AXL F SSDI8/4 1F - Safety module

2702263

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CRA-READY



Axioline F, Digital input module, Functional safety, SafetyBridge technology, 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; The product is being prepared for compliance with the Cyber Resilience Act (CRA).

Product description

The safety module is an input module from the Axioline F product range for use in a SafetyBridge technology V3 system. The safety module can be used as part of an Axioline F station at any point within an EtherCAT®, EtherNet/IP™, Sercos, Modbus, PROFINET or PROFIBUS system. The module has four safe digital inputs for two-channel assignment or eight safe digital inputs for single-channel assignment. Depending on the installation and parameterization, in the SafetyBridge technology V3 system the safety module can achieve the following safety integrity:
- Up to SIL 3 according to standard EN 61508
- Up to SIL 3 according to standard EN IEC 62061
- Up to Cat. 4/PL e according to standard EN ISO 13849-1

Your advantages

- Cost-effective system configuration, as no safety PLC or safe fieldbus system is required
- Flexible use, thanks to compatibility with all bus couplers from the Axioline F range
- Reduced installation time, thanks to fast wiring and easy handling
- Easy configuration using the free SAFECONF software
- 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

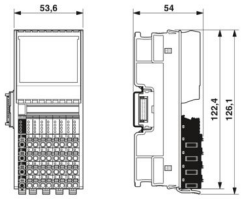
ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	2702263
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA521
GTIN	4055626066813
Weight per piece (including packing)	347.6 g
Weight per piece (excluding packing)	347.6 g
Customs tariff number	85389091
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

Interfaces

Axioline F local bus

No. of channels	1
Connection method	Bus base module

System properties

Programming data

Input address area	8 Byte
Output address area	8 Byte

Fieldbus data telegram

Required parameter data	1 Byte
Required configuration data	7 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 ... 30.2 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
	SafetyBridge technology
Type	modular
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)

Electrical properties

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 ... 30.2 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

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
Stripping length	8 mm

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)

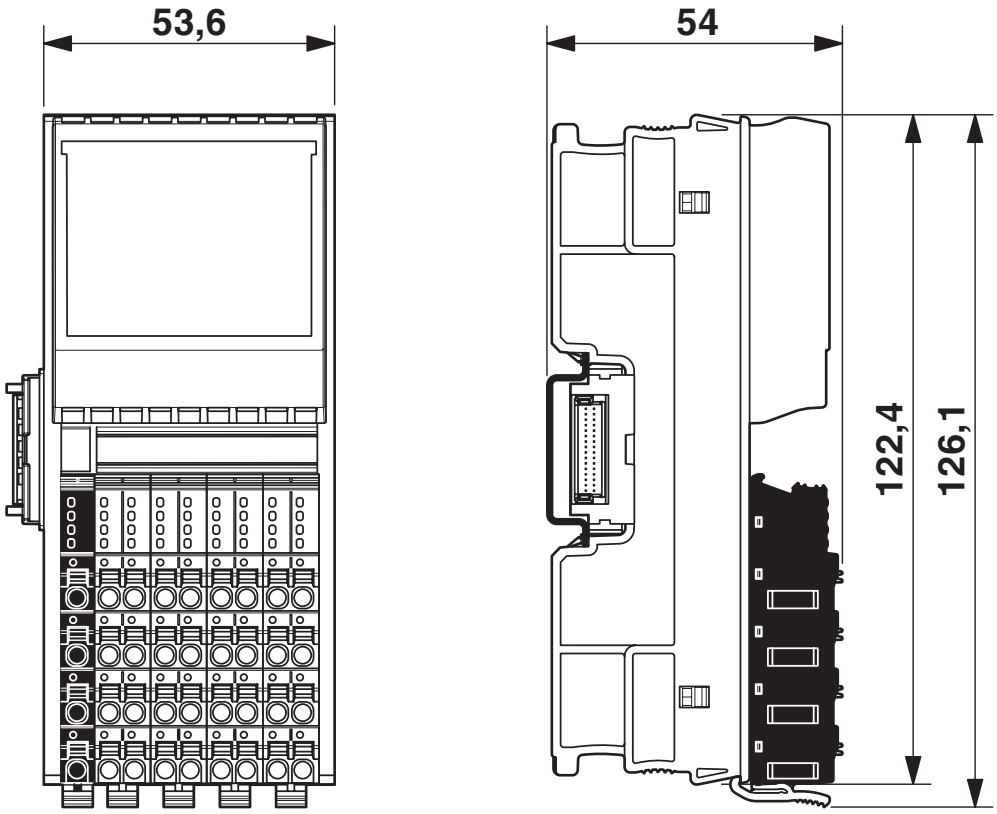
Characteristics

Safety data: EN ISO 13849

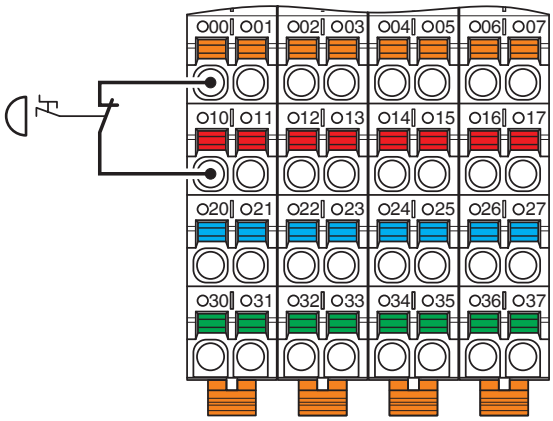
Performance level (PL)	max. e (two channel; dependent in parameterization and wiring)

Drawings

Dimensional drawing



Connection diagram



Connection example for an emergency stop circuit

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2702263

DNV GL
Approval ID: TAA00000DF

BSH
Approval ID: 840c

cULus Listed
Approval ID: E238705

Functional Safety
Approval ID: 968/FSP 2449.00/22

Classifications

ECLASS

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

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	20a4eb60-996c-41cb-a815-4850582f85d7

EF3.1 Climate Change

CO2e kg	15.71 kg CO2e

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