

AXL F PSDI8/4 1F - Safety module



2701559
<https://www.phoenixcontact.com/us/products/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
Catalog page	Page 270 (C-6-2019)
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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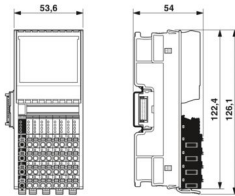


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Technical data

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

Interfaces

Axioline F local bus	
Connection method	Bus base module

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

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)
Input voltage range	-3 V DC ... 30 V DC

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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

Data management status

Article revision	12
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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)

Connection data

Connection technology

Connection name	Axioline F connector
pluggable	yes

Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ²

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Conductor cross section flexible	0.2 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16

Axioline F connector

Connection method	Push-in connection
Conductor cross section, rigid	0.2 mm² ... 1.5 mm²
Conductor cross section, flexible	0.2 mm² ... 1.5 mm²
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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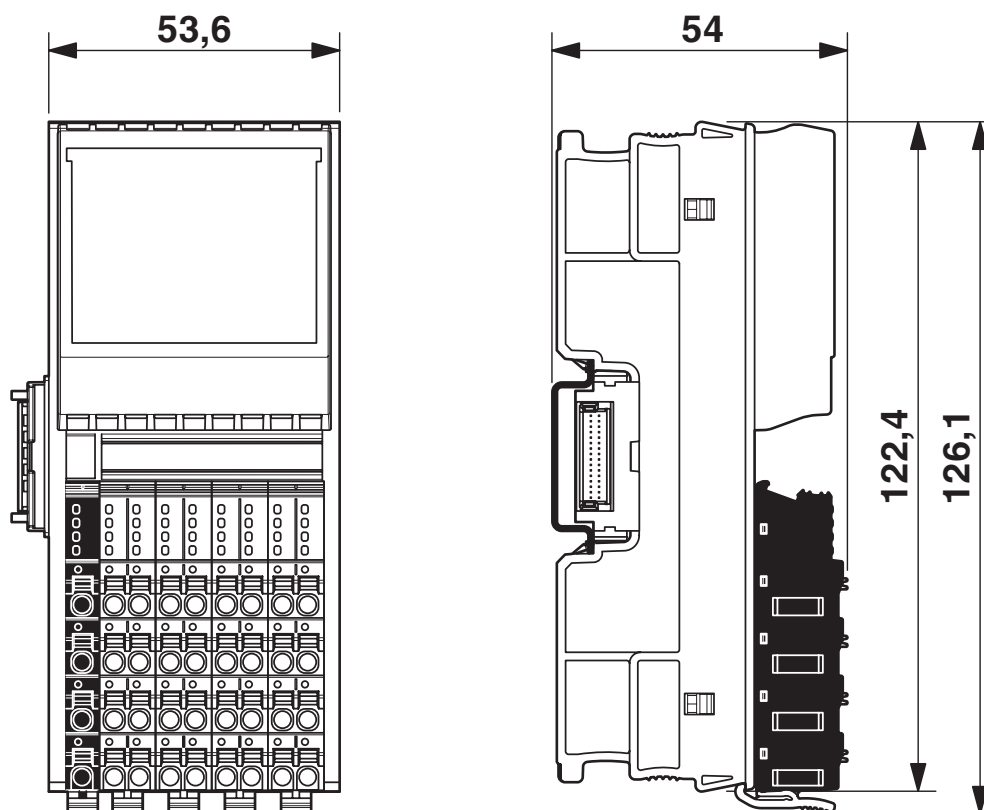
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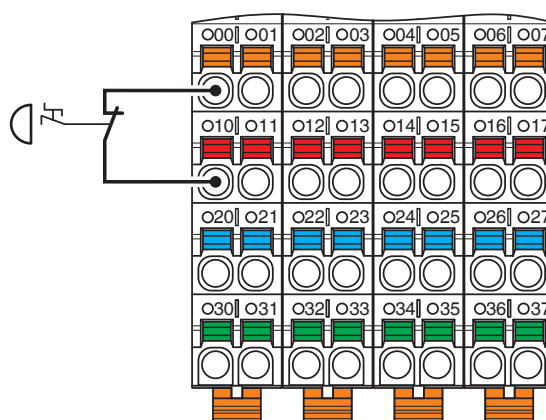


Drawings

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



Functional Safety

Approval ID: 968/EZ 650.04/20

PROFIsafe

Approval ID: Z20119



Functional Safety

Approval ID: 968/EZ 650.04/20

UAE-RoHS

Approval ID: 23-02-63243



cULus Listed

Approval ID: E238705

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Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

ETIM

ETIM 9.0	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
EF3.0 Climate Change	
CO2e kg	8.357 kg CO2e

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Accessories

AXL F BS F - Bus connector

2688129

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Axioline F bus base module for housing type F



ZB 20,3 AXL UNPRINTED - Zack marker strip

0829579

<https://www.phoenixcontact.com/us/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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ZBF 10/5,8 AXL UNPRINTED - Zack Marker strip, flat

0829580

<https://www.phoenixcontact.com/us/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 x 10, 15 x 5 mm, 1 x 5.8 x 5 mm, Number of individual labels: 50

EMT (35X46)R - Insert label

0801604

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



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

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EMT (35X46)R YE - Insert label

0801605

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



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

SZS 0,4X2,5 VDE - Screwdriver

1205037

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



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

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CRIMPFOX 6 - Crimping pliers

1212034

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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 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

CRIMPFOX DUO 10 - Crimping pliers

1031721

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



Crimping pliers, contact connection type: Insulated and uninsulated ferrules, standards/specifications: DIN 46228-1, DIN 46228-4, UL 486F, form A, E, F, min. cross section: 0.14 mm², max. cross section: 10 mm², for TWIN ferrules up to 2 x 4 mm², automatic cross section adjustment, rotating die, lateral and frontal insertion, compression: Trapezoidal crimp, black/green

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CRIMPFOX 10T-F - Crimping pliers

1134913

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Crimping pliers, contact connection type: Insulated and uninsulated ferrules, standards/specifications: DIN 46228-1, DIN 46228-4, min. cross section: 0.14 mm², max. cross section: 10 mm², For TWIN ferrules up to 2 x 4 mm², automatic cross section adjustment, frontal insertion, compression: Trapezoidal crimp, black

AXL SHIELD SET - Shield connection

2700518

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

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