

## Distributed I/O device - AXL E EIP DI16 M12 6P - 2701493

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Axioline E EtherNet/IP™ device in a plastic housing with 16 digital inputs, 24 V DC, M12 fast connection technology

### Why buy this product

- Connection to EtherNet/IP™ network using M12connectors (D-coded)
- Transmission speed of 10 Mbps and 100 Mbps
- Connection of digital sensors using M12connectors (A-coded)
- Diagnostic and status indicators
- Short-circuit and overload protection of the sensor supply
- IP65/IP67 degree of protection

### EtherNet/IP™

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 STK                                                                                                   |
| GTIN         | <br>4 046356 763479 |

### Technical data

#### Note

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

#### 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 %     |

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### Ambient conditions

|                                  |                                                   |
|----------------------------------|---------------------------------------------------|
| 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

|               |               |
|---------------|---------------|
| Net weight    | 547 g         |
| Mounting type | Wall mounting |

### Interfaces

|                              |                                       |
|------------------------------|---------------------------------------|
| Fieldbus system              | EtherNet/IP™                          |
| Designation                  | EtherNet/IP™                          |
| Connection method            | M12-Schnellanschlusstechnik           |
| Note on connection method    | D-coded                               |
| Designation connection point | Copper cable                          |
| Transmission speed           | 10/100 MBit/s (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<br>EIP adaptation of CIP 1.12 |

### Power supply for module electronics

|                                |                                                                              |
|--------------------------------|------------------------------------------------------------------------------|
| Module electronics and sensors | M12 connector (T-coded) Module electronics and sensors (U <sub>S</sub> ) 4   |
| Connection method              | M12 connector (T-coded)                                                      |
| Designation                    | Module electronics and sensors (U <sub>S</sub> )                             |
| Number of positions            | 4                                                                            |
| Supply voltage                 | 24 V DC                                                                      |
| Nominal supply voltage range   | 18 V DC ... 31.2 V DC (including all tolerances, including ripple)           |
| Current consumption            | max. 12 A                                                                    |
| Typical current consumption    | 190 mA ±15 % (at 24 V DC)                                                    |
| Actuators                      | M12 connector (T-coded) Actuators (U <sub>A</sub> ) for additional devices 4 |
| Connection method              | M12 connector (T-coded)                                                      |

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### Power supply for module electronics

|                              |                                                                    |
|------------------------------|--------------------------------------------------------------------|
| Designation                  | Actuators (U <sub>A</sub> ) for additional devices                 |
| Number of positions          | 4                                                                  |
| Supply voltage               | 24 V DC                                                            |
| Nominal supply voltage range | 18 V DC ... 31.2 V DC (including all tolerances, including ripple) |
| Current consumption          | max. 12 A                                                          |
| Typical current consumption  | 3 mA ±15 % (at 24 V DC)                                            |

### Digital inputs

|                                          |                                                                |
|------------------------------------------|----------------------------------------------------------------|
| Input name                               | Digital inputs                                                 |
| Description of the input                 | EN 61131-2 types 1 and 3                                       |
| Connection method                        | M12 connector, double occupancy                                |
|                                          | 4-wire                                                         |
| Number of inputs                         | 16                                                             |
| Protective circuit                       | Overload protection, short-circuit protection of sensor supply |
| Input filter time                        | < 1000 µs                                                      |
| Input voltage range "0" signal           | -30 V DC ... 5 V DC                                            |
| Input voltage range "1" signal           | 11 V DC ... 30 V DC                                            |
| Nominal input current at U <sub>IN</sub> | typ. 3 mA                                                      |

### Standards and Regulations

|                                |                                                                                                                                                                                       |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conformity with EMC directives | Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B, 6 kV contact discharge, 8 kV air discharge                  |
|                                | Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m                                            |
|                                | Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV                                                              |
|                                | Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B, DC supply lines: ±0.5 kV/±0.5 kV (symmetrical/asymmetrical) |
|                                | Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V                                                  |
|                                | Noise emission test as per EN 61000-6-4 Radio interference properties EN 55022 Class A                                                                                                |
| Test section                   | 24 V supply (communications power and sensor supply, digital inputs)/ bus connection (Ethernet 1) 500 V AC 50 Hz 1 min.                                                               |
|                                | 24 V supply (communications power and sensor supply, digital inputs)/ bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.                                                               |
|                                | 24 V supply (communications power and sensor supply, digital inputs)/ 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, digital inputs) 500 V AC 50 Hz 1 min.                                                              |

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## Technical data

### Standards and Regulations

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

## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27240404 |
| eCl@ss 4.1 | 27240404 |
| eCl@ss 5.0 | 27242204 |
| eCl@ss 5.1 | 27242604 |
| eCl@ss 6.0 | 27242604 |
| 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 |

### UNSPSC

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

## Approvals

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#### Approvals

UL Listed / cUL Listed / cULus Listed

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### Approvals

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

### Approval details

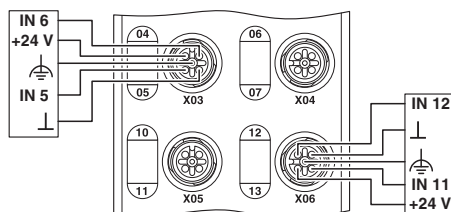
UL Listed 

cUL Listed 

cULus Listed 

### Drawings

Connection diagram



Dimensional drawing

