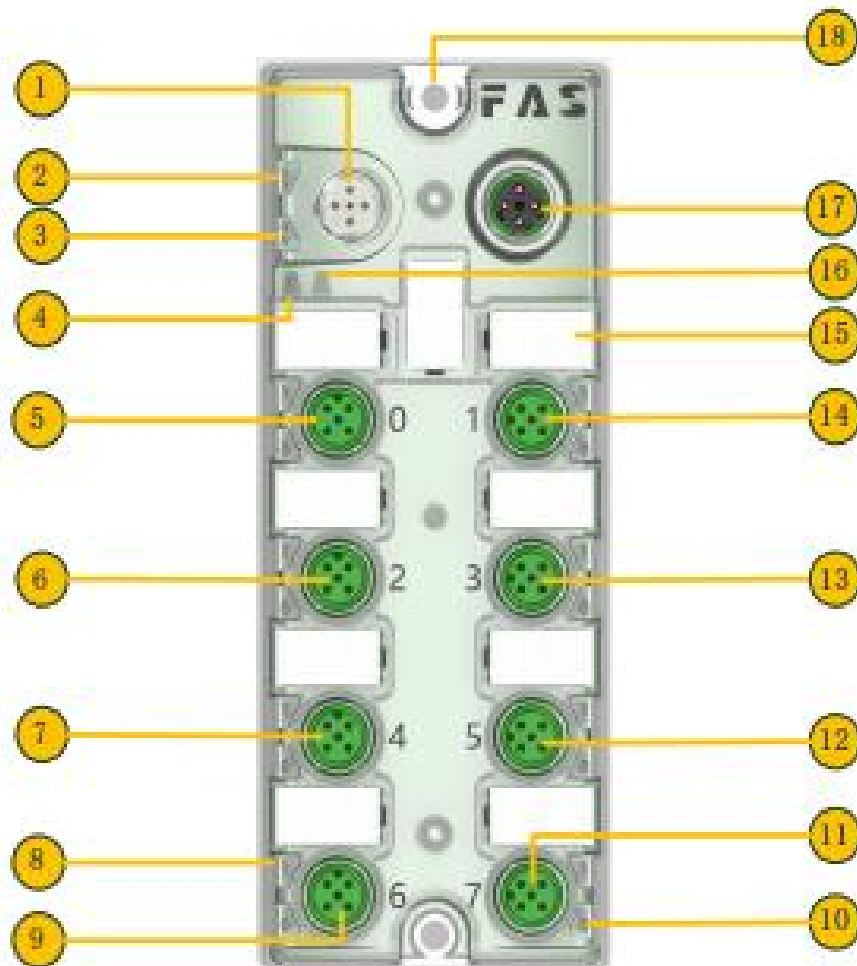


# FNI\_IOL-332-002-M12 manual

## 1. Connection diagram

Figure 1



- 1 IO-Link interface
- 2 Status LEDs: Power
- 3 Status LEDs: Actuator
- 4 Status LED: IO-Link
- 5 Digital I/O Ports 0 15 Labels
- 6 Digital I/O Port 2
- 7 Digital I/O ports 4
- 8 Status LED: Digital I/O Port 6 Pin2
- 9 Digital I/O port 6
- 10 Status LED: Digital I/O Port 7 Pin4

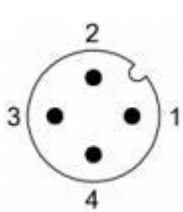
- 11 Digital I/O port 7
- 12 Digital I/O Port 5
- 13 Digital I/O Port 3
- 14 digital I/O port 1
- 16 Status LED: Abnormal
- 17 Expansion interface
- 18 Earth Ground

## 2. IO-Link interface diagram

as shown in picture 2.

M12, class A, male

**M12, Class A, male**



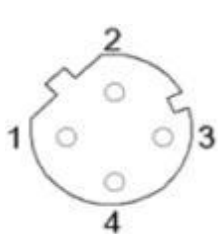
pin	illustrate
1	Power supply, +24V
2	Actuator power supply, +24V
3	GND
4	C/Q, IO-Link data transfer channel

picture 2

## 3. Extended interface diagram

As shown in Figure 3.

M12, D-coded, female



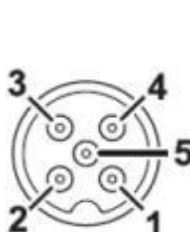
pin	illustrate
1	Power supply, +24V
2	communication
3	GND
4	communication

picture 3

## 4. Digital Input Port Connection Diagram

As shown in Figure 4.

M12, class A, female



pin	Function
1	Max 350mA, +24V
2	Digital input/output
3	0V, GND
4	Digital input/output
5	Function

picture 4

## 5. IO-Link data

### 5.1 parameter

As shown in Table 1-1.

surface 1-1

Data transmission baud rate	COM2 (38.4kbit/s)
Minimum cycle time	4.5ms
Process data cycle time	4.5ms, consistent with the minimum cycle time
Process data length	4 bytes in, 4 bytes out

## 5.2 Process data/input data

As shown in Figure 5. Note: 0, 1 are the first level, 2, 3 are the second level (extended)

位	0								1								2								3							
	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 Pin2	Input port 6 Pin2	Input port 5 Pin2	Input port 4 Pin2	Input port 3 Pin2	Input port 2 Pin2	Input port 1 Pin2	Input port 0 Pin2	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 Pin2	Input port 6 Pin2	Input port 5 Pin2	Input port 4 Pin2	Input port 3 Pin2	Input port 2 Pin2	Input port 1 Pin2	Input port 0 Pin2

picture 5

## 5.3 Process data/output data

As shown in Figure 6.

Note: 0, 1 are the first level, 2, 3 are the second level (extended)

0								1								2								3							
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
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	output port 7 Pin2	output port 6 Pin2	output port 5 Pin2	output port 4 Pin2	output port 3 Pin2	output port 2 Pin2	output port 1 Pin2	output port 0 Pin2	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	output port 7 Pin2	output port 6 Pin2	output port 5 Pin2	output port 4 Pin2	output port 3 Pin2	output port 2 Pin2	output port 1 Pin2	output port 0 Pin2

picture 6

## 5.4 parameter data/request data

As shown in Figure 7.

	DPP	SPDU		object name	length	scope	Defaults
	index	index	sub-index				
identifying data				Supplier ID	2		0x0454
				Device ID	3		0x099EE0
		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	max 64		FNI IOL-332-002-M12 with FNI IOL-332-002-M12
		0x13	0	Product ID	max 32		00BD31 with 00BD31
		0x14	0	Product text	44		IO-Link M12 PNP 16DI/DO extended with other
		0x16	0	hardware version	3		20211010
	0x17	0	Firmware version	3	2.04		
parameter data		0x40	0	bit inversion	4	00000000-FFFFFFFF	0x00000000
		0x41	0	direction	4	00000000-FFFFFFFF	0x00000000

picture 7

注:

0x40 Set bit reverse: 0-bit is not reversed, 1-bit is reversed, such as external input is 0x0000, when 0x40 is 0x00000000, the value is 0x00000000 (not reversed), when 0x40 is 0xFFFFFFFF, the value is 0xFFFFFFFF (reverse).

0x41 Set direction: 0-input, 1-output.

## 5.5 mistake

As shown in Figure 7.

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

picture 8

## 5.6 event

As shown in Figure 9.

class/qualifier			code (high + low)			
model	type	Example				
Appear	mistake	AL	Device hardware	powered by	Power supply low voltage	U2=powered by+24V
0xC0	0x30	0x03	0x5000	0x0100	0x0010	0x0002
0xF3			0x5112			
disappear	mistake	AL	Device hardware	powered by	Power supply low voltage	U2=powered by+24V
0x80	0x30	0x03	0x5000	0x0100	0x0010	0x0002
0xB3			0x5112			
Appear	mistake	AL	Device hardware	powered by	Peripheral power supply	
0xC0	0x30	0x03	0x5000	0x0100	0x0060	
0xF3			0x5160			
disappear	mistake	AL	Device hardware	powered by	Peripheral power supply	
0x80	0x30	0x03	0x5000	0x0100	0x0060	
0xB3			0x5160			

picture 9