

## Distributed I/O device - AXL E EC DI8 DO4 2A M12 6M - 2701529

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Axioline E, Digital I/O device, EtherCAT®, M12 fast connection technology, Digital inputs: 8, 24 V DC, connection method: 4-wire, Digital outputs: 4, 24 V DC, 2 A, connection method: 3-wire, Metal housing, degree of protection: IP65/67

### Product Description

The Axioline E device is designed for use within an EtherCAT® network. It is used to acquire and output digital signals. The device is designed for use in systems manufacturing. It is suitable for use without a control cabinet under harsh industrial conditions. The Axioline E device can be used on tool platforms, directly on welding robots or in conveying technology, for example. EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

### Your advantages

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



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356763783

### Technical data

#### Note

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

Width	60 mm
Height	185 mm

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## Technical data

### Dimensions

Depth	38 mm
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	708.6 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 <sub>S</sub> )
Connection method	M12 connector (T-coded)
Number of positions	4

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## Technical data

### Supply

Supply voltage	24 V DC
Nominal supply voltage range	18 V DC ... 31.2 V DC (including all tolerances, including ripple)
Current consumption	typ. 140 mA ±15 % (at 24 V DC)
Designation	Actuators (U <sub>A</sub> )
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	typ. 30 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
Connection technology	4-wire
Number of inputs	8
Type of protection	Overload protection, short-circuit protection of sensor supply
Input filter time	< 1000 µs
Input voltage range "0" signal	0 V ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Nominal input current at U <sub>IN</sub>	typ. 3 A

### Digital outputs

Output name	Digital outputs
Connection method	M12 connector, (A-coded)
Connection technology	3-wire
Number of outputs	4
Type of protection	Overload protection, short-circuit protection of outputs
Output voltage	24 V DC
Nominal output voltage	24 V DC (from voltage U <sub>A</sub> )
Maximum output current per channel	2 A
Nominal load, inductive	48 VA (1.2 H, 48 Ω, with nominal voltage)
Nominal load, ohmic	48 W (48 Ω, with nominal voltage)

### Electrical isolation

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.

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## Technical data

### Electrical isolation

	Bus connection (Ethernet 1)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply, digital outputs)/24 V supply (communications power and sensor supply, digital inputs) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply, digital outputs)/bus connection (Ethernet 1) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply, digital outputs)/bus connection (Ethernet 2) 500 V AC 50 Hz 1 min.
	24 V supply (actuator supply, digital outputs)/FE 500 V AC 50 Hz 1 min.

### Standards and Regulations

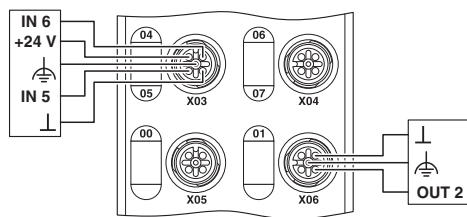
Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g, 11 ms period, half-sine shock pulse
	Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

### Environmental Product Compliance

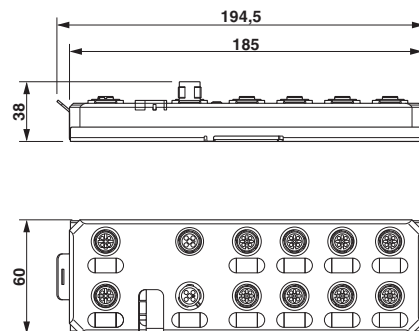
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Connection diagram



Dimensional drawing



## Approvals

Approvals

Approvals

UL Listed / cUL Listed / EtherCAT / cULus Listed

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### Approvals


Ex Approvals

UL Listed / cUL Listed / cULus Listed


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#### Approval details

UL 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
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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
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EtherCAT			0x84_001
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cULus Listed			
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