

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 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

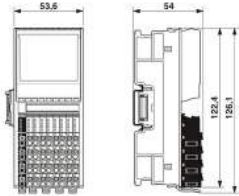
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Technical data

Dimensions

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

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

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
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)

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	5 ms
	15 ms

Product properties

Type	modular
Product type	I/O component
Product family	Axioline F
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. 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
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16

Axioline F connector

Connection method	Push-in connection
Conductor cross section, rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16

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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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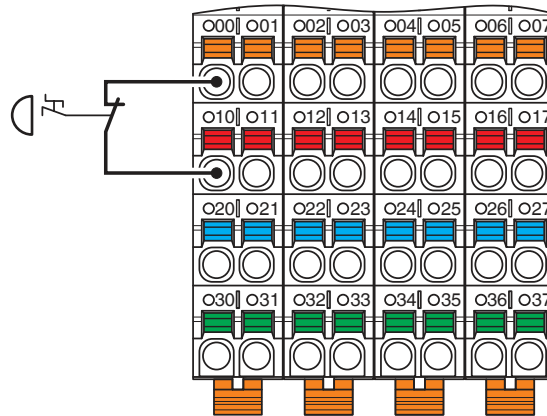
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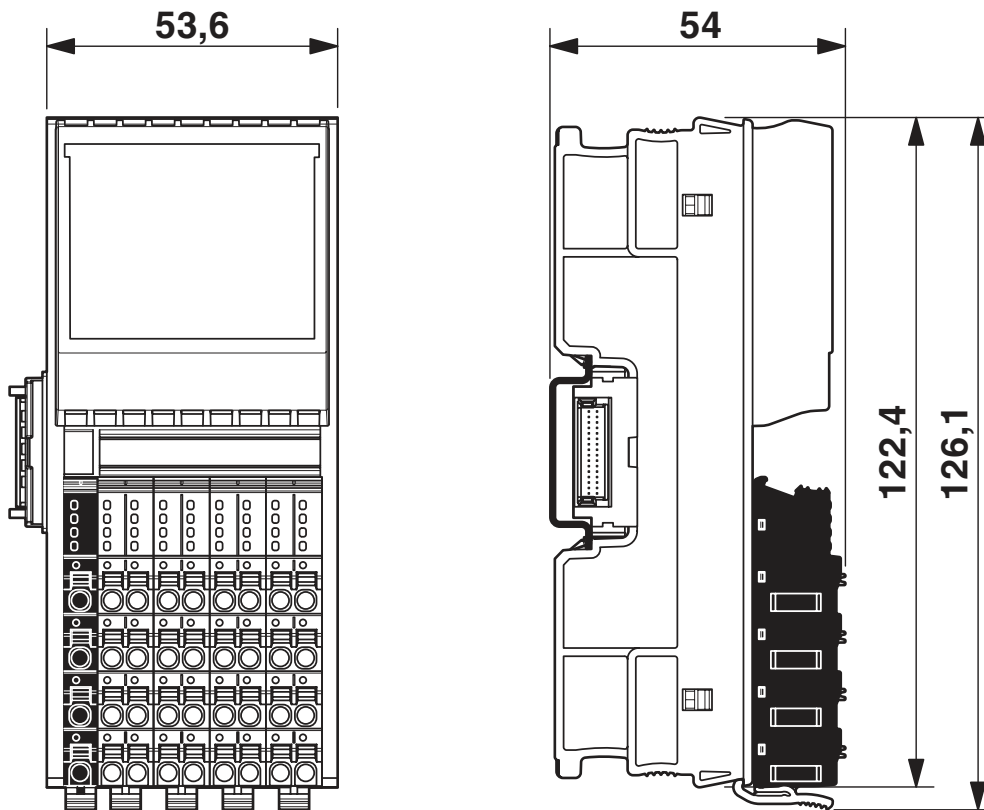
Drawings

Connection diagram



Connection example for an emergency stop circuit

Dimensional drawing



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Approvals

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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: Z20119



Functional Safety

Approval ID: 968/EZ 650.04/20

UAE-RoHS

Approval ID: 23-02-63243

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	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

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

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



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

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