AXL E IOL SDI8 SDO4 2A M12 L - Safety module

1185380

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CRA-READY



Axioline E-safety module, 4 safe digital inputs for 2-channel assignment, 8 safe digital inputs for 1-channel assignment, 4 safe digital +/-switching outputs, IO-Link interface, IP65/IP67 degree of protection, for PROFIsafe systems

Product description

The Axioline E Safe IP67 I/O box is the new addition to the Axioline E system.
The I/O box enables you to process safe inputs and outputs outside of the control cabinet and transfer them to the higher-level PROFIsafe controller.
To do this, the safety protocol is transmitted to the standard network via a Phoenix Contact IO-Link master and is then processed by the safety controller.
You can address the devices easily using the AXL E ADDRESSPLUG (100053), which is available as an accessory.

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
- Minimum installation effort with control-cabinet-free mounting
- Safe outputs with up to 2 A
- Long service life and high system availability with the robust design
- Connection of safe sensors and actuators directly at field level
- Easy device addressing with address plug

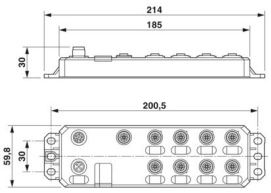
ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	1185380
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNA541
Product key	DNA541
GTIN	4063151225278
Weight per piece (including packing)	405 g
Weight per piece (excluding packing)	372 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	59.8 mm
Height	214 mm
Depth	30 mm
Note on dimensions	Specifications including fixing clips and connectors

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	Panel mounting
	Mounting panel
Mounting position	any

Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	Plastic POCAN B4239 GF30 YE 1018

Input data

Digital:

Input name	Safe 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. 200 m
Connection method	M12 connector, A-coded
Connection technology	3-conductor
Input voltage range "0" signal	-30 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30.2 V DC
Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	typ. 3.7 mA (at 24 V DC)
	max. 4.3 mA (with 30.2 V DC)

Input filter time	1.5 ms
	3 ms (Default)
	5 ms
	15 ms
Protective circuit	Overload protection, short-circuit protection of sensor supply

IO-Link

Number of ports	1
Connection method	M12 connector, A-coded
Connection technology	3-conductor
Port type	Class A
Specification	V1.1.2
Reverse polarity protection	yes
Transmission speed	230.4 kbps (COM3)
Cycle Time	≥ 4 ms
Process data update	≥ 4 ms
Amount of process data	64 bit (Input and output data)

Output data

Digital:

Output name	Safe digital outputs
Connection method	M12 connector, A-coded
Connection technology	2-conductor
Number of outputs	4 (for 2-channel assignment, +/- switching)
	4 (for 1-channel assignment, + switching)
Protective circuit	Overload protection, short-circuit protection of outputs
Output voltage	U_A - 1.4 V
Limitation of the voltage induced on circuit interruption	-15 V
Output current	max. 2 A (per channel)
	max. 2 A (per output)
	max. 6 A (Total current of all outputs; Please observe the notes in the user manual.)
Maximum output current per channel	2 A
Nominal output voltage	24 V DC (from voltage U_A)
Load min.	2.4 kΩ (10 mA at 24 V DC)
Output voltage when switched off	< 5 V ((in the Low state))
Output current when switched off	2 mA (Leakage current in the Low state)
Delay time	max. 128 s (can be parameterized)
Permissible cable length	max. 50 m
Switching frequency	max. 1 Hz
Reverse voltage resistance to short pulses	no
Resistance to permanently applied surge voltage	no

Product properties

Product type	I/O component
Product family	Axioline E
Application	Functional safety
Type	Stand-alone
Mounting position	any
Operating mode	Process data mode with 4 words
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)

Insulation characteristics

Pollution degree	4

Electrical properties

Supply: IO-Link

Designation	IO-Link port supply (L+)
Nominal voltage for I/O supply	24 V DC (Provided via the IO-Link interface of the IO-Link master.)
Supply voltage range	19.2 V DC ... 30.2 V DC (including all tolerances, including ripple)
Nominal current per device	approx. 15 mA
Permissible cable length	max. 20 m
Protective circuit	Reverse polarity protection

Supply: Module electronics and sensors

Designation	Supply of module electronics and sensors (U_S)
Connection method	M12 connector, L-coded
Number of positions	2
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30.2 V DC (including all tolerances, including ripple)
Current consumption	67 mA (without sensors)
Protection	max. 8 A (slow-blow)

Supply: Actuators

Designation	Actuator supply (U_A)
Connection method	M12 connector, L-coded
Number of positions	2
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30.2 V DC (including all tolerances, including ripple)
Current consumption	52 A (without actuators)
Protection	max. 8 A (slow-blow)

Connection data

Connection method	M12 connector
Note on the connection method	in accordance with IEC 61076-2-101, M12 connection technology

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (Mounting position: any)
Degree of protection	IP65/IP67 (in accordance with DIN EN 60529:1989 + A1:1999 + A2:2013)
Note	Resistant to gas that may endanger functions (sulfur dioxide (SO_2), hydrogen sulfide (H_2S))
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 (storage/transport)	75 % (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	30g, 11 ms period, half-sine shock pulse
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g

Standards and regulations

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

Air clearances and creepage distances

Air clearances and creepage distances	in accordance with IEC 60664-1

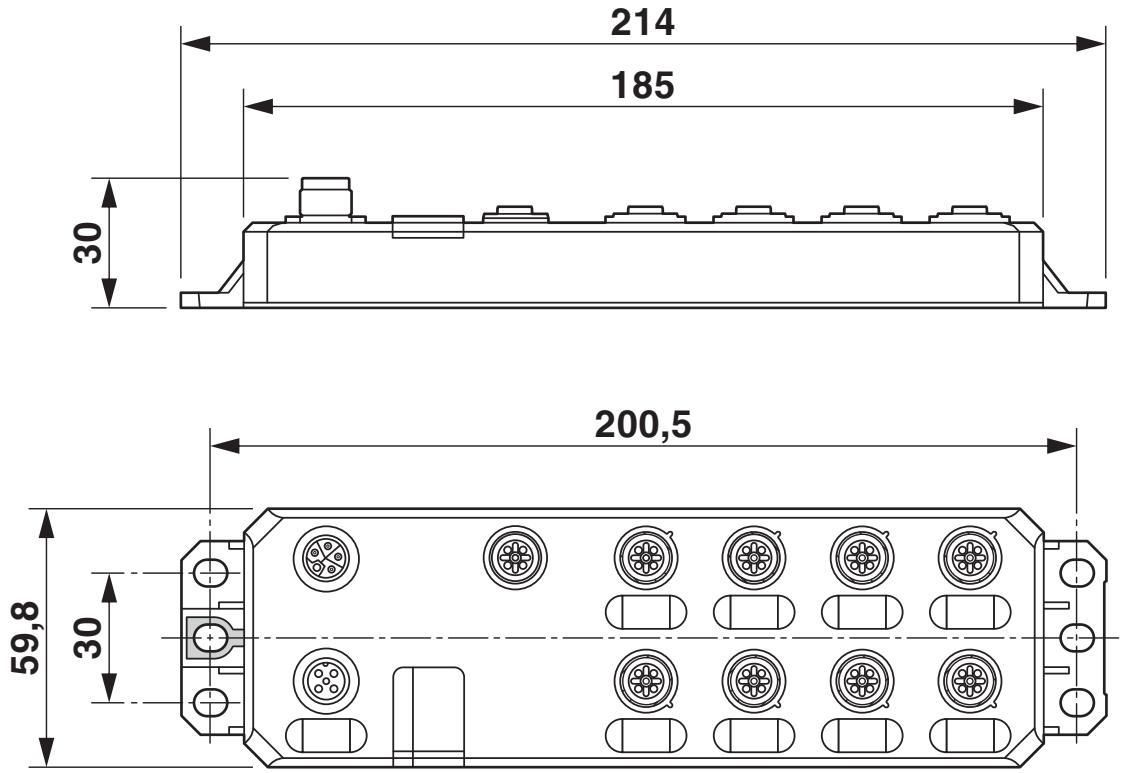
Characteristics

Safety data: EN ISO 13849-1

Performance level (PL)	max. d (1-channel assignment)
	max. e (2-channel assignment)

Drawings

Dimensional drawing



Dimensions (in mm)

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1185380

PROFIsafe
Approval ID: Z20308

cULus Listed
Approval ID: E238705

Functional Safety
Approval ID: 01/205/5820.00/22

FS Thermoprocess
Approval ID: 968 INS 799.01 25

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	6(c), 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	b48639e5-ae11-4270-ac76-a6f03f493f7d

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