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Distributed I/O device - AXL E EC IOL8 DI4 M12 6M - 2701531

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Axioline E-EtherCAT® device in a metal housing with 8 IO-Link ports and 4 digital inputs, 24 V DC, M12 fast connection technology

Product Description


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

Why buy this product

- ✓ Connection to EtherCAT® network using M12connectors (D-coded)
- ✓ Transmission speed of 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.)
- ✓ Diagnostic and status indicators
- ✓ Short-circuit and overload protection of the sensor supply
- ✓ IP65/IP67 degree of protection



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 STK |
| GTIN |  4 046356 763790 |
| GTIN | 4046356763790 |

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 | 38 mm |

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Dimensions

| | |
|--------------------|--|
| Note on dimensions | The height is 194.5 mm including the mounting plate. With fixing clips pulled out, the height is 212 mm. The depth is 38 mm including the mounting plate (30.5 mm without the mounting plate). |
| 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 | Zinc die-cast |
| Mounting type | Wall mounting or DIN rail mounting; both with mounting plate. |
| Net weight | 726.9 g |

Interfaces

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

System limits of the bus coupler

| | |
|---------------------------|--|
| Designation | EtherCAT® |
| Equipment type | EtherCAT® slave |
| System-specific protocols | Mailbox protocols CANopen® over EtherCAT® |
| | Mailbox protocols File access over EtherCAT® |
| Type of addressing | Auto-increment addressing |
| | Fixed position addressing |
| | Logical addressing |
| Specification | ETG.1000 V1.02 |

Supply

| | |
|---------------------|--|
| Designation | Module electronics and sensors (U _S) |
| Connection method | M12 connector (T-coded) |
| Number of positions | 4 |
| Supply voltage | 24 V DC |

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Supply

| | |
|------------------------------|--|
| Nominal supply voltage range | 18 V DC ... 31.2 V DC (including all tolerances, including ripple) |
| Current consumption | max. 12 A |
| Typical current consumption | 180 mA ±15 % (at 24 V DC) |
| Designation | Actuators (U _A) |
| Connection method | M12 connector (T-coded) |
| 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 | 28 mA ±15 % (at 24 V DC) |

Digital inputs

| | |
|---------------------------------------|--|
| 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 |
| 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 µs |
| Input frequency | 0.5 kHz |
| Type of protection | Overload protection |
| | 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 Ω, at nominal load) |
| Nominal load, inductive | 3.6 VA (0.8 H, 160 Ω, at nominal load) |
| Signal delay | max. 150 µs (when switched on) |
| | max. 200 µs (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 µA |

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Digital outputs

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

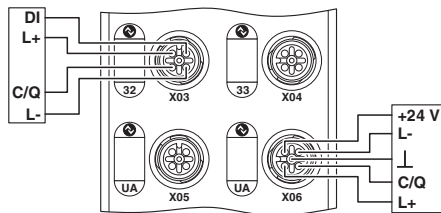
Environmental Product Compliance

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

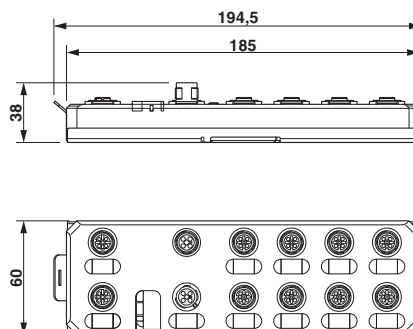
Drawings

Distributed I/O device - AXL E EC IOL8 DI4 M12 6M - 2701531

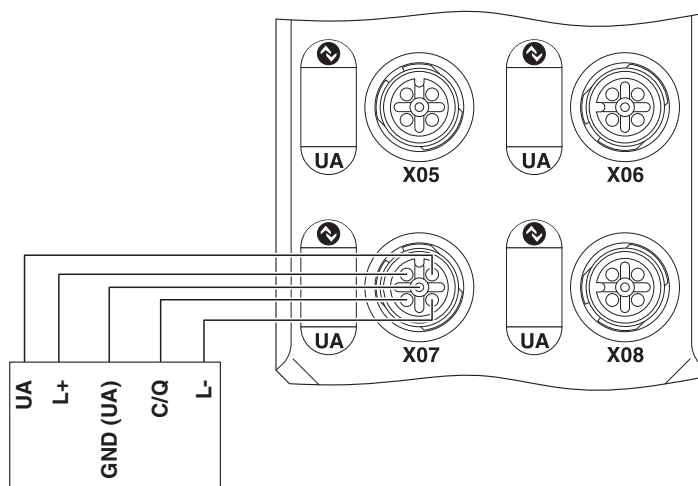
Connection diagram



Dimensional drawing



Connection diagram



Approvals

Approvals

Approvals

UL Listed / cUL Listed / EtherCAT / 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 |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 140324 |
|------------|---|---|---------------|

| | |
|----------|----------|
| EtherCAT | 0x84_002 |
|----------|----------|

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

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