AXL F PSDI8/4 XC 1F - Safety module

1369866

https://www.phoenixcontact.com/gb/products/1369866

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CRA-READY



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, Extreme conditions version, degree of protection: IP20; Extended temperature range.

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

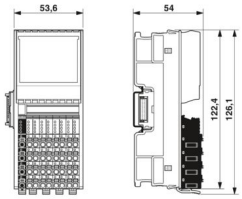
- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508

Commercial data

Item number	1369866
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNA521
Product key	DNA521
GTIN	4063151726652
Weight per piece (including packing)	287 g
Weight per piece (excluding packing)	222 g
Customs tariff number	85389099
Country of origin	DE

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	Only for industrial use
Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Mounting

Mounting type	DIN rail mounting

Material specifications

Color (Housing)	yellow (RAL 1018)
Material	PBT
Flammability rating according to UL 94	V-0 (Housing)

Interfaces

Axioline F local bus

Connection method	Bus base module

System properties

Programming data

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))
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
Special properties	Extended temperature range
	The product is being prepared for compliance with the Cyber Resilience Act (CRA)
	Extreme conditions version

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

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_l of 19.2 V DC ... 30 V DC)

Potentials: Supply for digital input modules (U_l)

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_l 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

Connection method	Push-in connection
pluggable	yes
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)

Test (noxious gas)

Test standard	ISA-71.04-2013 G3 Harsh Group A
	IEC 60068-2-60:2015 Method 4
Temperature	25 °C ±1 K
Humidity (relative)	75 % ±3 %
Test duration	21 Days
Volume concentration H_2S (Hydrogen sulfide)	50 ppb
Volume concentration NO_2 (Nitrogen dioxide)	1250 ppb
Volume concentration Cl_2 (Chlorine)	10 ppb
Volume concentration SO_2 (Sulfur dioxide)	300 ppb

Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Approvals

ATEX

Identification	II 3 G Ex ec IIC T4 Gc
Certificate	UL 22 ATEX 2909X

IECEx

Identification	Ex ec IIC T4 Gc
Certificate	IECEx ULD 22.0036X

UKEX

Identification	II 3 G Ex ec IIC T4 Gc
Certificate	UL23UKEX2855X

CCC / China-Ex

Identification	Ex ec IIC T4 Gc
Certificate	2023122310116913

UL, USA/Canada

Identification	cULus
Certificate	E238705

UL Ex, USA / Canada

Identification	Class I, Zone 2, AEx ec IIC T4, Ex ec IIC T4 Gc X
	Class I, Division 2, Groups A, B, C, D, T4
Certificate	E366272

Environmental simulation test

Identification	G3
Certificate	ISA-S71.04

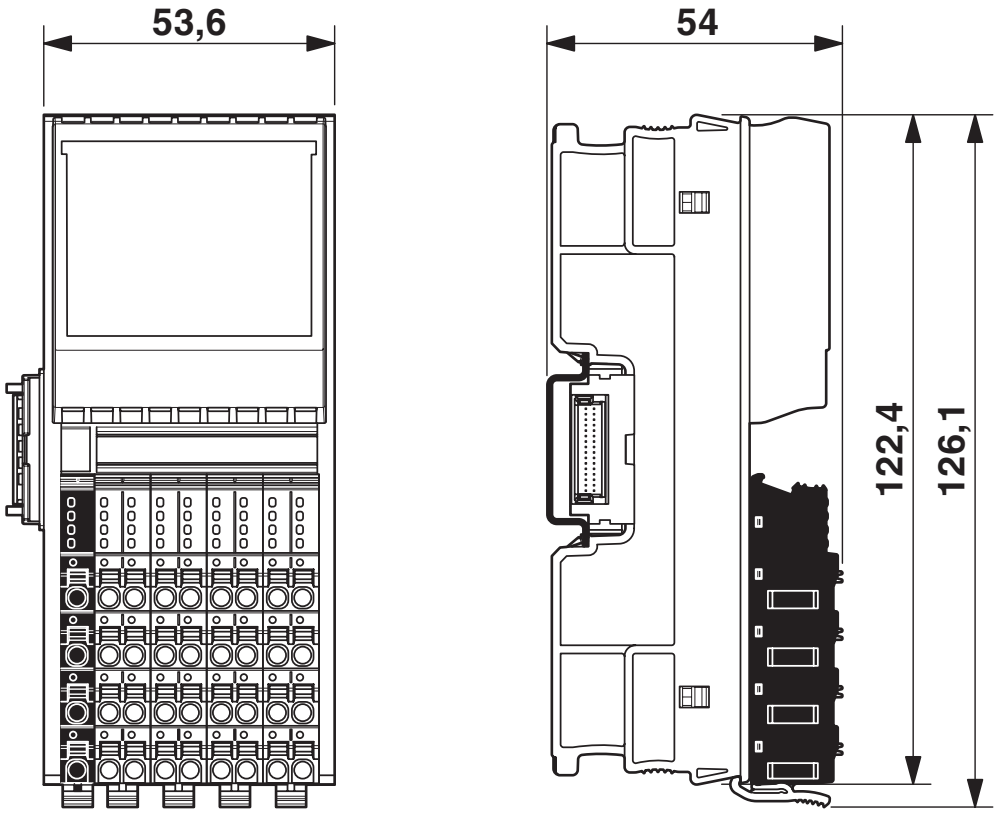
Characteristics

Safety data: EN ISO 13849

Performance level (PL)	max. e (two channel; dependent in parameterization and wiring)

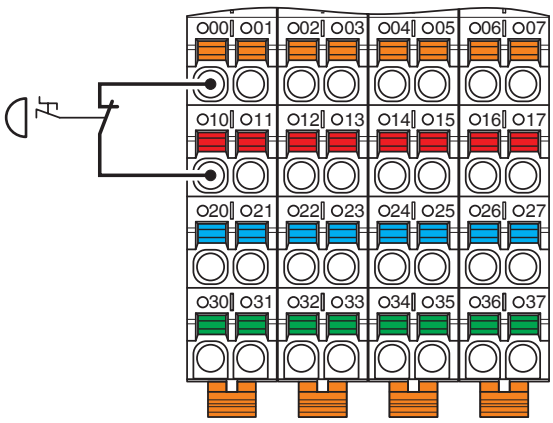
Drawings

Dimensional drawing



Dimensions (in mm)

Connection diagram



Connection example for an emergency stop circuit

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1369866

DNV GL
Approval ID: TAA00000DF

BSH
Approval ID: 840c

PROFIsafe
Approval ID: Z20362

Functional Safety
Approval ID: 968/EZ 650.04/20

TUEV RH FS
Approval ID: 968/EZ650.17/26

IECEx
Approval ID: IECEx ULD 22.0036X

ATEX
Approval ID: UL 22 ATEX 2909X

UKCA-EX
Approval ID: UL23UKEX2855X

CCC
Approval ID: 2023122310116913

Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0 ASSET	27250101
ECLASS-15.0	27242604

ETIM

ETIM 10.0	EC001599

UNSPSC

UNSPSC 21.0	32151600

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	ec05fbe9-e9c8-4111-ae23-33075b44193e

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