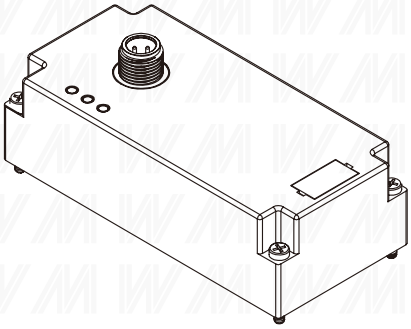
MVE2-IOL

100 / 156 / 188 / 220

Fieldbus System

User Manual E1.1.0

IO-Link



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If there has any question, please contact Mindman right away. Thanks.

1. Review

This manual is established by organization, so the chapters are interconnected.

1.1 Manual structure

1. Overview section
2. Basic safety information

1.2 Typography habits

The following formatting conventions are used in this manual.

List: Enumeration is displayed as a list with bullets.

- Vocabulary 1
- Vocabulary 2

Action: The action description is represented by a front triangle.

The result of the action is represented by an arrow.

▶ Military action description 1

→ Action results

▶ Military action description 2

The step program can also be displayed numerically in parentheses.

(1) Step 1

(2) Step 2

Syntax: Digit

Decimal numbers are displayed without additional indicators (e.g., 123), Hexadecimal number display with additional indicator hex (Such as 00hex) Or with prefix "0X" (Such as: 0×00)

Cross reference: Cross referencing indicates where additional information about this topic can be found.

1.3 Symbol

Explanatory note: This symbol indicates a general note.

Pay attention: This symbol indicates the most important safety notice.

1.4 Acronym

FNI : Network interface electricity

EMC : Magnetic compatibility work

FE : Capable of grounding

I : Standard input

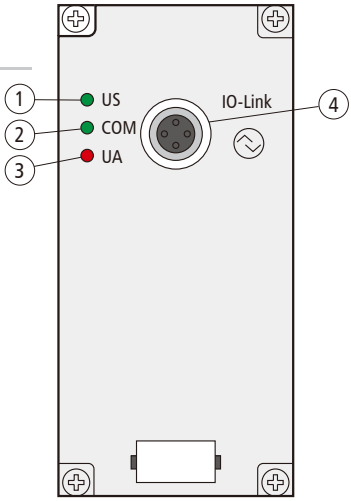
O : Standard output

1.5 Angle deviation

The product views and explanations in this manual may deviate from the actual product. They only explain the materials used left and right.

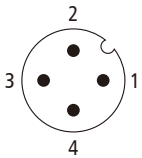
2. Guide

2.1 Module overview / LED status



No.	Name	Code	Description		
1	State LED: IO-Link	US	Green	always on	Power supply is normal
2	State LED: Power supply	COM	Green	flashing	IO-Link communication is normal
				always on	IO-Link communication error
3	State LED: Actuator power supply	UA	Red	always on	IO-Link interface, Pin 2 not powered
				flashing	Abnormal US power supply
				Not have	US power supply, Pin 2 normal
4	IO-Link interface	—	M12, A-Coded (male), 4 PIN		

2.2 Electrical connections

M12, A-Coded (male), 4 PIN			
Interface	Pin	Function	Description
	1	24V EL/SEN	Working voltage source (electronic components, sensors/inputs)
	2	24V VAL/OUT	Load voltage source (valve/output)
	3	0V EL/SEN	Working voltage source (electronic components, sensors/inputs)
	4	C/Q	Data communication

3. Technical Data

3.1 Operating conditions

Project	Parameter
Ambient temperature	−5～+50°C
Ambient temperature	2
Working humidity	35～85%RH (No condensation)
Waterproof grade	IP65

3.2 Electric data

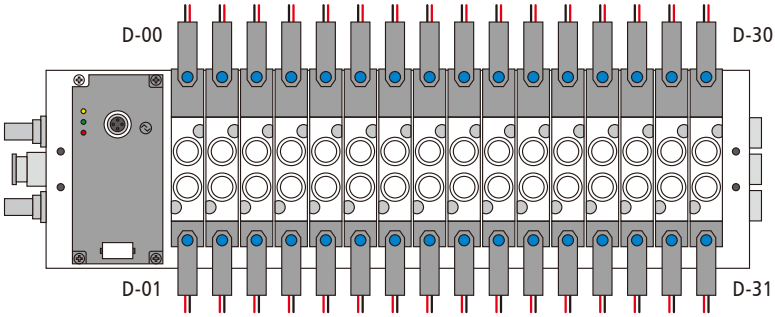
Project	Parameter
Electrical interface	• M12, A-Coded (male), 4 PIN • Metal threads for shielding
Inherent current consumption, logic power supply PS	30mA
Inherent current consumption, valve power supply PL	30mA
Maximum number of electromagnetic coils	32
Number of valve positions	16

3.3 Communication specifications

Project	Description
Data transmission baud rate	COM3 (230.4 kbit/s)
	COM2 (38.4 kbit/s)
Minimum cycle time	3ms
Process data cycle time	3ms, Consistent with minimum cycle time
Process data length	6-byte output

4. Communication Module Data

4.1 Coil definition



4.2 Output data

Byte	0								1							
Bit	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
Coil terminal	D-07	D-06	D-05	D-04	D-03	D-02	D-01	D-00	D-15	D-14	D-13	D-12	D-11	D-10	D-09	D-08
Byte	2								3							
Bit	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
Coil terminal	D-23	D-22	D-21	D-20	D-19	D-18	D-17	D-16	D-31	D-30	D-29	D-28	D-27	D-26	D-25	D-24

Example:

If the starting address assigned for output is 64, then the output address at point 0 is Q64.0, and the output address at point 31 is Q67.7.

4.3 System data

	DPP	SPDU		Object name	Lenth	Scope	Default value
	Index	Index	Subindex				
Indentification date				Supplier ID	2		0×0454
				Device ID	3		0×0997EB
		0×10	0	Supplier name	19	Read only	
		0×11	0	Supplier text	16		
		0×12	0	Product name	13		VALVE IOL-7V001-40
		0×13	0	Product ID	5		VALVE IOL-7V001-40
		0×14	0	Product text	44		IO-Link valvegroup low drive multiple output modes
		0×16	0	Hardware version	8		20210310
		0×17	0	Firmware version	3		1.0
Parameter data	0×42			State reset	1	R/W	0×00

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