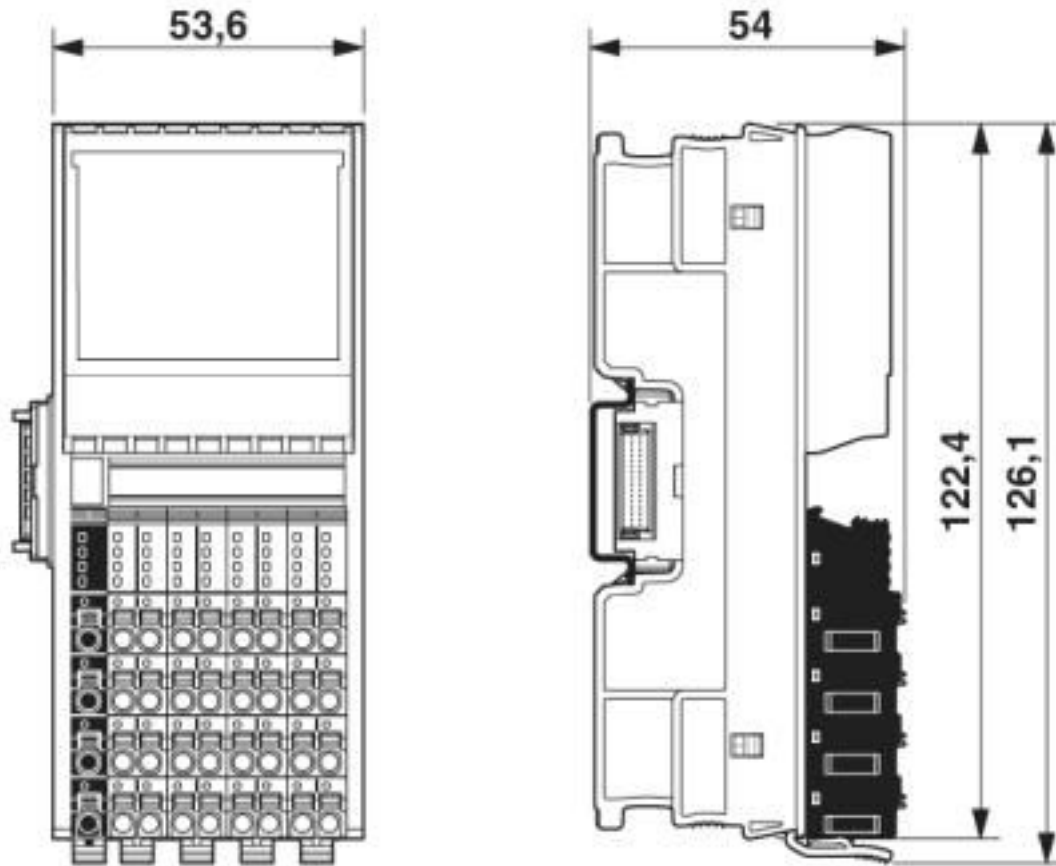
Connection diagram



Connection example for an emergency stop circuit

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Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	27242604
eCl@ss 4.0	27240400
eCl@ss 4.1	27240400
eCl@ss 5.0	27242200
eCl@ss 5.1	27242600
eCl@ss 6.0	27242600
eCl@ss 7.0	27242604
eCl@ss 8.0	27242604
eCl@ss 9.0	27242604

### ETIM

ETIM 3.0	EC001599
ETIM 4.0	EC001449
ETIM 5.0	EC001599
ETIM 6.0	EC001599
ETIM 7.0	EC001599

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## Classifications

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	32151602
UNSPSC 18.0	32151602
UNSPSC 19.0	32151602
UNSPSC 20.0	32151602
UNSPSC 21.0	32151602

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / PROFIsafe / Functional Safety / cULus Listed

#### Ex Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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PROFIsafe	Z20119
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Functional Safety		968/EZ 650.00/14
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cULus Listed	
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### Accessories

#### Accessories

#### Device marking

Insert label - EMT (35X28)R - 0801602



Insert label, 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: snapped into marker carrier, lettering field size: 35 x 28 mm, Number of individual labels: 500

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### DIN rail connector

Bus connector - AXL F BS F - 2688129



Axiline F bus base module for housing type F

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### Terminal marking

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



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



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, 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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