

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



1185380

<https://www.phoenixcontact.com/gb/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 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

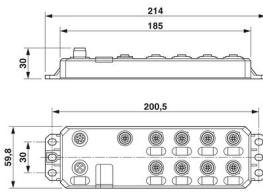
| | |
|--------------------------------------|---------------|
| Item number | 1185380 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales Key | DNA541 |
| Product Key | DNA541 |
| GTIN | 4063151225278 |
| Weight per Piece (including packing) | 405 g |
| Weight per Piece (excluding packing) | 372 g |
| Customs tariff number | 85389091 |
| 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 |

Material specifications

| | |
|------------------|----------------------------------|
| Housing material | Plastic POCAN B4239 GF30 YE 1018 |
| Color | yellow |

System properties

IO-Link

| | |
|------------------------|--------------------------------|
| Amount of process data | 64 Bit (Input and output data) |
|------------------------|--------------------------------|

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 |
| Number of ports | 1 |

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| | |
|-----------------------|------------------------|
| Connection method | M12 connector, A-coded |
| Connection technology | 3-conductor |
| Port type | Class A |

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) |
| 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

| | |
|-------------------|--------------------------------|
| Type | Stand-alone |
| Product type | I/O component |
| Mounting position | any |
| Application | Functional safety |
| Operating mode | Process data mode with 4 words |

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.) |
| Nominal current per device | approx. 15 mA |
| Protective circuit | Reverse polarity protection |
| Permissible cable length | max. 20 m |

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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) |

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) |

Connection data

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

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 ₂ 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) |

Standards and regulations

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

Mounting

| | |
|-------------------|-------------------|
| Mounting type | DIN rail mounting |
| Mounting position | any |

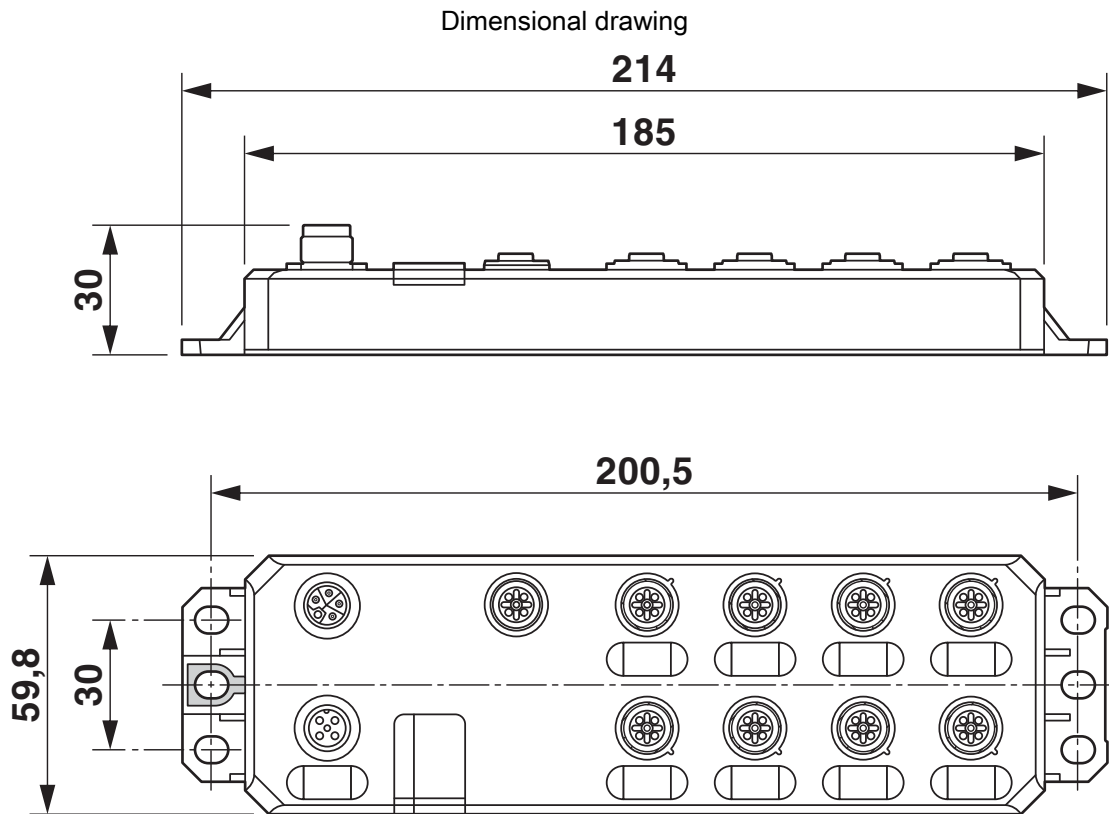
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Drawings



Dimensions (in mm)

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Approvals



Functional Safety

Approval ID: 968/FSP 2196.00/22



UL Listed

Approval ID: FILE E 238705

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 125 V | 1 A | - | - |



cUL Listed

Approval ID: FILE E 238705

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 125 V | 1 A | - | - |



Functional Safety

Approval ID: 01/205/5820.00/22

cULus Listed

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



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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27242604 |
| ECLASS-10.0.1 | 27242604 |
| ECLASS-11.0 | 27242604 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC001599 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

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Mandatory Accessories

Communication module

Communication module - AXL E PN IOL4/4 EF M12 6M-L - 1300926

<https://www.phoenixcontact.com/gb/products/1300926>



Axioline E, IO-Link master, PROFINET, M12 connector (D-coded), IO-Link ports Class A: 4, connection method: M12 connector (A-coded), connection technology: 3-conductor, IO-Link ports Class B: 4, connection method: M12 connector (A-coded), connection technology: 5-conductor, Digital inputs at pin 2 for class A ports: 4, 24 V DC, connection technology: 3-conductor, Digital outputs at pin 2 for class A ports: 4, 24 V DC, 2 A, connection technology: 2-conductor, with safe signal path, degree of protection: IP65/IP67/IP69K

Communication module

Communication module - AXL F IOL8 2H - 1027843

<https://www.phoenixcontact.com/gb/products/1027843>



Axioline F, IO-Link master, IO-Link ports Class A: 8, connection method: Push-in connection, connection technology: 3-conductor, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connectors

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Communication module

Communication module - AXL SE IOL4 - 1088132

<https://www.phoenixcontact.com/gb/products/1088132>



Axioline Smart Elements, IO-Link master, IO-Link ports Class A: 4, connection method: Push-in connection, connection technology: 3-conductor, degree of protection: IP20

Accessories

Configuration memory

Configuration memory - AXL E ADDRESSPLUG - 1100053

<https://www.phoenixcontact.com/gb/products/1100053>



Replaceable address plug for the safety address

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

Screw plug

Screw plug - PROT-M12 - 1680539

<https://www.phoenixcontact.com/gb/products/1680539>



An M12 screw plug for the unoccupied M12 sockets of the sensor/actuator cable, boxes and flush-type connectors

Snap-in markers

Snap-in markers - UCT-EM (7X10) - 0830765

<https://www.phoenixcontact.com/gb/products/0830765>



Snap-in markers, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, lettering field size: 7 x 10 mm, Number of individual labels: 30

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

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Y distributor

Y distributor - SAC-3P-Y/2XFS PE SCO - 1523971

<https://www.phoenixcontact.com/gb/products/1523971>



Y distributor, 4-position, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A and Socket straight M12 SPEEDCON, coding: A

Y distributor

Y distributor - SAC-3P-Y/2XFS B PE SCO - 1523968

<https://www.phoenixcontact.com/gb/products/1523968>



Y distributor, 4-position, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, PIN 2+4 bridged and Socket straight M12 SPEEDCON, coding: A, PIN 2+4 bridged, Thread M12 socket not rotatable

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

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Y distributor

Y distributor - SAC-5P-Y/2XFS VP SCO - 1546068

<https://www.phoenixcontact.com/gb/products/1546068>



Y distributor, 5-position, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A and Socket straight M12 SPEEDCON, coding: A, Parallel distributor, Thread M12 socket not rotatable

Power cable

Power cable - SAC-4P-10,0-105/M12FSL - 1425036

<https://www.phoenixcontact.com/gb/products/1425036>



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Socket straight M12, coding: L, on free cable end, cable length: 10 m, For direct current up to 12 A/63 V

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

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Power cable

Power cable - SAC-4P- 1,5-PUR/M12FSL - 1425073

<https://www.phoenixcontact.com/gb/products/1425073>



Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Socket straight M12, coding: L, on free cable end, cable length: 1.5 m, for direct current up to 16 A/63 V

Power cable

Power cable - SAC-4P-M12FSL/.../... - 1276563

<https://www.phoenixcontact.com/gb/products/1276563>



Power cable, 4-position, Variable cable type, Socket straight M12, coding: L, on free cable end, cable length: Free input (0.2 ... 40.0 m), for direct current up to 16 A/63 V

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Sensor/actuator cable

Sensor/actuator cable - SAC-5P-M12MS/3,0-PUR/M12FS - 1681619

<https://www.phoenixcontact.com/gb/products/1681619>

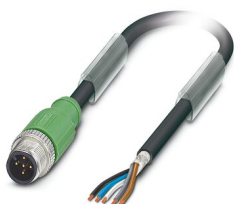


Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 3 m

Sensor/actuator cable

Sensor/actuator cable - SAC-5P-M12MS/ 5,0-PUR SH - 1682731

<https://www.phoenixcontact.com/gb/products/1682731>



Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12, coding: A, on free cable end, cable length: 5 m

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



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Sensor/actuator cable

Sensor/actuator cable - SAC-5P-M12MS-M12FS SH/.../... - 1536120

<https://www.phoenixcontact.com/gb/products/1536120>



Sensor/actuator cable, 5-position, Variable cable type, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: Free input (0.2 .. 40.0 m)

Plastic label

Plastic label - US-EMLP-HA (20X9) - 0830989

<https://www.phoenixcontact.com/gb/products/0830989>



Plastic label, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 20 x 9 mm, Number of individual labels: 70

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



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Screw plug

Screw plug - PROT-M12 SH - 1503302

<https://www.phoenixcontact.com/gb/products/1503302>



An M12 screw plug for the unoccupied M12 sockets of the shielded sensor/actuator cable, boxes and flush-type connectors

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