



Electrical Control Component

Electrical Control Component is a modular product that drives a sensor or actuator through a programmable controller in an automated control system. Through the electrical bus products, can quickly build industrial I/O networking solutions.

E · MC launched 10-Link electrical products are designed to simplify the connection of smart sensors and smart devices on the factory floor, assist in the digital upgrade of industrial manufacturing, and realize seamless communication throughout the whole process. With "IO-Link" technology, it can make the field sensors and actuators more convenient and quick to complete the parameter setting, and has great flexibility in the production process. It is the last 1 meter to the sensors and actuators, and is known as the bridge to Industry 4.0.



Compact67
IO-Link Master Station



Product Features

- Up to IP67 protection rating;
- Adopt IO-Link v1.1 specification design;
- Master Station supports COM1, COM2 and COM3 three communication rates.
- Interface type Class-A or Class-B is optional.
- Can connect all kinds of IO-Link standard equipment and standard switching signals;
- LED status display, channel level protection and diagnosis;
- Can be used with the IO-Link valve island to facilitate information exchange with the controller.

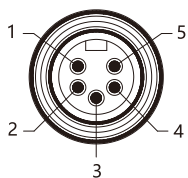
How to order?

IO-Link master station

Series	Protocol	Port Number	Port Type
ES	PN: PROFINET EC: EtherCAT EP: EtherNet/IP	8LK: 8 IO-Link ports	4A4B: 4*Class A+4*Class B 8A: 8*Class A

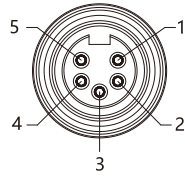
Order example: ES series, PROFINET protocol, port number is 8, port type is 8 ClassA, the ERP code is: ESPN-8LK-8A.

Power input interface(7/8" pin end, Male)

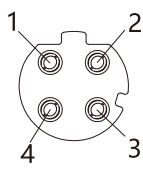


Pin	Interface Function	Power supply voltage
1	Auxiliary power supply Ua-	0V
2	System and signal load power supply Us-	0V
3	Protected area PE	
4	System and signal load power supply Us+	24V
5	Auxiliary power supply Ua+	24V

Power output interface(7/8" port, Female)

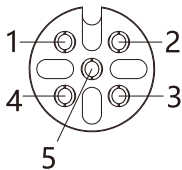


Bus interface (2XM12, D code,Female)



Pin	Interface function	Cable color
1	Transmitter TD+	Yellow
2	The receiving end RD+	White
3	Transmitter TD-	Orange
4	Receiving end RD-	Blue

IO-Link interface (8XM12, A code, Female)



Pin	Class-A type	Class-B type
1	Power supply 24V+	Power supply 24V+
2	Signal input/output B	Auxiliary power supply P24V+
3	Power supply GND	Power supply GND
4	IO-Link/ Input/output A	IO-Link/ Input/output A
5	/	Auxiliary power supply N24

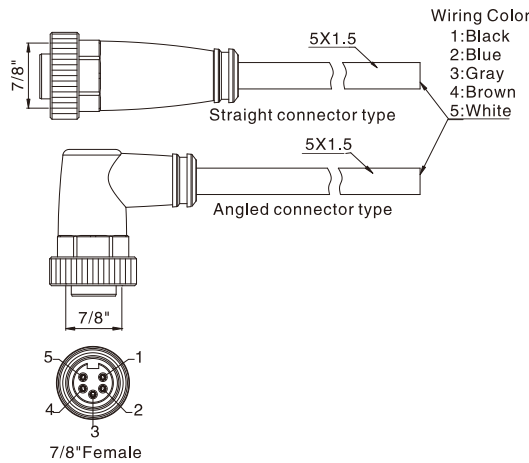
Specifications

Model number	ESPN-8LK-4A4B	ESPN-8LK-8A	ESEC-8LK-4A4B	ESEC-8LK-8A	ESEP-8LK-4A4B	ESEP-8LK-8A
Communication protocol	PROFINET		EtherCAT		EtherNet/IP	
Baud rate	100Mbps					
Bus communication	2XM12D-code4pin, hole					
Operating voltage	24VDC(18~30VDC)					
System consumption current	Below 200mA					
System and input signal power supply	Us, no more than 8A					
Auxiliary power supply	Ua, not more than 8A					
Mains supply	2 x 7/8" 5pin, pin end + hole end					
IO-Link signal port	8XM12 A-code5pin, holes end					
Number of IO-Link ports	8					
IO-Link Port type	4*ClassA+4*ClassB	8*ClassA	4*ClassA+4*ClassB	8*ClassA	4*ClassA+4*ClassB	8*ClassA
IO-Link version	IO-Link V 1.1					
IO-Link Communication rate	COM1 (4.8kbps) 、COM2 (38.4kbps) 、COM3(230.4kbps)					
IO-LiInK Current (Pin1&Pin3)	The maximum value of the IO-Link interface is 1.6A, and the maximum value of the common signal interface is 200mA					
IO-Link Auxiliary Current (Pin2&Pin5)	Maximum 2A per channel					
Input signal type	PNP sensor, stroke switch, dry contact, etc. (SIO mode)					
Input filter delay	1.6ms					
Output channel number	Max 12	Max 16	Max 12	Max 16	Max 12	Max 16
Output current	Maximum 2A per channel					
Output signal type	Indicator light, micro solenoid valve (SIO mode)					
Output switching frequency	Resistive load 100Hz, inductive load 5Hz					
Equipment diagnosis	Communication message feedback, undervoltage alarm, short circuit and overload protection					
Additional function	MRP		Communication break output hold		DHCP, BOOTP	
Class of protection	IP67					
Temperature range	Operating temperature -25~70℃, storage temperature -40~85℃					

Cable ordering code

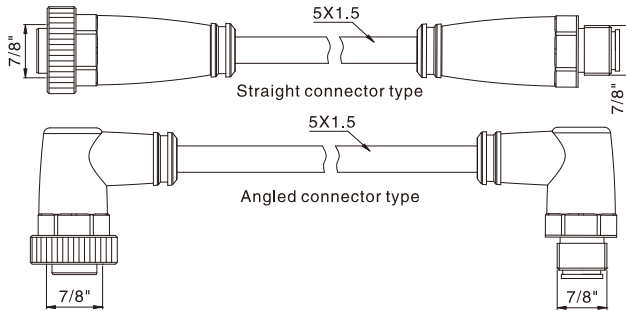
7/8" single-ended cable

ESLK	G78	Connection type	Cable length
7/8" single-ended cable			2M: The cable length is 2M 5M: The cable length is 5M (Other length could be customized)
IO-Link Master Station	R: Straight connector type RL: Angled connector type		



7/8" double-ended cable

ESLK	G78G78	Connection type	Cable length
7/8" double-ended cable			2M: The cable length is 2M 5M: The cable length is 5M (Other length could be customized)
IO-Link Master Station	R: Straight connector type RL: Angled connector type		



○ Cable ordering code

Bus cable

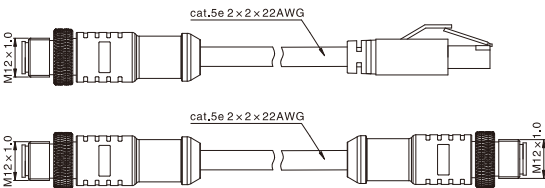
ESV-EN **ESV-EN** **ESV-EN**

Ethernet
fieldbus cable

2M: The cable length is 2M
5M: The cable length is 5M
(Other length could be customized)

M12RJ: M12 Male connectors ↔ RJ45

M12M12: M12 Male connectors ↔ M12 male

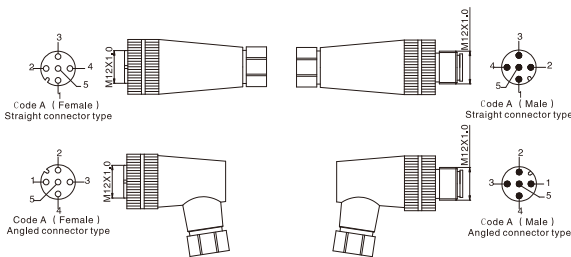


5-pin connector (M12-A code)

M125 **Connection type**

5-pin connector
(M12-A code)

R: Rotary female, Straight connector type
RL: Rotary female, Angled connector type
RF: Rotary male, Straight connector type
RFL: Rotary male, Angled connector type

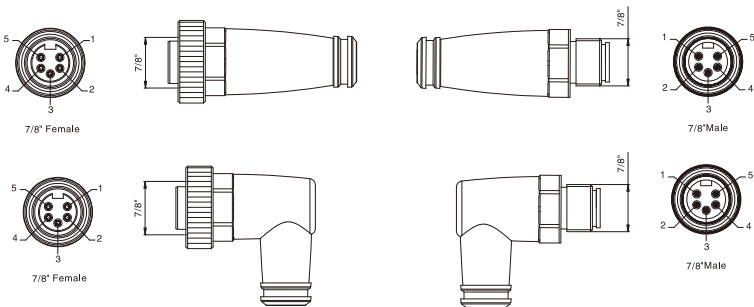


5-pin connector (7/8")

G78 **Connection type**

5-pin connector
(7/8")

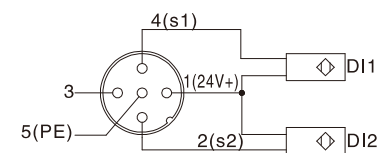
R: Rotary female, Straight connector type
RL: Rotary female, Angled connector type
RF: Rotary male, Straight connector type
RFL: Rotary male, Angled connector type



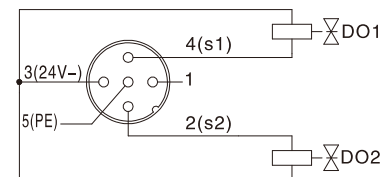
○ IO wiring diagram

Note: The master station port is used for common IO points

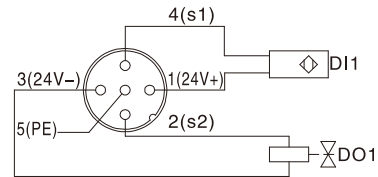
PNP dual input



PNP dual output



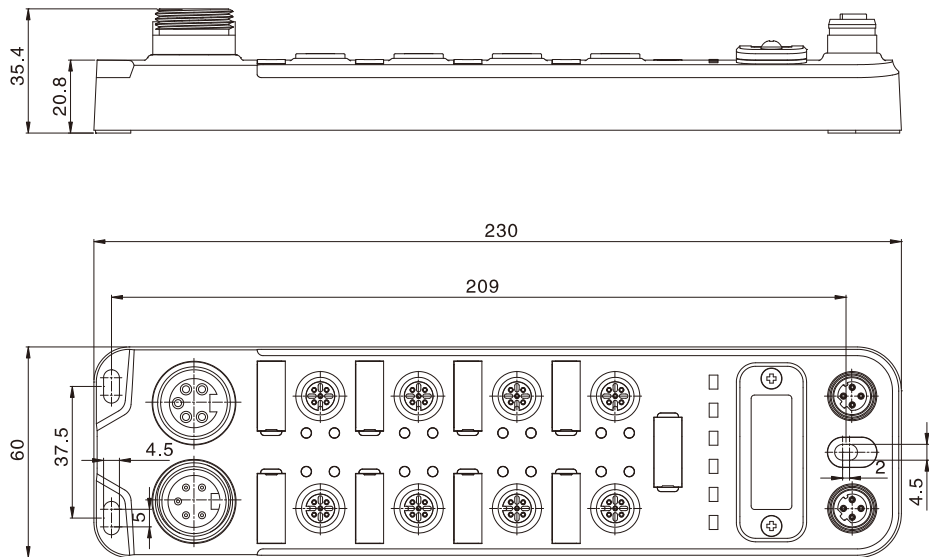
PNP type input and output



○ Precautions for Use

1. Do not disassemble, modify (including replacing the printed circuit board) or repair without authorization, which may cause injury or failure.
2. Do not exceed the specification parameters (limit value) operation of the product, do not use flammable or harmful liquids, may lead to fire, failure or product damage, please verify the manual before use.
3. Please connect according to the basic electrical specifications, for personal and equipment safety, we recommend to disconnect the power supply when wiring operation.
4. Connecting the module to the protective ground can release the interference current underground and ensure the safety and E · MC compatibility of the module.
5. Ensure a low impedance connection to the protective grounding.

○ Main Dimension



Compact67

IO-Link HUB



Product Features

- High degree of protection IP67.
- Use IO-Link V 1.1 normative design.
- Support COM2 communication rate.
- For input or output, NPN or PNP signal type is optional.
- M12 or M8 IO connections optional.
- Status indication via LED, channel-specific protection and diagnostics.

How to Order?

IO-Link Input/Output Modules-M12

Series NO	I/O	Digital Output	Connection type
ESLK	1600: 16DI 088U: 8DI+8DIO 16U: 16DI/DO	P: PNP N: NPN	M12: M12 signal connection

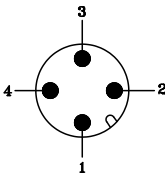
Order Example: ESLK series, 16DI, PNP output modules, M12 signal connection, EPR code is: ESLK-1600P-M12

IO-Link Input/Output Modules-M8

Series NO	I/O	Digital Output	Connection type
ESLK	0800: 8DI 08: 8DI/DO	P: PNP N: NPN	M8: M8 signal connection

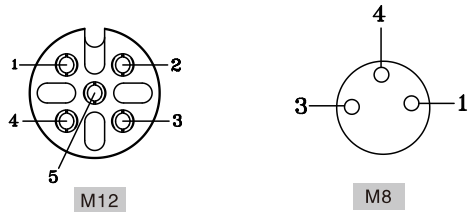
Order Example: ESLK series, 8DI, PNP output modules, M8 signal connection, EPR code is: ESLK-0800P-M8

IO-Link Interface



Pin	Interface Function
1	Power supply 24V+
2	Auxiliary power supply 24V+
3	Power supply GND
4	Data communication(IO-Link)

IO Interface



Pin	M12 Signal Connection	M8 Signal Connection
1	Power supply 24V+	Power supply 24V+
2	Signal input/output B	Second signal
3	Power supply GND	Power supply GND
4	Signal input/output A	First signal
5	Shield earthing PE	/

Specifications

IO-Link Input/Output Modules-M12

Model	ESLK-1600P-M12	ESLK-088UP-M12	ESLK-16UP-M12
Description	16DI,Class A,8*M12(PNP)	8DI+8DIO,Class A,8*M12(PNP)	16DI/DO,Class A,8*M12(PNP)
Model	ESLK-1600N-M12	ESLK-088UN-M12	ESLK-16UN-M12
Description	16DI,Class A,8*M12(NPN)	8DI+8DIO,Class A,8*M12(NPN)	16DI/DO,Class A,8*M12(NPN)
Connection IO-Link	1XM12 male A-Code 4pin		
Connection the power supply	Expansion port contains power supply		
Connection I/O ports	8XM12 female A-Code 5pin		
Input channel number	16	Max. 16	Max. 16
Input current	Max. 200 mA		
Input signal type	Sensor,magnet switch, reed switch		
Input filter delay	1.6ms		
Output channel number	-	Max. 8	Max. 8
Output supply current	Each channel Max 0.5A, Total ≤ 2A		
Output signal type	Indicators, Micro solenoid valve		
Input switching frequency	Resistive load 100Hz, inductive load 5Hz		
Equipment diagnosis	Communication message feedback, undervoltage alarm, short circuit/overload protection		
Degree of protection	IP67		
Temperature	Ambient temperature -25℃-70℃, Storage temperature -40℃-85℃		

IO-Link Input/Output Modules-M8

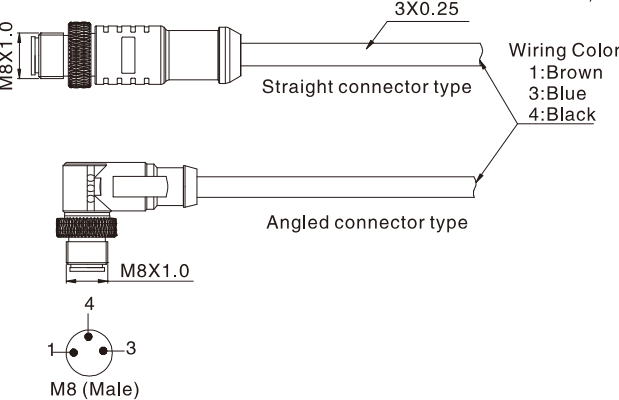
Model	ESLK-0800P-M8	ESLK-08P-M8
Description	8DI,Class A,8*M8(PNP)	8DI/DO,Class A,8*M8(PNP)
Model	ESLK-0800N-M8	ESLK-08N-M8
Description	8DI,Class A,8*M8(NPN)	8DI/DO,Class A,8*M8(NPN)
Connection IO-Link	1XM12 male A-Code 4pin	
Connection the power supply	Expansion port contains power supply	
Connection I/O ports	8XM8 female A-Code 3pin	
Number of digital inputs	8	Max. 8
Input current	Max. 200 mA	
Input signal type	Sensor,magnet switch, reed switch	
Input filter delay	1.6ms	
Output channel number	-	Max. 8
Output supply current	Each channel Max 0.5A, Total ≤ 2A	
Output signal type	Indicators, Micro solenoid valve	
Input switching frequency	Resistive load 100Hz, inductive load 5Hz	
Equipment diagnosis	Communication message feedback, undervoltage alarm, short circuit/overload protection	
Degree of protection	IP67	
Temperature	Ambient temperature -25℃-70℃, Storage temperature -40℃-85℃	

Wiring

M8 male connecting cable

M83 Connection type - PVC - Wiring length

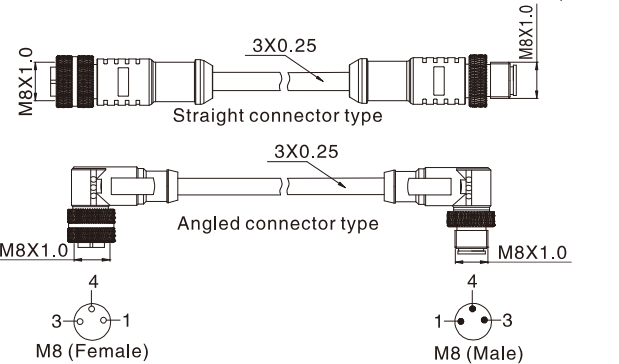
M8, 3 cores R: Straight connector type 2M: 2 meters
single connecting cable RL: Angled connector type 5M: 5 meters
(Other length could be customized)



M8 double connecting cable

M8M83 Connection type - PVC - Wiring length

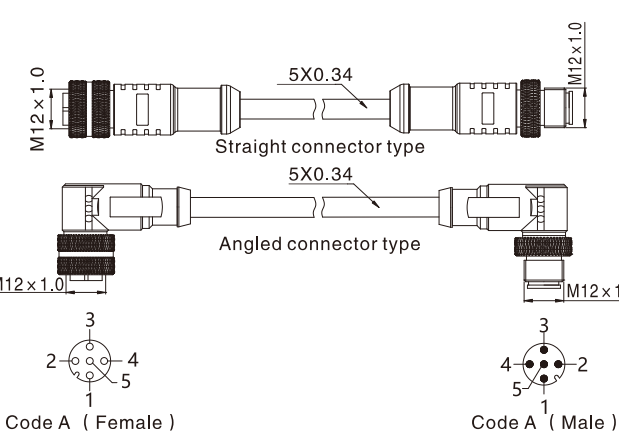
M8, 3 cores double R: Straight connector type 2M: 2 meters
connecting cable RL: Angled connector type 5M: 5 meters
(Other length could be customized)



IO-Link connector cable

M12M125 Connection type - PVC - Wiring length

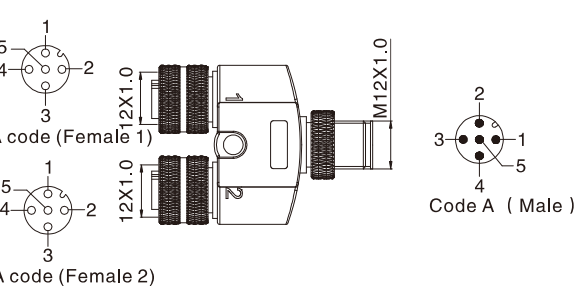
M12, 5 cores R: Straight connector type 2M: 2 meters
double connecting cable RL: Angled connector type 5M: 5 meters
(Other length could be customized)



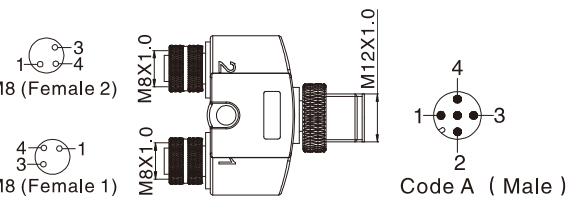
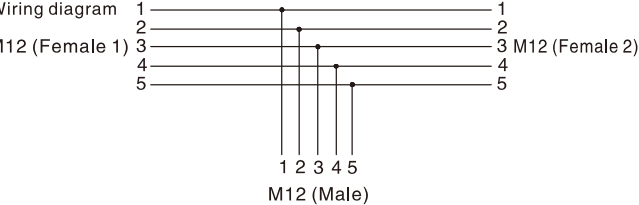
Y-type branch connector

ESLK - Connection type

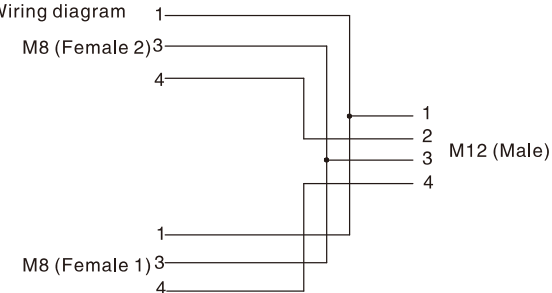
IO-Link HUB M12YM12:M12 to 2XM12 connector
M12YM8:M12 to 2XM8 connector



M12 to 2XM12 connector



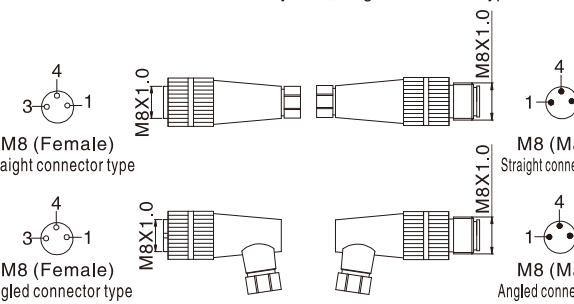
M12 to 2XM8 connector



3-pin Connector (M8)

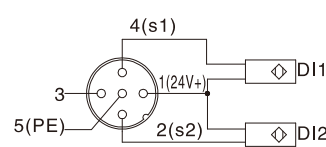
M83 Connection type

3-pin Connector (M8) R: Rotary female, Straight connector type
RL: Rotary female, Angled connector type RF: Rotary male, Straight connector type
RFL: Rotary male, Angled connector type

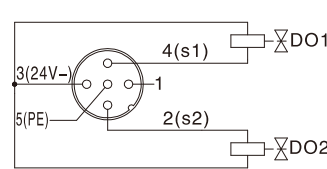


IO Wiring Diagram

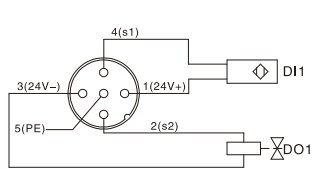
PNP dual input



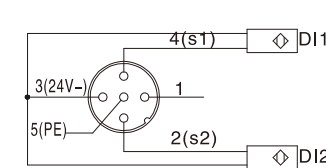
PNP dual output



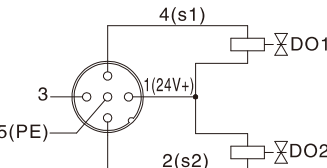
PNP input and output



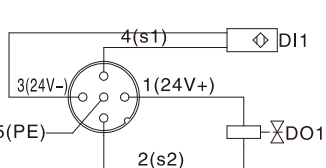
NPN dual input



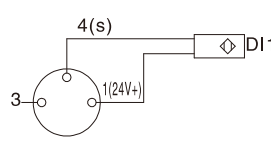
NPN dual output



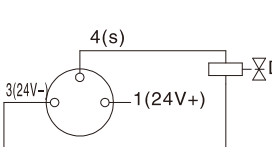
NPN input and output



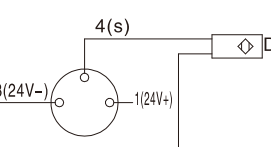
PNP input



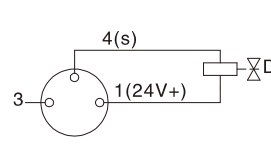
PNP output



NPN input



NPN output

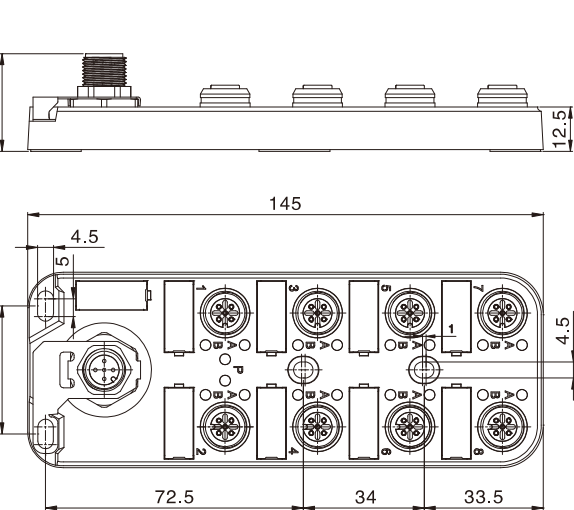


Precautions for Use

1. Do not disassembly, modify (including replacing printed circuit boards) or replace without authorization, which may result in injury or failure.
2. Do not operate the product exceeding the parameters (limited value), and do not use it for flammable or harmful liquids, which may cause fire, malfunction or damage to the product. Please verify the instructions before use.
3. Please connect according to the basic electrical specifications. For personal and equipment safety, it is recommended to disconnect the power supply during the wiring operation.
4. Connecting the module to the protective earthing can release the interference current underground and ensure the safety and E•MC compatibility of the module.
5. Ensure a low impedance connection to the protective earthing.

Main Dimension

IO-Link Input/Output Modules-M12



IO-Link Input/Output Modules-M8

