

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



1185380

<https://www.phoenixcontact.com/us/products/1185380>

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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 PROFI-safe 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 PROFI-safe 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

## Commercial data

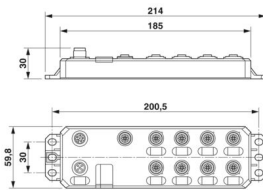
Item number	1185380
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA541
GTIN	4063151225278
Weight per piece (including packing)	405 g
Weight per piece (excluding packing)	372 g
Customs tariff number	85176200
Country of origin	DE

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## 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

Note on application	Only for industrial use
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### 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

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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	$U_A - 1.4 \text{ V}$
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

## 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

Insulation characteristics

Pollution degree	4
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## 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 <sub>2</sub> ), hydrogen sulfide (H <sub>2</sub> S))
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

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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)
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### Air clearances and creepage distances

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

Mounting type	Panel mounting
	Mounting panel
Mounting position	any

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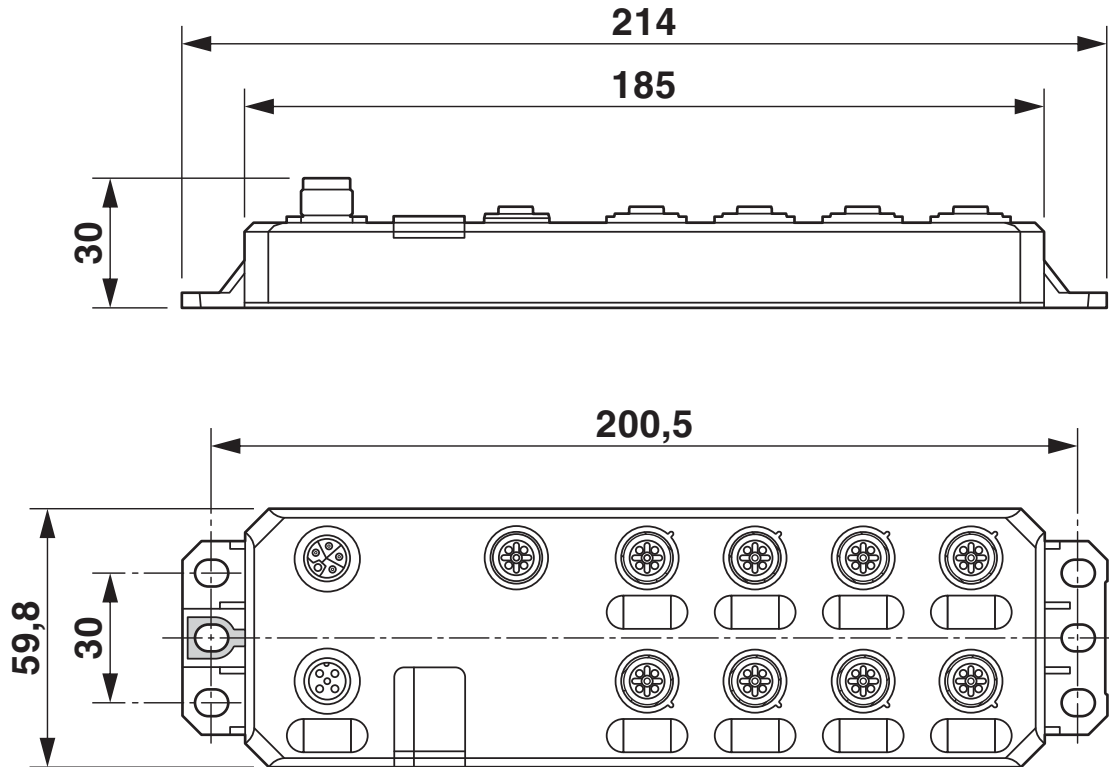


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## Drawings

Dimensional drawing



Dimensions (in mm)

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## Approvals

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### **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

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## Classifications

### ECLASS

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

### ETIM

ETIM 10.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## 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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