PRODUCT

USE INSTRUCTIONS

Ordering code: 00BF31

Part number: FNI IOL-236-S01-M12

[Technical support]

Contents

<u>Security</u>

■ Expected use

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

■ 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.

■ 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.

■ Dangerous voltage

Precautions!

Disconnect all power before using the device!

■ General security

Debugging and inspection	Trouble	Owner/operator obligations	Expected use
Before debugging, read the user manual carefully.	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.	This equipment is an EMC Class A compliant product. This device produces RF noise.	The warranty and limited liability statement provided by the manufacturer does not cover damage caused by: ·Unauthorized tampering ·Improper use operation ·The instructions provided in the user manual explain the use, installation and handling of discrepancies
This system cannot be used in an environment where the safety of personnel depends on the functionality of the equipment.	Only after the housing is fully installed can the intended use be assured.	The owner/operator must take appropriate precautions to use this equipment.	
		This device can only use the power supply that matches this device, and can only connect cables approved for application.	

1.Component function description

1.1Module overview
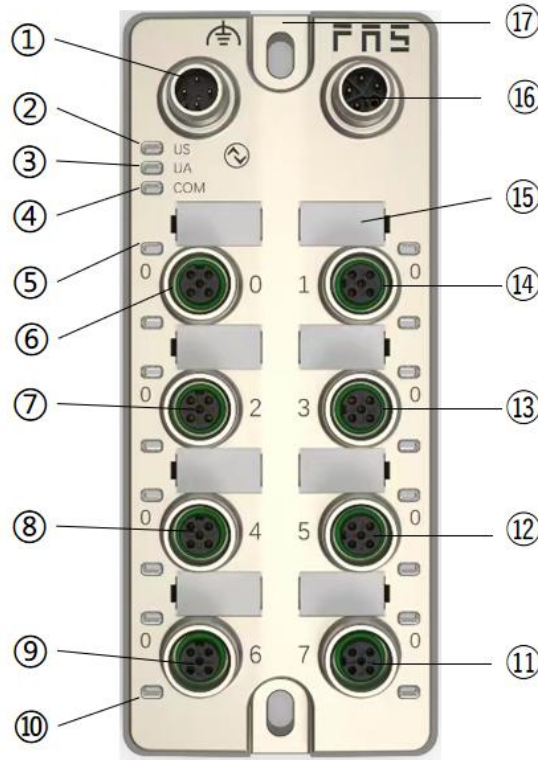
1	2	3	4	5	6
IO-Link interface	Status LED: Power	Status LED: Actuator	Status LED: IO-Link	Status LED: Pin 2	Digital I/O port 0
7	8	9	10	11	12
Digital I/O port 2	Digital I/O port 4	Digital I/O port 6	Status LED: Pin 4	Digital I/O port 7	Digital I/O port 5
13	14	15	16	17	18
Digital I/O port 3	Digital I/O port 1	Label	Auxiliary power interface	PE	-

2.Interface definition

2.1 IO-Link interface

M12, A type, Male
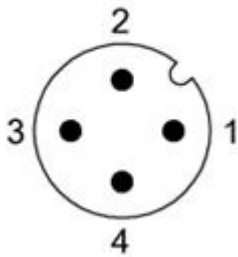
Pin	Description
1	Us power supply, +24V
2	Ua actuator power supply, +24V
3	GND
4	C/Q, I0-Link data transmission channel

2.2Auxiliary power interface connection diagram
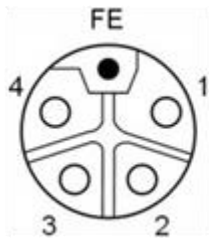
Pin	Illustrate
1	Auxiliary power supply, +24V
2	GND
3	GND
4	Auxiliary power supply, +24V
5	FE

2.3 Digital input/output connection diagram

Digital input/output port (M12, Class A, female)
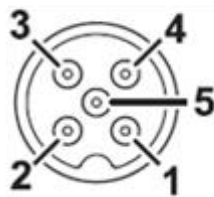
Pin	Function
1	External power supply +24V
2	NC
3	External power supply GND
4	Standard input/output
5	FE

3.IO-Link data

3.1 Communication parameters

Data transmission baud rate	COM2 (38.4kbit/s)
Minimum cycle time	3ms
Process data cycle time	3ms,corresponds to the minimum cycle time
Process data length	4 bytes input, 2 bytes output
Output type	PNPtype

3.2 Process data

3.2.1 Process data/input data

Note: 0 is MSB, 1 is LSB.

	0								1							
Bit	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
description	Output port 7 Pin4	Output port 6 Pin4	Output port 5 Pin4	Output port 4 Pin4	Output port 3 Pin4	Output port 2 Pin4	Output port 1 Pin4	Output port 0 Pin4	Reserved							

3.2.2 Process data/input data

Note: 0 is MSB, 1 is LSB.

	0								1								1								1							
Bit	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
Description	Input port 7 Pin4	Input port 6 Pin4	Input port 5 Pin4	Input port 4 Pin4	Input port 3 Pin4	Input port 2 Pin4	Input port 1 Pin4	Input port 0 Pin4	Input port 7 Pin4	Input port 6 Pin4	Input port 5 Pin4	Input port 4 Pin4	Input port 3 Pin4	Input port 2 Pin4	Input port 1 Pin4	Input port 0 Pin4	Reserved								Reserved							

3.3 Electrical parameters

Rated working voltage	18...30V DC
Maximum current of each port (Pin1)	100mA
Maximum current of each signal (Pin4)	2A
Total current Us	＜1.4A
Total current Ua	＜9A

3.4 Service data

	DPP	SPDU		Object name	length	Scope	default value
	index	index	subindex				
identification data				Supplier ID	2		0x0454
				Device ID	3		0x0994EC
		0x10	0	Supplier name	19	read only	FAS(Fujian)Co.,LTD
		0x11	0	Supplier text	16		www.fas-elec.com
		0x12	0	Product name	13		FNI IOL-236-S01-M12
		0x13	0	Product ID	5		00BF31
		0x14	0	Product text	44		IO-Link 8DI/DO with Auxiliary power
		0x16	0	Hardware version	3		20220226
		0x17	0	Firmware version	3		2.01
Parameter data		0x40	0	bit inversion	1	00-FF	0x00
		0x41	0	Direction	1	00-FF	0x00

Note: 0x40 setting bit is reversed: 0-bit is not reversed, 1-bit is reversed. For example, the external input is 0x0000, when 0x40 is 0x00, the value is 0x00 (not reversed), when 0x40 is 0xFF, the value is 0xFF (reverse).
0x41 sets the direction: 0-input, 1-output.
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3.5 **Error code**

Error code	Additional code
Device application error 0 x 80	Index not available 0x11
	Subindex not available 0x12
	value out of range 0x30

3.6 Event

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

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