

MVJB-156 series

MULTI CONNECTOR SYSTEM / FIELDBUS SYSTEM



Features



Inquiry sheet



Technical data



Caution for safety
(Read before installing)



PROFI
BUS

PROFI
NET



Modbus Ethernet/IP™

Feature

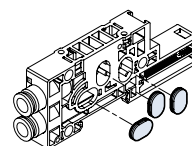
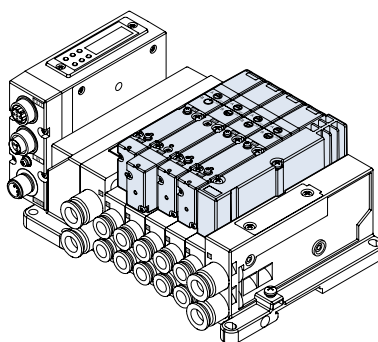
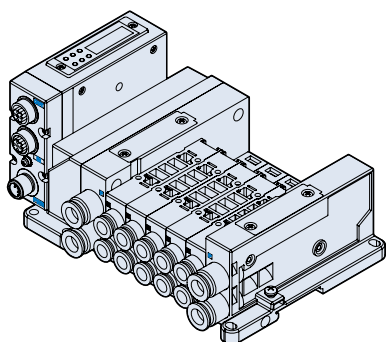
- All-in-one gasket for the base can be easier to increase the number of valve blocks.
- Plug-in design reduces the time for wiring and labor cost.
- Expandable communication protocol options available.
- The module is compatible with both NPN/PNP.
- SUP / EXH blocking disks enable dual-pressure operation within a single manifold.
- Low power consumption: 0.55W during actuation, reduced to 0.35 W in power-saving mode.
- 4-position double 3-port valve configuration available.

Method of choosing model

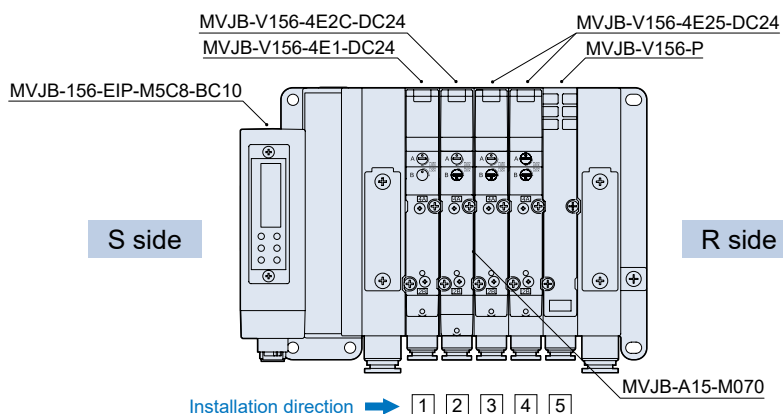
① Manifold type & Communication interface

② Solenoid valves / Blocking plates

③ Accessories



Order example



Step ① Model of manifold	MVJB-156-EIP-M5C8-BC10												
Step ② Solenoid valve / Block plate	Qty	Installation position											
		1	2	3	4	5	6	7	8	9	10	11	...
MVJB-V156-4E1-DC24	1	●											
MVJB-V156-4E2C-DC24	1		●										
MVJB-V156-4E25-DC24	2			●	●								
MVJB-V156-P	1					●							
Step ③ Accessories													
MVJB-A15-M070	1	-		●									-

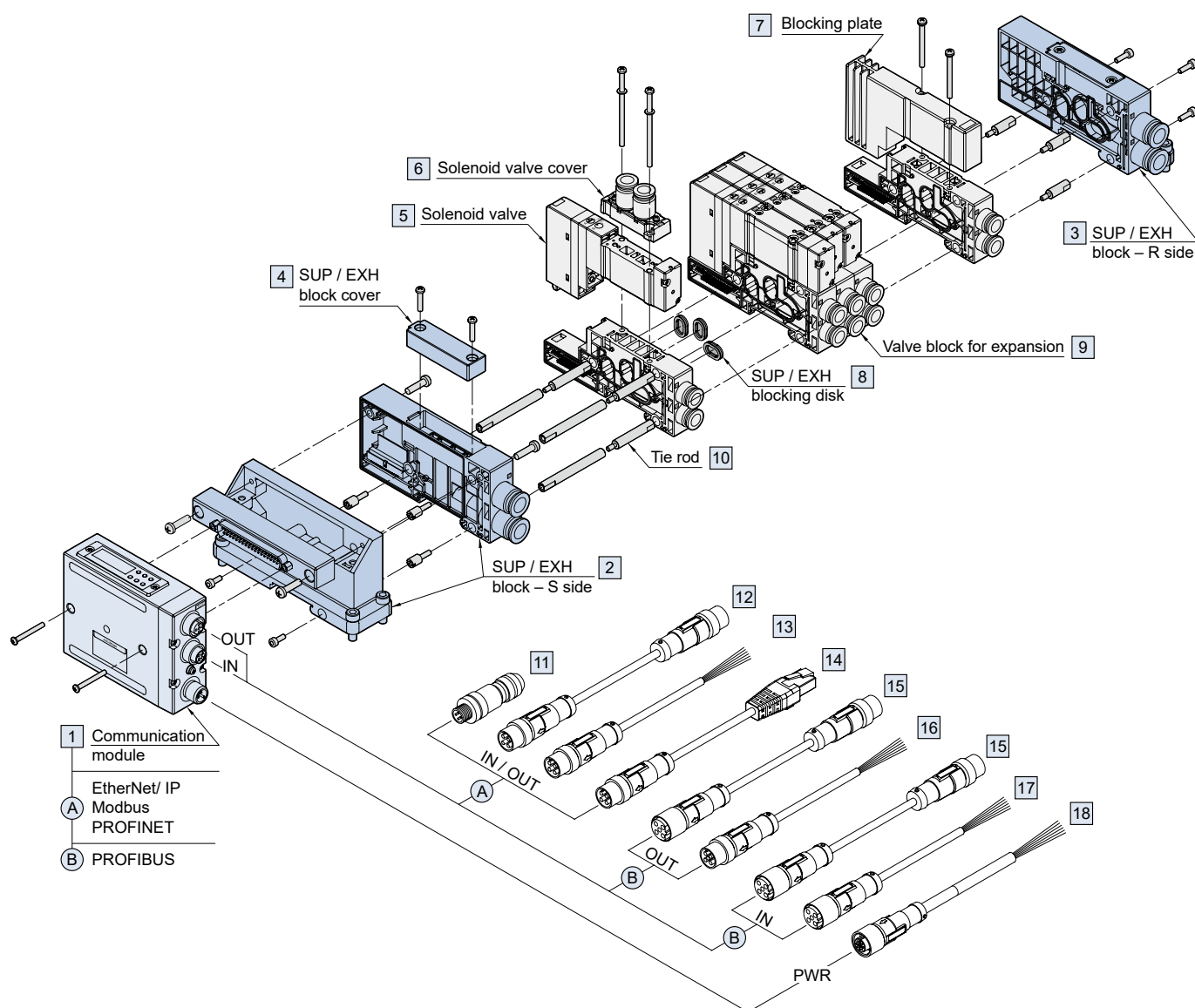
Step ① Manifold type & Communication interface
MVJB-156-EIP-M5C8-BC10 × 1 set

Step ② Solenoid valve / Block plate
MVJB-V156-4E1-DC24 × 1 set
MVJB-V156-4E2C-DC24 × 1 set
MVJB-V156-4E25-DC24 × 2 set
MVJB-V156-P × 1 set

Step ③ Accessories
MVJB-A15-M070 × 1 set

MVJB-156 Exploded view & Accessories

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No.	Components & Accessories	Model
1	Communication module	MVJB-SI-□
2	SUP / EXH block – S side	MVJB-A15-M020-□-□
3	SUP / EXH block – R side	MVJB-A15-M030-□
4	SUP / EXH block cover	MVJB-A15-M040-□
5	Solenoid valve	MVJB-V156□-□-DC24-□
6	Solenoid valve cover	MVJB-A15-V010-□
7	Blocking plate	MVJB-V156-P
8	SUP / EXH blocking disk	MVJB-A15-M070
9	Valve block for expansion	MVJB-C15-□
10	Tie rod	MVJB-A15-M010-S□

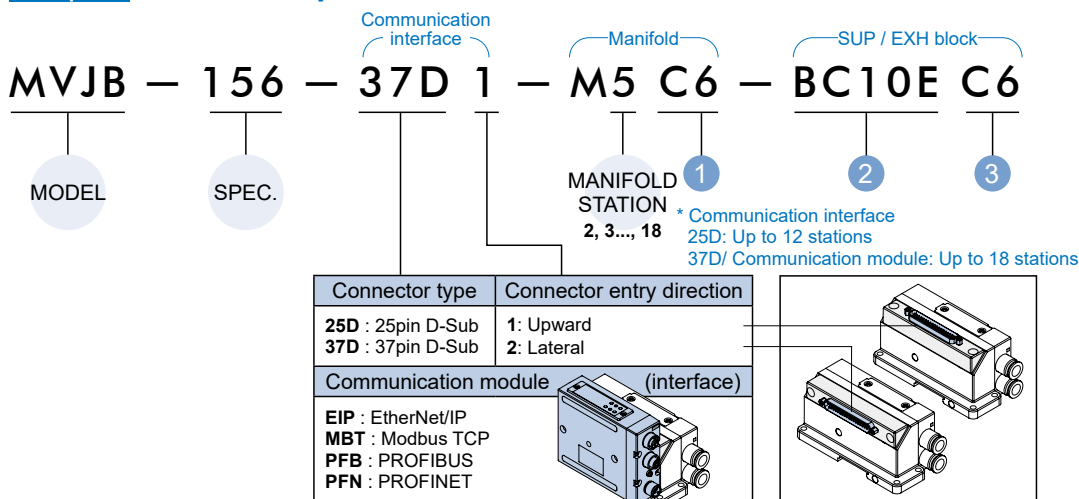
No.	Accessories	Model
11	Connector	M124D-SM Link
12	Cable with connector	M124D-SMSM-PVC-3M
13	Cable with connector	M124D-SMW-PVC-3M Link
14	Cable with connector	M124D-SMSR-PVC-3M
15	Cable with connector	M125B-SFSM-PVC-2M
16	Cable with connector	M125B-SMW-PVC-2M Link
17	Cable with connector	M125B-SFW-PVC-2M
18	Cable with connector	M125A-SFW-PVC-3M Link

MVJB-156 Order example of manifold

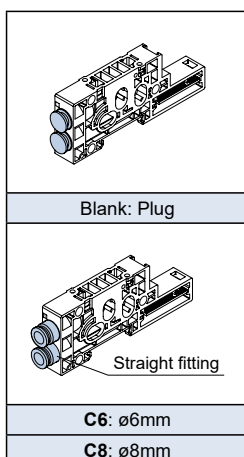
MULTI CONNECTOR SYSTEM / FIELDBUS SYSTEM



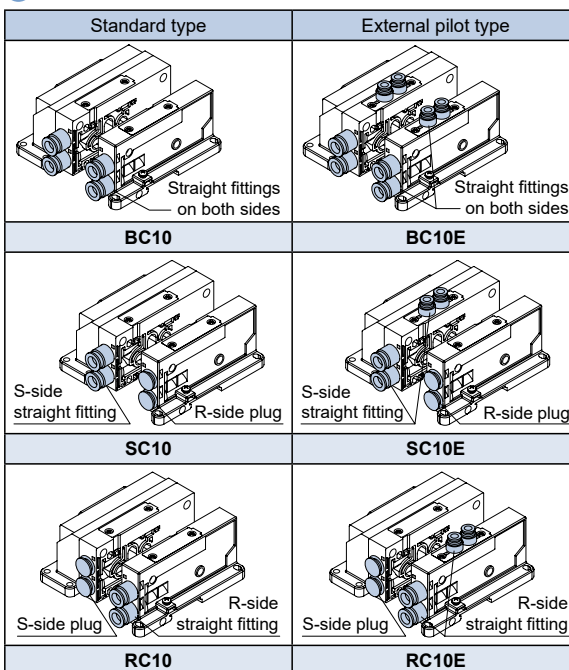
Step 1 Order example of manifold



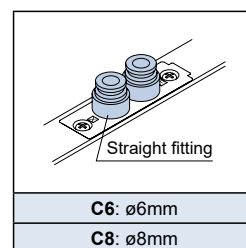
1 MANIFOLD A/B PORT FITTING TYPE



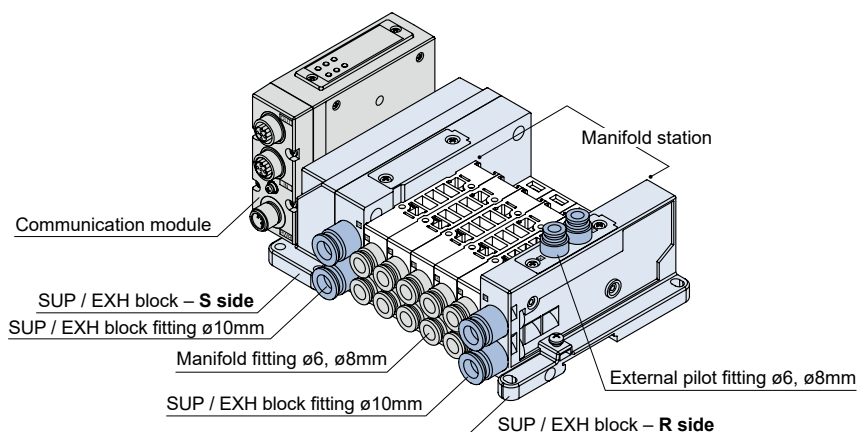
2 SUP / EXH BLOCK FITTING



3 EXTERNAL PILOT FITTING TYPE



* BC10E, SC10E, RC10E only.



MVJB-156 Order example of solenoid valve & blocking plate

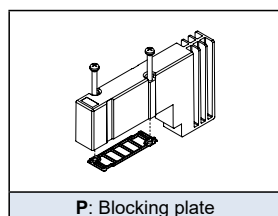
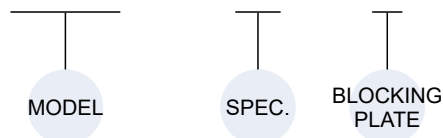
MULTI CONNECTOR SYSTEM / FIELDBUS SYSTEM



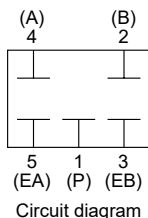
Step 2 Order example of Solenoid valve / blocking plate

Blocking plate

MVJB — V156 — P



*Includes mounting screws and gasket.

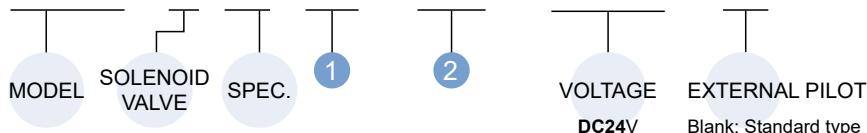


Specification of Solenoid valve

Model		4E1	4E2	4E2 C.P.R	4E2 3.4.5
No. of port		5			
No. of position		2		3	4
Medium		Air			
Operating pressure range MPa		0.2~0.7			
Operating pressure range (LP) MPa		0~0.7			—
Pilot pressure range (LP) MPa		0.25~0.7			—
Proof pressure MPa		1			
Effective orifice mm ²		11.5		10/14/10	12
Reponse time ms		20		27	42
Ambient temperature		+5~+50℃			
Max operating frequency		5 Hz			
Voltage		DC24V			
Power consumption W		0.55 (300 ms switching) 0.35 (power-saving mode)			
Available voltage range		±10%			
Insulation class		B			
Weight (g)	Manifold type	89	95	101	96
	Fitting C6	104	110	115	111
	Fitting C8	107	113	118	114

Solenoid valve

MVJB — V 156 C6 — 4E1 — DC24 — LP



*1. External pilot type requires the corresponding manifold specification.
*2. Not applicable to 4E2 3, 4 and 5.

1 FITTING TYPE 2 SOLENOID VALVE

 C6: Straight (dia. ø6mm) C8: Straight (dia. ø8mm)	 Standard type	 External pilot type	 Standard type	 External pilot type	 Standard type
	 4E1: 5/2 Single solenoid	 4E1: 5/2 Single solenoid (LP)	 4E2C: 5/3 Closed center	 4E2C: 5/3 Closed center (LP)	 4E23: 5/4 (N.C./N.C.)
	 4E2: 5/2 Double solenoid	 4E2: 5/2 Double solenoid (LP)	 4E2P: 5/3 Pressure center	 4E2P: 5/3 Pressure center (LP)	 4E24: 5/4 (N.O./N.O.)
		 4E2R: 5/3 Exhaust center	 4E2R: 5/3 Exhaust center (LP)	 4E25: 5/4 (N.O./N.C.)	

MVJB-156 Order example of accessories

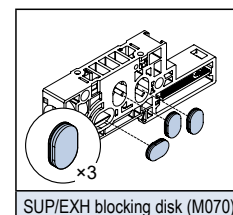
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Step 3 Order example of Accessories

SUP/EXH blocking disk **MVJB – A15 – M070**

* 3 pcs per set.



SUP/EXH blocking disk (M070)

Components

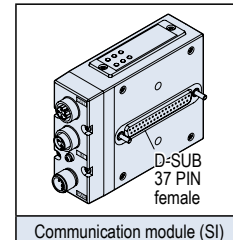
Communication module **MVJB – SI – EIP**

Caution

When ordering the Communication module separately, the original manifold module (SUP / EXH block – S side) must be equipped with a 37D connector.

COMMUNICATION
PROTOCOL

EIP : EtherNet/IP
MBT : Modbus TCP
PFB : PROFIBUS
PFN : PROFINET



Communication module (SI)

SUP / EXH block – R side **MVJB – A15 – M030 – C10 EC6**

SUP / EXH block – S side **MVJB – A15 – M020 – 37D 1 – C10 EC6**

* Up to 2 manifolds can be connected in series.

CONNECTOR TYPE

25D : 25pin D-Sub
37D : 37pin D-Sub*

CONNECTOR
ENTRY DIRECTION

1: Upward
2: Lateral *

P/R PORT
FITTING TYPE

Blank: Plug
C10: Straight
ø10mm

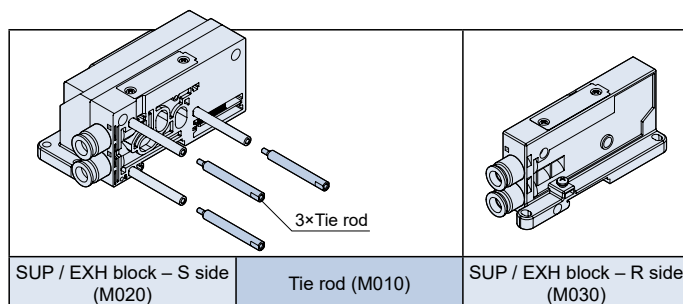
EXTERNAL PILOT
FITTING TYPE

Blank: Standard type
EC6: Straight ø6mm
EC8: Straight ø8mm

* Use 37D2 when a communication module is required.

Tie rod **MVJB – A15 – M010 – S1**

* 3 pcs per set.



Increase number
of manifold
stations
1, 2, 3, 6, 10

SUP / EXH block cover **MVJB – A15 – M040 – EC6**

Solenoid valve cover **MVJB – A15 – V010 – C6**

SUP / EXH block cover (M040)		Solenoid valve cover (V010)	
Blank: Standard type	EC6: External pilot fitting (dia. ø6mm) EC8: External pilot fitting (dia. ø8mm)	Blank: Manifold type	C6: Straight fitting (dia. ø6mm) C8: Straight fitting (dia. ø8mm)

MVJB-156 Order example of Valve block for expansion

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Order example of Valve block for expansion

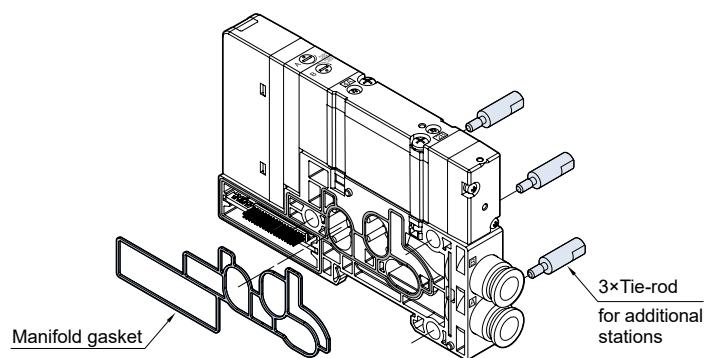
MVJB — C 15 — C6 + VS001

Manifold
Solenoid valve blocking plate

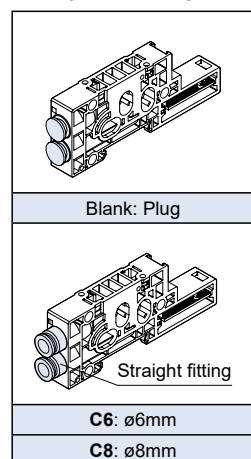
1
2

MODEL MANIFOLD UNIT SPEC. 15mm base

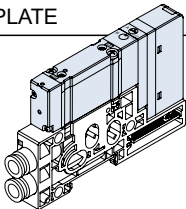
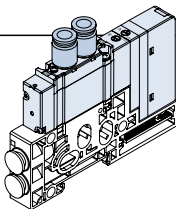
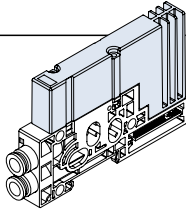
* The unit includes mounting screws and a gasket.



1 MANIFOLD A / B PORT FITTING TYPE



2 SOLENOID VALVE / BLOCKING PLATE

BLOCKING PLATE								
								
Code		Manifold type		Body ported type				Blocking plate
		Standard type	External pilot type	Standard type		External pilot type		
				Straight fitting C6	Straight fitting C8	Straight fitting C6	Straight fitting C8	
		001	002	003	004	005	006	—
4E1	S	●	●	●	●	●	●	
4E2	D	●	●	●	●	●	●	
4E2 C	C	●	●	●	●	●	●	
4E2 P	P	●	●	●	●	●	●	
4E2 R	R	●	●	●	●	●	●	
4E2 3	X	●		●	●			
4E2 4	Y	●		●	●			
4E2 5	Z	●		●	●			
Blocking plate	B							●

Weight

Weight (g)		Manifold type		Body ported type			
		Standard type	External pilot type	Standard type		External pilot type	
				Straight fitting C6	Straight fitting C8	Straight fitting C6	Straight fitting C8
				003	004	005	006
4E1	S	173		191			
4E2	D	179		197			
4E2 C/P/R	C/P/R	185		202			
4E2 3/4/5	X/Y/Z	180	—	198		—	
Blocking plate	B	135					

MVJB-156 Communication module (SI) spec.

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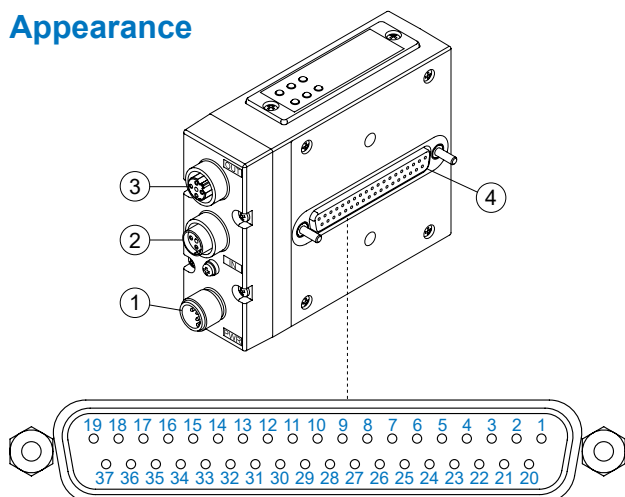


Mindman

Specification

Model	SI unit
Protocol name	EtherNet/IP, Modbus TCP, PROFINET, PROFIBUS
Speed	EtherNet/IP 10/100 Mbps
	Modbus TCP 10/100 Mbps
	PROFINET 100 Mbps
	PROFIBUS (DP-V0/V1 Slave) 9.6, 19.2, 45.45, 93.75, 187.5, 500, 1500, 3000, 6000, 12000 kbps
File	EtherNet/IP EDS
	Modbus TCP -
	PROFINET GSD
	PROFIBUS GSD
Power spec.	Power supply (Control) DC24V±10%, 0.5A max.
	Power supply (Output) DC24 V -5% to +10%, 2 A or less
	Power consumption 12W
Solenoid valve output	Output type PNP (-COM)
	Number of output points 36 points
	Protection function Short-circuit protection
Operating environment	Temperature range -20°C ~ +50°C
	Humidity range 10% ~ 90% RH
Weight	200g

Appearance



④ D-Sub (Female)

COM	PNP (-COM)		
Pin No.	1~18	19	20~37
Description	DC24V+	COM-	DC24V+

Appearance

Protocol	EtherNet/IP Modbus TCP PROFINET	PROFIBUS
③ BUS OUT	4 pin	5 pin
	M12 socket (female)	M12 socket (female)
	D-CODE	B-CODE
② BUS IN	4 pin	5 pin
	M12 socket (female)	M12 plug (male)
	D-CODE	B-CODE
① PWR	5 pin	
	M12 plug (male)	
	A-CODE	

Pin assignment

① Power

A-coded plug (male)	Pin	Signal
	1	24 V (Output)
	2	0 V (Output)
	3	24 V (Control & Input)
	4	0 V (Control & Input)
	5	N/A

② ③ Network interface

D-coded socket (female)	Pin	Signal
	1	TX +
	2	RX+
	3	TX-
	4	RX-

B-coded plug (male)	Pin	Signal
	1	+ 5V
	2	A_IN
	3	GND
	4	B_IN
	5	N/A

B-coded socket (female)	Pin	Signal
	1	+ 5V
	2	A_OUT
	3	GND
	4	B_OUT
	5	N/A

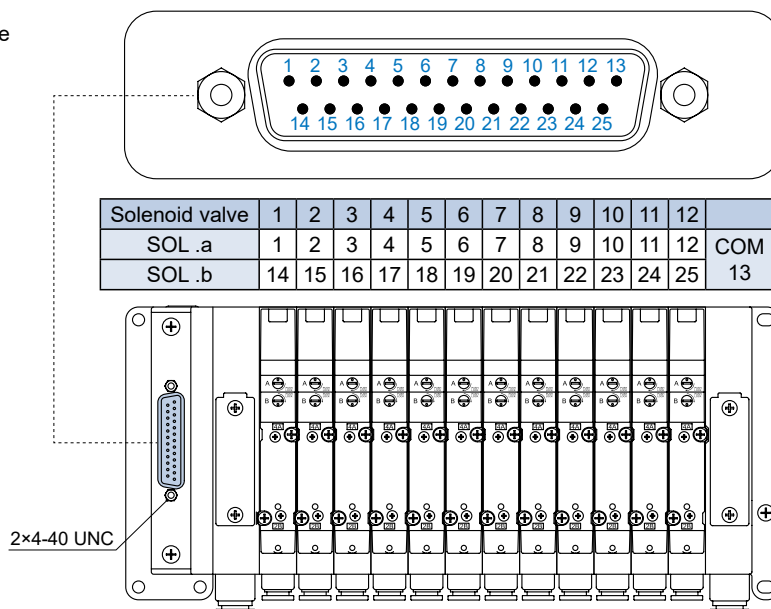
MVJB-156 Wiring

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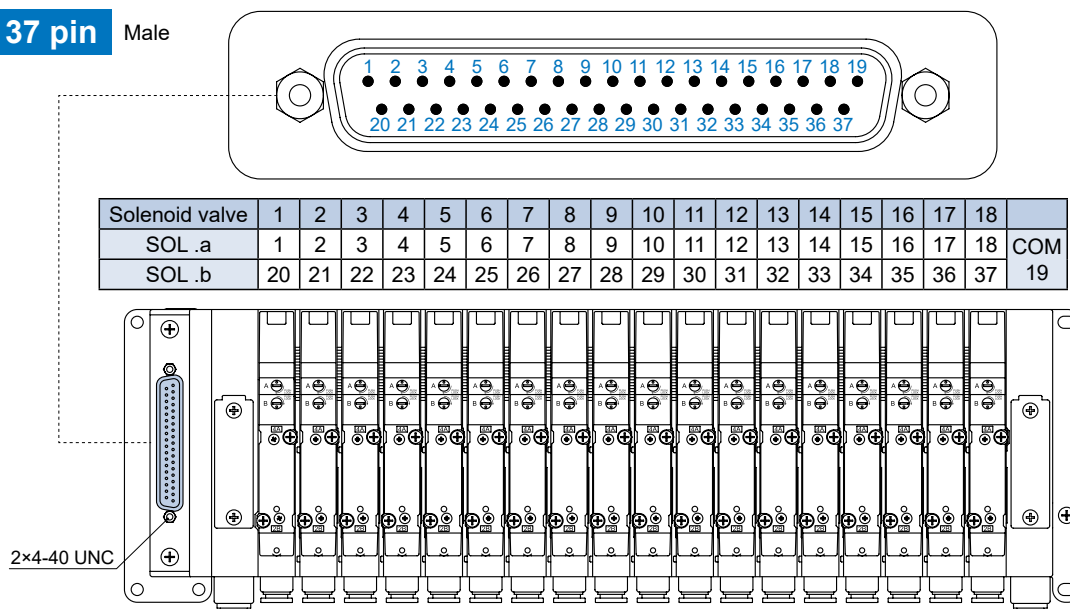


D-Sub plug pin wiring

25 pin Male

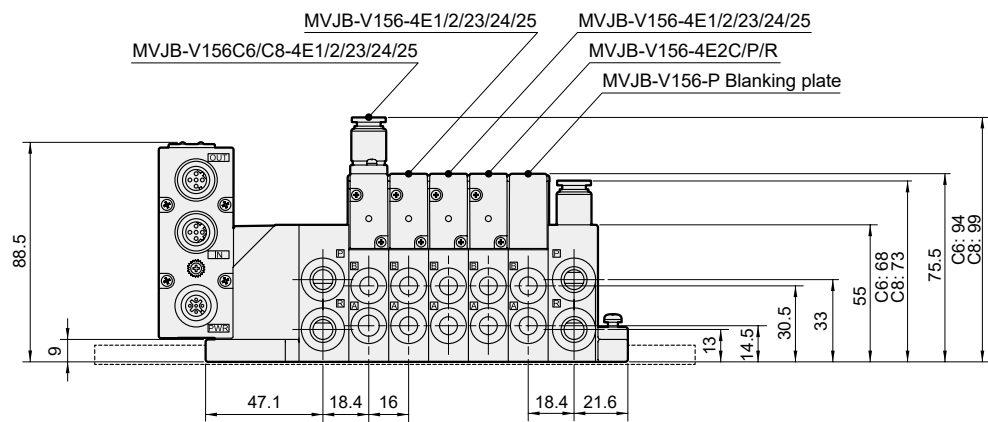
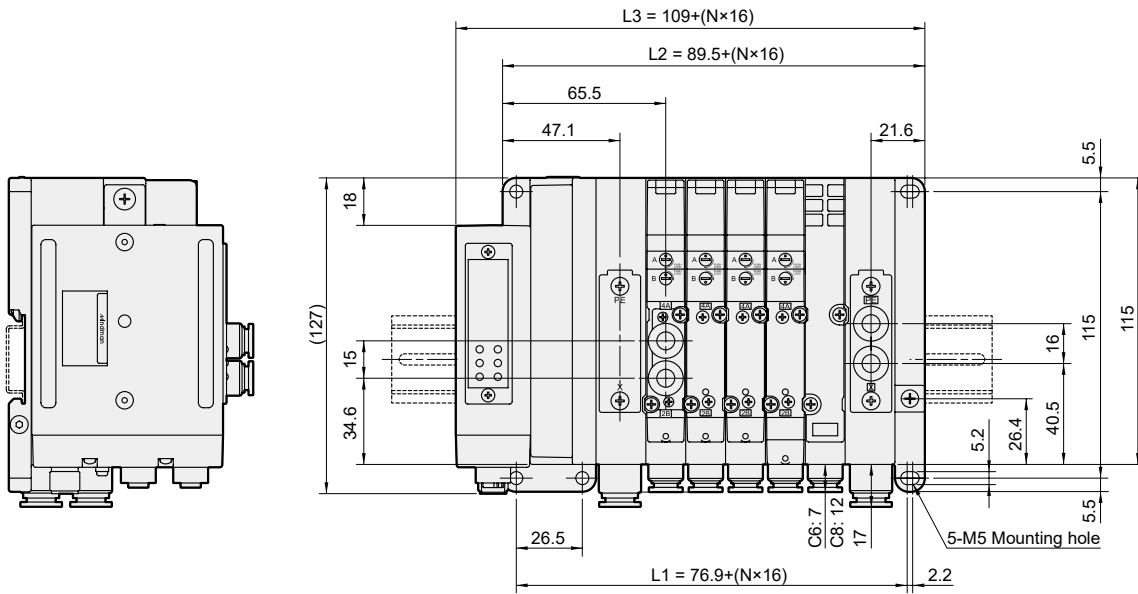


37 pin Male



MVJB-156 Dimensions

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No. of stations (N) Code	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
L1	108.9	124.9	140.9	156.9	172.9	188.9	204.9	220.9	236.9	252.9	268.9	284.9	300.9	316.9	332.9	348.9	364.9
L2	121.5	137.5	153.5	169.5	185.5	201.5	217.5	233.5	249.5	265.5	281.5	297.5	313.5	329.5	345.5	361.5	377.5
L3	141	157	173	189	205	221	237	253	269	285	301	317	333	349	365	381	397
Weight with SI	799	997	1195	1393	1591	1789	1987	2185	2383	2581	2779	2977	3175	3373	3571	3769	3967
(g) Without SI	999	1197	1395	1593	1791	1989	2187	2385	2583	2781	2979	3177	3375	3573	3771	3969	4167

MVJB-156 DIN rail installation instructions

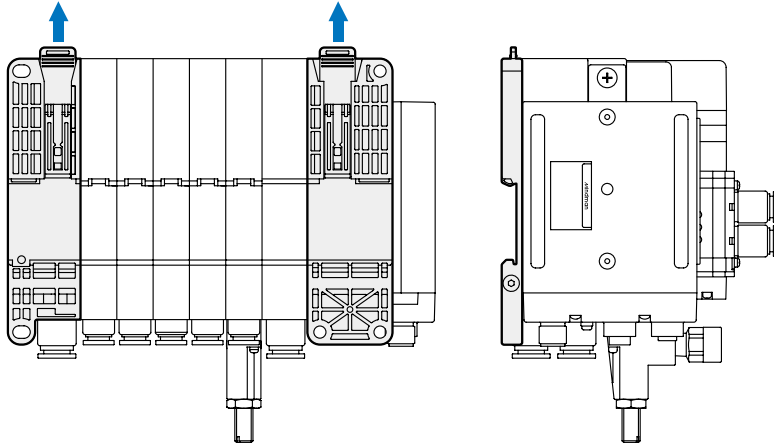
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Step1

Ensure that the DIN rail mounting clips on the manifold base are in the open position.

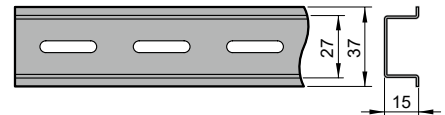
DIN rail mounting clips ×2



DIN Rail Specification

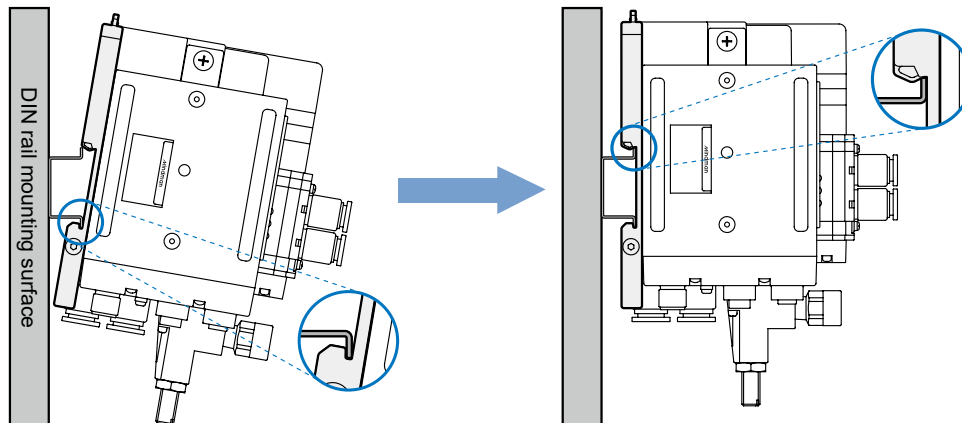
⚠ Caution

When installing on a flat surface, use a 15 mm height DIN rail.



Step2

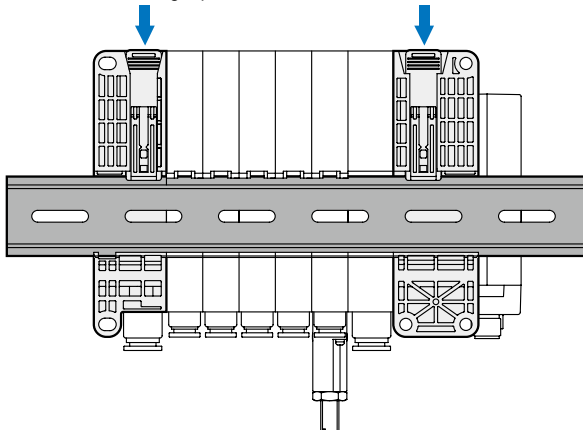
Tilt the manifold base slightly to engage the lower groove with the DIN rail, then press inward until the upper groove is fully secured onto the DIN rail.



Step3

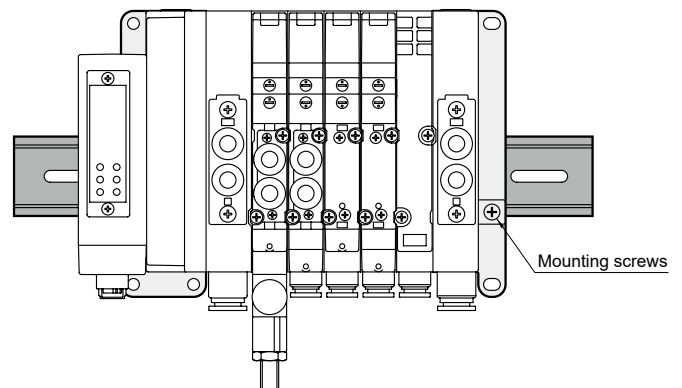
Push the DIN rail mounting clips downward into the locked position to ensure the unit is securely fixed to the DIN rail.

DIN rail mounting clips ×2



Step4

Tighten the mounting screws to ensure the communication module is firmly installed without any looseness.



CUSTOMER INFORMATION

Date issued

Quantity

Company

Delivery date

Contact

Mr/Ms

Person in charge

Part number

Revision

To be filled in by MINDMAN sales staff

MODEL OF MANIFOLD

MVJB – 156 –

— M

Manifold station & Tube fitting type

SUP / EXH block type
& External pilot fitting type

Serial No.
(To be filled in by MINDMAN)

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Note