

## Distributed I/O device - AXL E EIP IOL8 DI4 M12 6P - 2701496

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Axioline E, EtherNet/IP™, M12 fast connection technology, Digital inputs at pin 2 for type A ports: 4 , 24 V DC, connection method: 3-wire, Plastic housing, degree of protection: IP65/IP67

### Product Description

The Axioline E device is designed for use within an EtherNet/IP™ network. It enables the operation of up to eight IO-Link sensors/actuators and is also used to acquire digital signals.


### Your advantages

- ✓ Connection to EtherNet/IP™ network using M12connectors (D-coded)
- ✓ Transmission speed of 10 Mbps and 100 Mbps
- ✓ Connection of four IO-Link devices with additional digital input
- ✓ Connection of four IO-Link actuators with additional power supply
- ✓ Connection of IO-Link ports using M12connectors (A-coded, 5-pos.)
- ✓ IO-Link specification V1.1.2
- ✓ Diagnostic and status indicators
- ✓ Short-circuit and overload protection of the sensor supply
- ✓ IP65/IP67 degree of protection



EtherNet/IP  IO-Link

### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 046356 763509 |
| GTIN                                 | 4046356763509   |
| Weight per Piece (excluding packing) | 552.800 g   |
| Custom tariff number                 | 85176200  |
| Country of origin                    | Germany   |

### Technical data

#### Note

|                         |   |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

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### Technical data

#### Dimensions

|                    |  |
|--------------------|--|
| Width              | 60 mm  |
| Height             | 185 mm                                       |
| Depth              | 30.5 mm                                      |
| Note on dimensions | The height is 212 mm including fixing clips. |
| Drill hole spacing | 198.5 mm                                     |

#### Ambient conditions

|  |   |
|--|---|
| Ambient temperature (operation)          | -25 °C ... 60 °C                                  |
| Ambient temperature (storage/transport)  | -25 °C ... 85 °C                                  |
| Permissible humidity (operation)         | 5 % ... 95 %                                      |
| Permissible humidity (storage/transport) | 5 % ... 95 %                                      |
| Air pressure (operation)                 | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Air pressure (storage/transport)         | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Degree of protection                     | IP65/IP67   |

#### General

|                  |               |
|------------------|---------------|
| Housing material | Pocan®        |
| Mounting type    | Wall mounting |
| Color            | anthracite    |
| Net weight       | 552.8 g       |

#### Interfaces

|                               |                                     |
|-------------------------------|-------------------------------------|
| Designation                   | EtherNet/IP™                        |
| No. of channels               | 2                                   |
| Connection method             | M12 fast connection technology      |
| Note on the connection method | D-coded                             |
| Designation connection point  | Copper cable                        |
| Transmission speed            | 10/100 Mbps (with auto negotiation) |
| Number of positions           | 4                                   |

#### System limits of the bus coupler

|                           |                                |
|---------------------------|--------------------------------|
| Designation               | EtherNet/IP™                   |
| Equipment type            | EtherNet/IP™ slave             |
| System-specific protocols | EtherNet/IP™ protocols ACD     |
|                           | EtherNet/IP™ protocols DLR     |
|                           | EtherNet/IP™ protocols IGMP v2 |
| Protocols supported       | SNMP v1                        |
|                           | HTTP                           |
|                           | TFTP                           |
|                           | FTP                            |
|                           | BootP                          |
|                           | DHCP                           |
| Specification             | CIP Edition 3.11               |

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## Technical data

### System limits of the bus coupler

|  |                            |
|--|----------------------------|
|  | EIP adaptation of CIP 1.12 |
|--|----------------------------|

### Supply

|                      |  |
|----------------------|--|
| Designation          | Module electronics and sensors ( $U_S$ )                             |
| Connection method    | M12 connector (T-coded)  |
| Number of positions  | 4  |
| Supply voltage       | 24 V DC  |
| Supply voltage range | 19.5 V DC ... 31.2 V DC (including all tolerances, including ripple) |
| Current consumption  | typ. 180 mA $\pm$ 15 % (at 24 V DC)                                  |
| Designation          | Actuators ( $U_A$ )  |
| Connection method    | M12 connector (T-coded)  |
| Number of positions  | 4  |
| Supply voltage       | 24 V DC  |
| Supply voltage range | 18 V DC ... 31.2 V DC (including all tolerances, including ripple)   |
| Current consumption  | typ. 28 mA $\pm$ 15 % (at 24 V DC)                                   |

### Digital inputs

|                                   |  |
|-----------------------------------|--|
| Input name                        | Digital inputs at pin 2 for type A ports                       |
| Description of the input          | IEC 61131-2 type 1   |
| Connection method                 | M12 connector, X01 ... X04 have double occupancy               |
| Connection technology             | 3-wire   |
| Number of inputs                  | 4  |
| Protective circuit                | Overload protection, short-circuit protection of sensor supply |
| Nominal input voltage $U_{IN}$    | 24 V DC  |
| Nominal input current at $U_{IN}$ | typ. 3 mA  |
| Input filter time                 | < 1000 $\mu$ s   |
| Input voltage range "0" signal    | -0.3 V DC ... 5 V DC   |
| Input voltage range "1" signal    | 15 V DC ... 30 V DC  |
| Input frequency                   | 0.5 kHz  |
| Description of the input          | IO-Link ports in digital input (DI) mode                       |
| Connection method                 | M12 connector, X01 ... X04 have double occupancy               |
| Connection technology             | 3-wire   |
| Number of inputs                  | max. 8 (EN 61131-2 type 1)                                     |
| Nominal input voltage $U_{IN}$    | 24 V DC  |
| Input voltage range "0" signal    | -0.3 V DC ... 5 V DC   |
| Input voltage range "1" signal    | 15 V DC ... 30 V DC  |
| Nominal input current             | typ. 3 mA  |
| Sensor current per channel        | max. 200 mA (from L+/L-)                                       |
| Total sensor current              | max. 1.6 A (from L+/L-)  |
| Input filter time                 | < 1000 $\mu$ s   |
| Input frequency                   | 0.5 kHz  |
| Type of protection                | Overload protection  |

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### Technical data

#### Digital inputs

|  |  |
|--|--|
|  | Short-circuit protection for the sensor supply |
|--|--|

#### Digital outputs

|   |   |
|---|---|
| Output description  | IO-Link ports in digital output (DO) mode         |
| Connection method   | M12 connector, X01 ... X04 have double occupancy  |
| Connection technology                                     | 3-wire  |
| Number of outputs   | max. 8  |
| Nominal output voltage                                    | 24 V DC   |
| Maximum output current per channel                        | 150 mA  |
| Maximum output current per device                         | 1.2 A   |
| Nominal load, ohmic                                       | 3.6 W (160 $\Omega$ , at nominal load)            |
| Nominal load, inductive                                   | 3.6 VA (0.8 H, 160 $\Omega$ , at nominal load)    |
| Signal delay  | max. 150 $\mu$ s (when switched on)               |
|   | max. 200 $\mu$ s (when switched off)              |
| Switching rate  | 1 per second, maximum (at nominal inductive load) |
| Limitation of the voltage induced on circuit interruption | -15 V DC  |
| Output voltage when switched off                          | max. 1 V  |
| Output current when switched off                          | max. 300 $\mu$ A                                  |
| Type of protection  | Overload protection                               |
|   | Short-circuit protection                          |
| Behavior with overload                                    | Shutdown with automatic restart                   |

#### Electrical isolation

|              |   |
|--------------|---|
| Test section | 24 V supply (communications power and sensor supply, IO-Link ports)/ bus connection (Ethernet 1) 500 V AC 50 Hz 1 min.  |
|              | 24 V supply (communications power and sensor supply, IO-Link ports)/ bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.  |
|              | 24 V supply (communications power and sensor supply, IO-Link ports)/ FE 500 V AC 50 Hz 1 min.                           |
|              | Bus connection (Ethernet 1)/FE 500 V AC 50 Hz 1 min.  |
|              | Bus connection (Ethernet 2)/FE 500 V AC 50 Hz 1 min.  |
|              | Bus connection (Ethernet 1)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.   |
|              | 24 V supply (actuator supply)/24 V supply (communications power and sensor supply, IO-Link ports) 500 V AC 50 Hz 1 min. |
|              | 24 V supply (actuator supply)/bus connection (Ethernet 1) 500 V AC 50 Hz 1 min.   |
|              | 24 V supply (actuator supply)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.   |
|              | 24 V supply (actuator supply)/FE 500 V AC 50 Hz 1 min.  |

#### Standards and Regulations

|                  |  |
|------------------|--|
| Mechanical tests | Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g                          |
|                  | Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g, 11 ms period, half-sine shock pulse |

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### Technical data

#### Standards and Regulations

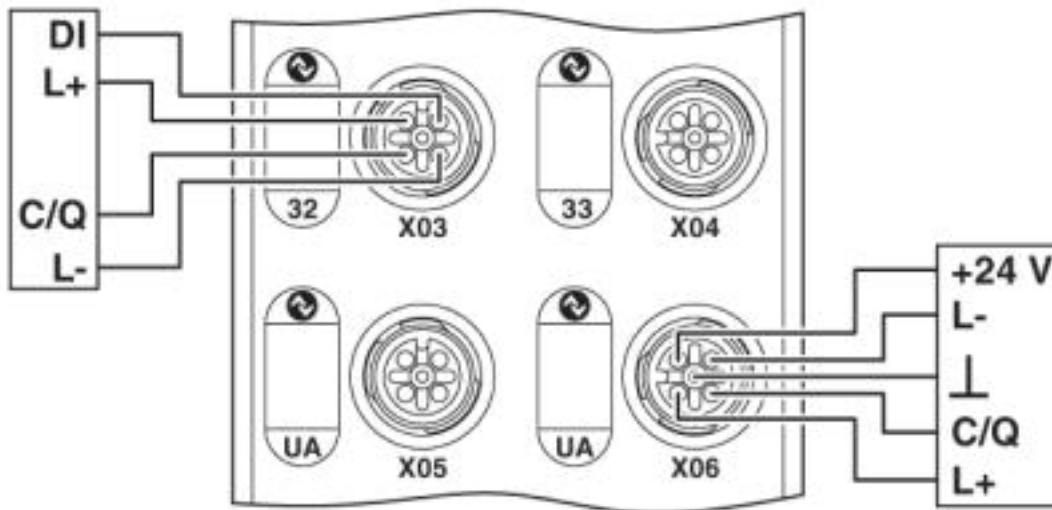
|                  |  |
|------------------|--|
|                  | Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g |
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1)                          |

#### Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 25;   |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

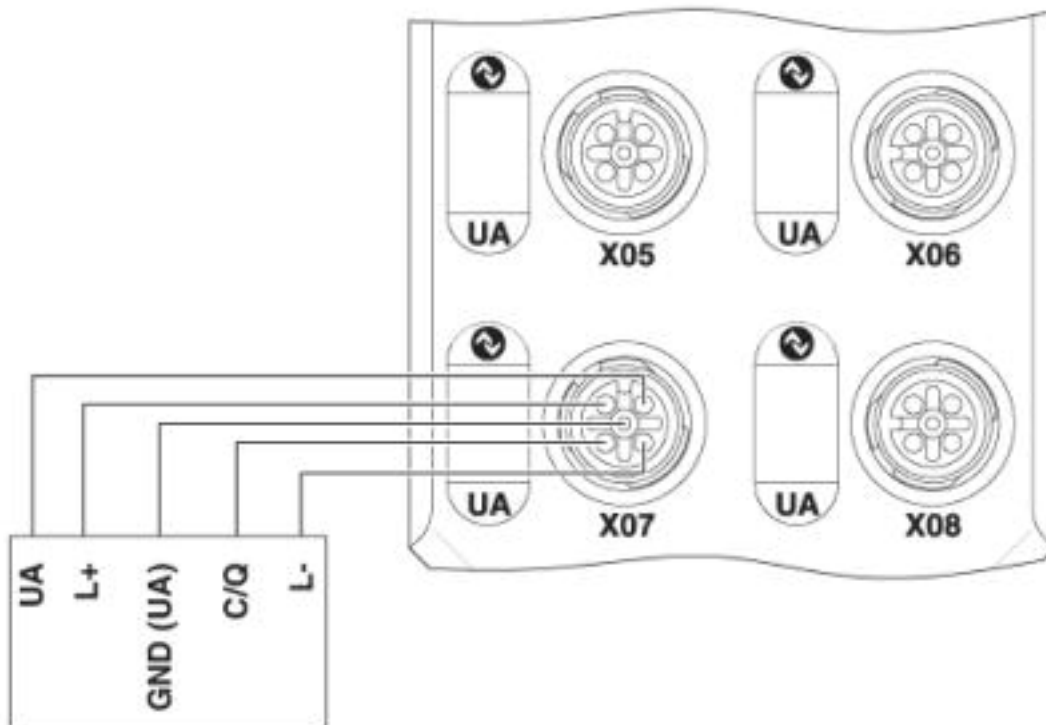
### Drawings

Connection diagram

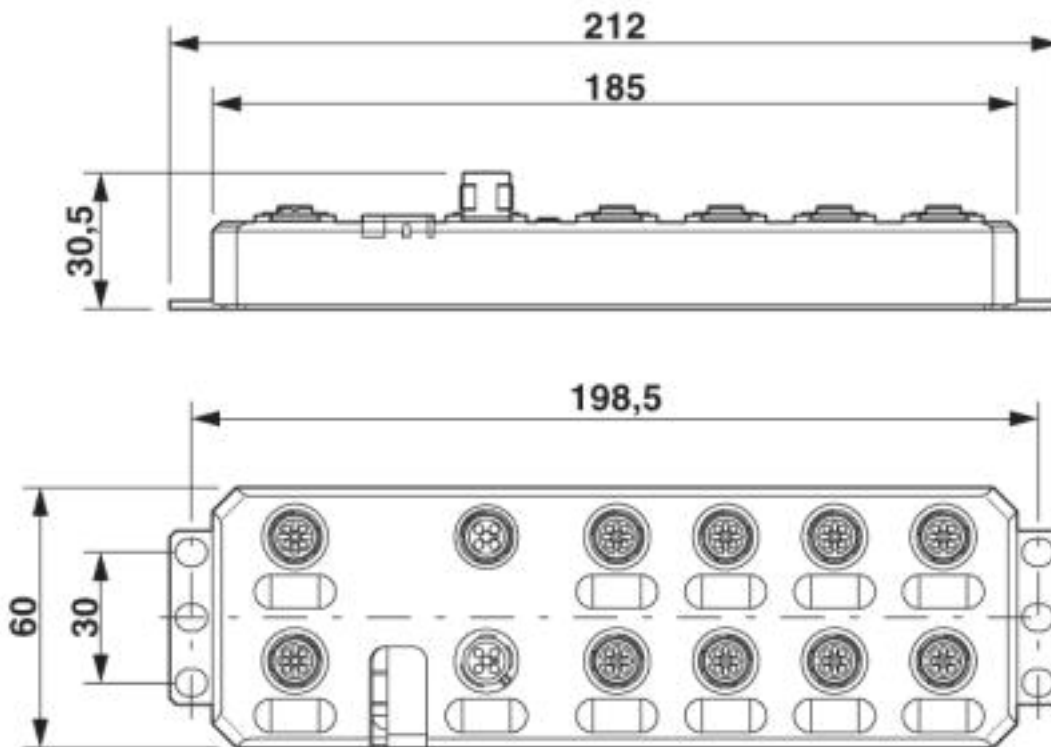


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Connection diagram



Dimensional drawing



<https://www.phoenixcontact.com/gb/products/2701496>



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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27240400 |
| eCl@ss 4.1 | 27240400 |
| eCl@ss 5.0 | 27242200 |
| eCl@ss 5.1 | 27242600 |
| eCl@ss 6.0 | 27242600 |
| eCl@ss 7.0 | 27242604 |
| eCl@ss 8.0 | 27242604 |
| eCl@ss 9.0 | 27242604 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001433 |
| ETIM 3.0 | EC001599 |
| ETIM 4.0 | EC001599 |
| ETIM 5.0 | EC001599 |
| ETIM 6.0 | EC001599 |
| ETIM 7.0 | EC001599 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11     | 39121311 |
| UNSPSC 12.01  | 39121311 |
| UNSPSC 13.2   | 32151602 |

### Approvals

#### Approvals

##### Approvals

UL Listed / cUL Listed / PROFIBUS / cULus Listed

##### Ex Approvals

UL Listed / cUL Listed / cULus Listed

#### Approval details

UL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 140324



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### Approvals

|            |   |   |               |
|------------|---|---|---------------|
| cUL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
|------------|---|---|---------------|

|          |        |
|----------|--------|
| PROFIBUS | Z01807 |
|----------|--------|

|              |   |
|--------------|---|
| cULus Listed |  |
|--------------|---|



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