

## Distributed I/O device - AXL E ETH IOL8 DI4 M12 6P - 2701536

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Axioline E-Ethernet device in a plastic 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 Ethernet network (Modbus/TCP). 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 network using M12connectors (D-coded)
- ✓ 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



Modbus/TCP (UDP) IO-Link

### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356763844

### 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
Depth	30.5 mm

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### Dimensions

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
Net weight	554.3 g

### Interfaces

Designation	Ethernet
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	Modbus/TCP
Equipment type	Modbus slave (server)
System-specific protocols	Modbus protocols Modbus/TCP
Protocols supported	SNMP v1
	HTTP
	TFTP
	FTP
	BootP
	DHCP
Specification	Modbus application protocol V1.1b

### Supply

Designation	Module electronics and sensors (U <sub>s</sub> )
Connection method	M12 connector (T-coded)
Number of positions	4
Supply voltage	24 V DC

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### Supply

Supply voltage range	19.5 V DC ... 31.2 V DC (including all tolerances, including ripple)
Current consumption	typ. 180 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
Supply voltage range	18 V DC ... 31.2 V DC (including all tolerances, including ripple)
Current consumption	typ. 28 mA ±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
Type of protection	Overload protection, short-circuit protection of sensor supply
Input filter time	< 1000 µs
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
Nominal input current at U <sub>IN</sub>	typ. 3 mA
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 <sub>IN</sub>	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

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#### Digital outputs

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
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

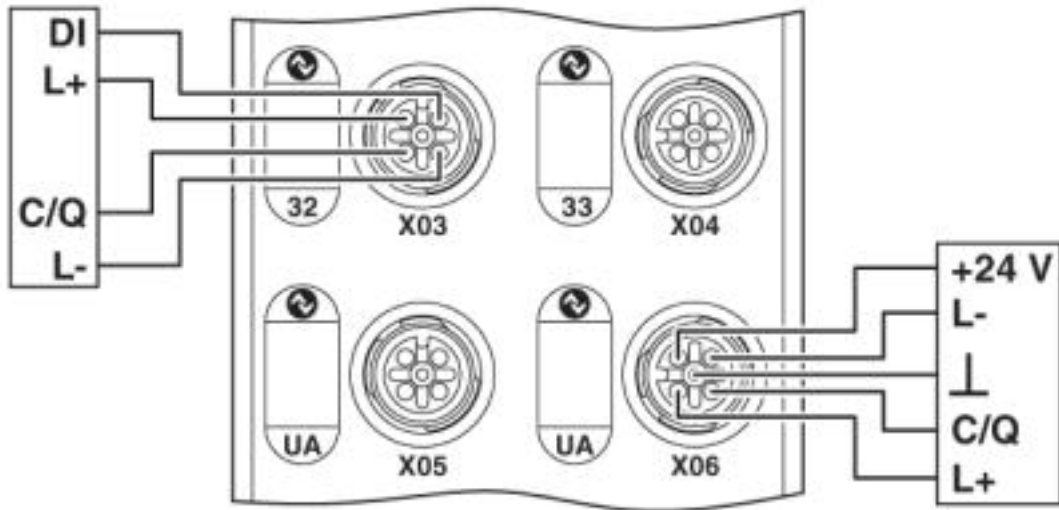
#### Environmental Product Compliance

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

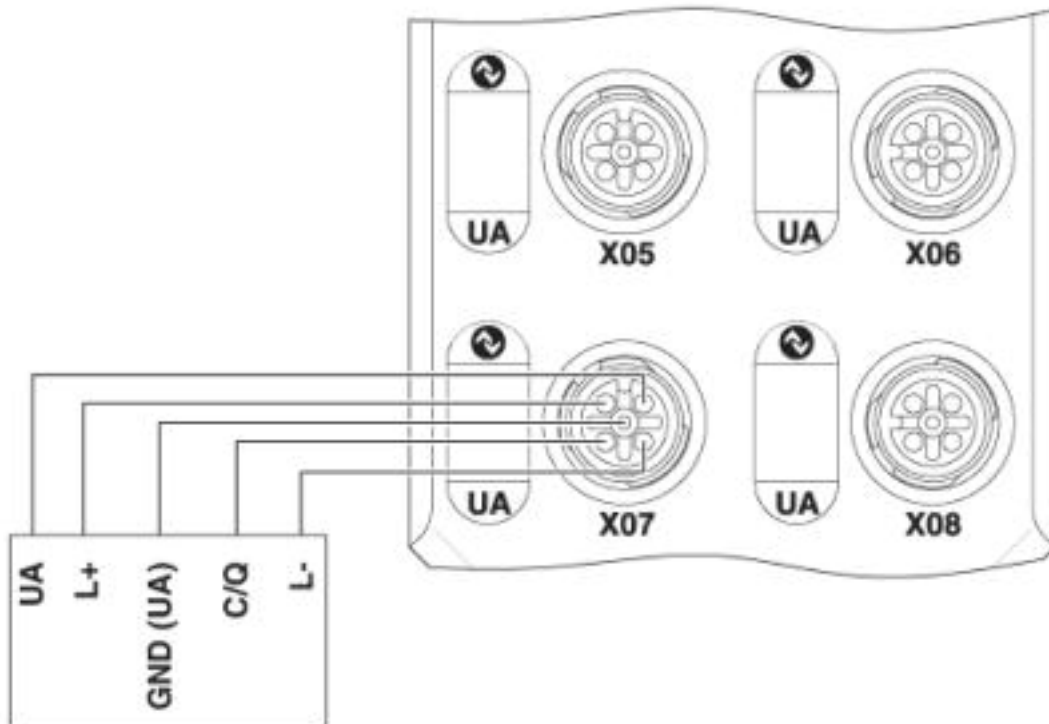
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## Drawings

Connection diagram

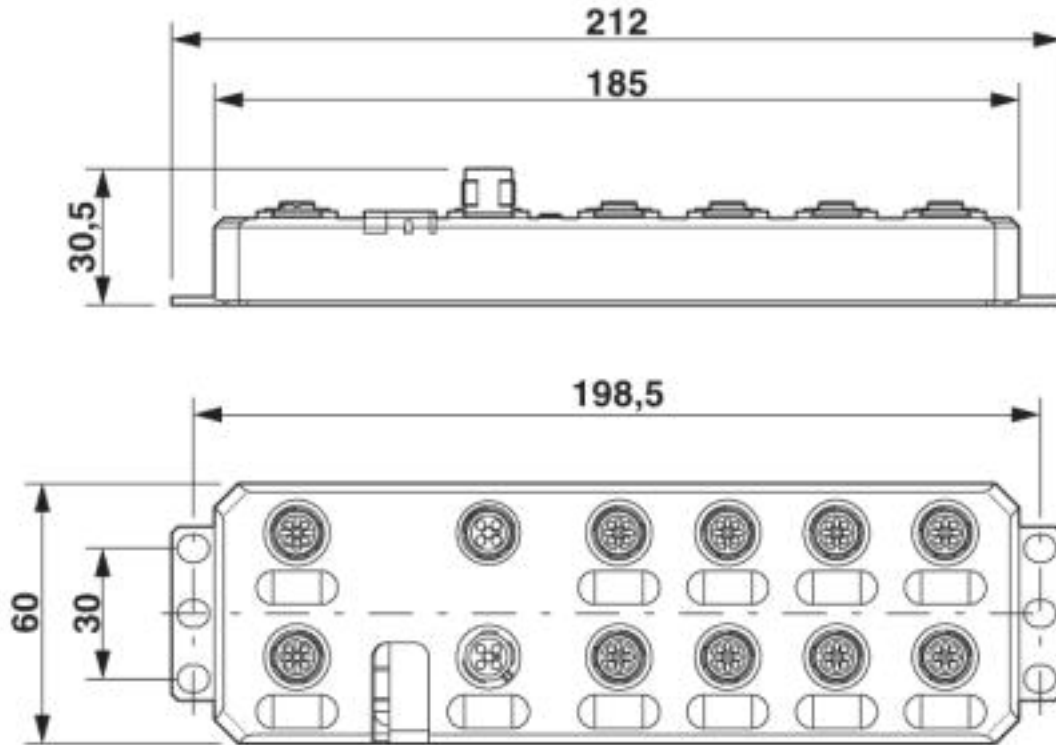


Connection diagram



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Dimensional drawing



## Approvals

Approvals

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Approvals

UL Listed / cUL Listed / cULus Listed

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Ex Approvals

UL Listed / cUL Listed / cULus Listed

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## Approval details

UL Listed



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

FILE E 140324

cUL Listed



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### Approvals

cULus Listed



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