

MVE series

EtherNet/IP

FIELD BUS SYSTEM

Output Device

Valve



MVSC-220



MVSY-100

Others

Relay
buzzer
Indicator light



MVSP-156

Input Device

Switch



Pressure Switch



Flow rate Switch

Others

Proximate Sensor
Photoelectric Switch
Limit Switch



Sensing Switch
(For cylinder)

Feature

Compatible Protocol

EtherNet/IP

Max. 8 units can be connected of I/O

Wiring time and labor costs can be reduced

Short/Open-circuit detection function

The location of error can be identified.

Counter function

It is possible to ascertain the maintenance period and identify the parts that require maintenance.

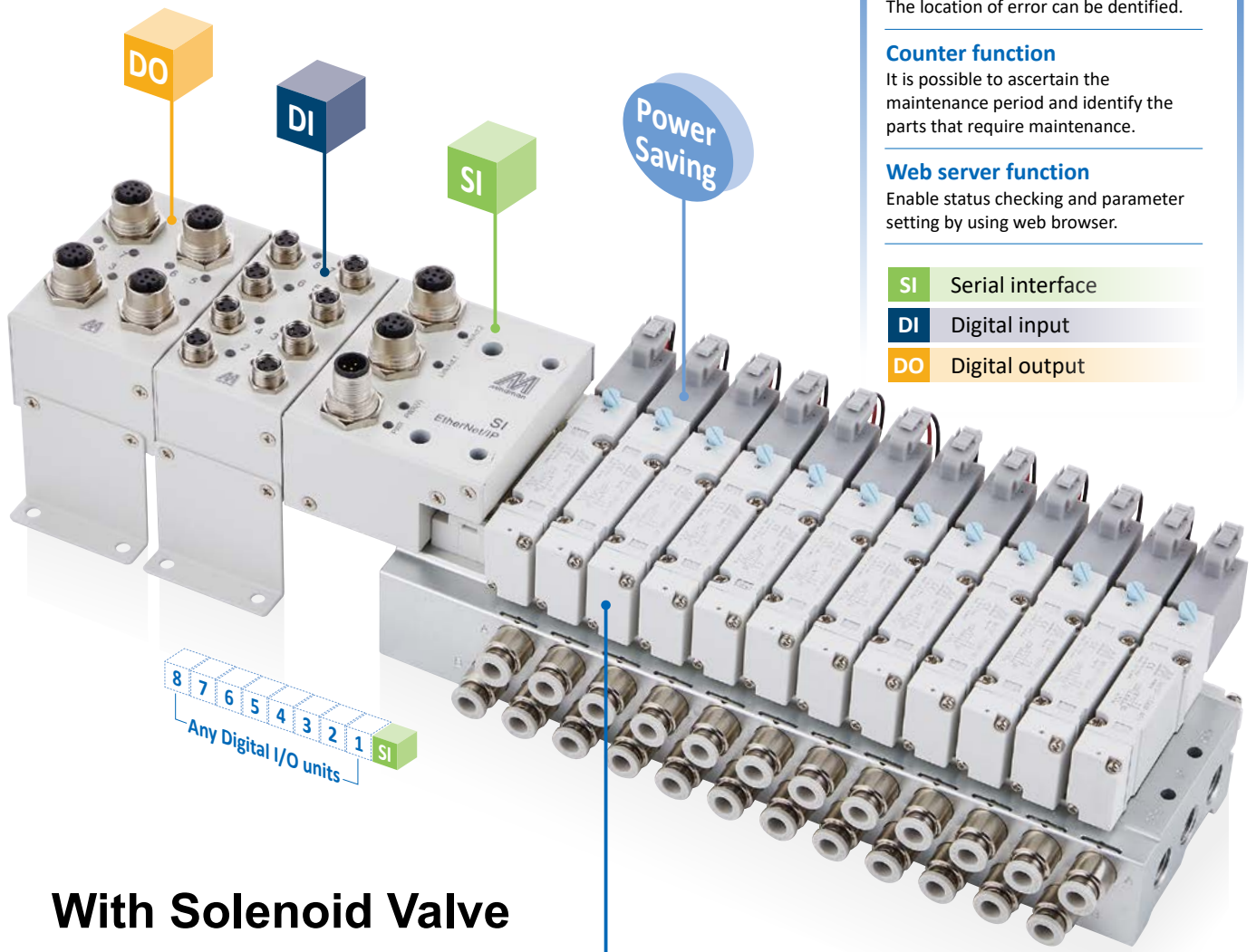
Web server function

Enable status checking and parameter setting by using web browser.

SI Serial interface

DI Digital input

DO Digital output



With Solenoid Valve

MVE-100 series



Valve Series

MVSY-100

Power Consumption

0.55W

With tube fitting

MVE-156 series



MVSY-156

0.55W

ø4, ø6, ø8 mm



MVSP-156

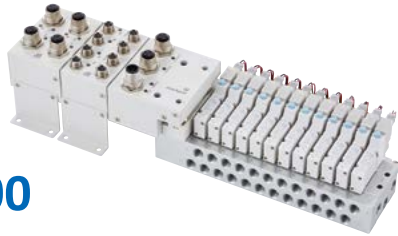
0.95W

ø4, ø6, ø8 mm

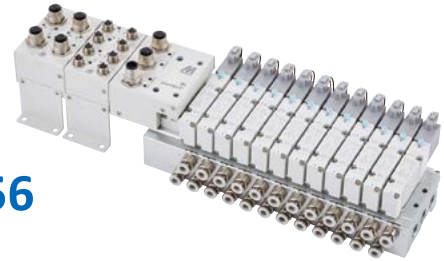
MVE series

EtherNet/IP

FIELD BUS SYSTEM



MVE-100
series

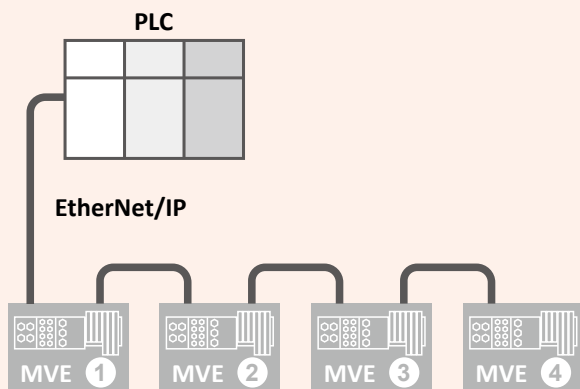


MVE-156
series

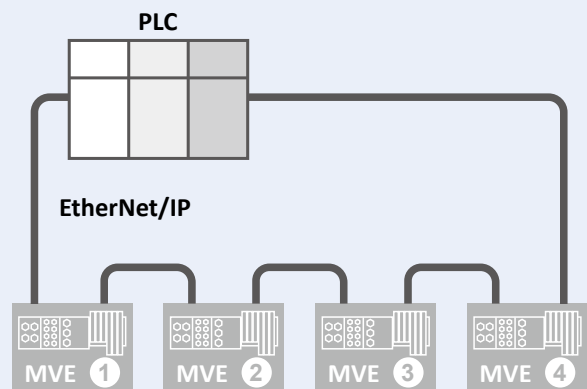
Compatible Topologies

In addition to the general star type, it is available for **linear** and **ring** topologies.

Linear type



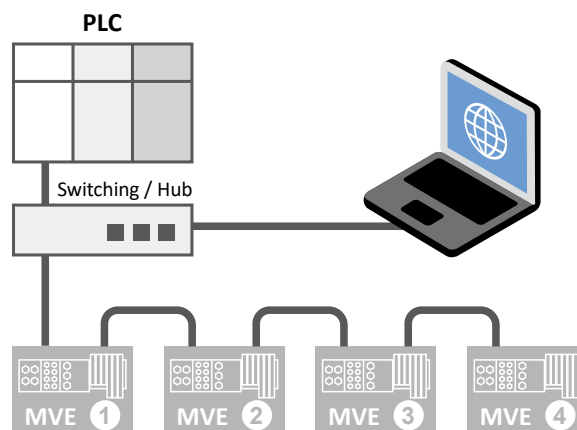
Ring type



Web server function

Using general web browsers, such as IE, Google Chrome which enables status check and parameter settings.

Operation and maintenance of the system can be performed efficiently.



MVE 1 ~ 4
can be accessed
via a web browser.

- Status check
- Parameter setting
- Forced output, etc.

MVE-100 series

FIELDBUS SYSTEM (EtherNet / IP)



Features



MVSY-100



Blocking plate

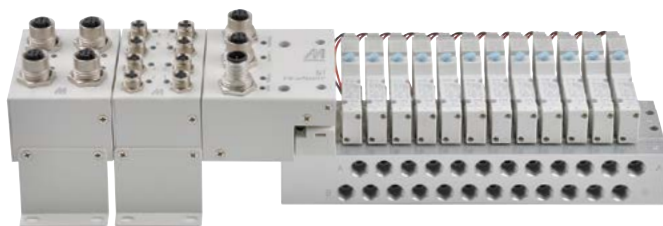


Technical data



Caution for safety

(Read before installing)



Feature

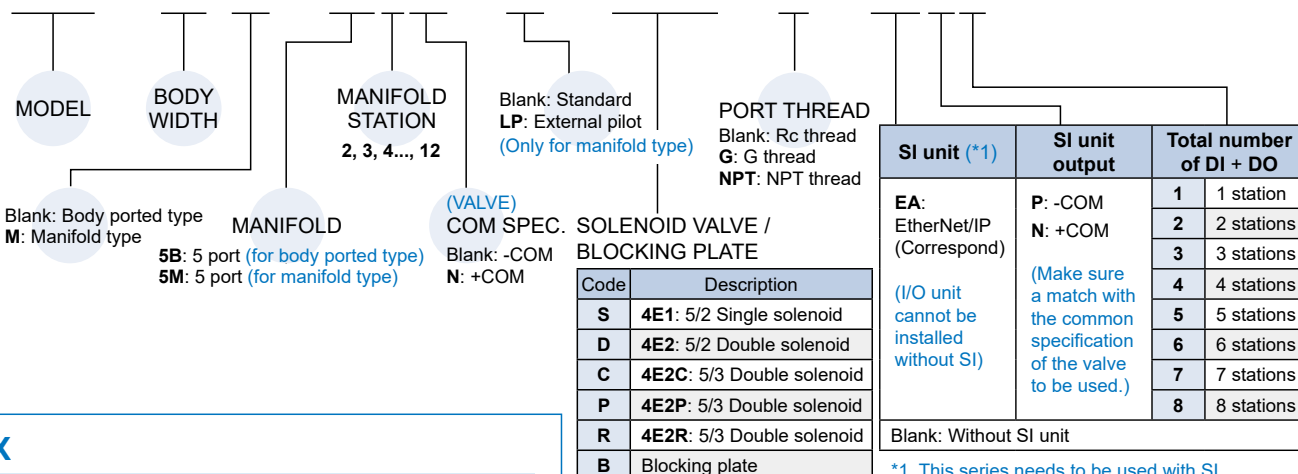
- Wiring time can be reduced.
- Labor cost can be reduced.
- High flexibility for system expansion.
- Circuit protection and self diagnosis function.
- Reduce error of wiring.
- Web server function.

Remark

- Maximum number of stations
4E1: 12 stations
4E2 & 4E2C.P.R: 11 stations
- For MVSY-100 series solenoid valve (Only with LJ plug type)

Order example of fieldbus system

MVE — 100M — 5B4□ — LP — SSDC — G — EAN6



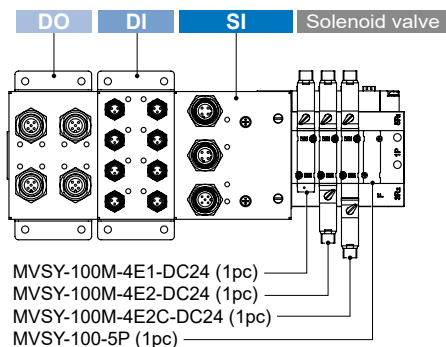
EX

Fieldbus system (Inclusion SI unit and solenoid valve)
MVE-100M-5M4-SDCB-G-EAP2 × 1 set

Digital input unit (DI unit)
MVE-100-DIPA-B1 × 1 set

Digital output unit (DO unit)
MVE-100-DOPB-B1 × 1 set

* The valve arrangement is numbered as the 1st station from the SI side.



*1. This series needs to be used with SI unit for EtherNet/IP communication.

*2. When I/O unit is selected, it is shipped separately, and assembled by user.

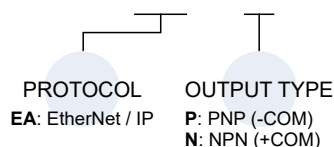
MVE Specification of SI unit

FIELD BUS SYSTEM (EtherNet / IP)



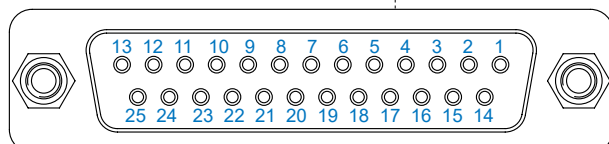
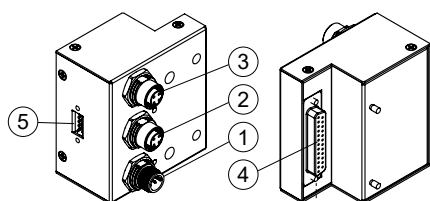
Order example of SI unit

MVE — 100 — SEA — N



Connector

No.	Item	Description
1	Power	M12 B-coded plug
2	EtherNet/IP port1	M12 D-coded socket
3	EtherNet/IP port2	M12 D-coded socket
4	Valve output	25 PIN D-sub
5	Extended I/O	10 pins connector



D-Sub (Female)

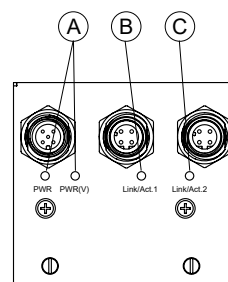
COM	-COM (PNP)	+COM (NPN)
Pin No.	1~12	13
Description	DC24V+	COM-
Pin No.	14~24	25
Description	DC24V+	COM-

Specification

Model	SI unit
Interface	Protocol
	Communication speed
	Configuration file
Power supply	Power connector
	Control & input
	Output
	Consumption
Valve output	Polarity of output
	Power supply
	Number of outputs
	Connected load
	Fail safe
	Protective function
Environment	Working temperature
	Working humidity

LED Indicator

NO.	LED	Status	Description
A	PWR (Yellow)	ON	Power-ON
		OFF	Power-OFF
B	LAN1 (Green)	Flash	Data Transmission
		OFF	No Link / Activity
		ON	Link / Activity
C	LAN2 (Green)	Flash	Data Transmission
		OFF	No Link / Activity
		ON	Link / Activity



Pin arrangement

Power

Plug, B-coded	Pin	Signal
	1	24 V (Output)
	2	0 V (Output)
	3	24 V (Control and input)
	4	0 V (Control and input)
	5	FE

Ethernet / IP

Socket, D-coded	Pin	Signal
	1	TX +
	2	RX+
	3	TX-
	4	RX-

Order example of DI digital input unit

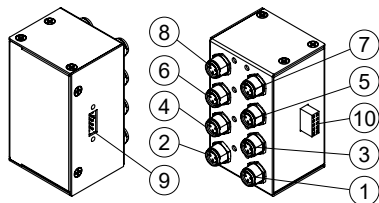
MVE — 100 — DI P A — B1

INPUT TYPE		NUMBER OF INPUT AND CONNECTOR		BRACKET
P	PNP	Symbol	Number	
N	NPN	A	8 input	M8 connector (3 PIN) 8 pcs

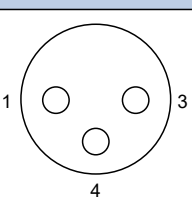
Blank: Without
B1: B-MVE-100
B2: B-MVE-100M
B3: B-MVE-156
B4: B-MVE-156M
B5: B-MVE-JA156M

Connector

No.	Item	Description
1	DI 0	M8, 3PIN socket (Female)
2	DI 1	
3	DI 2	
4	DI 3	
5	DI 4	
6	DI 5	
7	DI 6	
8	DI 7	
9	IOM Interface	10PIN connector (Male)
10	IOM Interface	10PIN connector (Female)



Pin arrangement

Socket	Pin	Signal
	1	24 V (Control and input)
	3	0 V (Control and input)
	4	Input

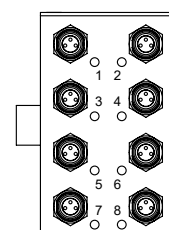
Specification

Model	DI unit
Input type	PNP or NPN
Input connector	M8 (3PIN) socket
Number of inputs	8 input (1 input / connector)
Sensor supplied voltage	DC24V
Maximum sensor supplied current	0.25A / Connector & 2A / Unit
Rated input current	9mA
ON voltage	≥ 17V *
OFF voltage	≤ 5V *
Feature	Short-Circuit Detection & Open-Circuit Detection
Power	Power supply voltage (control and input) DC24V, Class2, 2A
Environment	Working temperature -10°C ~ +50°C
	Storage temperature -20°C ~ +60°C
	Working humidity 35% ~ 85% RH
	Isolation 500VAC, 10MΩ

* At NPN input, between the pin for input terminal and supplied voltage of +24V.
 * At PNP input, between the pin for input terminal and supplied voltage of 0V.

LED Indicator

NO.	LED	Status	Description
1	DI 0	ON	Input device is ON
		OFF	Input device is OFF
2	DI 1	ON	Input device is ON
		OFF	Input device is OFF
3	DI 2	ON	Input device is ON
		OFF	Input device is OFF
4	DI 3	ON	Input device is ON
		OFF	Input device is OFF
5	DI 4	ON	Input device is ON
		OFF	Input device is OFF
6	DI 5	ON	Input device is ON
		OFF	Input device is OFF
7	DI 6	ON	Input device is ON
		OFF	Input device is OFF
8	DI 7	ON	Input device is ON
		OFF	Input device is OFF



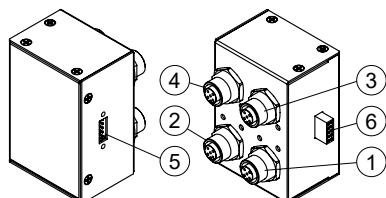
Order example of DO digital output unit

MVE — 100 — DO P B — B1

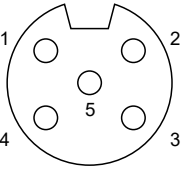
OUTPUT TYPE		NUMBER OF OUTPUT AND CONNECTOR			BRACKET
P	PNP	Symbol	Number	Connector	
N	NPN	B	8 output	M12 connector (5 PIN) 4 pcs	Blank: Without B1: B-MVE-100 B2: B-MVE-100M B3: B-MVE-156 B4: B-MVE-156M B5: B-MVE-JA156M

Connector

No.	Item	Description
1	DO 0, DO 1	M12, 5PIN socket (Female)
2	DO 2, DO 3	
3	DO 4, DO 5	
4	DO 6, DO 7	
5	IOM Interface	10PIN connector (Male)
6	IOM Interface	10PIN connector (Female)



Pin arrangement

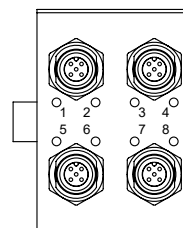
Socket, A-coded	Pin	Signal	
		PNP	NPN
	1	NC	24 V (Output)
	2	Output 2	Output 2
	3	0 V (Output)	NC
	4	Output1	Output1
	5	FE	FE

Specification

Model	DO unit
Output type	PNP or NPN
Output connector	M12 (5PIN) socket
Number of outputs	8 output (2 output / connector)
Rated load voltage	DC24V
Maximum load current	0.5A / Connector & 2A / Unit
Feature	Short-Circuit Detection & Open-Circuit Detection
Power	Power supply voltage (output)
	DC24V, Class2, 2A
Environment	Working temperature
	-10°C ~ +50°C
	Storage temperature
	-20°C ~ +60°C
	Working humidity
	35% ~ 85% RH
	Isolation
	500VAC, 10MΩ

LED Indicator

NO.	LED	Status	Description
1	DO 0	ON	DO Output
		OFF	No DO Output
2	DO 1	ON	DO Output
		OFF	No DO Output
3	DO 2	ON	DO Output
		OFF	No DO Output
4	DO 3	ON	DO Output
		OFF	No DO Output
5	DO 4	ON	DO Output
		OFF	No DO Output
6	DO 5	ON	DO Output
		OFF	No DO Output
7	DO 6	ON	DO Output
		OFF	No DO Output
8	DO 7	ON	DO Output
		OFF	No DO Output



MVE-100 with MVSY-100

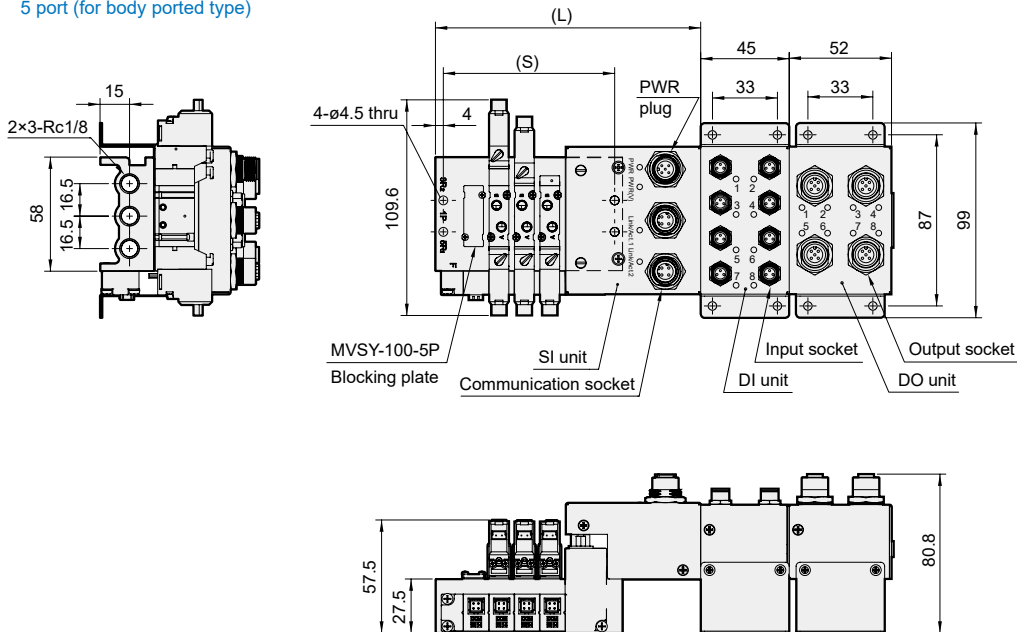
FIELDBUS SYSTEM (EtherNet / IP)



Mindman

MVE-100-5B*

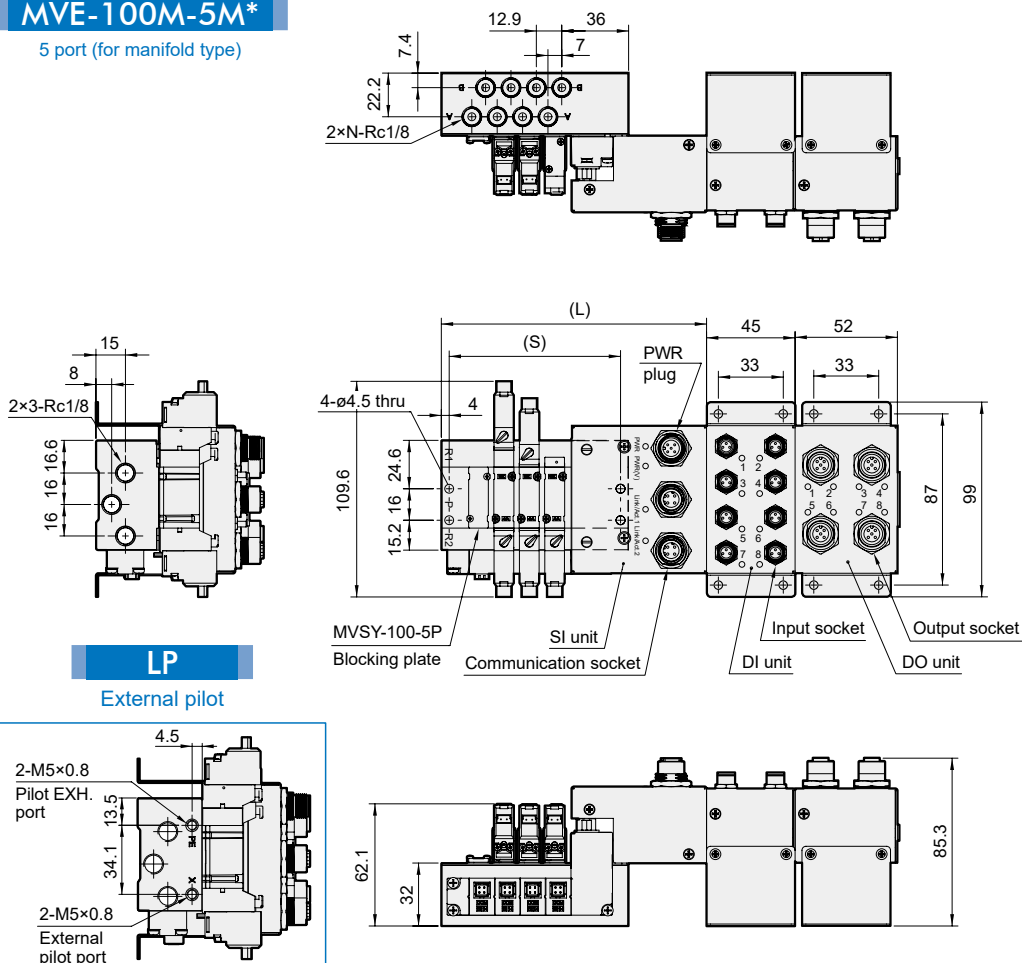
5 port (for body ported type)



No. of stations	L	S
2	109	62.3
3	121.9	75.2
4	134.8	88.1
5	147.7	101
6	160.6	113.9
7	173.5	126.8
8	186.4	139.7
9	199.3	152.6
10	212.2	165.5
11	225.1	178.4
12	238	191.3

MVE-100M-5M*

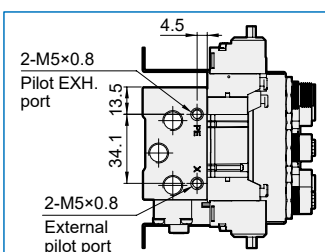
5 port (for manifold type)



No. of stations	L	S
2	109	62.3
3	121.9	75.2
4	134.8	88.1
5	147.7	101
6	160.6	113.9
7	173.5	126.8
8	186.4	139.7
9	199.3	152.6
10	212.2	165.5
11	225.1	178.4
12	238	191.3

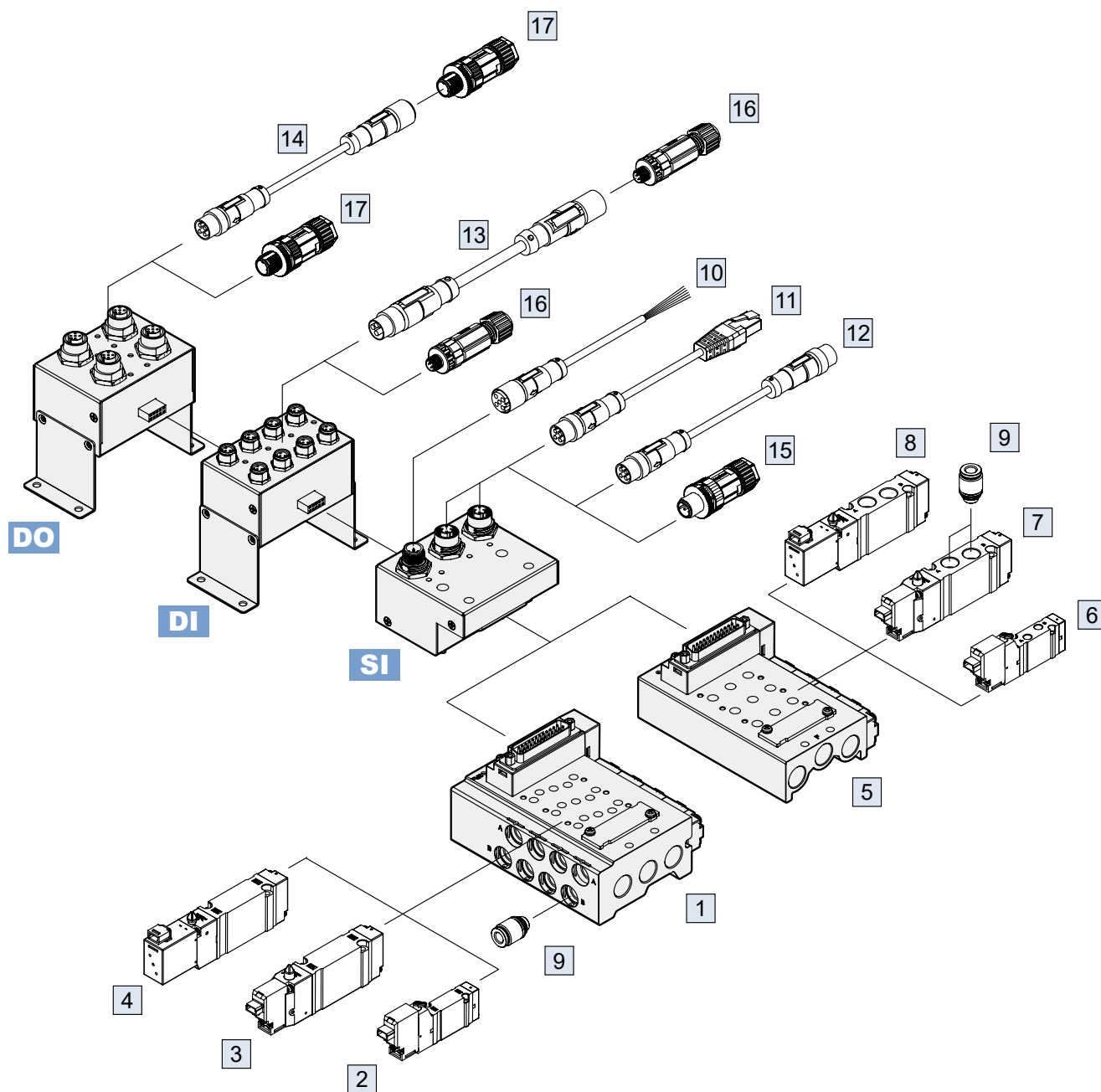
LP

External pilot



MVE-100 / 156 Valve / Accessories

FIELD BUS SYSTEM (EtherNet / IP)



No.	Device	Page link
1	Manifold (manifold type)	-
2	Solenoid valve MVSY-100M	Link
3	Solenoid valve MVSY-156M	Link
4	Solenoid valve MVSP-156M	Link
5	Manifold (body ported type)	-
6	Solenoid valve MVSY-100	Link
7	Solenoid valve MVSY-156	Link
8	Solenoid valve MVSP-156	Link
9	Tube fitting (ø4,ø6,ø8) (*1)	-

No.	Device	Page link
10	Cable with connector M125B-SFW*	Link
11	Communication cable M124D-SMSR*	Link
12	Communication cable M124D-SMSM*	Link
13	Cable with connector M83-SFSM*	Link
14	Cable with connector M124A-SFSM*	Link
15	Connector M124D-SM	Link
16	Connector M83-SM	Link
17	Connector M124A-SM	Link

*1. Only for MVE-156 series.