



# PRODUCT

USE INSTRUCTIONS

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[ Technical support ]

**Ordering code: 00BB16**

**Part number: FNI IOL-708-000-M12**

**Type: 8xAI, 0-10V DC**

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# Security

## ■ Expected use

This manual describes as decentralized input and output modules for connecting to an industrial network.

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## ■ Installation and start-up

Precautions!

Installation and start-up may only be performed by trained personnel. A qualified individual is one who is familiar with the installation and operation of the product and has the necessary qualifications to perform such operations. Any damage caused by unauthorized operation or illegal and improper use is not covered by the manufacturer's warranty. The equipment operator is responsible for ensuring that appropriate safety and accident prevention regulations are observed.

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## ■ Corrosion resistance

Precautions!

FNI modules generally have good chemical and oil resistance. When used in corrosive media (e.g. high concentrations of chemicals, oils, lubricants, coolants and other material media (i.e. very low water content), these media must be checked before the corresponding application material compatibility. If a module fails or is damaged due to this corrosive medium, a defect claim cannot be made.

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## ■ Dangerous voltage

Precautions!

Disconnect all power before using the device!

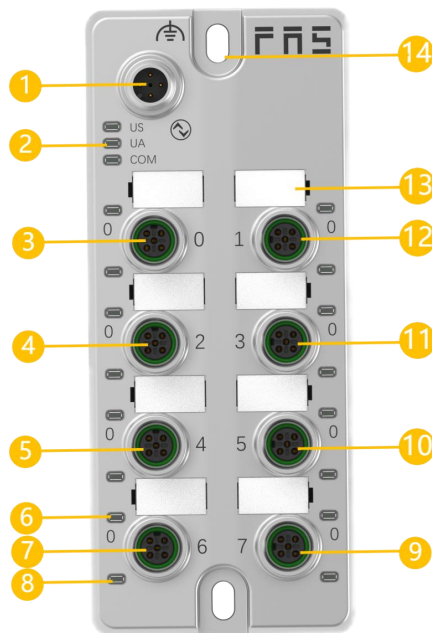
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## ■ General security

Debugging and inspection	Trouble	Owner/operator obligations	Expected use
<p>Before debugging, read the user manual carefully.</p>	<p>If the defect or equipment failure cannot be corrected, the operation of the equipment must be stopped to avoid damage that may be caused by unauthorized use.</p>	<p>This equipment is an EMC Class A compliant product. This device produces RF noise.</p>	<p>The warranty and limited liability statement provided by the manufacturer does not cover damage caused by:</p> <ul style="list-style-type: none"> <li>·Unauthorized tampering</li> <li>·Improper use operation</li> </ul> <p>·The instructions provided in the user manual explain the use, installation and handling of discrepancies</p>
<p>This system cannot be used in an environment where the safety of personnel depends on the functionality of the equipment.</p>	<p>Only after the housing is fully installed can the intended use be assured.</p>	<p>The owner/operator must take appropriate precautions to use this equipment.</p> <p>This device can only use the power supply that matches this device, and can only connect cables approved for application.</p>	

# 1.Component function description

## 1.1 Module overview

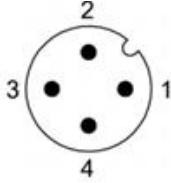


1	2	3	4	5	6	7
IO-Link interface	Status LED	Analog input port 0	Analog input port 2	Analog input port 4	Status LED:Analog input port 6 Pin2	Analog input port 6
8	9	10	11	12	13	14
Status LED:Analog input port 6 Pin4	Analog input port 7	Analog input port 5	Analog input port 3	Analog input port 1	Label	Earth interface

## 2.Interface definition

### 2.1 IO-Link interface

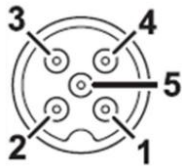
M12,A-Coded, Male



Pin	Illustrate
1	US power supply,+24V (<1.2A)
2	NC
3	GND
4	C/Q, IO-Link data transmission channel

### 2.2 Analog input port connection diagram(M12 A-Coded)

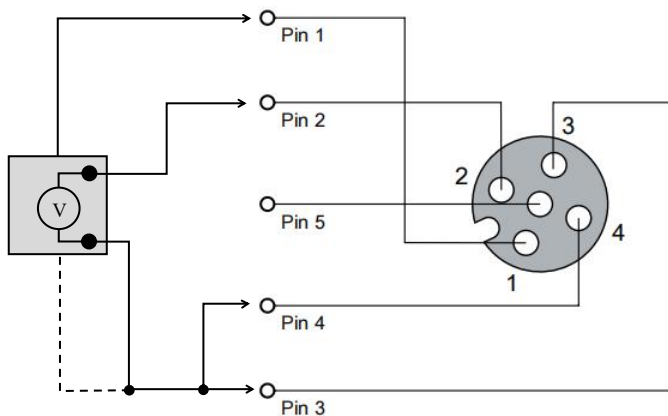
M12,A-Coded,Female



Pin	Illustrate
1	+24V (<350mA)
2	Analog input positive
3	0V,GND
4	Analog input negative
5	NC

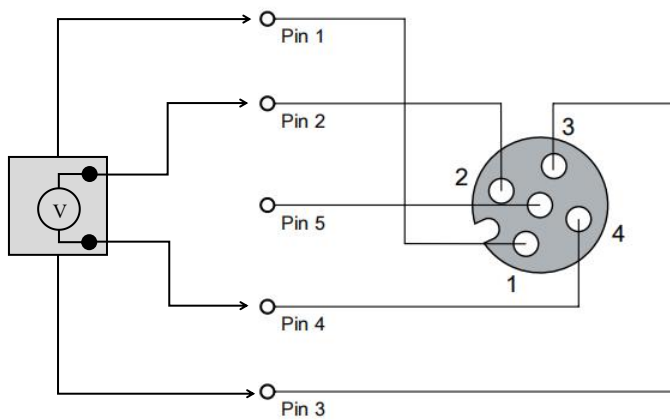
Sensor wiring requirements:

#### 1. Sensor 3-wire type:



- Pin1 Connect to the positive pole of the sensor power supply
- Pin2 Connect sensor signal
- Pin3 、 4 at the same time, connect the negative pole of the sensor power supply

## 2. Sensor 4-wire type:



- a. Pin1 Connect to the positive pole of the sensor power supply
- b. Pin2 Connect to the positive pole of the sensor signal
- c. Pin3 Connect to the negative pole of the sensor power supply
- d. Pin4 Connect to the negative pole of the sensor signal

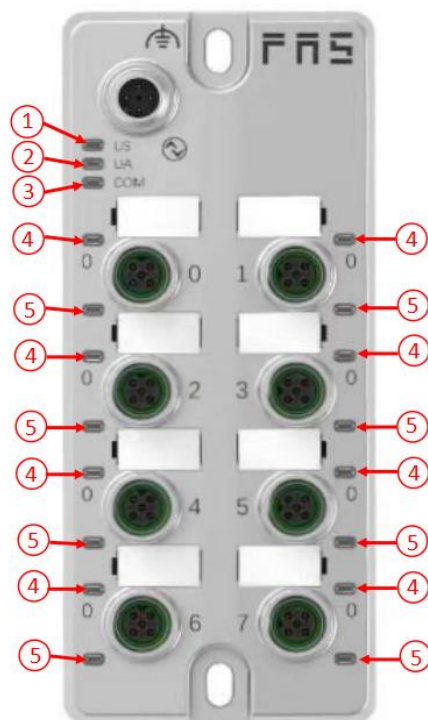
## 2.3 Status LED meter

Module total indicator light:

LED	State	Function
1	Closure	Module power supply abnormality
1	Green light is always on	Module power supply is normal
2	Closure	*Spare
3	Closure	Module exception
3	Green slow flash	IO-Link communication failed
3	Green pulse flash	IO-Link communication successful

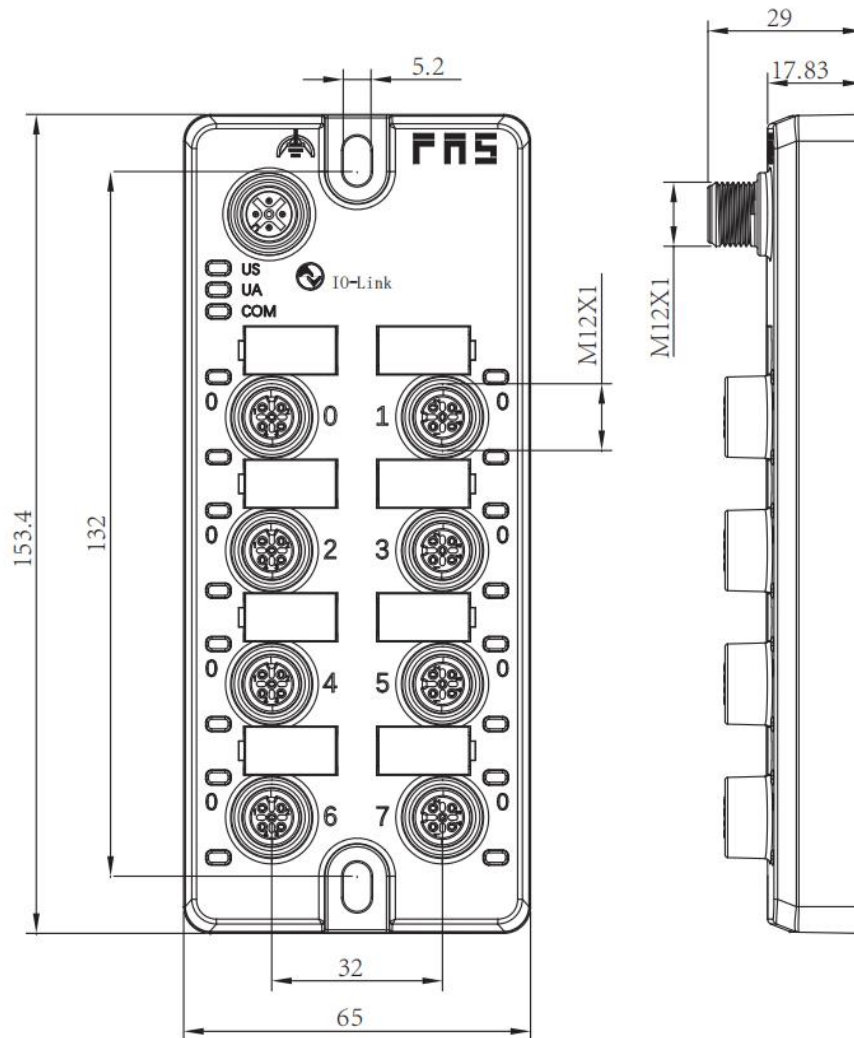
Analog input port:

LED	State	Function
4	Closure	No analog signal input
4	Yellow	Analog signal input is valid
4	Rred	Analog signal input short circuit
5	Closure	*Spare



## 2.4 Mechanical dimensions

Project	Specification
Dimensions (Width x Height xDepth)	65MMx153.4MMx29MM





## 3.IO-Link data

### 3.1 Communication parameters

Data transmission baud rate	COM2 (38.4kbit/s)
Frame type	2.V
Minimum cycle time	5ms
Process data cycle time	5ms,corresponds to the minimum cycle time
Process data length	16 byte input
Analog detection range	0~10V DC
Analog output value range	0~65535 (Correspond 0-10V DC)

### 3.2 Process data

#### 3.2.1 Process data/input data

Analog input port	Input data	Data range	Analog quantity Range
1	Byte1~Byte0	0~65535	0~10V
2	Byte3~Byte2	0~65535	0~10V
3	Byte5~Byte4	0~65535	0~10V
4	Byte7~Byte6	0~65535	0~10V
5	Byte9~Byte8	0~65535	0~10V
6	Byte11~Byte10	0~65535	0~10V
7	Byte13~Byte12	0~65535	0~10V
8	Byte15~Byte14	0~65535	0~10V

### 3.3 Service data

	DPP	SPDU		Object name	length	Scope	Defaults
	Index	Index	Subindex				
Identification data				Supplier ID	2		0x0454
				Device ID	3		0x099EE2
		0x10	0	Supplier name	19	Read only	FAS(Fujian)Co.,LTD
		0x11	0	Supplier text	16		<a href="http://www.fas-elec.com">www.fas-elec.com</a>
		0x12	0	Product name	13		FNI IOL-708-000-M12
		0x13	0	Product ID	5		00BB16
		0x14	0	Product text	44		IO-Link M12 8AI 0...10V
		0x16	0	Hard ware version	3		1.0
		0x17	0	Firmware version	3		1.0

### 3.4 Error code

Error code	Additional code
Device application error 0x80	Index not available 0x11
	Subindex not available 0x12
	Value out of range 0x30

### 3.5 Event

Class/qualifier			Code (high + low)			
Model	Type	Example				
Appear	Mistake	AL	Device hardware	Powered by	Power supply low voltage	U2=Power supply +24V
0xC0	0x30	0x03	0x5000	0x0100	0x0010	0x0002
0xF3			0x5112			
Disappear	Mistake	AL	Device hardware	Powered by	Power supply low voltage	U2=Power supply +24V
0x80	0x30	0x03	0x5000	0x0100	0x0010	0x0002
0xB3			0x5112			
Appear	Mistake	AL	Device hardware	Powered by	Power supply for peripherals	
0xC0	0x30	0x03	0x5000	0x0100	0x0060	
0xF3			0x5160			
Disappear	Mistake	AL	Device hardware	Powered by	Power supply for peripherals	
0x80	0x30	0x03	0x5000	0x0100	0x0060	
0xB3			0x5160			

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