AXL F PSAI8 I XC 1F - Safety module

1369869

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CRA-READY



Axioline F, Analog input module, Functional safety, PROFIsafe, Only for connection to Phoenix Contact or Siemens controllers in PROFINET systems, Safe analog inputs: 8 (1-channel assignment), 4 (2-channel assignment), 4 mA ... 20 mA, connection technology: 2-conductor (shielded, twisted pair), degree of protection: IP20; The product is being prepared for compliance with the Cyber Resilience Act (CRA).

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
- Safe analog value acquisition 4 ... 20 mA
- 8 safe inputs for 1-channel assignment
- 4 safe inputs for 2-channel assignment

Commercial data

Item number	1369869
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNA522
Product key	DNA522
GTIN	4063151727208
Weight per piece (including packing)	278 g
Weight per piece (excluding packing)	222 g
Customs tariff number	85389099
Country of origin	DE

Technical data

Dimensions

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
Mounting position	any

Material specifications

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

System properties

Programming data

Input address area	22 Byte (PROFIsafe 2.6.1)
Output address area	5 Byte (PROFIsafe 2.6.1)

Fieldbus data telegram

Required configuration data	31 Byte

Input data

Analog:

Input name	Safe analog inputs
Number of inputs	8 (1-channel assignment)
	4 (2-channel assignment)
Connection method	Push-in connection
Connection technology	2-conductor (shielded, twisted pair)
A/D converter resolution	16 bit
Limit frequency (3 dB)	30 Hz
Wire-break behavior	Goes to 0 mA
Protective circuit	Transient protection of inputs; Suppressor diode
	Overload protection; No; ±5.2 V DC, maximum, I_{max} = 50 mA

Measured value representation	16 bits
Data formats	Standardized representation
Current input signal	4 mA ... 20 mA
Input resistance current input	typ. 104 Ω
Filtering	RFI filtering / passive TP 1st order
Input filter	30 Hz

Product properties

Product type	I/O component
Product family	Axioline F
Application	Functional safety
	PROFIsafe
	Only for connection to Phoenix Contact or Siemens controllers in PROFINET systems
Type	modular
Mounting position	any
Operating mode	PROFIsafe 2.6.1
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)

Insulation characteristics

Overvoltage category	II (IEC 60664-1)
Pollution degree	2 (EN 60664-1)

Electrical properties

Maximum power dissipation for nominal condition	1.8 W

Potentials: Axioline F local bus supply (U_{Bus})

Supply voltage	5 V DC (via bus base module)
Current draw	max. 110 mA (at U_{Bus} 5 V DC)
	typ. 105 mA (at U_{Bus} 5 V DC)

Potentials: I/O supply (U_A)

Supply voltage	24 V DC (Power connector)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 31 mA
	typ. 25.5 mA (Power supply from U_A with 30 V DC)
Protective circuit	Surge protection; electronic (35 V, 0.5 s)
	Reverse polarity protection (parallel)
	Undervoltage detection; at 17 V
	Surge voltage detection; No
Protection	max. 8 A (slow-blow, required externally)

Connection data

Connection method	Push-in connection
Note on the connection method	Note the specification in the section Conductor cross-sections, and stripping and insertion lengths.

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
Degree of protection	IP20
Degree of protection at installation location	min. IP54
Note	Recommendation Do not use the AXL F PSAI8 I 1F in an atmosphere that contains corrosive gas.
Air pressure (operation)	70 kPa ... 108 kPa
Air pressure (storage/transport)	66 kPa ... 108 kPa
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Mechanical test

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	15g
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g

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)

Air clearances and creepage distances

Air clearances and creepage distances	IEC 60664-1

Approvals

ATEX

Identification	Ⓔx 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	Ⓔx 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)	c (1-channel assignment)
	e (2-channel assignment)

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1369869

DNV GL
Approval ID: TAA00000DF

BSH
Approval ID: 840c

PROFIsafe
Approval ID: Z20361

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	27242601
ECLASS-15.0	27242601
ECLASS-15.0 ASSET	27250101

ETIM

ETIM 10.0	EC001596

UNSPSC

UNSPSC 21.0	32151600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I, 7(c)-II

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	134aa207-08db-4104-9bfa-4a692313bbac

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