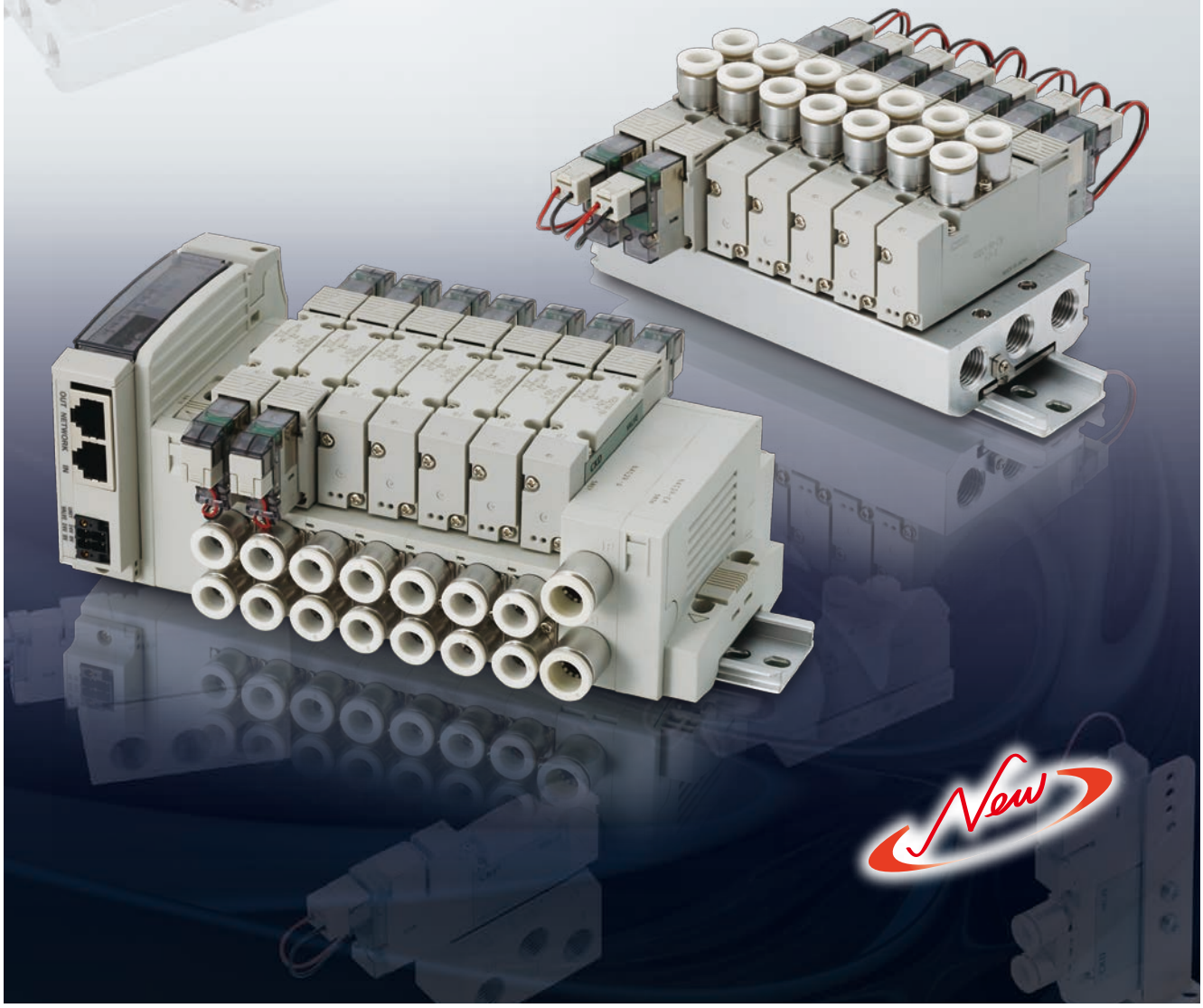
CKD

Renewal Product

3, 5 port pilot operated valve
4GA/B • 4GD/E R Series

3,5 PORT PILOT OPERATED VALVE 4GA/B 4GD/E R Series

User Friendly.
Upgraded Performance.



CKD Corporation

CC-1273A

New 4G! Start!

The new 4G is further evolved while inheriting
the conventional 4G series concept.
It starts here.

Power consumption **0.1w**
Minimal heat generated with integrated energy saving circuit
4GAB

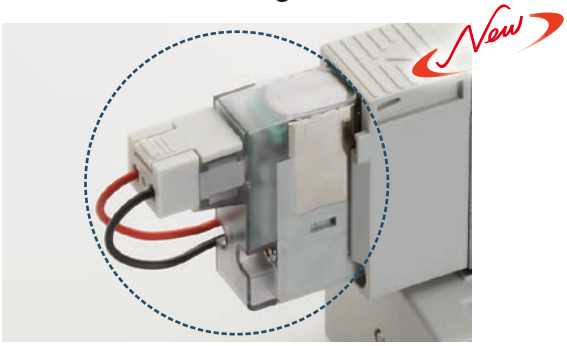
Power consumption **0.35w**
Standard products

Power Consumption

Continuous energization OK (single solenoid type)

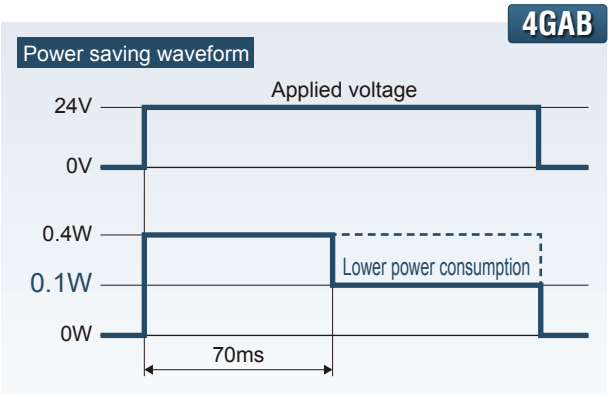
4GAB

Improved Solenoid Design.



Lower power consumption

4GAB



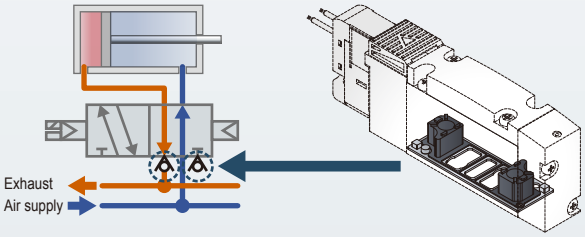
Safety

Manual override protection

Manual override with protective covers.

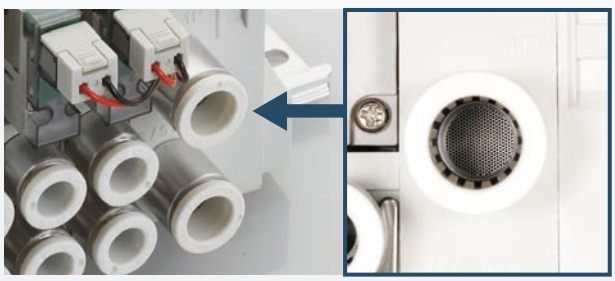
Potential for exhaust back-pressure eliminated.

Exhaust malfunction prevention valve.
Standard feature in both metal and plastic base designs.

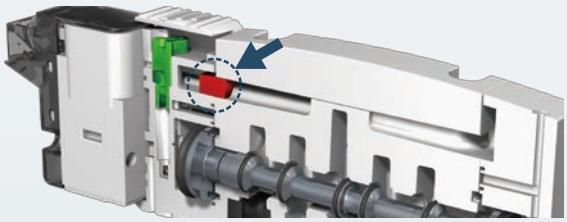


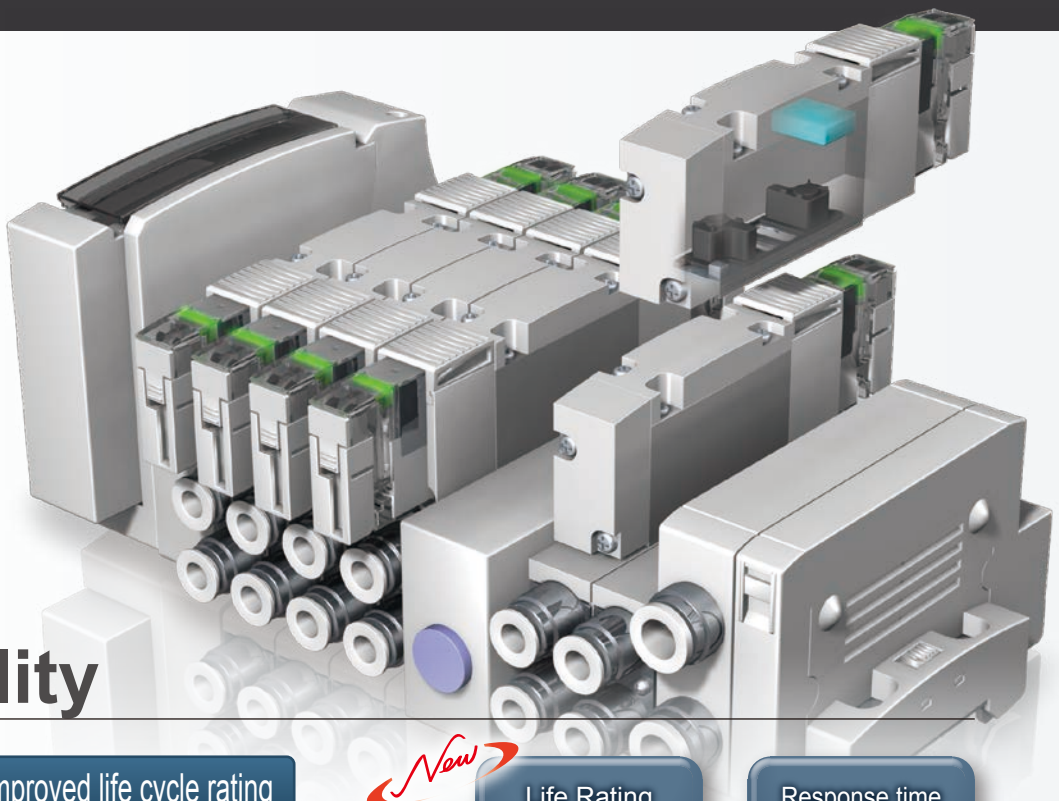
Contamination prevention

Filter standard equipment
(Available on A and B ports as an option)



Internal pilot filter is standard equipment.

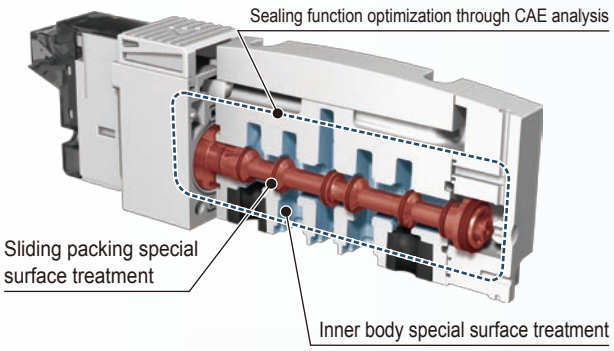




Reliability

Low friction design with improved life cycle rating

Excellent response time and long life achieved with the main spool. **4GAB**



New

Life Rating
100 million
cycles or more
Single solenoid, through our predetermined conditions
4GAB

Response time
12±2ms
4G1 test results

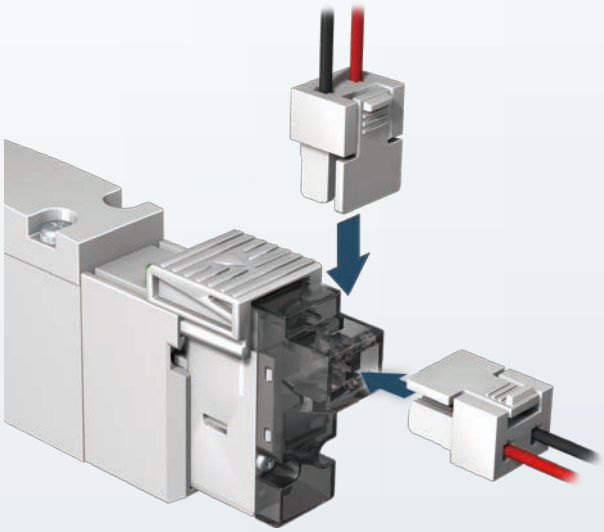
Improved response even after weekend shutdown

Smooth start-up even after a prolonged shut-down. **4GAB**

Flexible Functionality

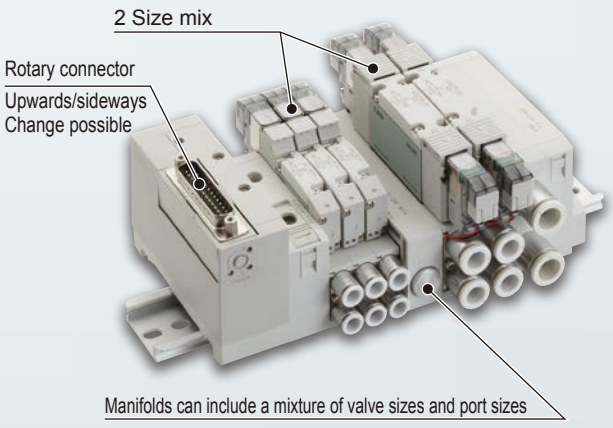
Two-way wiring connector of top or side.

Wire connection orientation is easily adjusted in the field.

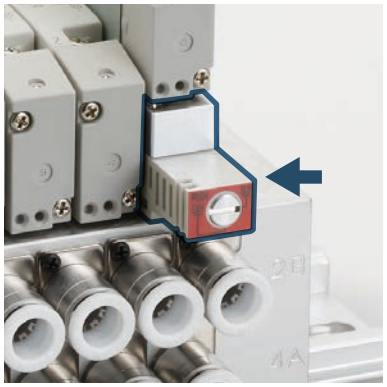


Manifold flexibility

Manifolds can include a mixture of valve sizes and port sizes.

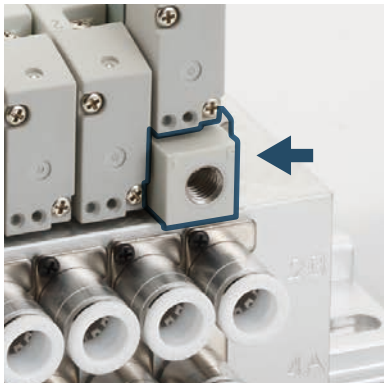


Variety of options



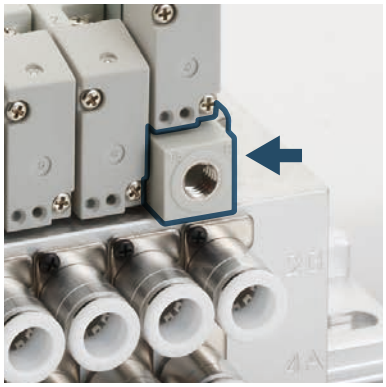
Individual Valve shut-off

Valves are individually replaceable without stopping operation of the production line!



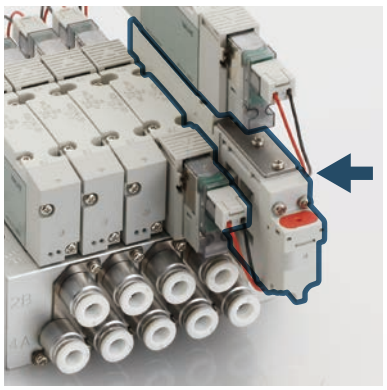
Individual supply spacer

Ideal for cylinder thrust adjustment in the individual valve pressure increase/decrease!



Exhaust spacer

Prevent malfunction of Single-acting cylinders in the individual exhaust!

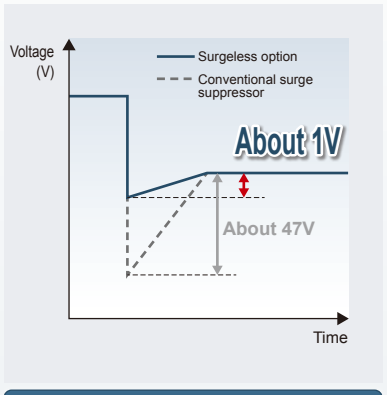


Pilot check valve spacer

For intermediate valve stoppage. Provides a short-term positive lock of a double-acting cylinder

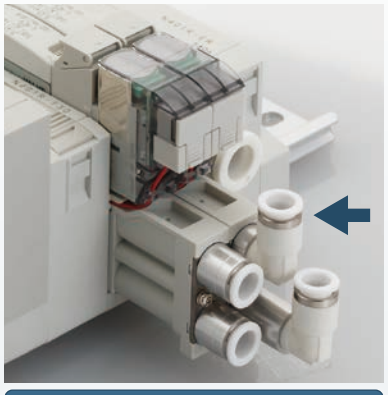
More valve porting options

4G1 now includes 8mm tubing (C8)
4G2 now includes 10mm tubing



Surge Protection

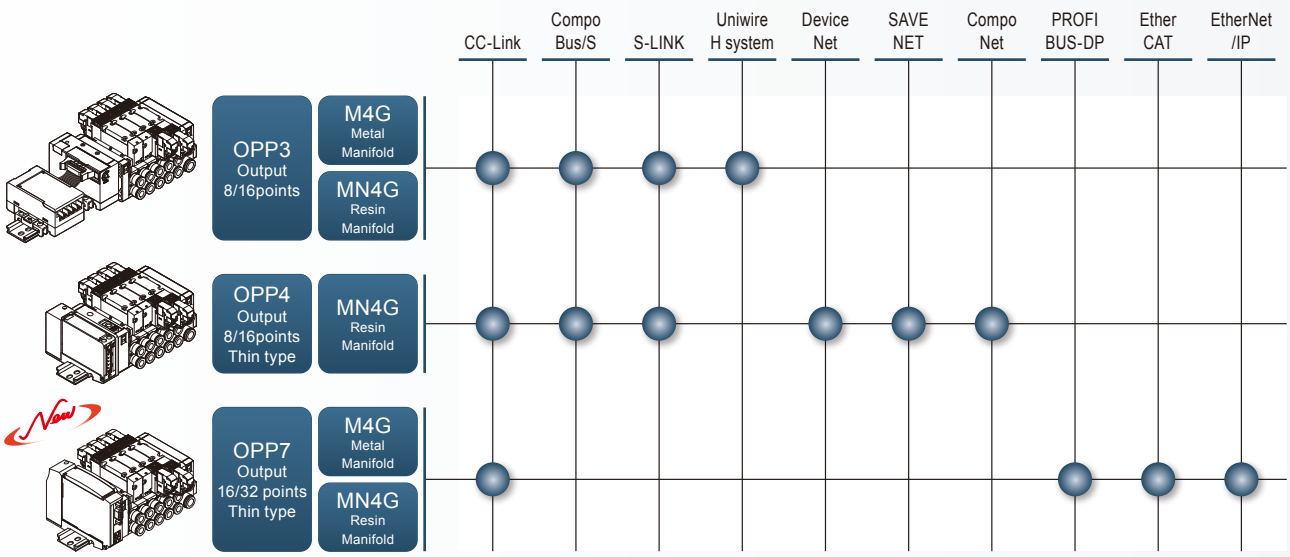
The coil surge voltage is reduced about 1V to protect the output contacts!



Elbow fitting option for block manifold

Improve the flexibility of valve installation with the addition of piping direction

Automation communication protocols supported



Applications/environment table

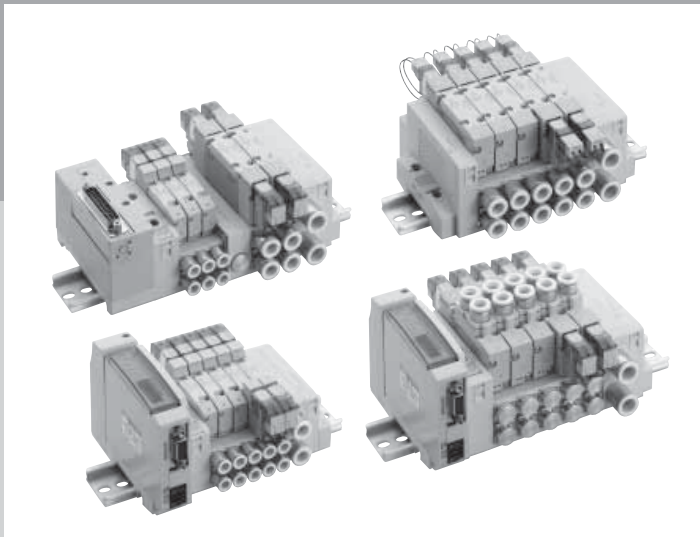
			Multi function type 4GA/B R	Standard type 4GD/E R
Reliability	Air quality	Ultra-dry air • N2	◉	○
		Dry air	◉	○
		Oil contaminated air/ low ozone	○	○
		Drain air	◉	○
	Countermeasure for the use after weekend shutdown		◉	○
	Low vacuum support		○	
Safety	Exhaust malfunction prevention function		○	○
	Manual override protective cover		○	○
	Built-in contamination protection		○	○
Usability	90 degree elbow quick to connect fittings		○	
	External pilot		○	
	Two-way wiring connector of top/side		○	○
	Manual operation without tools		○	○

◉ Recommended

MN4GA & 4GB

Block manifold

3, 5 port pilot operated valve

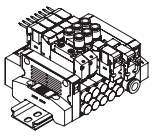
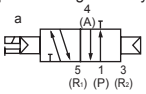
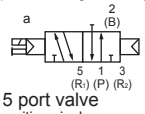
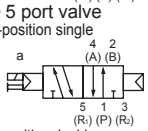
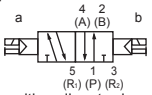
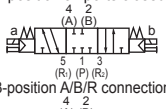
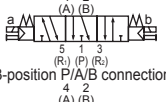
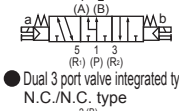
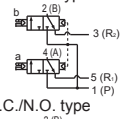
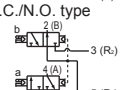
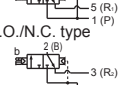
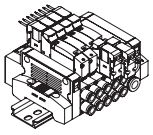
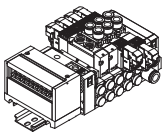
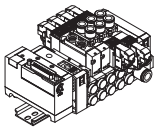
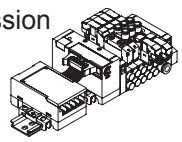
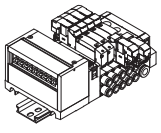
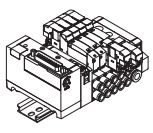
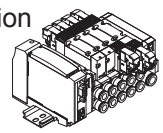


CONTENTS

Series variation

MN4GA & 4GB Series

* Refer to page 5 for the metal base (integrated model).
* Refer to Page 407 for the master valve.

Appearance			Model no.	Electrical connections	Number of Valve Position JIS symbol	Valve performance: Flow rate characteristics C ($dm^3/(s \cdot bar)$) Note 1	Valve performance: Applicable Cylinder diameter	Voltage (V)	
Individual wiring manifold	Body piping	MN4GA180R 	MN4GA1	Blank -E*	● 3 port valve 2-position single N.C. type  2-position single N.O. type  ● 5 port valve 2-position single  2-position double  3-position all ports closed  3-position A/B/R connection  3-position P/A/B connection  ● Dual 3 port valve integrated type N.C./N.C. type  N.C./N.O. type  N.O./N.C. type  N.O./N.O. type 	1.0 to 1.2	φ20 to φ40	100 VAC 200 VAC 24 VDC 12 VDC 3 VDC 5 VDC Note 2	
			MN4GA2	Blank -E* -B		2.2 to 2.5	φ40 to φ80		
	Base piping	MN4GB180R 	MN4GB1	Blank -E*		1.0 to 1.2	φ20 to φ40		
			MN4GB2	Blank -E* -B		2.2 to 2.5	φ40 to φ80		
Reduced wiring manifold	Body piping	Terminal block MN4GA280R 	MN4GA1 (N3GA1) (N4GA1)	-T10 -T11 (- A2N)		1.0 to 1.2	φ20 to φ40	24 VDC 12 VDC	
			MN4GA2 (N3GA2) (N4GA2)			2.2 to 2.5	φ40 to φ80		
		Connector type MN4GA280R 	MN4GA1 (N3GA1) (N4GA1)	-T30 -T5* (- A2N)		1.0 to 1.2	φ20 to φ40	24 VDC 12 VDC	
			MN4GA2 (N3GA2) (N4GA2)			2.2 to 2.5	φ40 to φ80		
		Serial transmission MN4GA180R 	MN4GA1 (N3GA1) (N4GA1)	-T6* -T7* -T8* (- A2N)		1.0 to 1.2	φ20 to φ40	24 VDC	
			MN4GA2 (N3GA2) (N4GA2)			2.2 to 2.5	φ40 to φ80		
	Base piping	Terminal block MN4GB180R 	MN4GB1 (N4GB1)	-T10 -T11 (- A2N)		1.0 to 1.2	φ20 to φ40	24 VDC 12 VDC	
			MN4GB2 (N4GB2)			2.2 to 2.5	φ40 to φ80		
		Connector type MN4GB180R 	MN4GB1 (N4GB1)	-T30 -T5* (- A2N)		1.0 to 1.2	φ20 to φ40	24 VDC 12 VDC	
			MN4GB2 (N4GB2)			2.2 to 2.5	φ40 to φ80		
		Serial transmission MN4GB280R 	MN4GB1 (N4GB1)	-T6* -T7* -T8* (- A2N)		1.0 to 1.2	φ20 to φ40	24 VDC	
			MN4GB2 (N4GB2)			2.2 to 2.5	φ40 to φ80		

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.
Note 2: Grommet lead wire specifications are only for DC voltage.
Note 3: Compatible only with the base piping type.
Note 4: These are specifications for mounting of the reduced wiring manifold.

Valve Position										A/B Piping port																								A/B Piping port				Electrical connections														Page
2-position				3-position				Dual 3 port valves integrated type	Mix	Barbed fitting	Push-in fitting					L type push-in fitting (upward) Note 3				L type push-in fitting (downward)				Female thread		Push-in fitting				Female thread		Discrete, individual wiring				Reduced wiring														
Normally closed	Normally open	Single	Double	All ports closed	ABR connection	PAB connection				φ1.8	φ1.8	φ4	φ6	φ8	φ1.8	φ4	φ6	φ8	φ1.8	φ4	φ6	φ8	M5	Rc1/8	φ1/8 inch	φ5/32 inch	φ1/4 inch	φ5/16 inch	1/8NPT	G1 /8	Grommet lead	E type connector	EJ type connector	DIN terminal box	A type connector Note 4	Common terminal block	D-sub connector	Flat cable with power supply terminal	Flat cable without power supply terminal	Serial transmission														
CF	C18	C4	C6	C8	CL18	CL4	CL6	CL8	CD18	CD4	CD6	CD8	M5	06	C3N	C4N	C6N	C8N	06N	06G	Blank	E*	E*J	B*	A2N	T1*	T30	T50	T5*	T6*	T7*	T8*																		
●	●	●	●	●	●	●	●	●	●	●	●	●	●											●	●	●	●																						220
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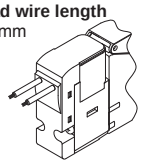
Electrical connections

Discrete valve/individual wiring manifold

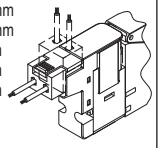
Blank Grommet lead wire (i)

● **Lead wire length**
300mm

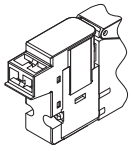


EO E type connector (i)

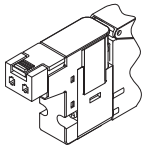
● **Lead wire length**
300mm
500mm
1m
2m
3m



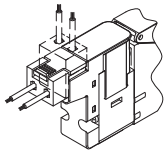
E0N E type connector without socket



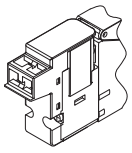
E1 E type connector with socket/terminal



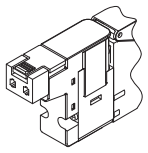
E2 E type connector (i)(s)(v)



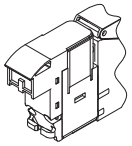
E2N E type connector without socket (s)(v)



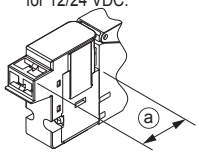
E3 E type connector with socket/terminal (s)(v)



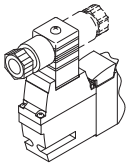
A2N A type connector downward without socket



● With the model for 100 VAC, the dimensions for (a) will be 3.5 mm longer than the model for 12/24 VDC.

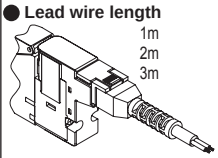


B BN DIN terminal box (BN: without terminal box)

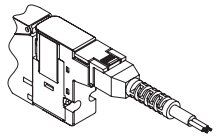


EO*J EJ type connector (i)

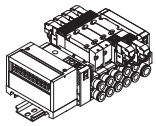
● **Lead wire length**
1m
2m
3m



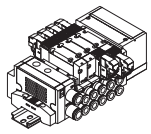
E2*J EJ type connector (i)(s)(v)



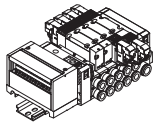
T10 Common terminal block type M3 thread specifications (left side)



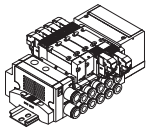
T10R Common terminal block type M3 screw specifications (right side)



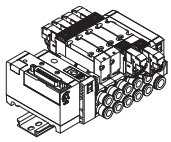
T11 Central terminal block type push tightening specifications (left side)



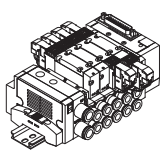
T11R Common terminal block type clamping specifications (right side)



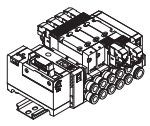
T30 D-sub connector type (left side)



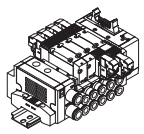
T30R D-sub connector type (right side)



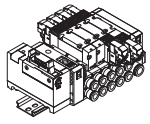
T50 Flat cable with power supply terminal (left side)



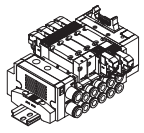
T50R Flat cable power supply with terminal (right side)



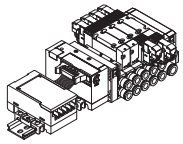
T5 $^{1}_{2}$ $^{}_{3}$ Flat cable without power supply terminal (left side)



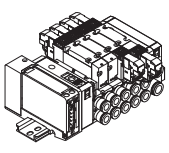
T5 $^{1}_{2}$ $^{}_{3}$ Flat cable power supply without terminal (right side)



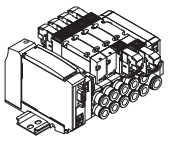
T6*0 T6*1 Serial transmission



T7*0 T7*1 Serial transmission thin model slot type



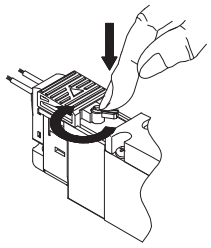
T8*1 T8*2 Serial transmission thin model slot type



Manual operating device

Blank Locking/non-locking common type

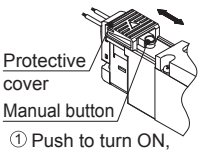
(standard)



① For non-locking, push to turn ON, release to turn OFF

② For locking, push and turn 90° clockwise to hold the ON state. Turn counterclockwise to unlock and turn OFF

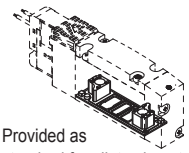
M Non-locking type



① Push to turn ON, release to turn OFF

Other options

H With check valve



Provided as standard for pilot exhaust .

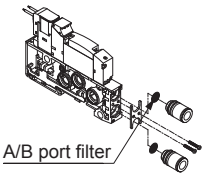
K External pilot

Main pressure and pilot pressure individual circuit specifications.

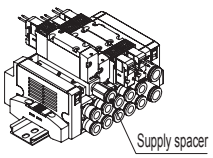
A Ozone/cutting water compatible product

Select this model for compatibility with inflow of cutting oil and compatibility with ozone.

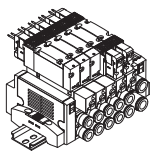
F AB port filter integrated



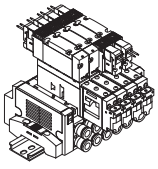
Z1 Z3 Supply spacer Exhaust spacer



Z2 In stop valve Spacer

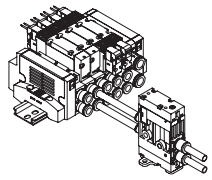


Z6 Spacer type Pilot check valve

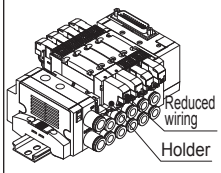


Electric connection circuit diagram

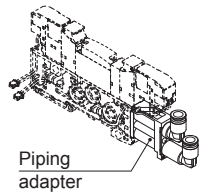
Other options
Pilot check valve (separate type) * Refer to page 186



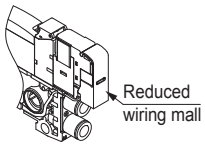
WI	Single reduced wiring

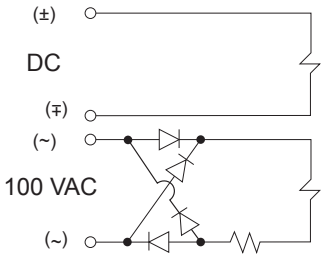
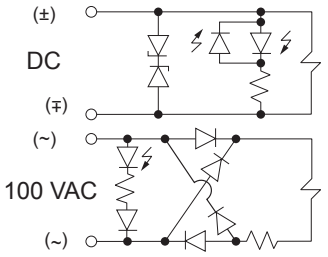
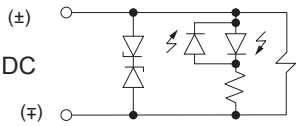
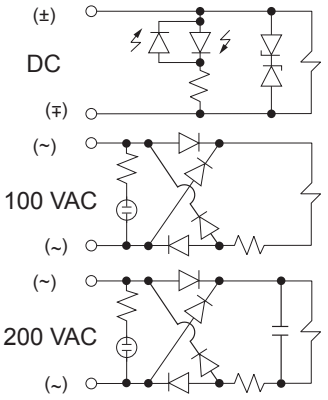
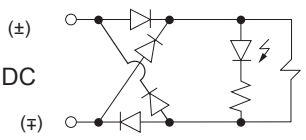
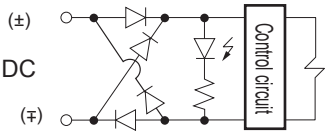


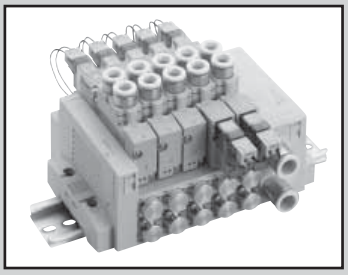
L	With piping adaptor



Q	Reduced wiring mall



	Electrical connection	Without lead wire	With lead wire	With indicator light	With surge suppressor	Without socket	Circuit diagram
Blank	Grommet lead wire		●				
E0	E type connector		●				
E0*J	EJ type connector		●				
E0N	E type connector					●	
E1	E type connector	●					
E2	E type connector		●	●	●		
E2*J	EJ type connector		●	●	●		
E2N	E type connector			●	●	●	
E3	E type connector	●		●	●		
A2N	A type connector			●	●	●	
B	DIN terminal box	●		●	●		
BN	DIN terminal box (Without terminal box)						
Option S E2	E type connector		●	●	●		
Option S E2*J	EJ type connector		●	●	●		
Option S E2N	E type connector			●	●	●	
Option S A2N	A type connector			●	●	●	
Option E E2	E type connector		●	●	●		
Option E E2*J	EJ type connector		●	●	●		
Option E E2N	E type connector			●	●	●	
Option E A2N	A type connector			●	●	●	



Individual wiring block manifold
Body piping

MN4GA1/2 Series

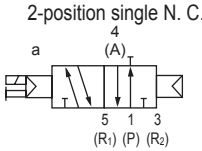
● Applicable cylinder bore size: φ20 to φ80

CE Refer to Ending for details. RoHS CAD

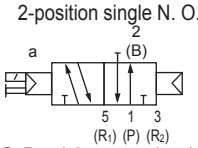
JIS symbol

● 3 port valve

2-position single N. C. type

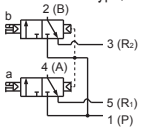


2-position single N. O. type

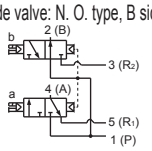


● Dual 3 port valve integrated type

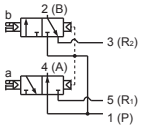
(A side valve: N. C. type, B side valve: N. C. type)



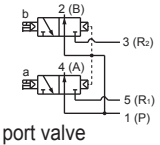
(A side valve: N. O. type, B side valve: N. O. type)



(A side valve: N. O. type, B side valve: N. C. type)

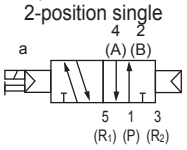


(A side valve: N. O. type, B side valve: N. O. type)

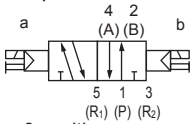


● 5 port valve

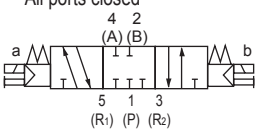
2-position single



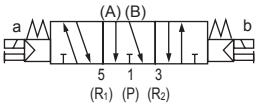
2-position double



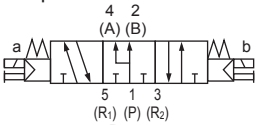
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Descriptions	
Manifold type	Block manifold
Mounting method	DIN rail mount type
Supply and exhaust method	Common supply/common exhaust (check valve integrated)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve integrated)
Piping direction	Valve top direction
Valve type and operation method	Pilot-operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7
Min. working pressure MPa	0.2 Note 3
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual operating device	Non-locking/locking common type (standard)
Lubrication Note 1	Not required
Degree of protection Note 2	Dust proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Containing corrosive gas is not permissible

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated. Excessive or intermittent lubrication results in unstable operation.

Note 2 The degree of protection is dust proof. The unit is not water proof. Avoid water drops or oil, etc. during use.

Note 3 The working pressure range is 0 to 0.7 MPa when the external pilot (option symbol: K) is selected. Set the external pilot pressure between 0.2 to 0.7 MPa.

Electrical specification

Descriptions							
Rated voltage V		DC24	DC12	DC5	DC3	AC100	AC200
Voltage fluctuation range		±10%					
Holding current A (Note 4)	Standard	0.015 (0.017)	0.030 (0.034)	0.072 (0.082)	0.120 (0.136)	0.009 (0.009)	0.006 (0.006)
	With low heat energy-saving circuit	0.005	0.010	–		–	
Power consumption W (Note 4)	Standard	0.35 (0.40)		0.35 (0.40)		–	
	With low heat energy-saving circuit	0.1		–		–	
Apparent power VA (Note 4)	Standard	–		–		0.93 (0.98)	1.08 (1.13)
Thermal class		B					
Surge suppressor		Option					
Indicator		Light (option)					

Note 4: Values in ( ) apply when a light is attached. In addition, the low heat energy-saving circuits only have a light attached.

Individual specifications

Descriptions			MN3GA1/MN4GA1	MN3GA2/MN4GA2
Max. station no.			24 stations	20 stations
Port size	Milli fitting/ M5, Rc thread	A/B port	Barbed fitting φ1.8 push-in fitting φ1.8, φ4, φ6 M5	Push-in fitting φ4, φ6, φ8 Rc1/8
		P/R port	Push-in fitting φ6, φ8	Push-in fitting φ8, φ10
	Inch fitting/ M5, NPT thread	A/B port	Push-in fitting φ1/8 inch, φ5/32 inch M5	Push-in fitting φ1/4 inch φ5/16 inch 1/8NPT
		P/R port	Push-in fitting φ1/4 inch, φ5/16 inch	Push-in fitting φ5/16 inch, φ3/8 inch
	Milli fitting/ G thread	A/B port	–	G1/8
		P/R port	–	Push-in fitting φ8, φ10

● Refer to "Mounting attitude" on page 631 for DIN rail mounting.
● Refer to page 224 for weight.

Descriptions			MN3GA1/MN4GA1		MN3GA2/MN4GA2	
			ON	OFF	ON	OFF
Response time ms	Dual 3 port valve integrated type		9	12	12	29
	2-position	Single	12	12	19	19
		Double	9	-	18	-
	3-position	ABR connection	8	15	17	30

Values including a light surge suppressor. The response time is the value at 0.5 MPa supply pressure, 20°C, with no lubrication. It varies depending on the pressure and the lubricant quality.

Flow characteristics

Model no.	Valve Position		P→A/B		A/B→R1/R2	
			C (dm^3/(s·bar)	b	C (dm^3/(s·bar)	b
MN3GA1 MN4GA1	Dual 3 port valve integrated type		0.87	0.37	1.0 (0.68)	0.14 (0.22)
	2-position		0.98	0.33	1.2 (0.71)	0.11 (0.27)
	3-position	All ports closed	0.92	0.34	1.0 —	0.16 —
		ABR connection	0.92	0.29	1.1 (0.69)	0.13 (0.22)
		PAB connection	1.1	0.35	1.1 —	0.17 —
MN3GA2 MN4GA2	Dual 3 port valve integrated type		1.7	0.37	2.2 (1.6)	0.13 (0.21)
	2-position		2.2	0.21	2.5 (1.7)	0.19 (0.10)
	3-position	All ports closed	2.0	0.25	2.3 —	0.10 —
		ABR connection	2.0	0.27	2.5 (1.7)	0.18 (0.12)
		PAB connection	2.3	0.31	2.3 —	0.16 —

Note 1: Effective sectional area S and sonic conductance C are converted as S ≈ 5.0 × C.
Note 2: Values in ( ) apply when a check valve is integrated.

Ozone specifications / Coolant proof specifications

Select the option "A" of Ⓔ in how to order on page 222.

Clean room specifications

(Catalog No. CB-033SA)

- Particle generation preventing structure for use in clean rooms

** - Voltage - **P7***

Specifications for secondary battery

(Catalog No.CC-947A)

- In order to be applicable for secondary battery manufacturing process, confine materials for air passage and sliding section

** - Voltage - **P4**

MN4GA1/2 Series

Individual wiring block manifold; body piping

How to order

Manifold model no.

MN4GA1 1 0 R - C6 - E2 H - 10 - 3

3 port manifold model no.

MN3GA1 1 0 R - C6 - E2 H - 10 - 3

Discrete valve block with solenoid valve

N4GA1 1 0 R - C6 - E2 H — 3

Discrete 3 port valve block with solenoid valve

N3GA1 1 0 R - C6 - E2 H — 3

Discrete solenoid valve

4GA1 1 9 R - C6 - E2 H — 3

Discrete 3 port solenoid valve

3GA1 1 9 R - C6 - E2 H — 3

Ⓐ Model no.

Ⓑ Valve Position

Ⓒ Port size Note 1

Ⓓ Electrical connections

Ⓔ Option

Ⓕ Station no.

Ⓖ Voltage

Symbol	Descriptions		Ⓐ Model No.							
			Manifold				Discrete block with solenoid valve / Discrete solenoid valve			
			3 port valve		5 port valve					
			MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N) 3GA1	(N) 3GA2	(N) 4GA1	(N) 4GA2
Ⓑ Valve Position										
1	2-position single				●	●			●	●
2	2-position double				●	●			●	●
3	3-position all ports closed				●	●			●	●
4	3-position ABR connection				●	●			●	●
5	3-position PAB connection				●	●			●	●
1	2-position single normally closed	Note 2	●	●			●	●		
11	2-position single normally open	Note 2	●	●			●	●		
66	3 port valve integrated type Note 2, 3	A side valve: Normally closed B side valve: Normally closed	●	●			●	●		
67		A side valve: Normally closed B side valve: Normally open	●	●			●	●		
76		A side valve: Normally open B side valve: Normally closed	●	●			●	●		
77		A side valve: Normally open B side valve: Normally open	●	●			●	●		
8	Mix manifold (In case of multiple Valve Positions)		●	●	●	●	●	●	●	●
Ⓒ Port size (A/B port)										
Type	Milli fitting/Rc thread									
CF	φ1.8 barbed fitting (applicable tube UP-9102-**)		●		●		●		●	
C18	φ1.8 push-in fitting (applicable tube UP-9402-**)		●		●		●		●	
C4	φ4 push-in fitting		●	●	●	●	●	●	●	●
C6	φ6 push-in fitting		●	●	●	●	●	●	●	●
C8	φ8 push-in fitting			●		●		●		●
CX	Push-in fitting mix	Note 4	●	●	●	●				
M5	M5		●		●		●		●	
06	Rc 1/8			●		●		●		●
Type	Inch fitting/Inch thread									
C3N	φ1/8 inch push-in fitting		●		●		●		●	
C4N	φ5/32 inch push-in fitting		●		●		●		●	
C6N	φ1/4 inch push-in fitting			●		●		●		●
C8N	φ5/16 inch push-in fitting			●		●		●		●
CXN	Push-in fitting mix	Note 4	●	●	●	●				
06N	1/8NPT			●		●		●		●
Type	G thread									
06G	G1/8			●		●		●		●
Ⓓ Electrical connections										
Refer to the next page for wire connections.										
Ⓔ Option										
Blank	Non-locking/locking common manual override		●	●	●	●	●	●	●	●
M	Non-locking manual override		●	●	●	●	●	●	●	●
H	With check valve	Note 5	●	●	●	●	●	●	●	●
K	External pilot	Note 6	●	●	●	●	●	●	●	●
A	Ozone/cutting oil proof		●	●	●	●	●	●	●	●
S	Surgeless	Note 7	●	●	●	●	●	●	●	●
E	Low heat and energy saving circuit	Note 7, Note 8	●	●	●	●	●	●	●	●
F	A/B port filter integrated	Note 9	●	●	●	●	●	●	●	●
Z1	Air supply spacer	Note 10	●	●	●	●				
Z2	In stop valve spacer	Note 10, Note 11	●	●	●	●				
Z3	Exhaust spacer	Note 10	●	●	●	●				
Ⓕ Station no.										
1	1 stations		●	●	●	●				
to	to									
24	24 Stations (The max. station no. of MN3GA2/MN4GA2 is 20.)									
Ⓖ Voltage										
1	100 VAC (rectifier integrated)		●	●	●	●	●	●	●	●
2	200 VAC (rectifier integrated)	Note 12		●		●		●		●
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●
7	3 VDC		○	○	○	○	○	○	○	○
8	5 VDC		○	○	○	○	○	○	○	○

is not available.

○ Contact CKD for price and availability.

⚠ Cautions for model No. selection

Note 1 Designate P/R port sizes with the supply/exhaust block in manifold specifications.

Note 2 Select MN4GA*80 when mixing with 4, 5 port valves. Select MN3GA*80 when mixing with the masking plate.

Note 3 Combination with the external pilot (K) is not available. Dimensions are the same as the respective 2-position double.

Note 4 The push-in fitting cannot be mixed with the discrete valve's 4 (A) or 2 (B) port.

Note 5 3-position all ports closed and PAB connection are not provided with check valve (H). Refer to page 627 for details on check valve.

Note 6 Contact CKD when using a vacuum with the external pilot (K).

Note 7 In addition, the surgeless "S" and low heat energy-saving circuit "E" cannot be selected at the same time.

Note 8 This is surgeless specifications.

Note 9 The P port has a filter built inside as a standard.

Note 10 Specify the spacer mounting position and quantity in manifold specifications. Stacking multiple spacers is not supported. Combination with the masking plate is not supported. Refer to page 287 to 291 for details.

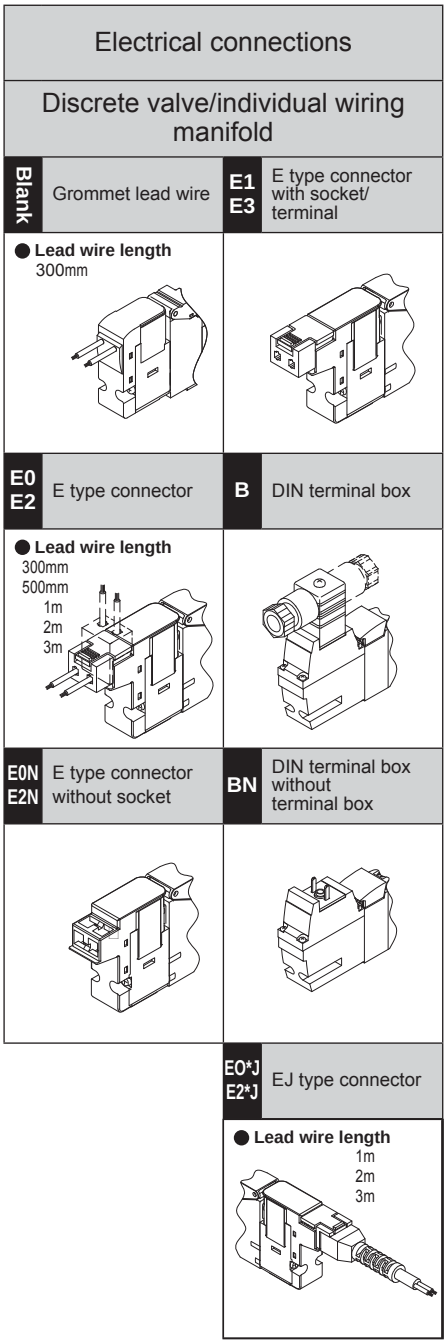
Note 11 Combination with the external pilot (K) is not available.

Note 12 Only the DIN terminal box are supported.

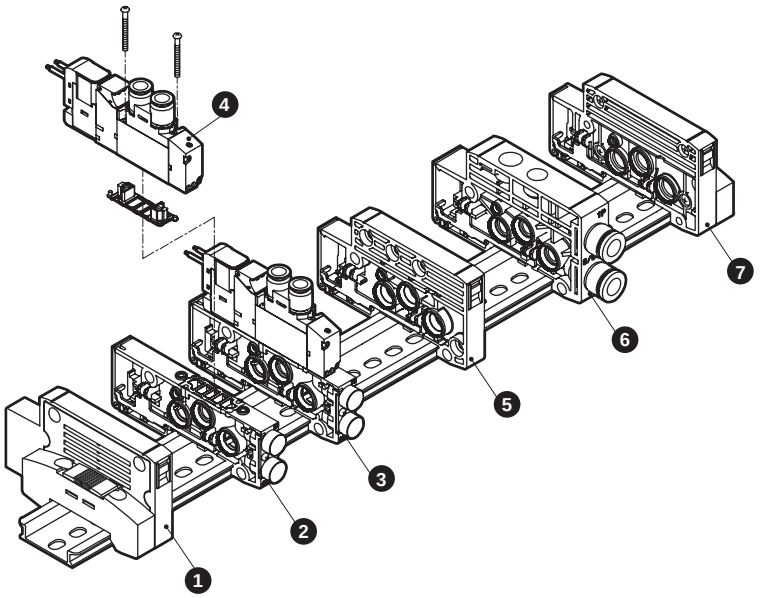
[Electrical connection list]

Ⓓ Electrical connections			Ⓐ Model No.							
			Manifold				Discrete valve block with solenoid valve / Discrete solenoid valve			
			Dual 3 port valve integrated		5 port valve					
			MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N) 3GA1	(N) 3GA2	(N) 4GA1	(N) 4GA2
Blank	Grommet lead wire (300 mm)	Note 13	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7)	With surge suppressor/light Note 14		●		●		●		●
BN	DIN terminal box (Pg7) (without terminal box)	with surge suppressor Note 14		●		●		●		●
E type connector (upward/lateral direction common)										
E0	Lead wire (300 mm)	Note 15	●	●	●	●	●	●	●	●
E00	Lead wire (500 mm)	Note 15	●	●	●	●	●	●	●	●
E01	Lead wire (1000 mm)	Note 15	●	●	●	●	●	●	●	●
E02	Lead wire (2000 mm)	Note 15	●	●	●	●	●	●	●	●
E03	Lead wire (3000 mm)	Note 15	●	●	●	●	●	●	●	●
E0N	Without lead wire (without socket)	Note 15	●	●	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal)	Note 15	●	●	●	●	●	●	●	●
E2	Lead wire (300mm)	With surge suppressor/light	●	●	●	●	●	●	●	●
E20	Lead wire (500mm)	With surge suppressor/light	●	●	●	●	●	●	●	●
E21	Lead wire (1000mm)	With surge suppressor/light	●	●	●	●	●	●	●	●
E22	Lead wire (2000mm)	With surge suppressor/light	●	●	●	●	●	●	●	●
E23	Lead wire (3000mm)	With surge suppressor/light	●	●	●	●	●	●	●	●
E2N	Without lead wire (without socket)	With surge suppressor/light	●	●	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal)	With surge suppressor/light	●	●	●	●	●	●	●	●
EJ type connector (socket with cover, upward/lateral direction common)										
E01J	Lead wire (1000 mm)	Note 15	●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm)	Note 15	●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm)	Note 15	●	●	●	●	●	●	●	●
E21J	Lead wire (1000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E22J	Lead wire (2000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E23J	Lead wire (3000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●

Note 13 Grommet lead wire specifications are only for DC voltage.
Note 14 Supports AC voltage and 12/24 VDC. The light is also attached to the terminal box.
Note 15 AC voltage comes with a rectifier circuit.



Manifold components explanation and parts list



Main parts list (refer to page 276 to 294 for details)

No.	Component name	Model no. (example)	No.	Component name	Model no. (example)
1	End block L	N4G1R-EL	5	Partition block	N4G1R-S
2	Discrete valve block	N4GA1R-V1	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GA110R-C6-H-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GA119R-C6-H-3			

A type reduced wiring weight

4GA1

(g)

Block type		Weight	Block type		Weight
Valve block with solenoid valve	N3GA110R-C6-3	70	Valve block with masking plate	N4GA1R-MP	34
	N3GA1110R-C6-3	70	Supply and exhaust block	N4G1R-Q-8	58
	N4GA110R-C6-3	70		N4G1R-QK-8	60
	N4GA120R-C6-3	87	End block	N4G1R-E*	60
	N4GA1 $^{3}_{4}_{5}$ 0R-C6-3	91		N4G1R-EX*	60
	N3GA1660R-C6-3	87	Partition block	N4G1R-S	45

4GA2

(g)

Block type		Weight	Block type		Weight
Valve block with solenoid valve	N3GA210R-C8-3	129	Valve block with masking plate	N4GA2R-MP	66
	N3GA2110R-C8-3	129	Supply and exhaust block	N4G2R-Q-10	83
	N4GA210R-C8-3	129		N4G2R-QK-10	85
	N4GA220R-C8-3	147	End block	N4G2R-E*	84
	N4GA2 $^{3}_{4}_{5}$ 0R-C8-3	159		N4G2R-EX*	85
	N4GA2660R-C8-3	147	Partition block	N4G2R-S	60

Parts list

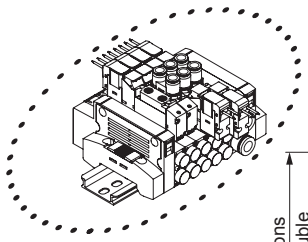
Application	Parts name	Model no.	Application	Parts name	Model no.
Valve 4G1	Cartridge fitting φ1.8 barbed type	4G1R-JOINT-CF			
	Cartridge fitting φ1.8 straight type	4G1R-JOINT-C18	Valve	Coil assembly	4GR-[*1]-[*2]-COIL-[*3] *1: Electrical connection (blank, B, E0, ...), *3: Voltage (1, 2, 3, 4) *2: Ozone/cutting oil proof (blank, A)
	Cartridge fitting φ4 straight type	4G1R-JOINT-C4			
	Cartridge fitting φ6 straight type	4G1R-JOINT-C6			
	Cartridge fitting φ1/8 inch straight type	4G1R-JOINT-C3N		E type connector socket assembly	4GR-SOCKET-ASSY-[*1]-[*3] *1: Electrical connection (E0, E00, ...), *3: Voltage (1, 3, 4)
	Cartridge fitting φ5/32 inch straight type	4G1R-JOINT-C4N			
	Plug cartridge	4G1R-JOINT-CPG			
Valve For 4G2	Cartridge fitting: φ4 straight type	4G2R-JOINT-C4		E type connector socket assembly	4GR-SOCKET-ASSY-[*1] *1: Electrical connection (E01J, E002J, ...)
	Cartridge fitting: φ6 straight type	4G2R-JOINT-C6			
	Cartridge fitting: φ8 straight type	4G2R-JOINT-C8	Valve 4G2	DIN terminal box assembly	4GR-TERMINAL-BOX-[*3] *3: Voltage (1,2,3,4)
	Cartridge fitting φ1/4 inch straight type	4G2R-JOINT-C6N			
	Cartridge fitting φ5/16 inch straight type	4G2R-JOINT-C8N			
	Plug cartridge	4G2R-JOINT-CPG			

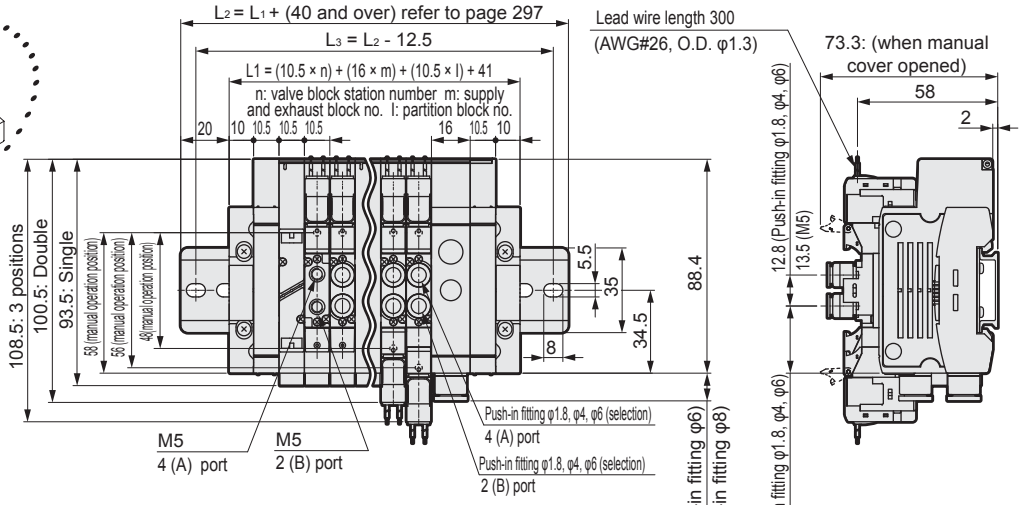
Dimensions CAD

MN4GA1

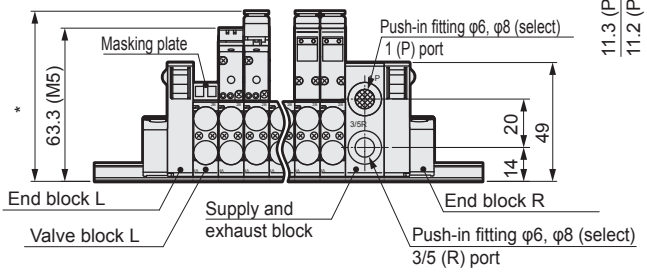
● Grommet lead wire (blank)

* For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

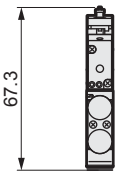




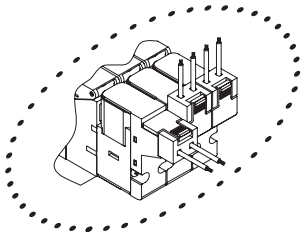
Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1

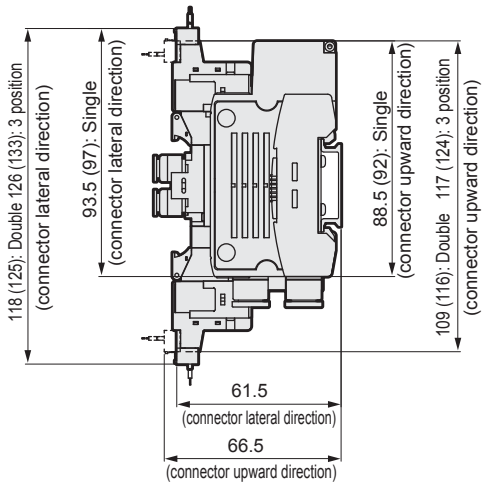


● φ1.8 barbed fitting type (CF)

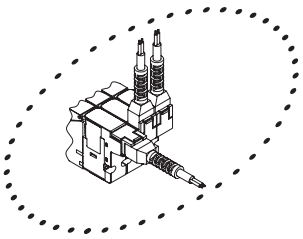


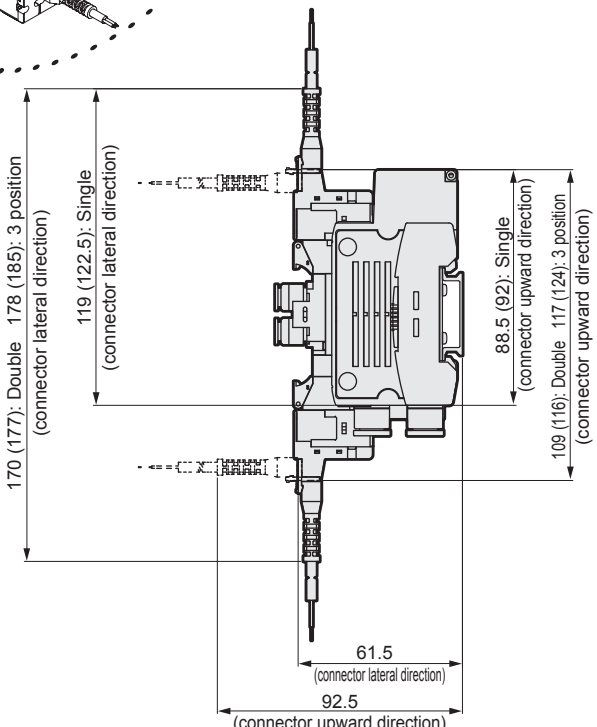
● E type connector type (E)





● EJ type connector type (E**J)





Note: Values in ( ) apply for 100 VAC.

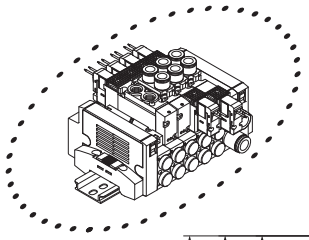
* Refer to page 251 for the dimension drawings of the push-in fitting for supply and exhaust block.

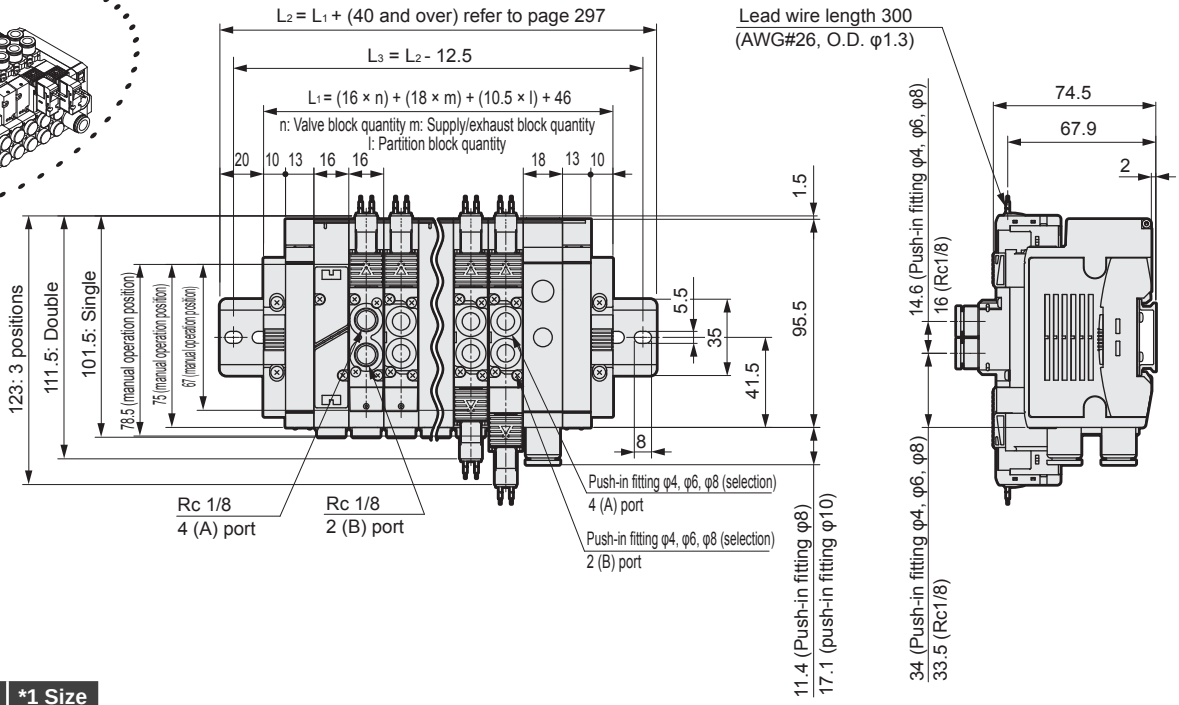
Dimensions CAD

MN4GA2

● Grommet lead wire (blank)

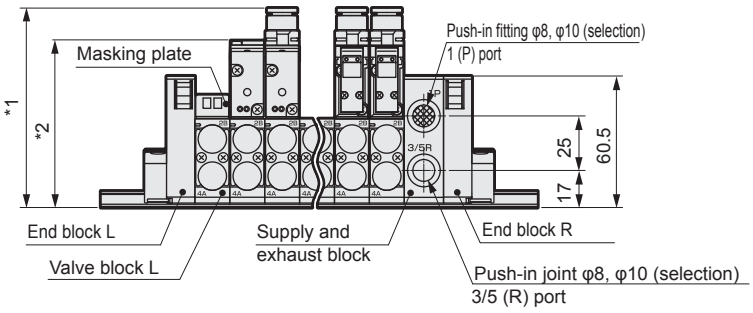
* For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.





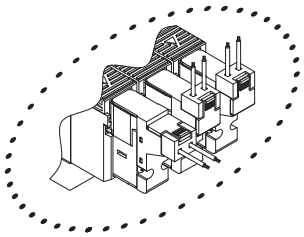
Push-in fitting size	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

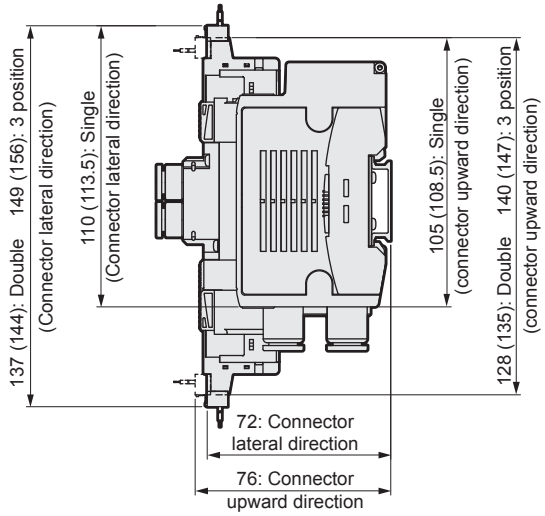
Female thread size	*2 Size
Rc1/8	76.5
1/8NPT	77.8
G1/8	



Dimensions

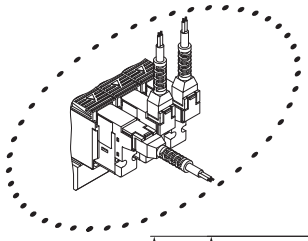
● E type connector type (E)

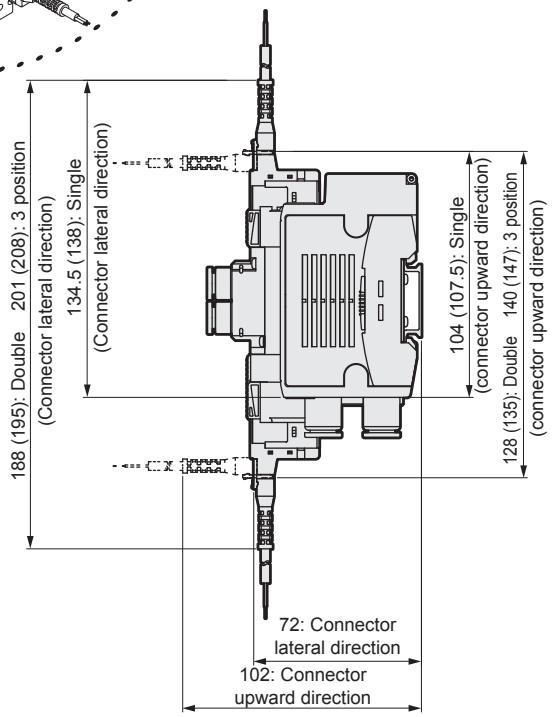




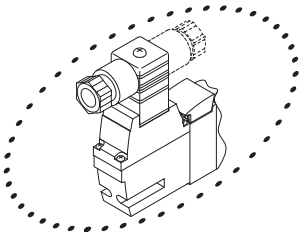
Note: Values in ( ) apply for 100 VAC.

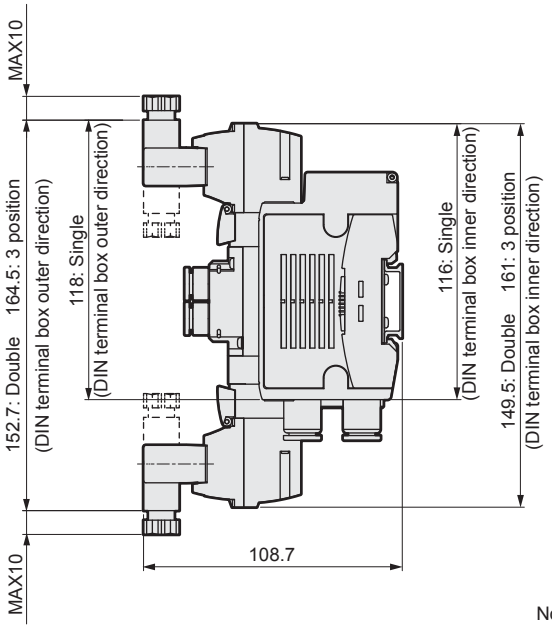
● EJ type connector type (E**J)





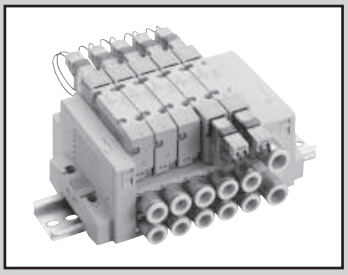
● DIN terminal box type (B)





Note: The DIN terminal box assembly is shipped facing inward.

* Refer to page 251 for the dimension drawings of the L type push-in fitting for supply and exhaust block.



Individual wiring block manifold
Base piping

MN4GB1/2 Series

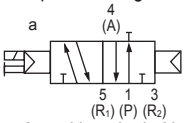
● Applicable cylinder bore size: φ20 ~ φ80

CE Refer to Ending for details. RoHS CAD

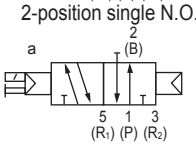
JIS symbol

● 3 port valve

2-position single N.C. type

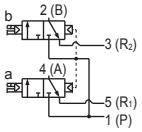


2-position single N.O. type

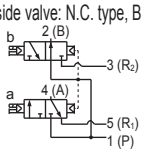


● Dual 3 port valve integrated type

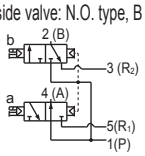
(A side valve: N.C. type, B side valve: N.C. type)



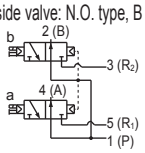
(A side valve: N.C. type, B side valve: N.O. type)



(A side valve: N.O. type, B side valve: N.C. type)

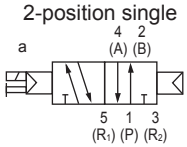


(A side valve: N.O. type, B side valve: N.O. type)

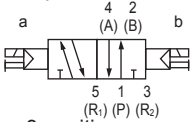


● 5 port valve

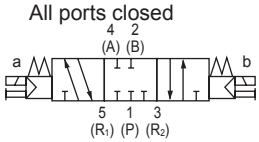
2-position single



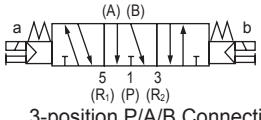
2-position double



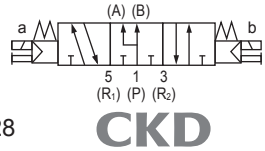
3-position
All ports closed



3-position A/B/R Connection



3-position P/A/B Connection



Manifold common specifications

Descriptions	
Manifold type	Block manifold
Mounting method	DIN rail mount type
Supply and exhaust method	Common supply/common exhaust (malfunction prevention valve integrated)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve integrated)
Piping direction	Base part lateral direction
Valve type and operation	Pilot operated type soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7
Min. working pressure MPa	0.2 Note 3
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual operating device	Non-locking/locking common type (standard)
Lubrication Note 1	Not required
Degree of protection Note 2	Dust proof
Vibration resistance m/s²	50 or less
Vibration resistance m/s²	300 or less
Atmosphere	Containing corrosive gas is not permissible

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated.
Excessive or intermittent lubrication results in unstable operation.

Note 2 The degree of protection is dust proof. The unit is not water proof.
Avoid water drops or oil, etc. during use.

Note 3 The working pressure range is 0 to 0.7 MPa when the external pilot (option symbol: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Electrical specification

Descriptions							
Rated voltage V		24 VDC	12 VDC	5 VDC	3 VDC	100 VAC	200 VAC
Voltage fluctuation range		±10%					
Holding current A (Note 4)	Standard	0.015 (0.017)	0.030 (0.034)	0.072 (0.082)	0.120 (0.136)	0.009 (0.009)	0.006 (0.006)
	With low heat and energy saving circuit	0.005	0.010	–		–	
Power consumption W (Note 4)	Standard	0.35 (0.40)		0.35 (0.40)		–	
	With low heat and energy saving circuit	0.1		–		–	
Apparent power VA (Note 4)	Standard	–		–		0.93 (0.98)	1.08 (1.13)
Thermal class		B					
Surge suppressor		Option					
Indicator		Light (option)					

Note 4: Values in ( ) apply when a light is attached. In addition, the low heat energy-saving circuits only have a light attached.

Individual specifications

Descriptions			M3GB1/M4GB1	M3GB2/M4GB2
Max. station no.			24 stations	20 stations
Port size	Milli fitting	A/B port	Barbed fitting φ1.8 push-in fitting φ1.8, φ4, φ6	Push-in fitting φ4, φ6, φ8
		P/R port	Push-in fitting φ6, φ8	Push-in fitting φ8, φ10
	Inch fitting	A/B port	Push-in fitting φ1/8 inch, φ5/32 inch	Push-in fitting φ1/4 inch φ5/16 inch 1/ 8NPT
		P/R port	Push-in fitting φ1/4 inch, φ5/16 inch	Push-in fitting φ5/16 inch,φ3/8 inch

· Refer to "Mounting attitude" on page 631 for DIN rail installation.
· Refer to page 232 for weight.

Descriptions			MN3GB1/MN4GB1		MN3GB2/MN4GB2	
			ON	OFF	ON	OFF
Response time ms	Dual 3 port valve integrated type		9	12	12	29
	2-position	Single	12	12	19	19
		Double	9	-	18	-
	3-position	ABR connection	8	15	17	30

Values including a light surge suppressor. Response time is the value at an air supply of 0.5 MPa, 20 °C, and oil-free. It varies depending on the pressure and the lubricant quality.

Flow characteristics

Model no.	Valve Position		P→A/B		A/B→R1/R2	
			C (dm^3/(s·bar)	b	C (dm^3/(s·bar)	b
MN3GB1 MN4GB1	Dual 3 port valve integrated type		0.86	0.35	1.0 (0.66)	0.15 (0.25)
	2-position		1.0	0.30	1.1 (0.72)	0.11 (0.26)
	3-position	All ports closed	0.96	0.32	1.0 -	0.14 -
		ABR connection	0.96	0.29	1.2 (0.71)	0.11 (0.30)
		PAB connection	1.1	0.31	1.0 -	0.15 -
MN3GB2 MN4GB2	Dual 3 port valve integrated type		1.7	0.42	2.2 (1.6)	0.15 (0.19)
	2-position		2.4	0.35	2.5 (1.7)	0.19 (0.19)
	3-position	All ports closed	2.2	0.38	2.3 -	0.17 -
		ABR connection	2.2	0.38	2.5 (1.7)	0.18 (0.20)
		PAB connection	2.3	0.29	2.3 -	0.15 -

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.
Note 2: Values in ( ) apply when a malfunction prevention valve is attached.

Ozone specifications / Cutting oil proof type specifications

Selectthe option "A" of Ⓔ in how to order on page 231.

Clean room specifications (Catalog No. CB-033SA)

● Particle generation preventing structure for use in clean rooms

** - Voltage - **P7***

Specifications for secondary battery (Catalog No.CC-947A)

● In order to be applicable for secondary battery manufacturing process, confine materials for air passage and sliding section

** - Voltage - **P4**

MN4GB1/2 Series

Individual wiring manifold; base piping

How to order

Manifold model no.

MN4GB1 1 0 R - C6 - E2 H - 10 - 3

3 port manifold model no.

MN3GB1 1 0 R - C6 - E2 H - 10 - 3

Discrete valve block with solenoid valve

N4GB1 1 0 R - C6 - E2 H — 3

Discrete 3 port valve block with solenoid valve

N3GB1 1 0 R - C6 - E2 H — 3

Discrete solenoid valve

4GB1 1 9 R - 00 - E2 H — 3

Discrete 3 port solenoid valve

3GB1 1 9 R - 00 - E2 H — 3

Ⓐ Model no.
Ⓑ Valve Position
Ⓒ Port size Note 1, Note 2 Note 3
Ⓓ Electrical connections
Ⓔ Option
Ⓕ Station no.
Ⓖ Voltage

Cautions for model No. selection

Note 1 A or B port plug specifications are available only for the 2-position single.
Designate P/R port sizes with the supply/exhaust block in manifold specifications.

Note 2 A/B port sizes do not differ for the mix (CX) of push-in fitting L type.

Note 3 In the case of a discrete solenoid valve, set the port size of "00".

Note 4 Select M4GB*80R when mixing with 4, 5 port valves. Select M3GB*80R when mixing with the masking plate.

Note 5 Combination with the external pilot (K) is not available. Dimensions are the same as the respective 2-position double solenoid.

Note 6 Please select option "L" at the same time as items other than single solenoids.

Note 7 Push-in fitting cannot be mixed with the discrete valve's 4 (A) or 2 (B) port.

Note 8 Only the single solenoid are supported.

Symbol	Descriptions		Ⓐ Model No. Manifold: Dual 3 port valve integrated type: MN3GB1	MN3GB2	5 port valve: MN4GB1	MN4GB2	Discrete block with solenoid valve/Discrete solenoid valve: (N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
Ⓑ Valve Position										
1	2-position single				●	●			●	●
2	2-position double				●	●			●	●
3	3-position all ports closed				●	●			●	●
4	3-position ABR connection				●	●			●	●
5	3-position PAB connection				●	●			●	●
66	Dual 3 port valve integrated type Note 4, 5	A side valve: Normally closed B side valve: Normally closed	●	●			●	●		
67		A side valve: Normally closed B side valve: Normally open	●	●			●	●		
76		A side valve: Normally open B side valve: Normally closed	●	●			●	●		
77		A side valve: Normally open B side valve: Normally open	●	●			●	●		
8	Mix manifold (In case of multiple Valve Positions)		●	●	●	●	●	●	●	●
Ⓒ Port size (A/B port)										
Type	**Milli fitting/Rc thread**									
CF	φ1.8 barbed fitting (applicable tube UP-9102-**)		●		●		●		●	
C18	φ1.8 push-in fitting (applicable tube UP-9402-**)		●		●		●		●	
C4	φ4 push-in fitting		●	●	●	●	●	●	●	●
C6	φ6 push-in fitting		●	●	●	●	●	●	●	●
C8	φ8 push-in fitting			●		●		●		●
CL18	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)	Note 6	●		●		●		●	
CL4	L type φ4 push-in fitting (upward)	Note 6	●		●		●		●	
CL6	L type φ6 push-in fitting (upward)	Note 6	●	●	●	●	●	●	●	●
CL8	L type φ8 push-in fitting (upward)	Note 6		●		●		●		●
CD18	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)		●		●		●		●	
CD4	L type φ4 push-in fitting (downward)		●		●		●		●	
CD6	L type φ6 push-in fitting (downward)		●	●	●	●	●	●	●	●
CD8	L type φ8 push-in fitting (downward)			●		●		●		●
CX	Push-in fitting mix	Note 8	●	●	●	●				
Single plug specifications	Port A	Port B								
CFNC	φ1.8 barbed fitting (applicable tube UP-9102-**)	Plug			●				●	
C18NC	φ1.8 push-in fitting (applicable tube UP-9402-**)				●				●	
C4NC	φ4 push-in fitting				●	●			●	●
C6NC	φ6 push-in fitting				●	●			●	●
C8NC	φ8 push-in fitting					●				●
CFNO	Plug	φ1.8 barbed fitting (applicable tube UP-9102-**)			●				●	
C18NO		φ1.8 push-in fitting (applicable tube UP-9402-**)			●				●	
C4NO		φ4 push-in fitting			●	●			●	●
C6NO		φ6 push-in fitting			●	●			●	●
C8NO		φ8 push-in fitting				●				●
CL18NC	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)	Plug			●				●	
CL4NC	L type φ4 push-in fitting (upward)				●				●	
CL6NC	L type φ6 push-in fitting (upward)				●	●			●	●
CL8NC	L type φ8 push-in fitting (upward)					●				●
CL18NO	Plug	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)			●				●	
CL4NO		L type φ4 push-in fitting (upward)			●				●	
CL6NO		L type φ6 push-in fitting (upward)			●	●			●	●
CL8NO		L type φ8 push-in fitting (upward)				●				●
CD18NC	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)	Plug			●				●	
CD4NC	L type φ4 push-in fitting (downward)				●				●	
CD6NC	L type φ6 push-in fitting (downward)				●	●			●	●
CD8NC	L type φ8 push-in fitting (downward)					●				●
CD18NO	Plug	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)			●				●	
CD4NO		L type φ4 push-in fitting (downward)			●				●	
CD6NO		L type φ6 push-in fitting (downward)			●	●			●	●
CD8NO		L type φ8 push-in fitting (downward)				●				●
Type	**Inch fitting/Inch thread**									
C3N	φ1/8 inch push-in fitting		●		●		●		●	
C4N	φ5/32 inch push-in fitting		●		●		●		●	
C6N	φ1/4 inch push-in fitting			●		●		●		●
C8N	φ5/16 inch push-in fitting			●		●		●		●
CL3N	L type φ1/8 inch push-in fitting (upward)	Note 8	○		○		○		○	
CL4N	L type φ5/32 inch push-in fitting (upward)	Note 8	○		○		○		○	
CL6N	L type φ1/4 inch push-in fitting (upward)	Note 8		○		○		○		○
CL8N	L type φ5/16 inch push-in fitting (upward)	Note 8		○		○		○		○
CXN	Push-in fitting mix	Note 8	●	●	●	●				
Single plug	Port A	Port B								
C3NCN	φ1/8 inch push-in fitting	Plug			●				●	
C4NCN	φ5/32 inch push-in fitting				●				●	
C6NCN	φ1/4 inch push-in fitting					●				●
C8NCN	φ5/16 inch push-in fitting					●				●
C3NON	Plug	φ1/8 inch push-in fitting			●				●	
C4NON		φ5/32 inch push-in fitting			●				●	
C6NON		φ1/4 inch push-in fitting				●				●
C8NON		φ5/16 inch push-in fitting				●				●
C3NCN	L type φ1/8 inch push-in fitting (upward)	Plug			○				○	
C4NCN	L type φ5/32 inch push-in fitting (upward)				○				○	
C6NCN	L type φ1/4 inch push-in fitting (upward)					○				○
C8NCN	L type φ5/16 inch push-in fitting (upward)					○				○
CL3NON	Plug	L type φ1/8 inch push-in fitting (upward)			○				○	
CL4NON		L type φ5/32 inch push-in fitting (upward)			○				○	
CL6NON		L type φ1/4 inch push-in fitting (upward)				○				○
CL8NON		L type φ5/16 inch push-in fitting (upward)				○				○
00	Discrete valve for mounting base						●	●	●	●

is not available. ○ Contact CKD for price and availability.

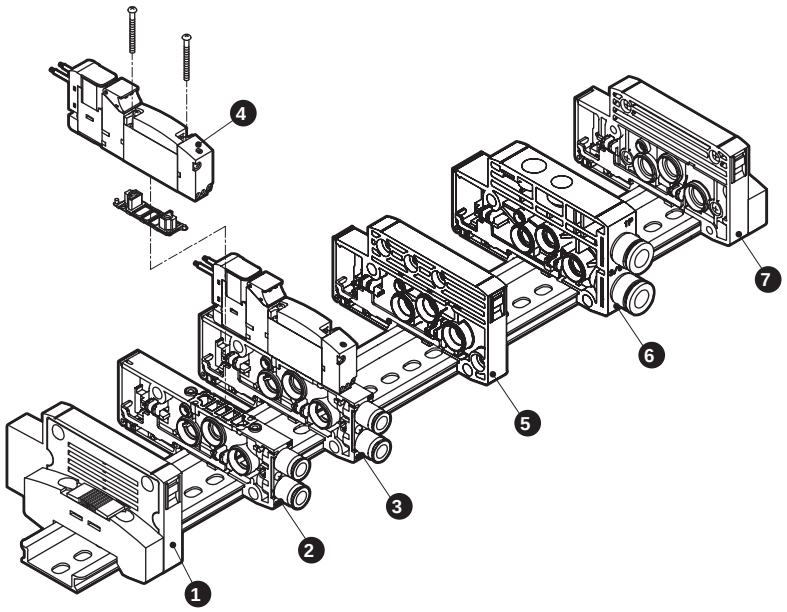
(Option, Station no., Voltage and electrical connection list)

Symbol	Descriptions	Model No. A: Manifold: Dual 3 port valve integrated type: MN3GB1	MN3GB2	Manifold: 5 port valve: MN4GB1	MN4GB2	Discrete valve block with solenoid valve / Discrete solenoid valve: (N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
E Option									
Blank	Non-locking/locking common manual override	●	●	●	●	●	●	●	●
M	Non-locking manual override	●	●	●	●	●	●	●	●
H	With malfunction prevention valve Note 9	●	●	●	●	●	●	●	●
K	External pilot Note 10			●	●			●	●
A	Ozone/cutting oil proof	●	●	●	●	●	●	●	●
S	Surgeless Note 11	●	●	●	●	●	●	●	●
E	Low heat and energy saving circuit Note 11, Note 12	●	●	●	●	●	●	●	●
L	With piping adaptor	●	●	●	●	●	●	●	●
F	A/B port filter integrated Note 13	●	●	●	●	●	●	●	●
Z1	Air supply spacer Note 14	●	●	●	●				
Z2	In stop valve spacer Note 14, Note 15	●	●	●	●				
Z3	Exhaust spacer Note14	●	●	●	●				
Z6	Spacer type pilot check valve Note 14, Note 20				●				
F Station no.									
1	1 station	●	●	●	●				
to	to								
24	24 stations (The max. station no. of MN4GB2 is 20.)								
G Voltage									
1	100 VAC (rectifier integrated)	●	●	●	●	●	●	●	●
2	200 VAC (rectifier integrated) Note 16		●		●		●		●
3	24 VDC	●	●	●	●	●	●	●	●
4	12 VDC	●	●	●	●	●	●	●	●
7	3 VDC	○	○	○	○	○	○	○	○
8	5 VDC	○	○	○	○	○	○	○	○
D Electrical connections									
Blank	Grommet lead wire (300 mm) Note 17	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7) with surge suppressor/light Note 18		●		●		●		●
BN	DIN terminal box (Pg7) (without terminal box) with surge suppressor/light Note 18		●		●		●		●
E type connector type (upward/lateral direction common)									
E0	Lead wire (300 mm) Note 19	●	●	●	●	●	●	●	●
E00	Lead wire (500mm) Note 19	●	●	●	●	●	●	●	●
E01	Lead wire (1000mm) Note 19	●	●	●	●	●	●	●	●
E02	Lead wire (2000mm) Note 19	●	●	●	●	●	●	●	●
E03	Lead wire (3000mm) Note 19	●	●	●	●	●	●	●	●
E0N	Without lead wire (without socket) Note 19	●	●	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal) Note 19	●	●	●	●	●	●	●	●
E2	Lead wire (300mm) With surge suppressor/light	●	●	●	●	●	●	●	●
E20	Lead wire (500mm) With surge suppressor/light	●	●	●	●	●	●	●	●
E21	Lead wire (1000mm) With surge suppressor/light	●	●	●	●	●	●	●	●
E22	Lead wire (2000mm) With surge suppressor/light	●	●	●	●	●	●	●	●
E23	Lead wire (3000mm) With surge suppressor/light	●	●	●	●	●	●	●	●
E2N	Without lead wire (without socket) with surge suppressor/light	●	●	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal) with surge suppressor/light	●	●	●	●	●	●	●	●
EJ type connector type (socket with cover, upward/lateral direction common)									
E01J	Lead wire (1000 mm) Note 19	●	●	●	●	●	●	●	●
E02J	Lead wire (2000mm) Note 19	●	●	●	●	●	●	●	●
E03J	Lead wire (3000mm) Note 19	●	●	●	●	●	●	●	●
E21J	Lead wire (1000mm) With surge suppressor/light	●	●	●	●	●	●	●	●
E22J	Lead wire (2000mm) With surge suppressor/light	●	●	●	●	●	●	●	●
E23J	Lead wire (3000mm) With surge suppressor/light	●	●	●	●	●	●	●	●

is not available.
○ Contact CKD for price and availability.

Note 9 3-position all ports closed and PAB connection are not provided with malfunction prevention valve (H). Refer to page 628 for details on malfunction prevention valve.
Note 10 Contact CKD when using a vacuum with the external pilot (K).
Note11 In addition, the surgeless "S" and low heat energy-saving circuit "E" cannot be selected at the same time.
Note12 This is surgeless specifications.
Note13 The P port has a filter built inside as a standard.
Note14 Specify the spacer mounting position and quantity in manifold specifications. Stacking multiple spacers is not supported. Combination with the masking plate is not supported. Items other than single solenoids cannot be selected at the same time as the L type push-in fitting (upward). Refer to page 287 to 291 for details.
Note15 Combination with the external pilot (K) is not available.
Note 16 Only the DIN terminal box are supported.
Note17 Grommet lead wire specifications are only for DC voltage.
Note 18 Supports AC voltage and 12/24 VDC. The light is also attached to the terminal box.
Note 19 AC voltage comes with a rectifier circuit.
Note 20 Combination with the push-in fitting L type (upward) is not available.

Manifold components explanation and parts list



Main parts list (refer to page 276 to 294 for details)

Product No.	Component name	Model no. (example)	No.	Component name	Model no. (example)
1	End block L	N4G1R - EL	5	Partition block	N4G1R-S
2	Discrete valve block	N4GB1R-V1-C6	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GB110R-C6-H-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GB119R-00-H-3			

B type reduced wiring weight

4GB1 (g)

Block type		Weight	Block type		Weight
Valve block with solenoid valve	N4GB110R-C6	67	Supply and exhaust block	N4G1R-Q-8	58
	N4GB120R-C6	84		N4G1R-QK-8	60
	N4GB1$\frac{3}{4}_{5}$0R-C6	85	End block	N4G1R-E*	60
	N3GB1660R-C6-3	84		N4G1R-EX*	60
Valve block with masking plate	N4GB1R-MP-C6	37	Partition block	N4G1R-S	45

4GB2 (g)

Block type		Weight	Block type		Weight
Valve block with solenoid valve	N4GB210R-C8	128	Supply and exhaust block	N4G2R-Q-10	83
	N4GB220R-C8	145		N4G2R-QK-10	85
	N4GB2$\frac{3}{4}_{5}$0R-C8	156	End block	N4G2R-E*	84
	N4GB2660R-C8-3	145		N4G2R-EX*	85
Valve block with masking plate	N4GB2R-MP-C8	69	Partition block	N4G2R-S	60

Parts list

Application	Parts name	Model no.
Valve 4G1	φ1.8 barbed type	4G1R-JOINT-CF
	φ1.8 straight type	4G1R-JOINT-C18
	φ4 straight type	4G1R-JOINT-C4
	φ6 straight type	4G1R-JOINT-C6
	φ1.8 elbow type	4G1R-JOINT-CL18,CLL18
	φ4 elbow type	4G1R-JOINT-CL4,CLL4
	φ6 elbow type	4G1R-JOINT-CL6,CLL6
	φ1/8 inch straight type	4G1R-JOINT-C3N
	φ5/32 inch straight type	4G1R-JOINT-C4N
	φ1/8 inch elbow type Note 1	4G1R-JOINT-CL3N
	φ5/32 inch elbow type Note 1	4G1R-JOINT-CL4N
	Plug cartridge	4G1R-JOINT-CPG
Valve 4G2	φ4 straight type	4G2R-JOINT-C4
	φ6 straight type	4G2R-JOINT-C6
	φ8 straight type	4G2R-JOINT-C8
	φ6 elbow type	4G2R-JOINT-CL6,CLL6
	φ8 elbow type	4G2R-JOINT-CL8,CLL8
	φ1/4 inch straight type	4G2R-JOINT-C6N
	φ5/16 inch straight type	4G2R-JOINT-C8N

Application	Parts name	Model no.
Valve 4G2	φ1/4 inch elbow type Note 1	4G2R-JOINT-CL6N
	φ5/16 inch elbow type Note 1	4G2R-JOINT-CL8N
	Plug cartridge	4G2R-JOINT-CPG
Valve	Coil assembly	4GR-[*1]-[*2]-COIL-[*3] *1: Electrical connection (blank, B, E0, ...), *2: Ozone/cutting oil proof (blank, A) *3: Voltage (1,2,3,4)
	E type connector socket assembly	4GR-SOCKET-ASSY-[*1]-[*3] *1: Electrical connection (E0, E00...), *3: Voltage (1,3,4)
	E type connector socket assembly	4GR-SOCKET-ASSY-[*1] *1: Electrical connection (E01J, E02J, ...)
Valve 4G2	DIN terminal box assembly	4GR-TERMINAL-BOX-[*3] *3: Voltage (1,2,3,4)

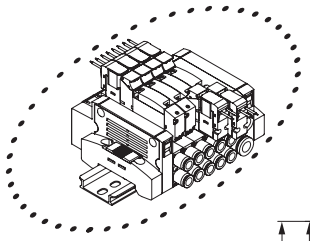
Note 1: This is a available consult factory order.

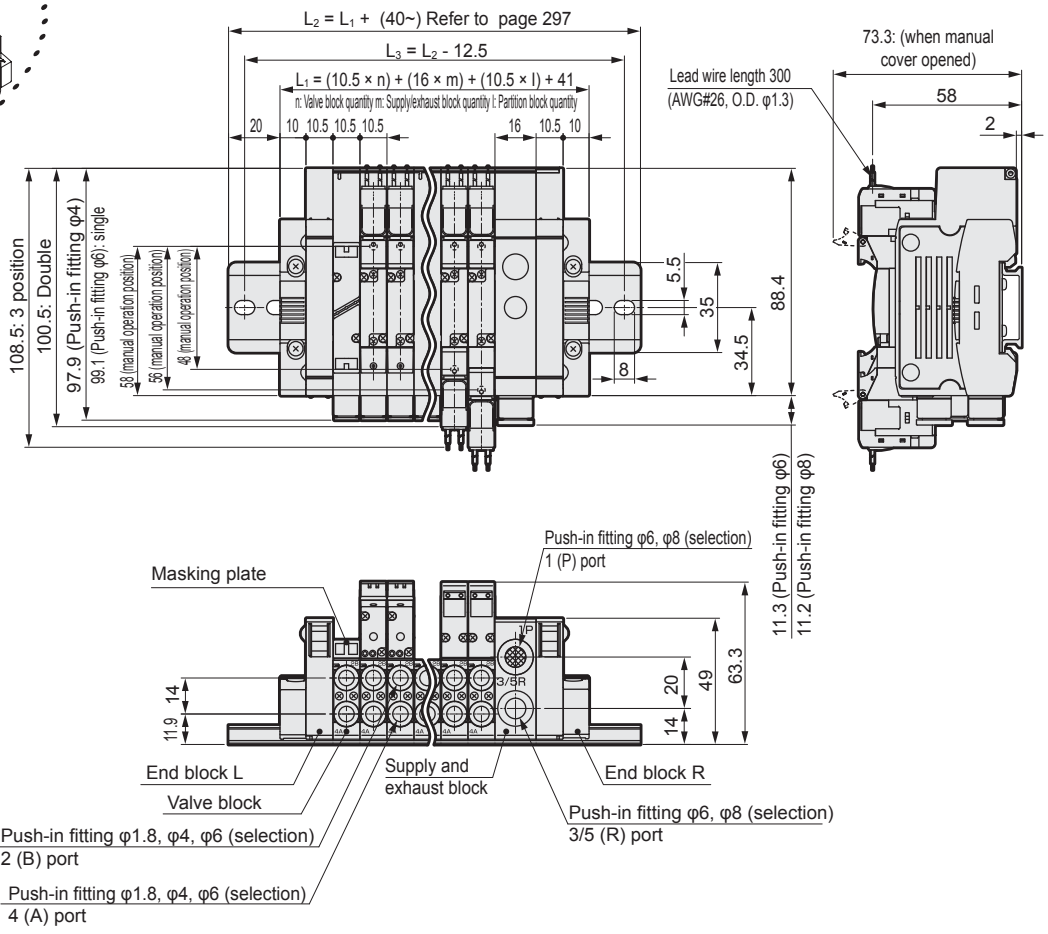
Dimensions

MN4GB1

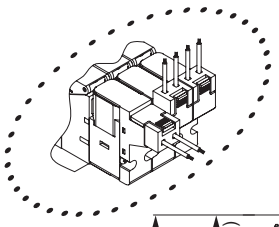
● Grommet lead wire (blank)

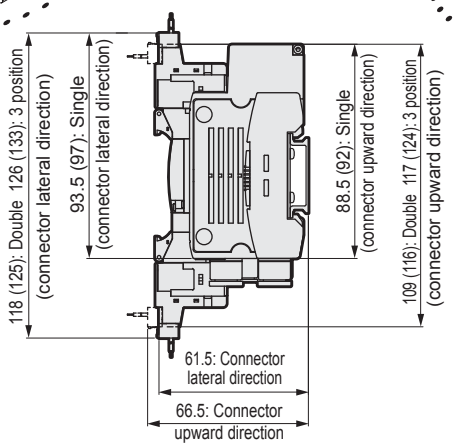
* For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.





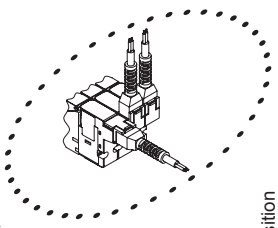
● E type connector type (E)

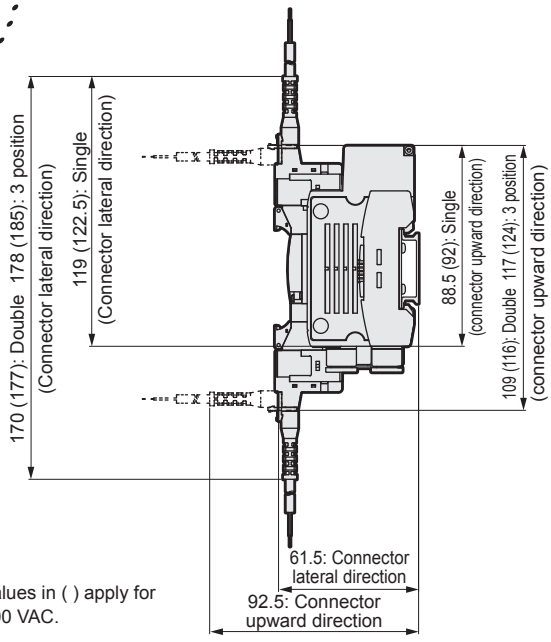




Note: Values in ( ) apply for 100 VAC.

● EJ type connector type (E**J)





Note: Values in ( ) apply for 100 VAC.

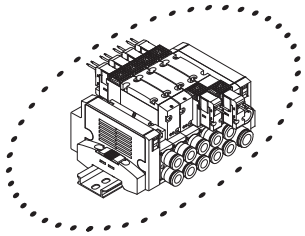
* Refer to page 266 for the dimension drawings of the push-in fitting for valve block and supply/exhaust block.

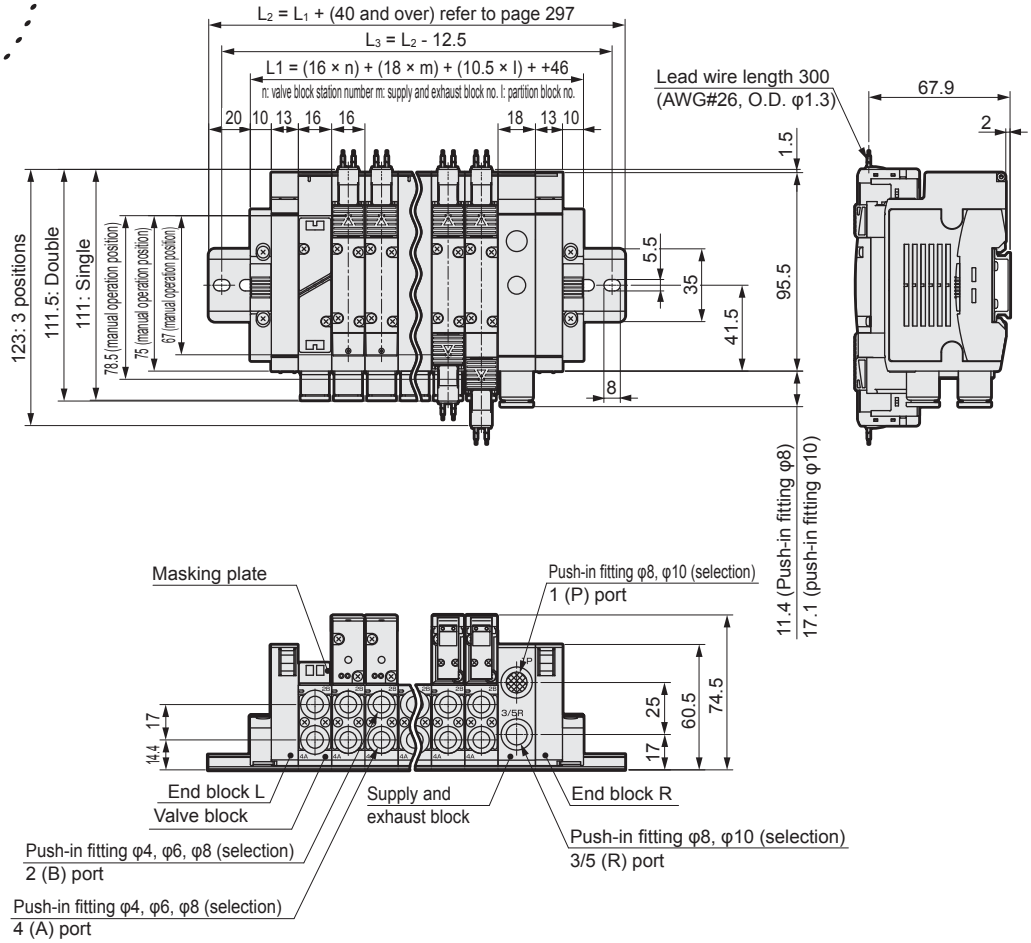
Dimensions CAD

MN4GB2

● Grommet lead wire (blank)

* For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

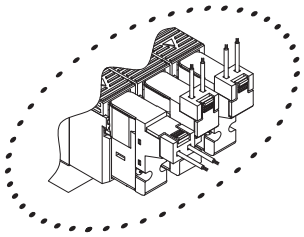


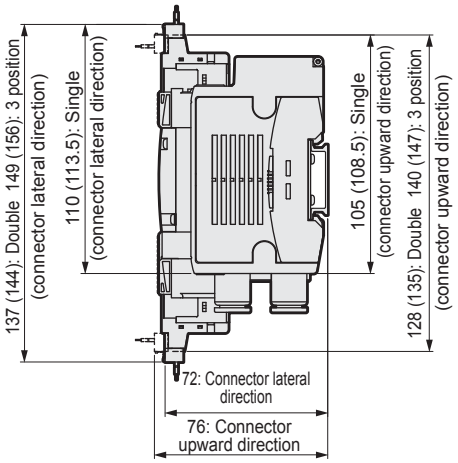


* Refer to page 268 for the dimension drawings of the push-in fitting for valve block and supply/exhaust block.

Dimensions

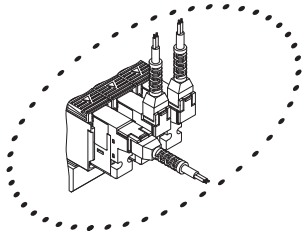
● E type connector type (E)

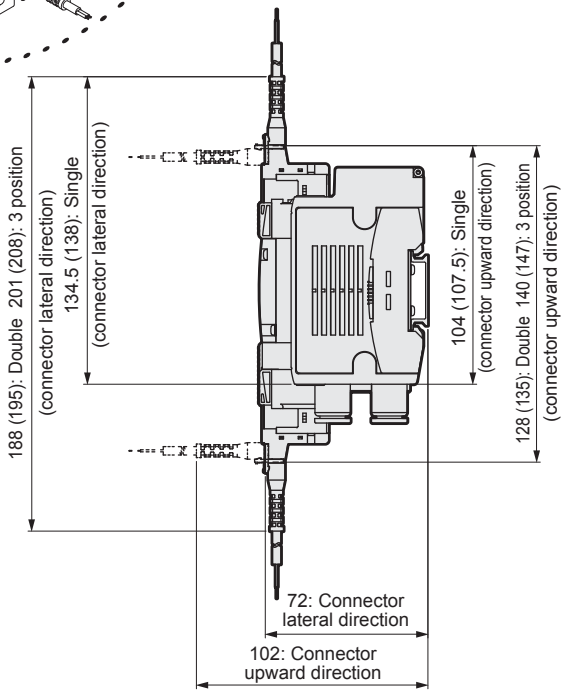




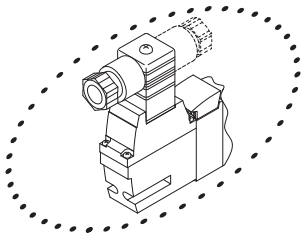
Note: Values in ( ) apply for 100 VAC.

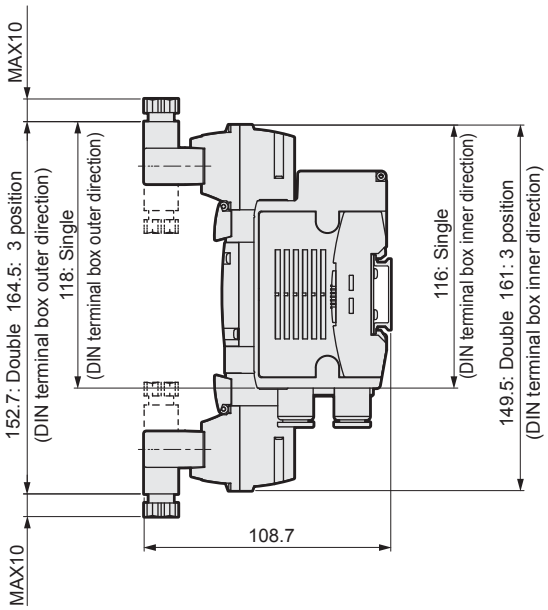
● EJ type connector type (E**J)



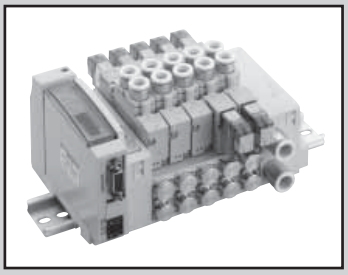


● DIN terminal box type (B)





Note: The DIN terminal box assembly is shipped facing inward.



Reduced wiring block manifold
Body piping

MN4GA1, 2-T* Series

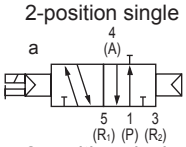
● Applicable cylinder bore size: φ20 ~ φ80

RoHS CAD

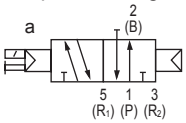
JIS symbol

● 3 port valve

2-position single N.C. type

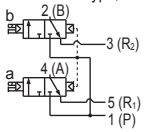


2-position single N.O. type

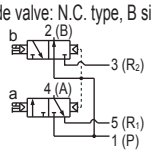


● Dual 3 port valve integrated type

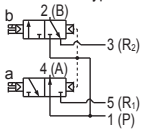
(A side valve: N.C. type, B side valve: N.C. type)



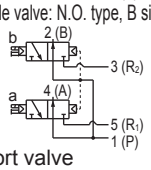
(A side valve: N.C. type, B side valve: N.O. type)



(A side valve: N.O. type, B side valve: N.C. type)

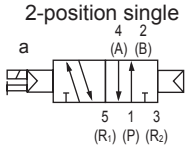


(A side valve: N.O. type, B side valve: N.O. type)

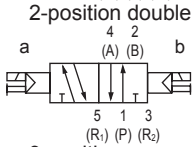


● 5 port valve

2-position single

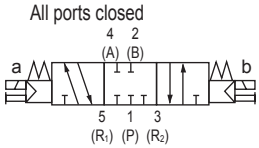


2-position double

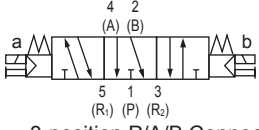


3-position

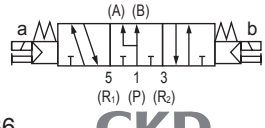
All ports closed



3-position A/B/R Connection



3-position P/A/B Connection



Manifold common specifications

Descriptions	
Manifold type	Block manifold
Mounting method	DIN rail mount type
Supply and exhaust method	Common supply/common exhaust (malfunction prevention valve integrated)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve integrated)
Piping direction	Valve top direction
Valve type and operation method	Pilot-operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7
Min. working pressure MPa	0.2 Note 3
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual operating device	Non-locking/locking common type (standard)
Lubrication Note 1	Not required
Degree of protection Note 2	Dust proof
Vibration resistance m/s^2	50 or less
Vibration resistance m/s^2	300 or less
Atmosphere	Containing corrosive gas is not permissible

Electrical specification

Descriptions				
Rated voltage		T1*, T30*, T5*		T6*, T8*
		24 VDC	12 VDC	24 VDC
Voltage fluctuation range (Note 4)		±10%		+10%, -5%
Holding current A	Standard	0.017	0.034	0.017
	With low heat energy-saving circuit	0.005	0.010	0.005
Power consumption W	Standard	0.4		
	With low heat energy-saving circuit	0.1		
Thermal class		B		
Surge suppressor Note 5		Zener diode		
Indicator		LED		

Note 4 Please note the voltage fluctuation range since the T6* and T8* (Serial transmission type) have a voltage drop due to the internal circuit.

Note 5 If you select the low heat energy-saving circuit or surgeless, it will become a diode.

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated. Excessive or intermittent lubrication results in unstable operation.

Note 2 The degree of protection is dust proof. The unit is not water proof. Avoid water drops or oil, etc. during use.

Note 3 The working pressure range is 0 to 0.7 MPa when the external pilot (option symbol: K) is selected. Set the external pilot pressure between 0.2 to 0.7 MPa.

Individual specifications

Descriptions			MN3GA1/MN4GA1									
			T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station no.	Standard wiring		16 station	24 station	24 station	16 station	18 station	8 station	24 station	8/16 stations	8/16 stations	16/24 stations
	Double wiring		8 station	12 station	12 station	8 station	9 station	4 station	12 station	4/8 stations	4/8 stations	8/16 stations
Max. number of solenoid			16 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points	16/32 points
Port size	Milli fitting/M5, Rc thread	A/B port	Barbed fitting φ1.8 push-in fitting φ1.8, φ4, φ6 M5									
		P/R port	Push-in fitting φ6, φ8									
	Inch fitting/M5, NPT thread	A/B port	Push-in fitting φ1/8 inch, φ5/32 inch M5									
		P/R port	Push-in fitting φ1/4 inch, φ5/16 inch									
	Milli fitting/ G thread	A/B port	-									
		P/R port	-									

Descriptions			MN3GA2/MN4GA2									
			T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station no.	Standard wiring		16 station	20 station	20 station	16 station	18 station	8 station	20 station	8/16 stations	8/16 stations	16/20 stations
	Double wiring		8 station	12 station	12 station	8 station	9 station	4 station	12 station	4/8 stations	4/8 stations	8/16 stations
Max. number of solenoid			16 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points	16/32 points
Port size	Milli fitting/M5, Rc thread	A/B port	Push-in fitting φ4, φ6, φ8 Rc1/8									
		P/R port	Push-in fitting φ8, φ10									
	Inch fitting/M5, NPT thread	A/B port	Push-in fitting φ1/4 inch, φ5/16 inch 1/8NPT									
		P/R port	Push-in fitting φ5/16 inch, φ3/8 inch									
	Milli fitting/ G thread	A/B port	G1/8									
		P/R port	Push-in fitting φ8, φ10									

Refer to page 240 for weight.

flow characteristics

Model no.	Valve Position		P→A/B		A/B→R1/R2	
			C (dm^3/(s·bar))	b	C (dm^3/(s·bar))	b
MN3GA1 MN4GA1	Dual 3 port valve integrated type		0.87	0.37	1.0 (0.68)	0.14 (0.22)
	2-position		0.98	0.33	1.2 (0.71)	0.11 (0.27)
	3-position	All ports closed	0.92	0.34	1.0 -	0.16 -
		ABR connection	0.92	0.29	1.1 (0.69)	0.13 (0.22)
		PAB connection	1.1	0.35	1.1 -	0.17 -
MN3GA2 MN4GA2	Dual 3 port valve integrated type		1.7	0.37	2.2 (1.6)	0.13 (0.21)
	2-position		2.2	0.21	2.5 (1.7)	0.19 (0.10)
	3-position	All ports closed	2.0	0.25	2.3 -	0.10 -
		ABR connection	2.0	0.27	2.5 (1.7)	0.18 (0.12)
		PAB connection	2.3	0.31	2.3 -	0.16 -

Note 1: Effective sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.

Note 2: Values in ( ) apply when a malfunction prevention valve is attached.

Reduced wiring specifications

Descriptions	T10	T11	T30	T50	T51	T52	T53
Type	Common terminal block M3 thread type	Common terminal block push tightening system	D sub-connector	20 pin flat cable connector (with power supply terminal)	20 pin flat cable connector (without power supply terminal)	10 pin flat cable connector (without power supply terminal)	26 pin flat cable connector (without power supply terminal)
Connector	-	-	D sub-connector 25 pin	MIL-C-83503 standard compliant pressure welding 20-pin socket	MIL-C-83503 standard compliant pressure welding 20-pin socket	MIL-C-83503 standard compliant pressure welding 10-pin socket	MIL-C-83503 standard compliant pressure welding 26-pin socket

Serial transmission slave unit specifications (refer to page 611 for applicable PLC table)

Descriptions		T6G1	T6C0*1	T6C1*1	T6A0*2	T6A1*2	T6J0*2	T6J1*2	T6E0	T6E1
Network name		CC-Link ver1.10	CompoBus/S		UNIWIRE SYSTEM		UNIWIRE H SYSTEM		S-LINK	
Power supply voltage	Unit side	24 VDC ±10%			24 VDC +10%, -5% Power supply terminal common					
	Valve side	24 VDC +10%, -5%								
Current consumption	Unit side	100 mA or less (when all output points are ON)			100 mA or less (when all output points are ON) Load current is not included					
	Valve side	15 mA or less (when all output points are OFF)								
Output points		16 points	8 points	16 points	8 points	16 points	8 points	16 points	8 points	16 points
Occupied number		1 station	1 node address (8-point mode)	2 node address (8-point mode)	Output 8 points	Output 16 points	Output 8 points	Output 16 points	FAN-in: 3 *3	FAN-in: 3 *3
Operation display		LED (power supply and communication state)								
Output type		NPN								

Descriptions		T7C0*4	T7C1*4	T7E0	T7E1	T7G1	T7L1*5	T7D1	T7S1	T7SP1
Network name		CompoBus/S		S-LINK		CC-Link ver1.10	SAVE NET	DeviceNet*6, *7	CompoNet	
Power supply voltage	Unit side	24 VDC ±10%		24 VDC +10%, -5% Power supply terminal common						
	Valve side	24 VDC +10%, -5%								
	Communication side	-		-		-	-	11 VDC to 25 VDC *8	14.0 VDC to 26.4 VDC	
Current consumption	Unit side	50 mA or less (when all output points are ON)		90 mA or less (when all output points are ON) Load current is not included		110 mA or less (when all output points are ON) Load current is not included			40 mA or less (when all output points are ON) Load current is not included	
	Valve side	15 mA or less (when all output points are OFF)								
	Communication side	-		-		-	-	50 mA or less	65 mA or less (all points ON: 24 VDC) 95 mA or less (all points ON: 14 VDC)	
Output points		8 points	16 points	8 points	16 points	16 points	16 points	16 points	16 points	
Occupied number		1 node address (8-point mode)	2 node address (8-point mode)	FAN-in: 3 *3	FAN-in: 3 *3	1 station	1 station	2 bytes	Word slave 1 node (16 points)	
Operation display		LED (power supply and communication state)								
Output type		NPN							NPN	PNP

Descriptions		T8G1 T8G2	T8GP1 T8GP2	T8P1 T8P2	T8PP1 T8PP2	T8EC1 T8EC2	T8ECP1 T8ECP2	T8EN1 T8EN2	T8ENP1 T8ENP2
Network name		CC-Link ver1.10		PROFIBUS-DP(V0)		EtherCAT		EtherNet/IP	
Power supply voltage	Unit side	24 VDC ± 10%							
	Valve side	24 VDC + 10%, -5%							
Current consumption	Unit side	60 mA or less (when all output points are ON)		60 mA or less (when all output points are ON)		110 mA or less (when all output points are ON)		120 mA or less (when all output points are ON)	
	Valve side	T8*1: 15 mA or less T8*2: 20 mA or less (when all output points are ON) Load current is not included							
Output points		T8*1: 16 points T8*2: 32 points							
Occupied number		1 station							
Operation display		LED (power supply and communication state)							
Output type		NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output

*1 The long-distance communication mode is not available.
*2 Compatible with 128 transmission points and a transmission distance of 200 m. Contact CKD for other specifications.
*3 FAN-in indicates the capacity of the input from the D-G line. It is necessary to calculate the number of units to be connected.
*4 The long-distance communication mode is available.
*5 Compatible with a transmission bit rate of 128 bits and the transmission method of semi-duplicated communication. Contact CKD for other specifications.
*6 Compatible with DeviceNet compliant networks (DLNK, etc.) as well.
*7 Contact CKD for EDS file. EDS file: A file containing text for parameters for communication with masters of each company.

MN4GA1/2-T* Series

Reduced wiring manifold; body piping

How to order

Manifold model no.

MN4GA1 1 0 R - C6 - T30 W H - 10 - 3

3 port manifold model no.

MN3GA1 1 0 R - C6 - T30 W H - 10 - 3

Discrete valve block with solenoid valve

N4GA1 1 0 R - C6 - A2N *1 H — 3

Discrete 3 port valve block with solenoid valve

N3GA1 1 0 R - C6 - A2N *1 H — 3

Discrete solenoid valve

4GA1 1 9 R - C6 - A2N H — 3

Discrete 3 port solenoid valve

3GA1 1 9 R - C6 - A2N H — 3

Ⓐ Model no.

Ⓑ Valve Position

Ⓒ Port size Note 1

Ⓓ Reduced wiring connection

Ⓔ Terminal and connector pin array

Ⓕ Option

Ⓖ Station no.

Ⓗ Voltage

Cautions for model No. selection

Note 1 Designate P/R port sizes with the supply/exhaust block in manifold specifications.

Note 2 Select MN4GA*80R when mixing with 4, 5 port valves. Select MN4GA*80R when mixing with the masking plate.

Note 3 Combination with the external pilot (K) is not available. Dimensions are the same as the respective 2-position double solenoid.

Note 4 The push-in fitting cannot be mixed with the discrete valve's 4 (A) or 2 (B) port.

Note 5 Blank····· Wired based on the type of valve used. W*·····Wired for the double solenoid regardless of the type of valve used.

Note 6 Reduced wiring (A type socket assembly) is attached to the cap side. The discrete valve (A2N) comes with a holder for holding the socket assembly. Refer to page 293 for details.

Note 7 3-position all ports closed and PAB connection are not provided with malfunction prevention valve (H). Refer to page 628 for details on malfunction prevention valve.

Note 8 Contact CKD when using a vacuum with the external pilot (K).

Note 9 In addition, the surgeless "S" and low heat energy-saving circuit "E" cannot be selected at the same time.

Note10 This is surgeless specifications.

Note11 The P port has a filter built inside as a standard.

Note12 Specify the spacer mounting position and quantity in manifold specifications. Stacking multiple spacers is not supported. Combination with the masking plate is not supported. Refer to page 287 to 291 for details.

Note13 Combination with the external pilot (K) is not available.

Symbol	Descriptions	Ⓐ Model No. Manifold 3 port valve MN3GA1	MN3GA2	5 port valve MN4GA1	MN4GA2	Discrete block with solenoid valve / Discrete solenoid valve (N) 3GA1	(N) 3GA2	(N) 4GA1	(N) 4GA2
Ⓑ Valve Position									
1	2-position single			●	●			●	●
2	2-position double			●	●			●	●
3	3-position all ports closed			●	●			●	●
4	3-position ABR connection			●	●			●	●
5	3-position PAB connection			●	●			●	●
1	2-position single normally closed Note 2	●	●			●	●		
11	2-position single normally open Note 2	●	●			●	●		
66	Dual 3 port valve integrated type Note 2, 3 — A side valve: Normally closed / B side valve: Normally closed	●	●			●	●		
67	Dual 3 port valve integrated type Note 2, 3 — A side valve: Normally closed / B side valve: Normally open	●	●			●	●		
76	Dual 3 port valve integrated type Note 2, 3 — A side valve: Normally open / B side valve: Normally closed	●	●			●	●		
77	Dual 3 port valve integrated type Note 2, 3 — A side valve: Normally open / B side valve: Normally open	●	●			●	●		
8	Mix manifold (In case of multiple Valve Positions)	●	●	●	●	●	●	●	●
Ⓒ Port size (A/B port)									
Type	Milli fitting/Rc thread								
CF	Barbed fitting φ1.8 (applicable tube UP-9102-**)	●		●		●		●	
C18	Push-in fitting for fiber φ1.8 (applicable tube UP-9402-**)	●		●		●		●	
C4	Push-in fitting φ4	●	●	●	●	●	●	●	●
C6	Push-in fitting φ6	●	●	●	●	●	●	●	●
C8	Push-in fitting φ8		●		●		●		●
CX	Push-in fitting mix Note 4	●	●	●	●				
M5	M5	●		●		●		●	
06	Rc1/8		●		●		●		●
Type	Inch fitting/Inch thread								
C3N	φ1/8 inch push-in fitting	●		●		●		●	
C4N	φ5/32 inch push-in fitting	●		●		●		●	
C6N	φ1/4 inch push-in fitting		●		●		●		●
C8N	φ5/16 inch push-in fitting		●		●		●		●
CXN	Push-in fitting mix Note 4	●	●	●	●				
06N	1/8NPT		●		●		●		●
Type	G thread								
06G	G1/8		●		●		●		●
Ⓓ Reduced wiring connection, serial transmission	Refer to the next page for wire connections, serial transmission.								
Ⓔ Terminal connector pin array									
Blank	Standard wiring Note 5	●	●	●	●	●	●	●	●
W	Double wiring Note 5	●	●	●	●	●	●	●	●
W1	Double wiring (With single reduced wiring) Note 5, 6	●	●	●	●	●	●	●	●
Ⓕ Option									
Blank	Non-locking/locking common manual override	●	●	●	●	●	●	●	●
M	Non-locking manual override	●	●	●	●	●	●	●	●
H	With malfunction prevention valve Note 7	●	●	●	●	●	●	●	●
K	External pilot Note 8	●	●	●	●	●	●	●	●
A	Ozone/cutting oil proof	●	●	●	●	●	●	●	●
S	Surgeless Note 9	●	●	●	●	●	●	●	●
E	Low heat and energy saving circuit Note 9, 10	●	●	●	●	●	●	●	●
Q	Reduced wiring mall	●	●	●	●	●	●	●	●
F	A/B port filter integrated Note 11	●	●	●	●	●	●	●	●
Z1	Air supply spacer Note 12	●	●	●	●				
Z2	In stop valve spacer Note 12, Note 13	●	●	●	●				
Z3	Exhaust spacer Note12	●	●	●	●				
Ⓖ Station no.									
1	1 station	●	●	●	●				
to	to								
24	24 stations (Refer to page 236 for the max. station no. for each model)								
Ⓗ Voltage									
3	24 VDC	●	●	●	●	●	●	●	●
4	12 VDC	●	●	●	●	●	●	●	●

is not available.

Ⓐ Model No.			Manifold				Discrete valveblock with solenoid valve / Discrete solenoid valve			
			Dual 3 port valve integrated type		5 port valve					
			MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N) 3GA1	(N) 3GA2	(N) 4GA1	(N) 4GA2
Ⓓ Reduced wiring connection (light and surge suppressor provided as standard) 12/24 VDC										
T10	Common terminal block (M3 thread)	Left side specifications	●	●	●	●				
T10R		Right side specifications	●	●	●	●				
T11	Common terminal block (push tightening)	Left side specifications	●	●	●	●				
T11R		Right side specifications	●	●	●	●				
T30	D sub-connector	Left side specifications	●	●	●	●				
T30R		Right side specifications	●	●	●	●				
T50	20 pin flat cable connector (with power supply terminal)	Left side specifications	●	●	●	●				
T50R		Right side specifications	●	●	●	●				
T51	20 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T51R		Right side specifications	●	●	●	●				
T52	10 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T52R		Right side specifications	●	●	●	●				
T53	26 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T53R		Right side specifications	●	●	●	●				
Ⓓ Serial transmission (light and surge suppressor provided as standard) 24 VDC										
T6A0	UNIWIRE SYSTEM	NPN 8 points	●	●	●	●				
T6A1		NPN 16 points	●	●	●	●				
T6C0	CompoBus/S	NPN 8 points	●	●	●	●				
T6C1		NPN 16 points	●	●	●	●				
T6E0	S-LINK	NPN 8 points	●	●	●	●				
T6E1		NPN 16 points	●	●	●	●				
T6G1	CC-Link	NPN 16 points	●	●	●	●				
T6J0	UNIWIRE H SYSTEM	NPN 8 points	●	●	●	●				
T6J1		NPN 16 points	●	●	●	●				
T7C0	Thin type CompoBus/S	NPN 8 points	●	●	●	●				
T7C1		NPN 16 points	●	●	●	●				
T7D1	Thin type DeviceNet	NPN 16 points	●	●	●	●				
T7E0	Thin type S-LINK	NPN 8 points	●	●	●	●				
T7E1		NPN 16 points	●	●	●	●				
T7G1	Thin type CC-Link	NPN 16 points	●	●	●	●				
T7L1	Thin type SAVE NET	NPN 16 points	●	●	●	●				
T7S1	Thin type CompoNet	NPN 16 points	●	●	●	●				
T7SP1		PNP 16 points	●	●	●	●				
T8G1	Thin type CC-Link	NPN 16 points	●	●	●	●				
T8G2		NPN 32 points	●	●	●	●				
T8GP1		PNP 16 points	●	●	●	●				
T8GP2		PNP 32 points	●	●	●	●				
T8P1	Thin type PROFIBUS-DP	NPN 16 points	●	●	●	●				
T8P2		NPN 32 points	●	●	●	●				
T8PP1		PNP 16 points	●	●	●	●				
T8PP2		PNP 32 points	●	●	●	●				
T8EC1	Thin type EtherCAT	NPN 16 points	●	●	●	●				
T8EC2		NPN 32 points	●	●	●	●				
T8ECP1		PNP 16 points	●	●	●	●				
T8ECP2		PNP 32 points	●	●	●	●				
T8EN1	Thin type EtherNet/IP	NPN 16 points	●	●	●	●				
T8EN2		NPN 32 points	●	●	●	●				
T8ENP1		PNP 16 points	●	●	●	●				
T8ENP2		PNP 32 points	●	●	●	●				
A2N	Without lead wire (without socket)	with surge suppressor/light					●	●	●	●

Ozone specifications / Coolant proof specifications

Selectthe option "A" of Ⓕ in how to order on page 238.

Clean room specifications (Catalog No. CB-033SA)

● Clean room specifications

** - Voltage - P7*

Specifications for secondary battery (Catalog No.CC-947A)

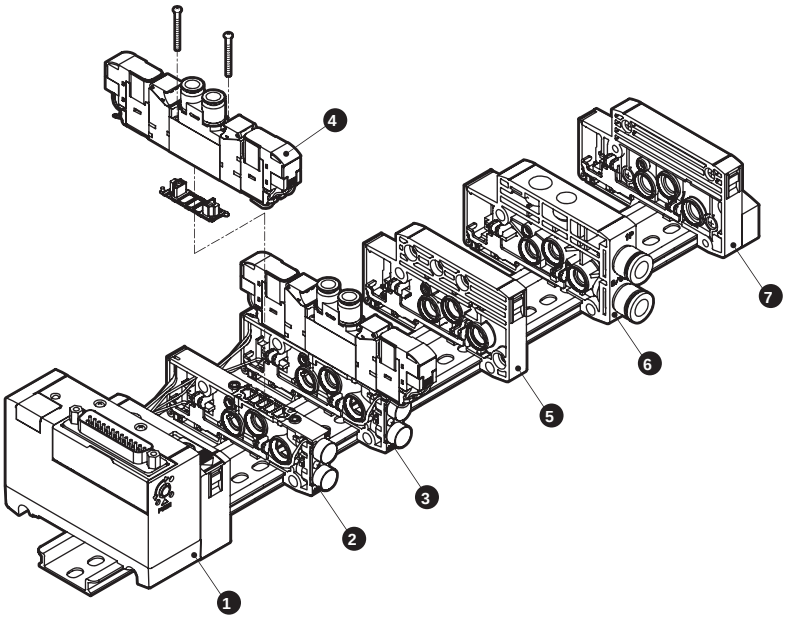
● In order to be applicable for secondary battery manufacturing process, confine materials for air passage and sliding section

** - Voltage - P4

MN4GA1/2-T* Series

Reduced wiring manifold; body piping

Manifold components explanation and parts list



Main parts list (refer to page 276 to 294 for details)

Product No.	Component name	Model no. (example)	No.	Component name	Model no. (example)
1	Electrical block	N4G1R-T30	5	Partition block	N4G1R-S
2	Discrete valve block	N4GA1R-V2	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GA120R-C6-A2NH-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GA129R-C6-A2NH-3			

A type reduced wiring weight

4GA1

(g)

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N3GA110R-C6-A2N-3	72	Supply and exhaust block	N4G1R-Q-8	58	Electrical block	N4G1R-T10(R)	207
	N3GA1110R-C6-A2N-3	72		N4G1R-QK-8	60		N4G1R-T30(R)	165
	N4GA110R-C6-A2N-3	72	End block	N4G1R-E*	60		N4G1R-T50(R)	167
	N4GA120R-C6-A2N-3	91		N4G1R-EX*	60		N4G1R-T6*	295
	N4GA1$\frac{3}{5}$0R-C6-A2N-3	95	Partition block	N4G1R-S	45		N4G1R-T7*	203
	N3GA1660R-C6-A2N-3	91					N4G1R-T8*	229
Valve block with masking plate	N4GA1R-MP*-C6	34						

4GA2

(g)

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N3GA210R-C8-A2N-3	131	Supply and exhaust block	N4G2R-Q-10	83	Electrical block	N4G2R-T10(R)	223
	N3GA2110R-C8-A2N-3	131		N4G2R-QK-10	85		N4G2R-T30(R)	182
	N4GA210R-C8-A2N-3	131	End block	N4G2R-E*	84		N4G2R-T50(R)	184
	N4GA220R-C8-A2N-3	151		N4G2R-EX*	85		N4G2R-T6*	312
	N4GA2$\frac{3}{5}$0R-C8-A2N-3	163	Partition block	N4G2R-S	60		N4G2R-T7*	204
	N4GA2660R-C8-A2N-3	151					N4G2R-T8*	242
Valve block with masking plate	N4GA2R-MP*-C8	66						

Parts list

Application	Parts name	Model no.	Application	Parts name	Model no.
Valve 4G1	Cartridge fitting φ1.8 barbed type	4G1R-JOINT-CF	Valve	Coil assembly	4GR-A2N-[*2]-COIL-[*3] *2: Ozone/cutting oil proof (Blank, A) *3: Voltage (3,4)
	Cartridge fitting φ1.8 straight type	4G1R-JOINT-C18			
	Cartridge fitting φ4 straight type	4G1R-JOINT-C4			
	Cartridge fitting φ6 straight type	4G1R-JOINT-C6			
	Cartridge fitting φ1/8 inch straight type	4G1R-JOINT-C3N	Manifold	Expansion socket assembly model no. (Details on page 613)	For a side solenoid N4GR-SOCKET-ASSY-(Selection no.)
	Cartridge fitting φ5/32 inch straight type	4G1R-JOINT-C4N			
	Plug cartridge	4G1R-JOINT-CPG			
Valve 4G2	Cartridge fitting φ4 straight type	4G2R-JOINT-C4			For b side solenoid N4GR-RELAY-SOCKET-(Selection no.)
	Cartridge fitting φ6 straight type	4G2R-JOINT-C6			
	Cartridge fitting φ8 straight type	4G2R-JOINT-C8			
	Cartridge fitting φ1/4 inch straight type	4G2R-JOINT-C6N			
	Cartridge fitting φ5/16 inch straight type	4G2R-JOINT-C8N			
	Plug cartridge	4G2R-JOINT-CPG			

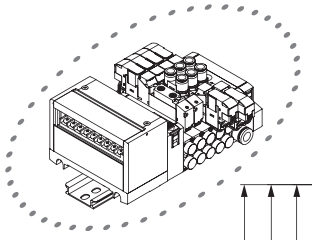
MEMO

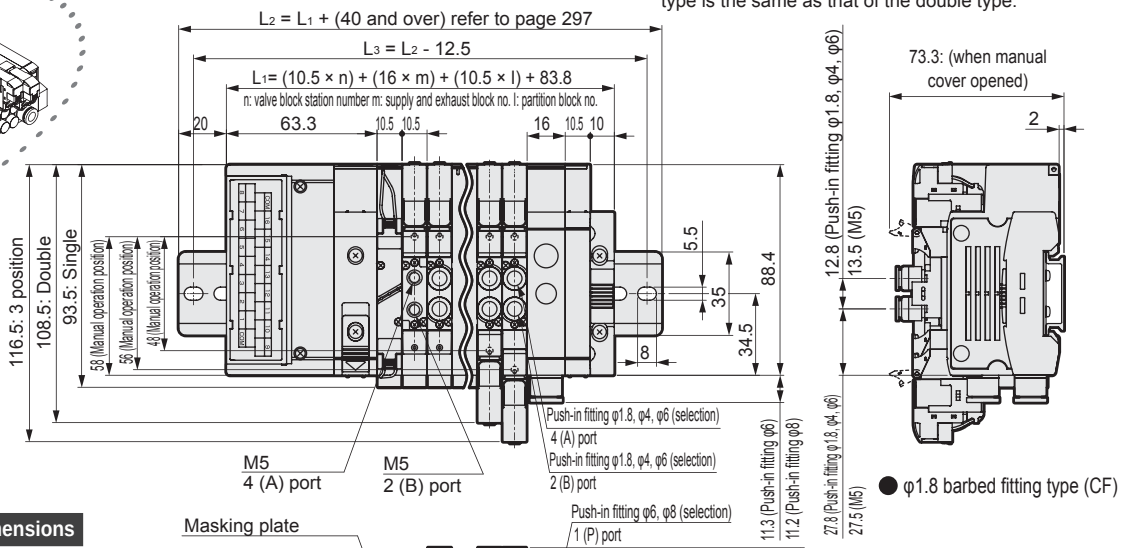
Dimensions CAD

MN4GA1

● Common terminal block (M3 thread) Left side (T10)

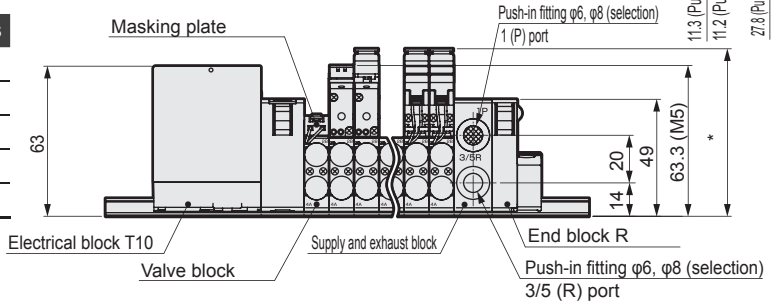
Note 1: There are push tightening specifications (T11)
The dimensions are the same as T10.
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

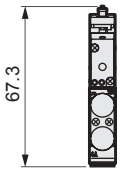




● φ1.8 barbed fitting type (CF)

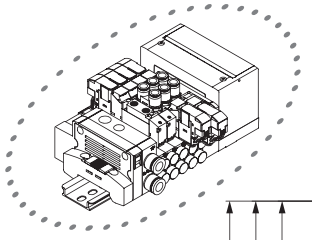
Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1

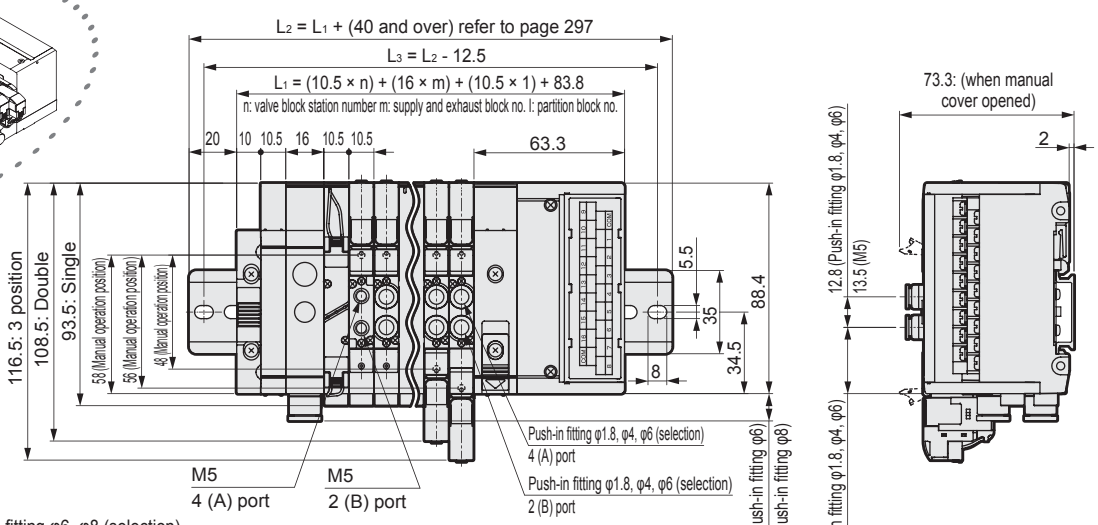


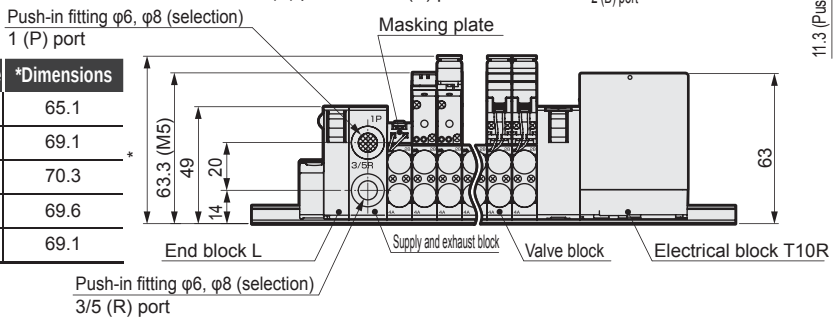


● Common terminal block (M3 thread) Right side (T10R)

Note 1: There are push tightening specifications (T11R).
The dimensions are the same as T10R.
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.







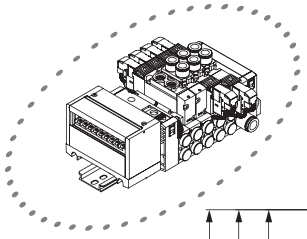
Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1

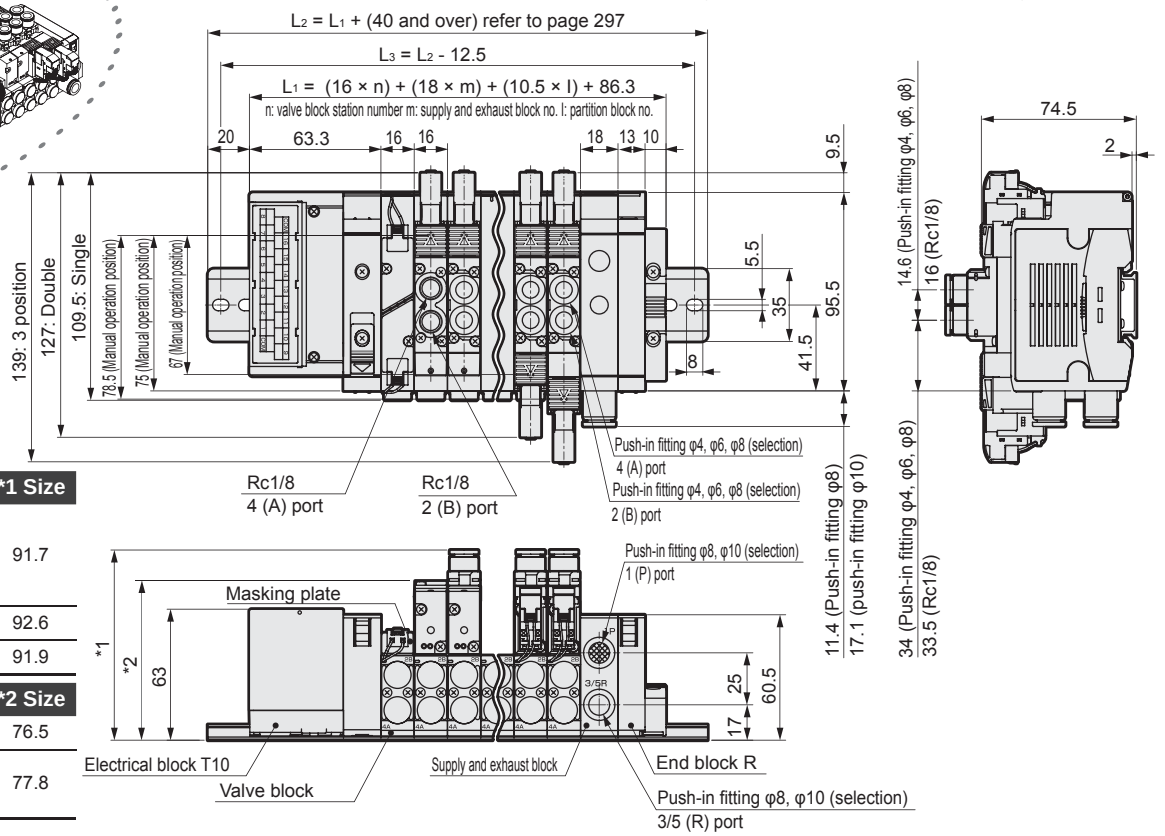
Dimensions

MN4GA2

● Common terminal block (M3 thread) Left side (T10)

Note 1: There are push tightening specifications (T11)
The dimensions are the same as T10.
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.



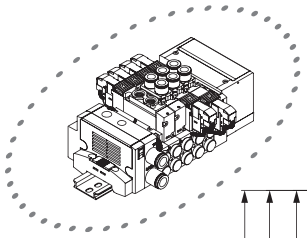


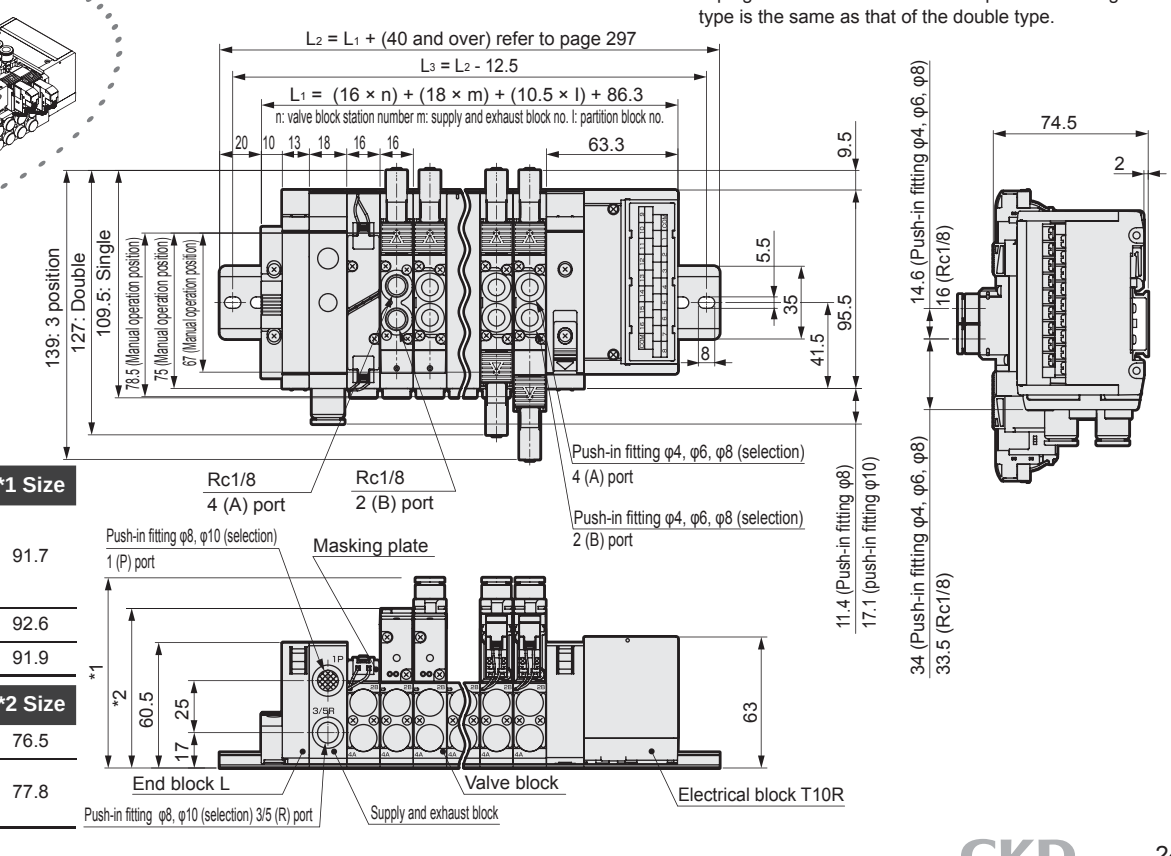
Push-in fitting size	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

Female thread size	*2 Size
Rc1/8	76.5
1/8 NPT	77.8
G 1/ 8	

● Common terminal block (M3 thread) Right side (T10R)

Note 1: There are push tightening specifications (T11R).
The dimensions are the same as T10R.
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.





Push-in fitting	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

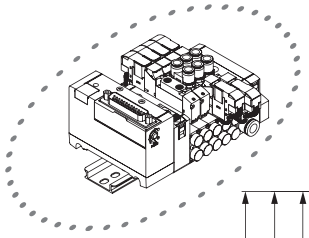
Female thread size	*2 Size
Rc1/8	76.5
1/8NPT	77.8
G 1/ 8	

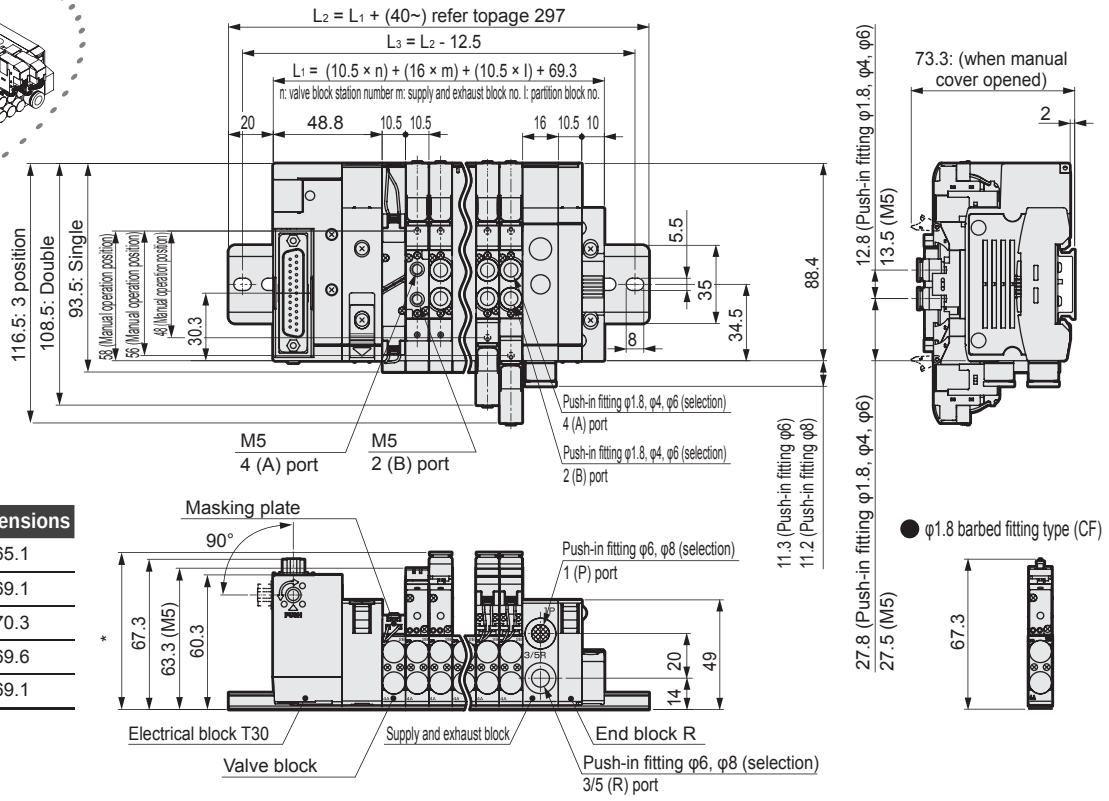
Dimensions CAD

MN4GA1

● D-sub connector left side (T30)

Note: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

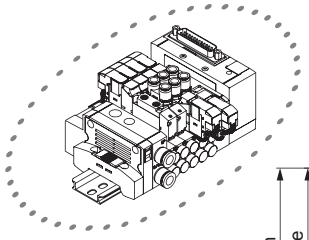


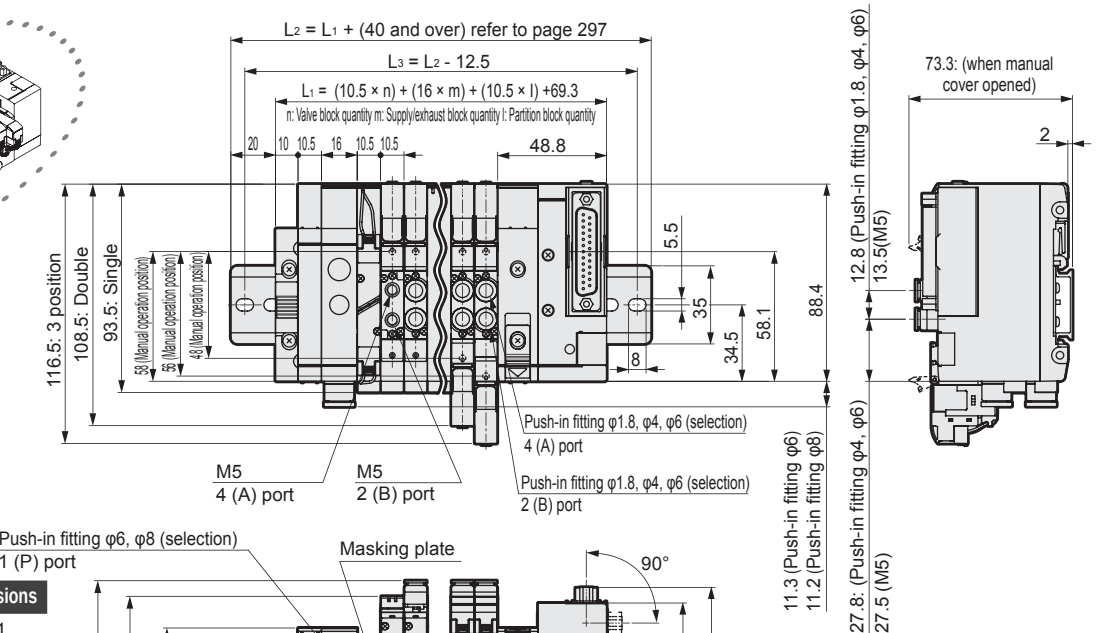


Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1

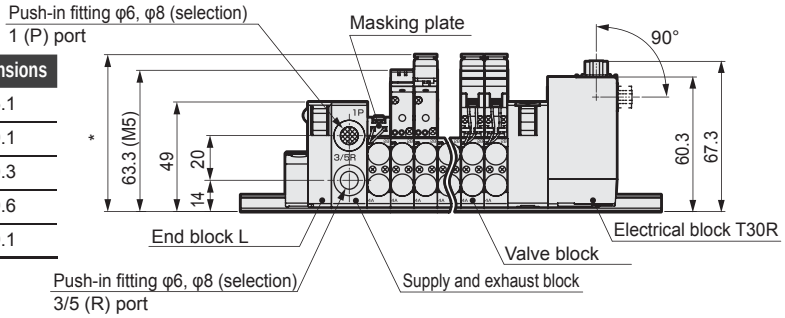
● φ1.8 barbed fitting type (CF)

● D-sub connector right side (T30R)





Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1

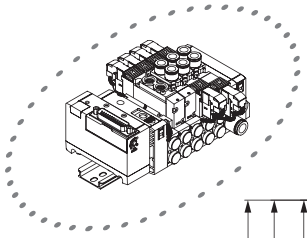


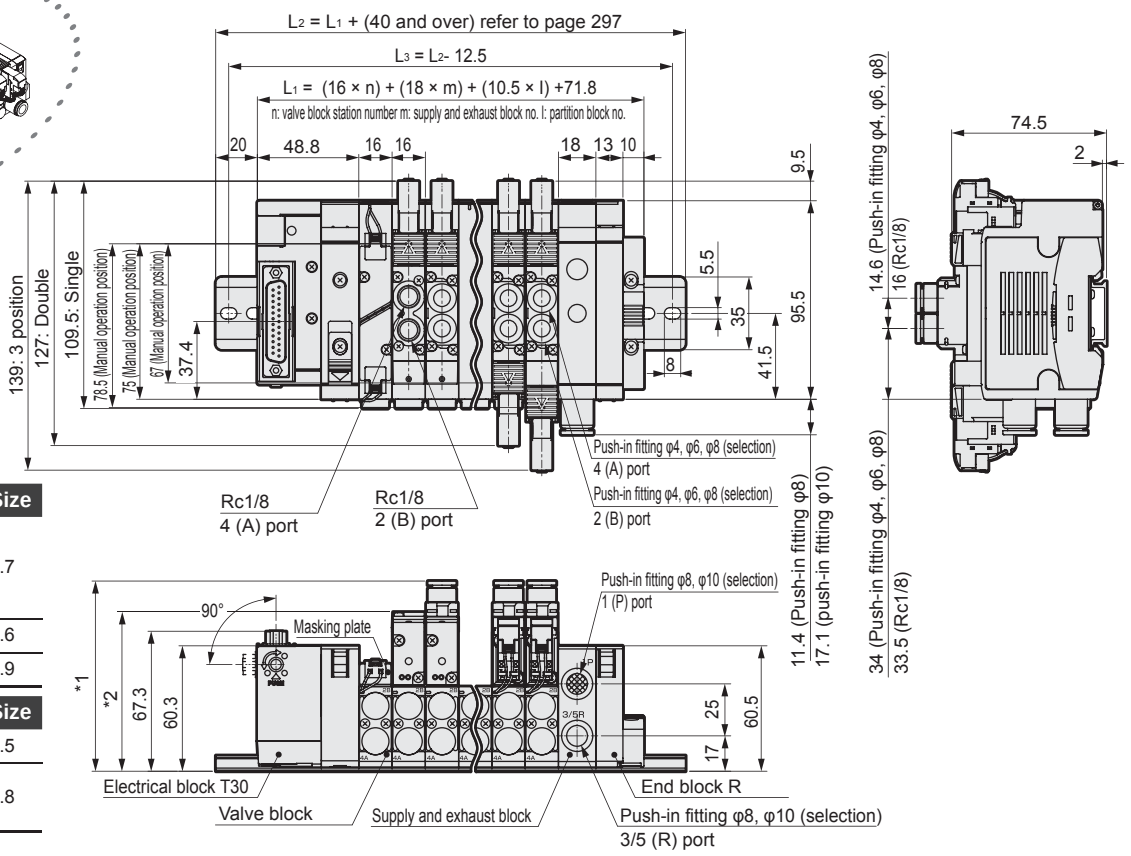
Dimensions CAD

MN4GA2

● D-sub connector left side (T30)

Note: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

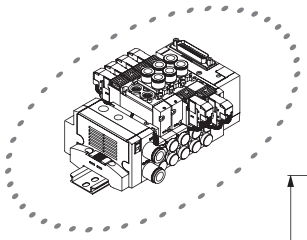


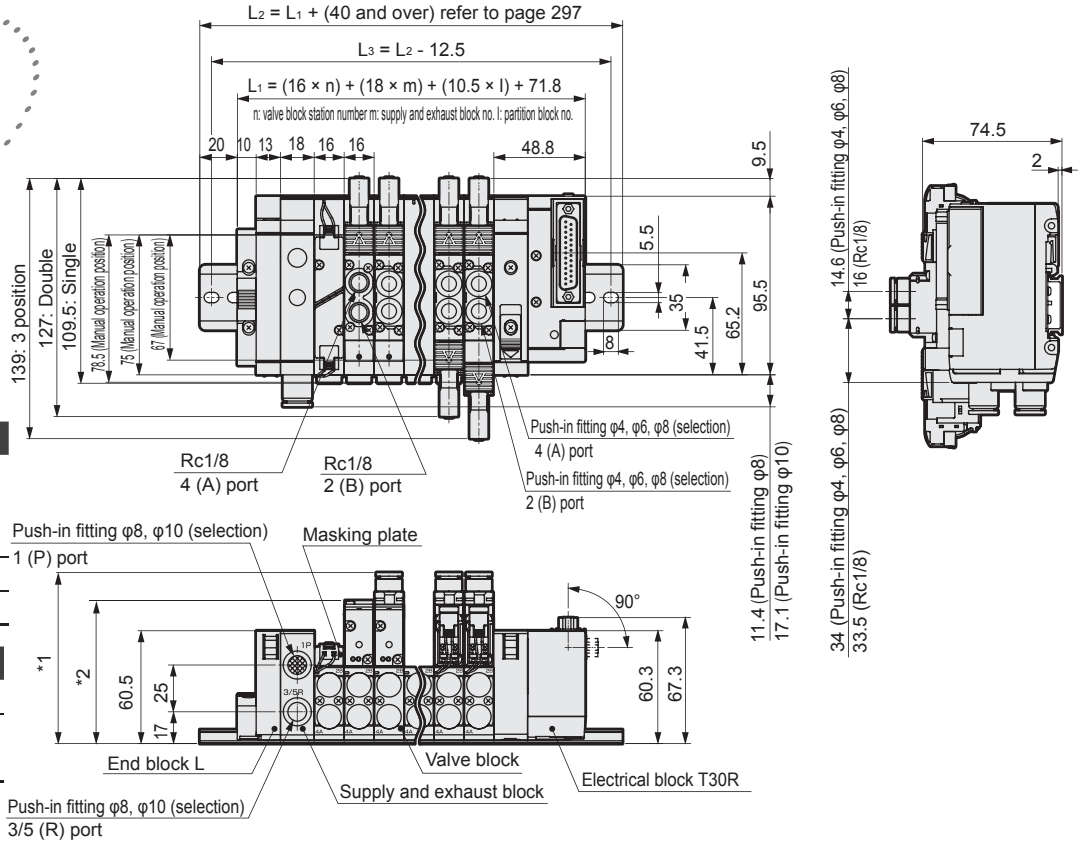


Push-in fitting size	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

Female thread size	*2 Size
Rc1/8	76.5
1/8 NPT	77.8
G1/8	

● D-sub connector right side (T30R)





Push-in fitting size	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

Female thread size	*2 Size
Rc1/8	76.5
1/8 NPT	77.8
G1/8	

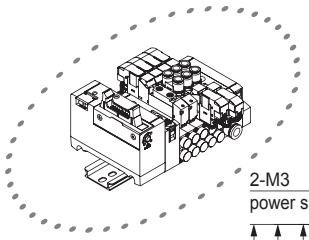
Dimensions CAD

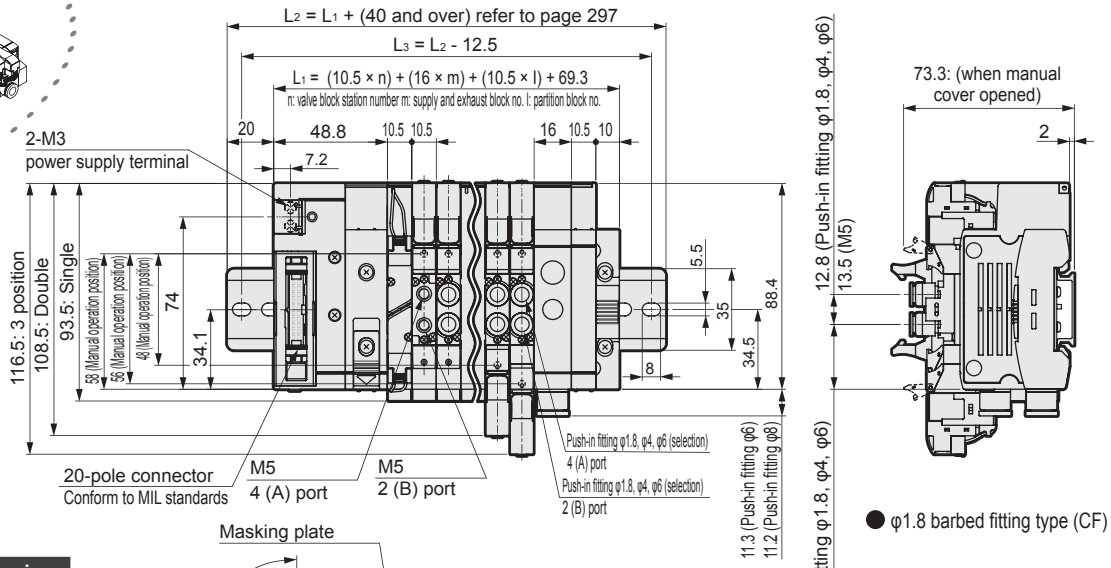
MN4GA1

● Flat cable connector left side (T50)
With power supply terminal

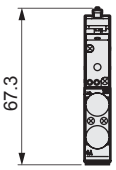
Note 1: T51, T52, and T53 flat cable connectors are also available. The dimensions are the same as T50.

Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

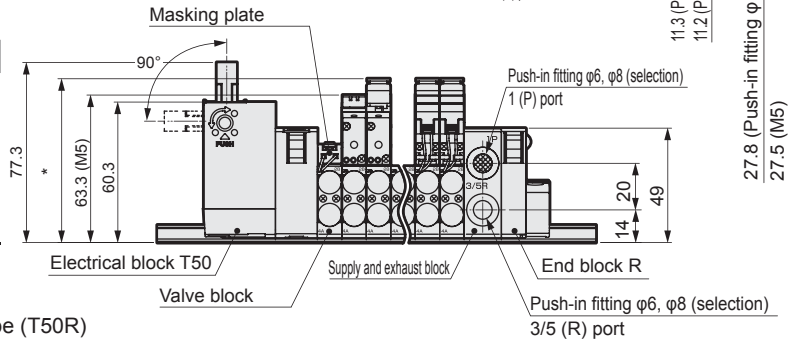




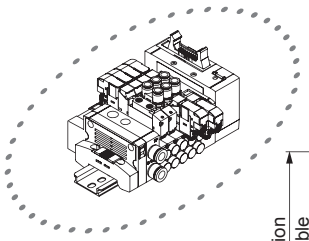
● φ1.8 barbed fitting type (CF)

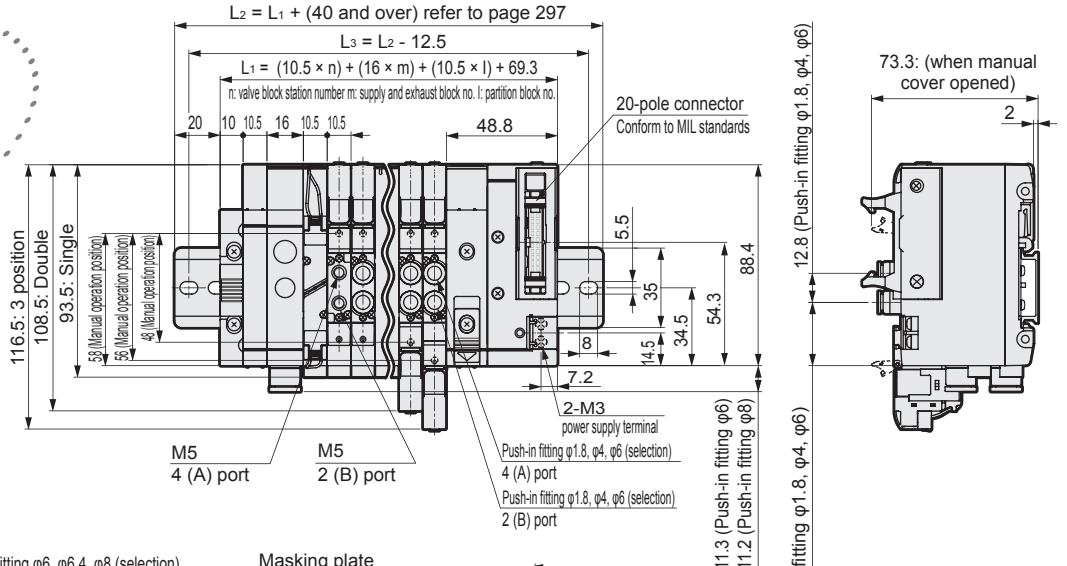


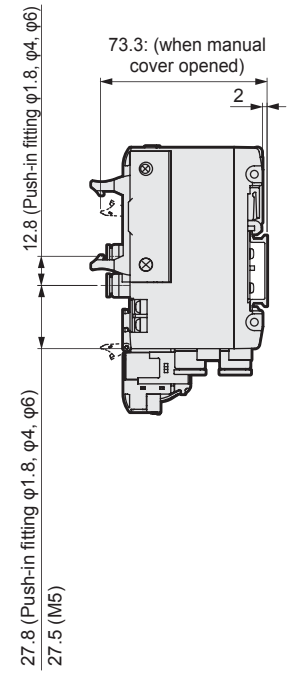
Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1



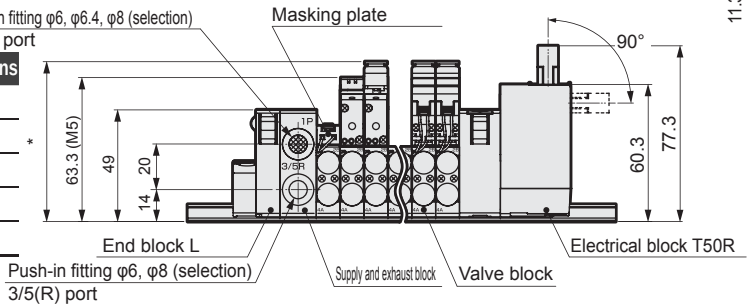
● Flat cable connector right type (T50R)
power supply terminal







Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1

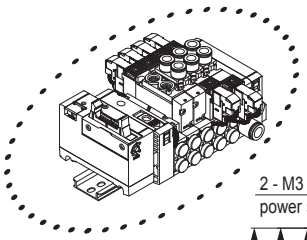


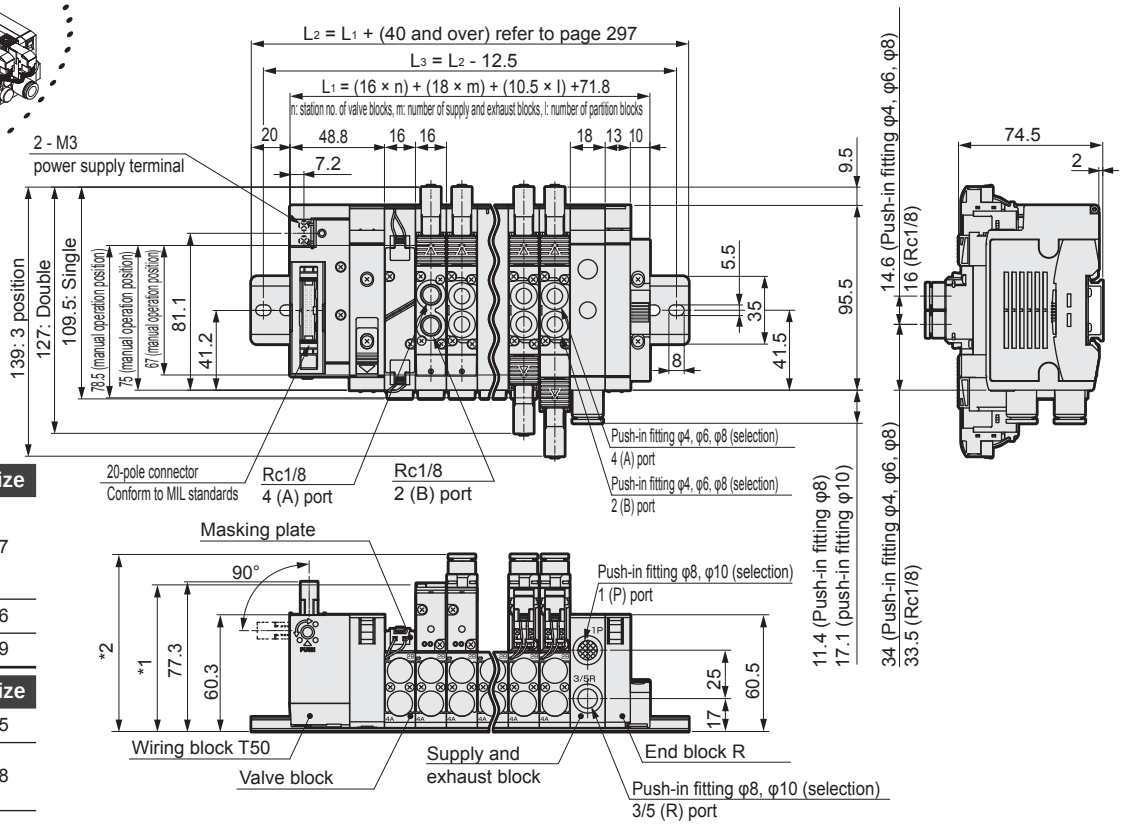
Dimensions

MN4GA2

● Flat cable connector left side (T50)
With power supply terminal

Note 1: T51, T52, and T53 flat cable connectors are also available. The dimensions are the same as T50.
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

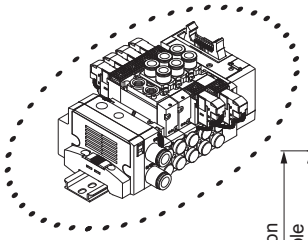


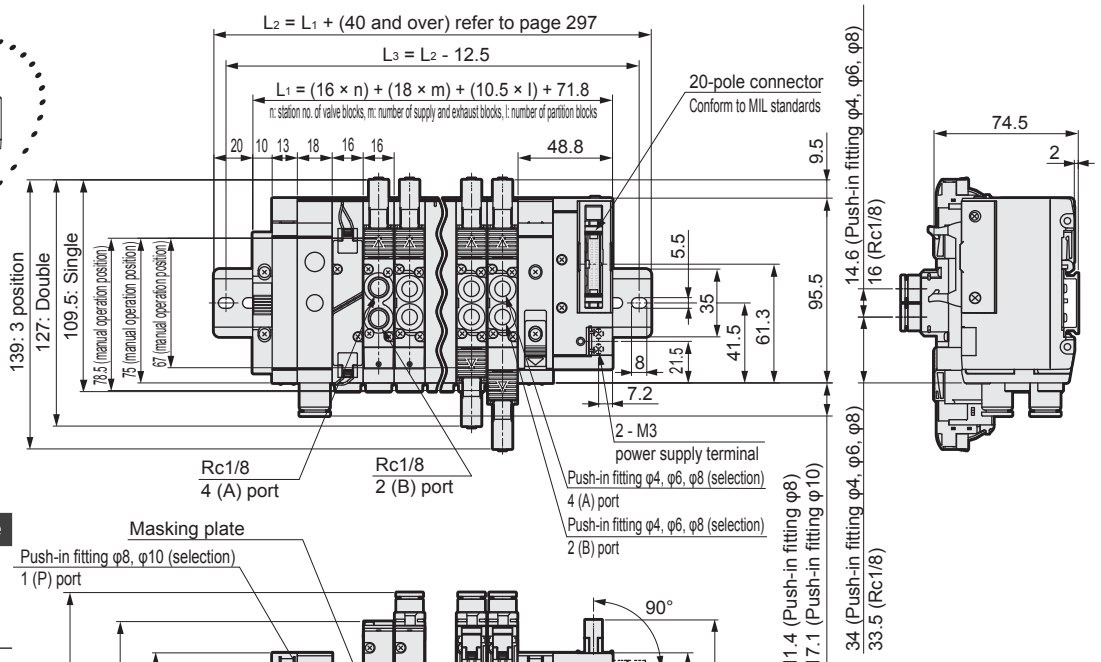


Push-in fitting size	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

Female thread size	*2 Size
Rc1/8	76.5
1/8NPT	77.8
G1/8	

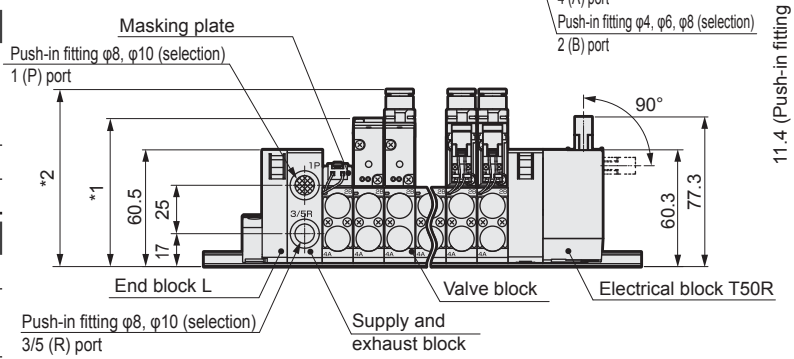
● Flat cable connector right type (T50R)
With power supply terminal





Push-in fitting size	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

Female thread size	*2 Size
Rc1/8	76.5
1/8 NPT	77.8
G1/8	

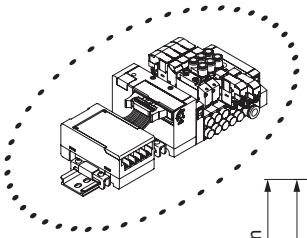


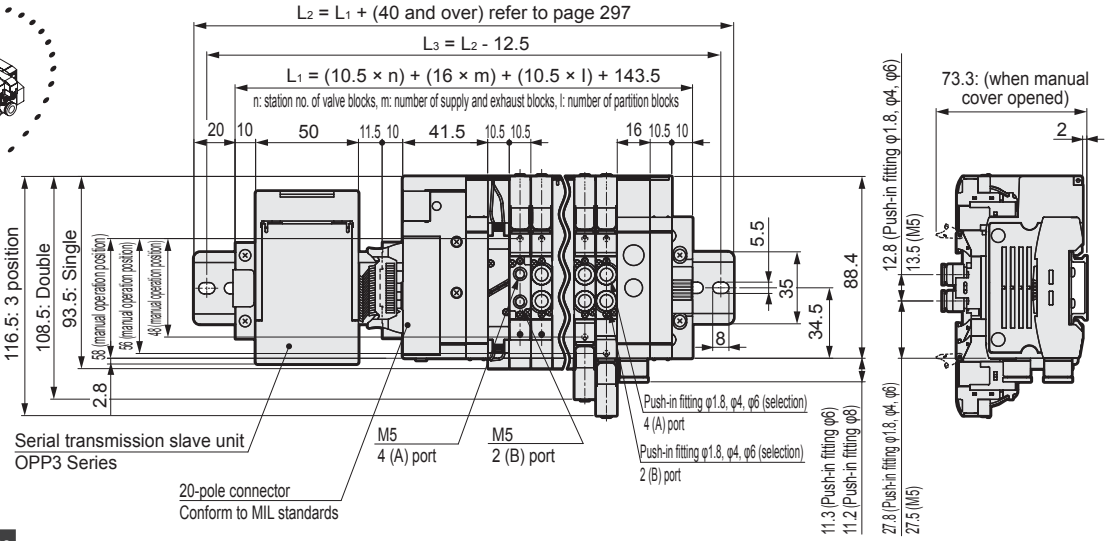
Dimensions CAD

MN4GA1

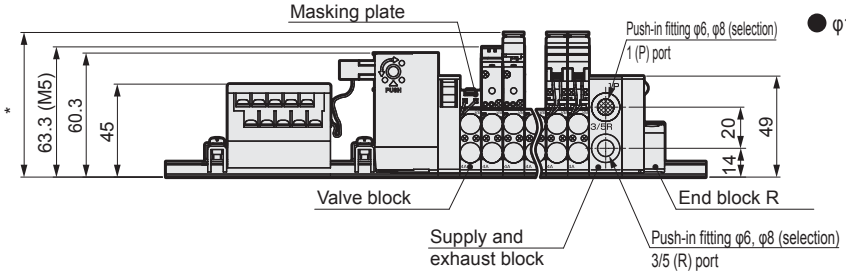
● Serial transmission (T6*)

Note: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

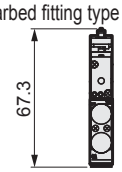




Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1

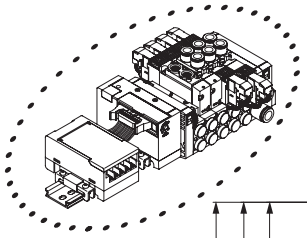


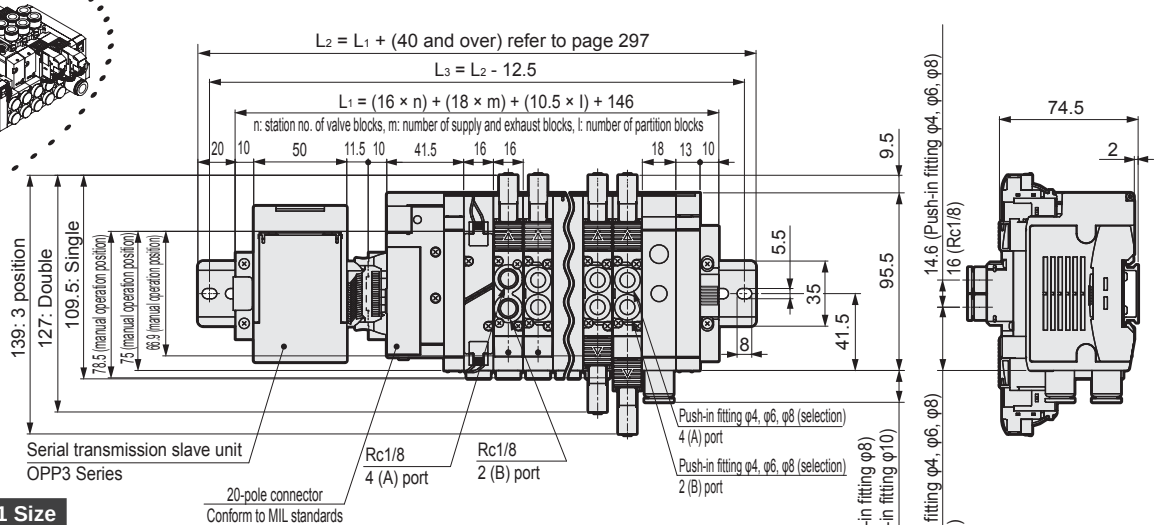
● φ1.8 barbed fitting type (CF)



MN4GA2

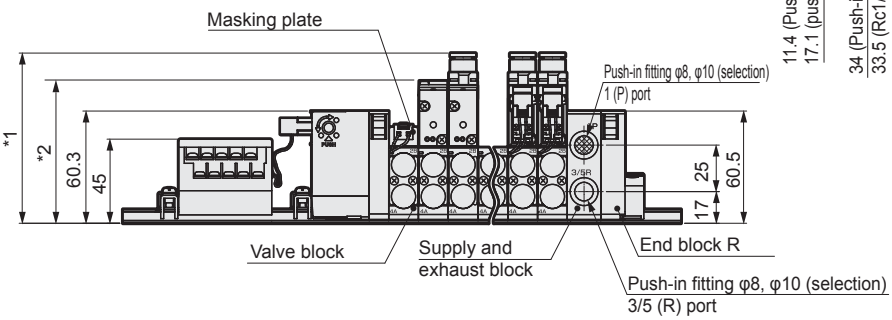
● Serial transmission (T6*)





Push-in fitting size	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

Female thread size	*2 Size
Rc1/8	76.5
1/8 NPT	77.8
G1/8	

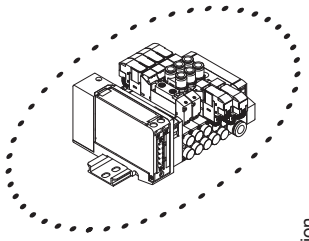


Dimensions

MN4GA1

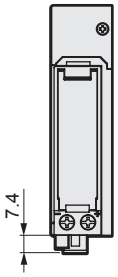
● Thin serial transmission (T7*)

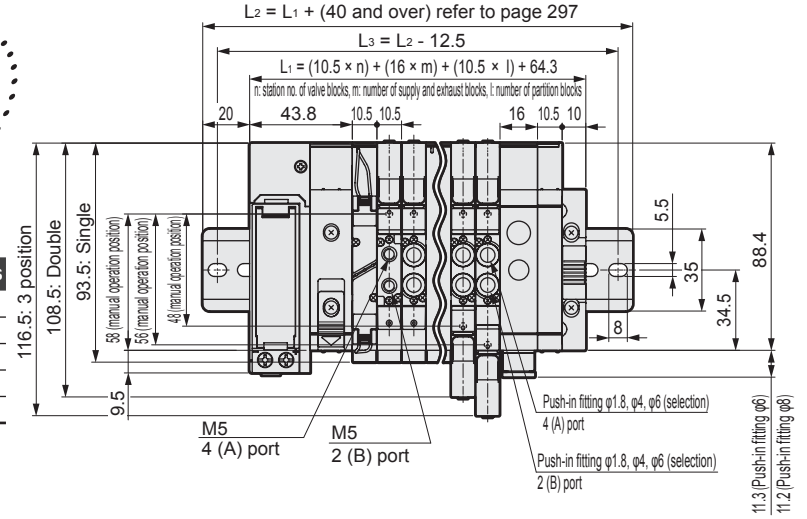
Note: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

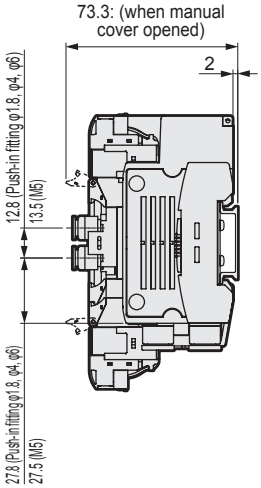


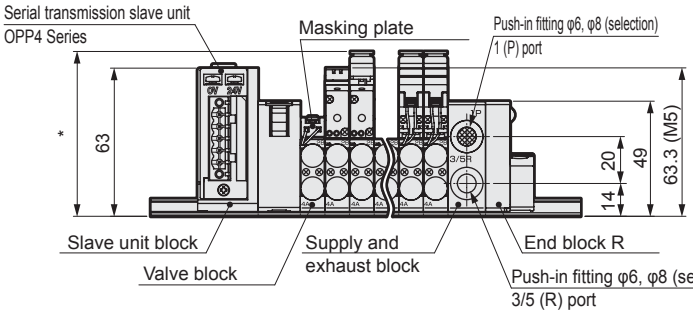
Push-in fitting size	*Dimensions
φ1.8	65.1
φ4	69.1
φ6	70.3
φ1/8 inch	69.6
φ5/32 inch	69.1

With T7S*1

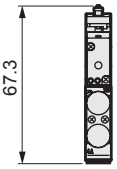






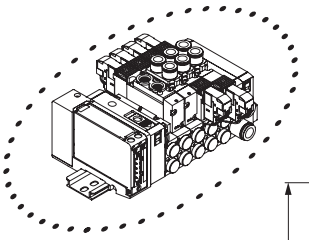


● φ1.8 barbed fitting type (CF)



MN4GA2

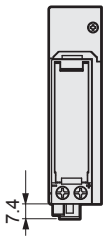
● Thin serial transmission (T7*)

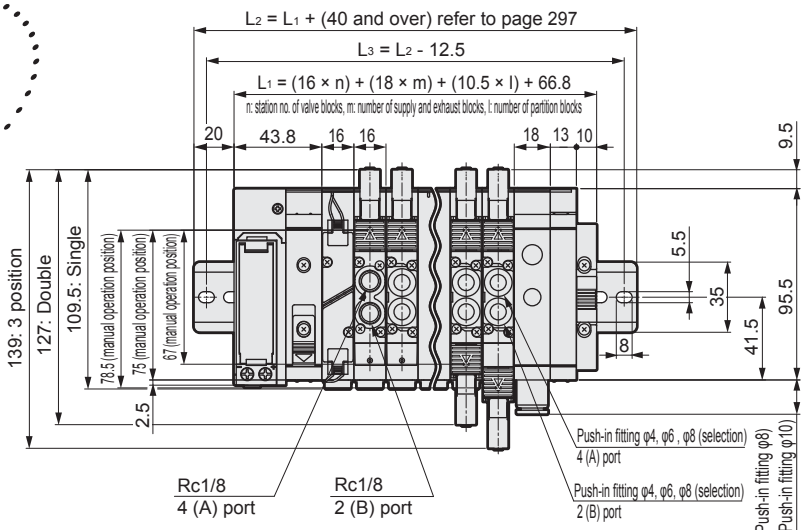


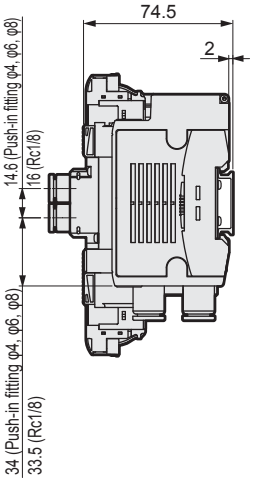
Push-in fitting size	*1 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

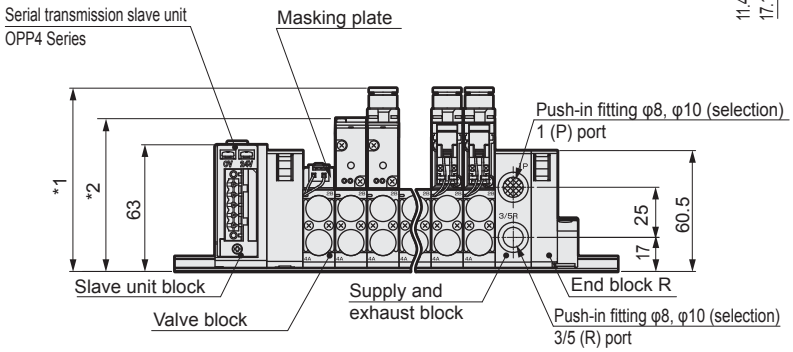
Female thread size	*2 Size
Rc1/8	76.5
1/8 NPT	77.8
G1/8	

With T7S*1









MN4GA1/2-T8* Series

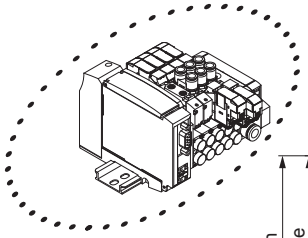
Reduced wiring manifold; body piping

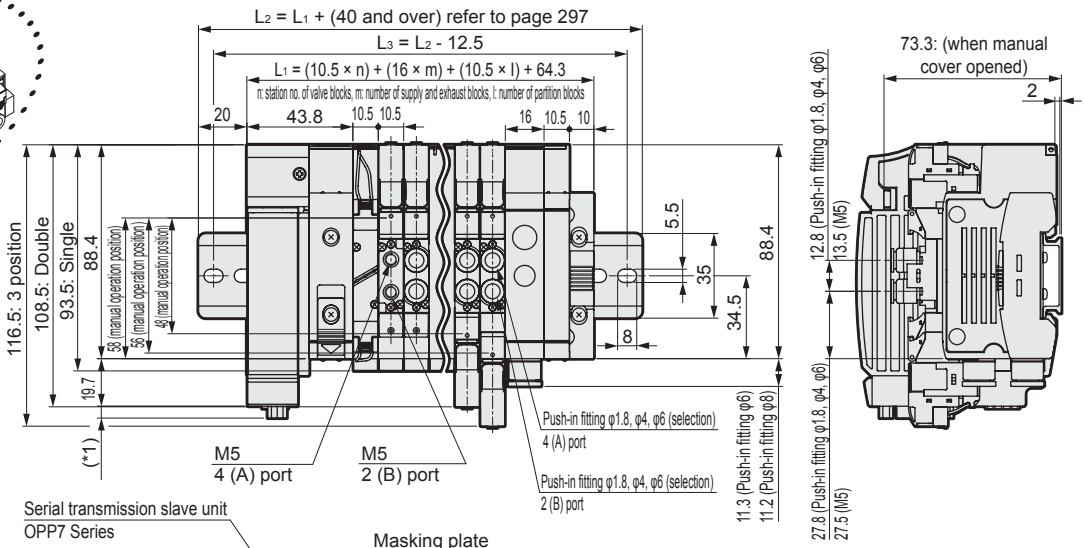
Dimensions

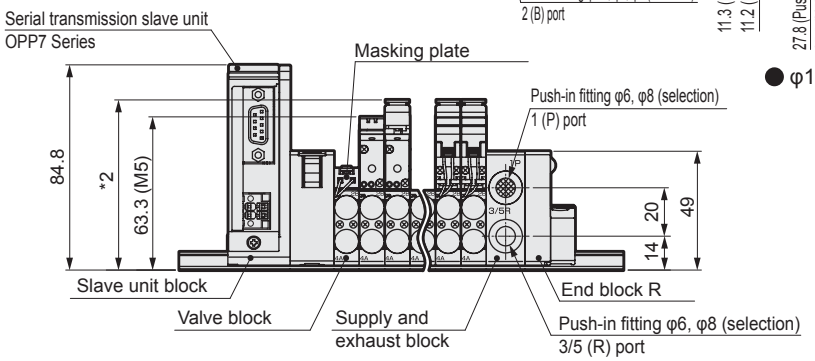
MN4GA1

● Thin serial transmission (T8*)

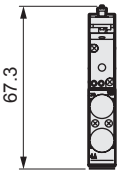
Note: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.







● φ1.8 barbed fitting type (CF)

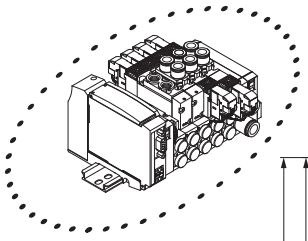


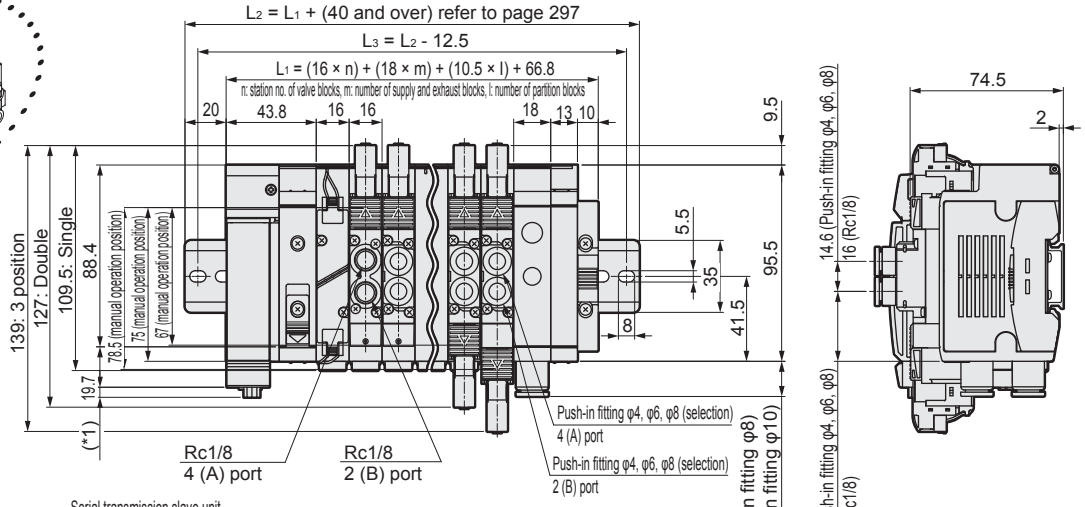
Serial transmission	*1 Size
T8G*	1.0
T8P*	4.9
T8E*	3.0

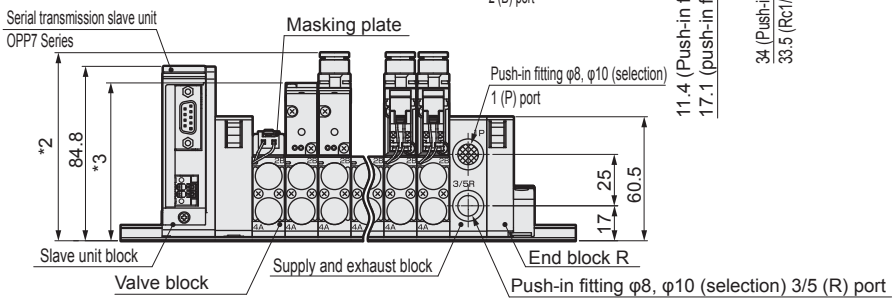
Female thread size	*2 Size
Rc1/8	76.5
1/8 NPT	77.8
G1/8	

MN4GA2

●Serial transmission (T8*)







Serial transmission	*1 Size
T8G*	1.0
T8P*	4.9
T8E*	3.0

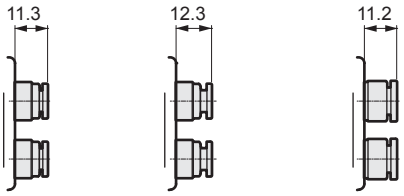
Push-in fitting size	*2 Size
φ4	91.7
φ6	
φ8	
φ1/4 inch	92.6
φ5/16 inch	91.9

Female thread size	*3 Size
Rc1/8	76.5
1/8 NPT	77.8
G1/8	

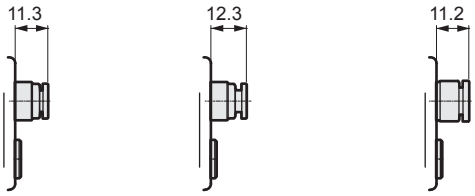
Dimensions

MN4G1 Supply/exhaust block

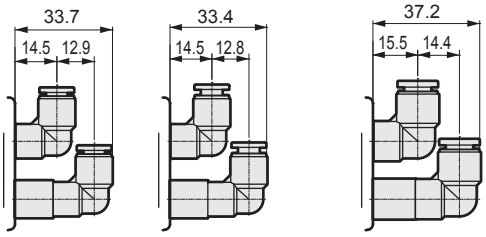
● Fitting straight
● φ6 (6) ● φ6.4 (6N) ● φ8 (8)



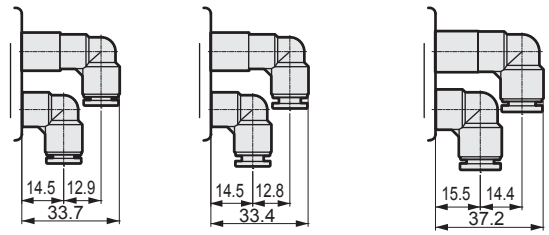
● Fitting straight, single plug
● φ6 (6X) ● φ6.4 (6NX) ● φ8 (8X)



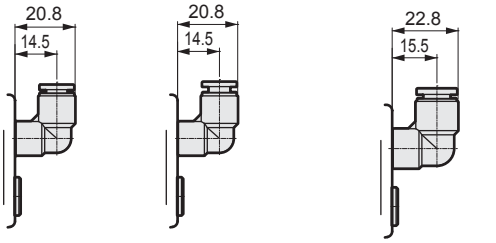
● Fitting L type (upward)
● φ6 (6L) ● φ6.4 (6LN) ● φ8 (8L)



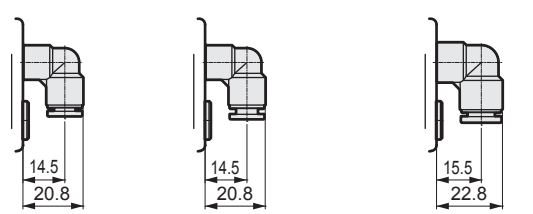
● Fitting L type (downward)
● φ6 (6D) ● φ6.4 (6DN) ● φ8 (8D)



● Fitting L type (upward), single plug
● φ6 (6LX) ● φ6.4 (6LXN) ● φ8 (8LX)

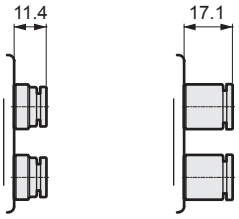


● Fitting L type (downward), single plug
● φ6 (6DX) ● φ6.4 (6DXN) ● φ8 (8DX)

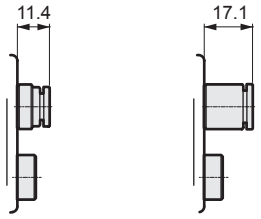


MN4G2 Supply/exhaust block

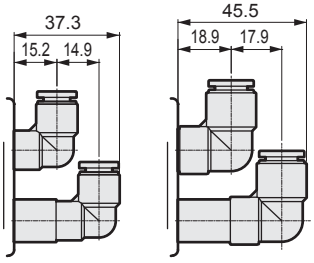
● Fitting straight
● φ8 (8) ● φ10 (10)



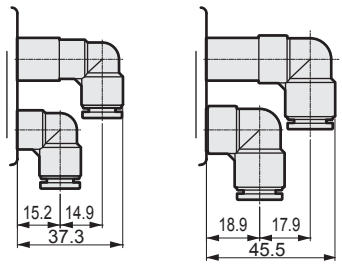
● Fitting straight, single plug
● φ8 (8X) ● φ10 (10X)



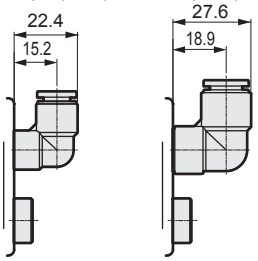
● Fitting L type (upward)
● φ8 (8L) ● φ10 (10L)



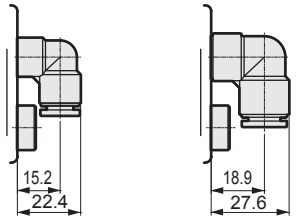
● Fitting L type (downward)
● φ8 (8D) ● φ10 (10D)

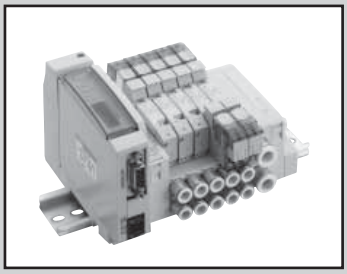


● Fitting L type (upward), single plug
● φ8 (8LX) ● φ10 (10LX)



● Fitting L type (downward), single plug
● φ8 (8DX) ● φ10 (10DX)





Reduced wiring block manifold
Base piping

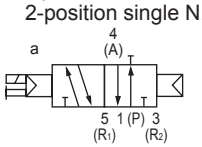
MN4GB1/2-T* Series

● Applicable cylinder bore size: φ20 to φ80

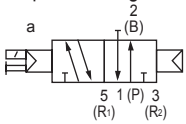
RoHS CAD

JIS symbol

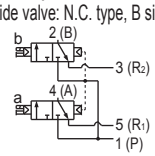
● 3 port valve
2-position single N.C. type



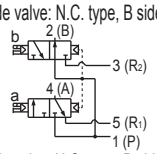
2-position single N.O. type



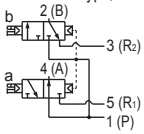
● Dual 3 port valve integrated type
(A side valve: N.C. type, B side valve: N.C. type)



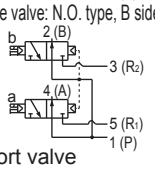
(A side valve: N.C. type, B side valve: N.O. type)



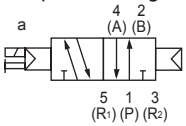
(A side valve: N.O. type, B side valve: N.C. type)



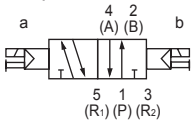
(A side valve: N.O. type, B side valve: N.O. type)



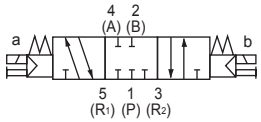
● 5 port valve
2-position single



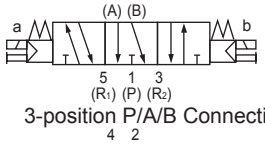
2-position double



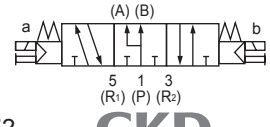
3-position
all ports closed



3-position A/B/R connection



3-position P/A/B Connection



Manifold common specifications

Descriptions	
Manifold type	Block manifold
Mounting method	DIN rail mount type
Supply and exhaust method	Common supply/common exhaust (malfunction prevention valve integrated)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve integrated)
Piping direction	Base part lateral direction
Valve type and operation	Pilot operated type soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7
Min. working pressure MPa	0.2 Note 3
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual operating device	Non-locking/locking common type (standard)
Lubrication Note 1	Not required
Degree of protection Note 2	Dust proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Containing corrosive gas is not permissible

Electrical specification

Descriptions				
Rated voltage		T1*, T30*, T5*		T6*, T8*
		24 VDC	12 VDC	24 VDC
Voltage fluctuation range (Note 4)		±10%		+10%, - 5%
Holding current A	Standard	0.017	0.034	0.017
	low heat/ With energy-saving circuit	0.005	0.010	0.005
Power consumption W	Standard	0.4		
	low heat/ With energy-saving circuit	0.1		
Thermal class		B		
Surge suppressor (Note 5)		Zener diode		
Indicator		LED		

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated. Excessive or intermittent lubrication results in unstable operation.
Note 2 The degree of protection is dust proof. The unit is not water proof. Avoid water drops or oil, etc. during use.
Note 3 The working pressure range is 0 to 0.7 MPa when the external pilot (option symbol: K) is selected. Set the external pilot pressure between 0.2 to 0.7 MPa.
Note 4 Please note the voltage fluctuation range since the T6* and T8* (Serial transmission type) have a voltage drop due to the internal circuit.
Note 5 If you select the low heat energy-saving circuit or surgeless, it will become a diode.

Individual specifications

Descriptions			MN3GB1/MN4GB1									
			T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station no.		Standard wiring	16 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	8/16 stations	8/16 stations	16/24 stations
		Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations	8/16 stations
Maximum solenoid number			16 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points	16/32 points
Port size	Mini fitting	A/B port	Barbed fitting φ1.8 Push-in fitting φ1.8, φ4, φ6									
		P/R port	Push-in fitting φ6, φ8									
	Inch fitting	A/B port	Push-in fitting φ1/8 inch, φ5/32 inch									
		P/R port	Push-in fitting φ1/4 inch, φ5/16 inch									

・Refer to page 256 for weight.

Descriptions			MN3GB2/MN4GB2									
			T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station no.		Standard wiring	16 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	8/16 stations	8/16 stations	16/20 stations
		Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations	8/16 stations
Maximum solenoid number			16 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points	16/32 points
Port size	Milli fitting	A/B port	Push-in fitting φ4, φ6, φ8									
		P/R port	Push-in fitting φ8, φ10									
	Inch fitting	A/B port	Push-in fittingφ1/4 inch, φ5/16 inch 1/8NPT									
		P/R port	Push-in fitting φ5/16 inch, φ3/8 inch									

・Refer to page 256 for weight.

Flow characteristics

Model no.	Valve Position		P→A/B		A/B→R1/R2	
			C (dm^3/(s·bar))	b	C (dm^3/(s·bar))	b
MN3GB1 MN4GB1	Dual 3 port valve integrated type		0.86	0.35	1.0 (0.66)	0.15 (0.25)
	2-position		1.0	0.30	1.1 (0.72)	0.11 (0.26)
	3-position	All ports closed	0.96	0.32	1.0 -	0.14 -
		ABR connection	0.96	0.29	1.2 (0.71)	0.11 (0.30)
		PAB connection	1.1	0.31	1.0 -	0.15 -
MN3GB2 MN4GB2	Dual 3 port valve integrated type		1.7	0.42	2.2 (1.6)	0.15 (0.19)
	2-position		2.4	0.35	2.5 (1.7)	0.19 (0.19)
	3-position	All ports closed	2.2	0.38	2.3 -	0.17 -
		ABR connection	2.2	0.38	2.5 (1.7)	0.18 (0.20)
		PAB connection	2.3	0.29	2.3 -	0.15 -

Note 1: Effective sectional area S and sonic conductance C are converted as S ≈ 5.0 × C.
Note 2: Values in ( ) apply when a malfunction prevention valve is attached.

Reduced wiring specifications

Descriptions	T10	T11	T30	T50	T51	T52	T53
Type	Common terminal block M3 thread type	Common terminal block push tightening system	D sub-connector	20 pin flat cable connector with power supply terminal	20 pin flat cable connector without power supply terminal	10 pin flat cable connector without power supply terminal	26 pin flat cable connector without power supply terminal
Connector	-	-	D sub-connector 25 pin	MIL−C−83503 standards conformed pressure welding socket 20 pin	MIL-C-83503 standards conformed pressure welding socket 20 pin	MIL-C-83503 standards conformed pressure welding socket 10 pin	MIL-C-83503 standards conformed pressure welding socket 26 pin

Serial transmission slave unit specifications (refer to page 611 for applicable PLC table)

Descriptions		T6G1	T6C0*1	T6C1*1	T6A0*2	T6A1*2	T6J0*2	T6J1*2	T6E0	T6E1
Network name		CC-Link ver1.10	CompoBus/S		UNIWIRE SYSTEM		UNIWIRE H SYSTEM		S-LINK	
Power supply voltage	Unit side	24 VDC ±10%			24 VDC +10%, -5% Power supply terminal common					
	Valve side	24 VDC +10%, -5%								
Current consumption	Unit side	100mA or less (when all output points are ON)			100mA or less (when all output points are ON) Load current is not included					
	Valve side	15mA or less (when all output points are OFF)								
Output points		16 points	8 points	16 points	8 points	16 points	8 points	16 points	8 points	16 points
Occupied number		1 station	1 node address (8 point mode)	2 node address (8 point mode)	Output 8 points	Output 16 points	Output 8 points	Output 16 points	FAN-in : 3*3	FAN-in : 3*3
Operation display		LED (power supply and communication state)								
Output type		NPN								

Descriptions		T7C0*4	T7C1*4	T7E0	T7E1	T7G1	T7L1*5	T7D1	T7S1	T7SP1
Network name		CompoBus/S		S-LINK		CC-Link ver1.10	SAVE NET	Device Net *6, *7	CompoNet	
Power voltage	Unit side	24 VDC ±10%		24 VDC +10%, -5% Power supply terminal common						
	Valve side	24 VDC +10%, -5%								
	Communication side	-		-		-	-	11 VDC to 25 VDC *8	14.0 VDC to 26.4 VDC	
Current consumption	Unit side	50 mA or less (when all output points are ON)		90 mA or less (when all output points are ON) Load current is not included		110 mA or less (when all output points are ON) Load current is not included			40mA or less (when all output points are ON) Load current is not included	
	Valve side	15 mA or less (when all output points are OFF)								
	Communication side	-		-		-	-	50mA or less	65mA or less (all points ON: 24 VDC) 95mA or less (all points ON: 24 VDC)	
Output points		8 points	16 points	8 points	16 points	16 points	16 points	16 points	16 points	
Occupied number		1 node address (8 point mode)	2 node address (8 point mode)	FAN-in : 3 *3	FAN-in : 3 *3	1 station	1 station	2 byte	Word slave node (16 point)	
Operating indication		LED (power supply and communication state)								
Output type		NPN								PNP

Descriptions		T8G1 / T8G2	T8GP1 / T8GP2	T8P1 / T8P2	T8PP1 / T8PP2	T8EC1 / T8EC2	T8ECP1 / T8ECP2	T8EN1 / T8EN2	T8ENP1 / T8ENP2
Network name		CC-Link ver1.10		PROFIBUS-DP (V0)		EtherCAT		EtherNet/IP	
Power supply voltage	Unit side	24 VDC ± 10%							
	Valve side	24 VDC + 10%, -5%							
Current consumption	Unit side	60 mA or less (when all output points are ON)		60 mA or less (when all output points are ON)		110 mA or less (when all output points are ON)		120 mA or less (when all output points are ON)	
	Valve side	T8*1: 15mA or less T8*2: 20mA or less (when all output points are ON) Load current is not included							
Output points		T8*1: 16 points T8*2: 32 points							
Occupied number		1 station							
Operation display		LED (power supply and communication state)							
Output type		NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output

*1 Long-distance communication mode is not supported.
*2 The number of transmission points of 128 points and the transmission distance of 200 m are supported. Contact CKD for other specifications.
*3 FAN-in indicates the capacity of the input from the D-G line. It is necessary to calculate the number of units to be connected.
*4 The long-distance communication mode is available.
*5 Compatible with a transmission bit rate of 128 bits and the transmission method of semi-duplicated communication. Contact CKD for other specifications.
*6 Compatible with DeviceNet compliant networks (DLNK, etc.) as well.
*7 Contact CKD for EDS file. EDS file: A file containing text for parameters for communication with masters of each company.

MN4GA1/2-T* Series

Reduced wiring block manifold; base piping

How to order

● Manifold model no.

MN4GB1 1 0 R - C6 - T30 W H - 10 - 3

● 3 port manifold model no.

MN3GB1 1 0 R - C6 - T30 W H - 10 - 3

● Discrete valve block with solenoid valve

N4GB1 1 0 R - C6 - A2N *1 H — 3

● Discrete 3 port valve block with solenoid valve

N3GB1 1 0 R - C6 - A2N *1 H — 3

● Discrete solenoid valve

4GB1 1 9 R - 00 - A2N H — 3

● Discrete 3 port solenoid valve

3GB1 1 9 R - 00 - A2N H — 3

A Model no.
B Valve Position
C Port size
Note 1
Note 2
Note 3
D Reduced wiring
E Terminal and connector pin array
F Option
G Station no.
H Voltage

Symbol	Descriptions		A Model No. Manifold: Dual 3 port valve integrated type MN3GB1	MN3GB2	Manifold: 5 port valve MN4GB1	MN4GB2	Discrete valve block with solenoid valve/discrete solenoid valve (N) 3GB1	(N)3GB2	(N)4GB1	(N) 4GB2
B Valve Position										
1	2-position single				●	●			●	●
2	2-position double				●	●			●	●
3	3-position all ports closed				●	●			●	●
4	3-position ABR connection				●	●			●	●
5	3-position PAB connection				●	●			●	●
66	Dual 3 port valve integrated type Note 4, 5	A side valve: Normally closed B side valve: Normally closed	●	●			●	●		
67		A side valve: Normally closed B side valve: Normally open	●	●			●	●		
76		A side valve: Normally open B side valve: Normally closed	●	●			●	●		
77		A side valve: Normally open B side valve: Normally open	●	●			●	●		
8	Mix manifold (In case of multiple Valve Positions)		●	●	●	●	●	●	●	●
C Port size (A/B port)										
Type	**Milli fitting/Rc thread**									
CF	φ1.8 barbed fitting (applicable tube UP-9102-**)		●		●		●		●	
C18	φ1.8 push-in fitting (applicable tube UP-9402-**)		●		●		●		●	
C4	φ4 push-in fitting		●	●	●	●	●	●	●	●
C6	φ6 push-in fitting		●	●	●	●	●	●	●	●
C8	φ8 push-in fitting			●		●		●		●
CL18	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)	Note 6	●		●		●		●	
CL4	L type φ4 push-in fitting (upward)	Note 6	●		●		●		●	
CL6	L type φ6 push-in fitting (upward)	Note 6	●	●	●	●	●	●	●	●
CL8	L type φ8 push-in fitting (upward)	Note 6		●		●		●		●
CD18	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)		●		●		●		●	
CD4	L type φ4 push-in fitting (downward)		●		●		●		●	
CD6	L type φ6 push-in fitting (downward)		●	●	●	●	●	●	●	●
CD8	L type φ8 push-in fitting (downward)			●		●		●		●
CX	Push-in fitting mix	Note 7	●	●	●	●				
Single plug specifications	A Port	B Port								
CFNC	φ1.8 barbed fitting (applicable tube UP-9102-**)	Plug			●				●	
C18NC	φ1.8 push-in fitting (applicable tube UP-9402-**)	Plug			●				●	
C4NC	φ4 push-in fitting	Plug			●	●			●	●
C6NC	φ6 push-in fitting	Plug			●	●			●	●
C8NC	φ8 push-in fitting	Plug				●				●
CFNO	Plug	φ1.8 barbed fitting (applicable tube UP-9102-**)			●				●	
C18NO	Plug	φ1.8 push-in fitting (applicable tube UP-9402-**)			●				●	
C4NO	Plug	φ4 push-in fitting			●	●			●	●
C6NO	Plug	φ6 push-in fitting			●	●			●	●
C8NO	Plug	φ8 push-in fitting				●				●
CL18NC	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)	Plug			●				●	
CL4NC	L type φ4 push-in fitting (upward)	Plug			●				●	
CL6NC	L type φ6 push-in fitting (upward)	Plug			●	●			●	●
CL8NC	L type φ8 push-in fitting (upward)	Plug				●				●
CL18NO	Plug	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)			●				●	
CL4NO	Plug	L type φ4 push-in fitting (upward)			●				●	
CL6NO	Plug	L type φ6 push-in fitting (upward)			●	●			●	●
CL8NO	Plug	L type φ8 push-in fitting (upward)				●				●
CD18NC	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)	Plug			●				●	
CD4NC	L type φ4 push-in fitting (downward)	Plug			●				●	
CD6NC	L type φ6 push-in fitting (downward)	Plug			●	●			●	●
CD8NC	L type φ8 push-in fitting (downward)	Plug				●				●
CD18NO	Plug	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)			●				●	
CD4NO	Plug	L type φ4 push-in fitting (downward)			●				●	
CD6NO	Plug	L type φ6 push-in fitting (downward)			●	●			●	●
CD8NO	Plug	L type φ8 push-in fitting (downward)				●				●
Type	**Inch fitting/Inch thread**									
C3N	φ1/8 inch push-in fitting		●		●		●		●	
C4N	φ5/32 inch push-in fitting		●		●		●		●	
C6N	φ1/4 inch push-in fitting			●		●		●		●
C8N	φ5/16 inch push-in fitting			●		●		●		●
CL3N	L type φ1/8 inch push-in fitting (upward)	Note 8	O		O		O		O	
CL4N	L type φ5/32 inch push-in fitting (upward)	Note 8	O		O		O		O	
CL6N	L type φ1/4 inch push-in fitting (upward)	Note 8		O		O		O		O
CL8N	L type φ5/16 inch push-in fitting (upward)	Note 8		O		O		O		O
CXN	Push-in fitting mix	Note 7	●	●	●	●				
Single plug specifications	A Port	B Port								
C3NCN	φ1/8 inch push-in fitting	Plug			●				●	
C4NCN	φ5/32 inch push-in fitting	Plug			●				●	
C6NCN	φ1/4 inch push-in fitting	Plug				●				●
C8NCN	φ5/16 inch push-in fitting	Plug				●				●
C3NON	Plug	φ1/8 inch push-in fitting			●				●	
C4NON	Plug	φ5/32 inch push-in fitting			●				●	
C6NON	Plug	φ1/4 inch push-in fitting				●				●
C8NON	Plug	φ5/16 inch push-in fitting				●				●
CL3NCN	L type φ1/8 inch push-in fitting (upward)	Plug			O				O	
CL4NCN	L type φ5/32 inch push-in fitting (upward)	Plug			O				O	
CL6NCN	L type φ1/4 inch push-in fitting (upward)	Plug				O				O
CL8NCN	L type φ5/16 inch push-in fitting (upward)	Plug				O				O
CL3NON	Plug	L type φ1/8 inch push-in fitting (upward)			O				O	
CL4NON	Plug	L type φ5/32 inch push-in fitting (upward)			O				O	
CL6NON	Plug	L type φ1/4 inch push-in fitting (upward)				O				O
CL8NON	Plug	L type φ5/16 inch push-in fitting (upward)				O				O
00	Discrete valve for mounting base						●	●	●	●

is not available.
O Contact CKD for price and availability.

Cautions for model No. selection

Note 1 A or B port plug specifications are available only for the 2-position single.
Designate P/R port sizes with the supply/exhaust block in manifold specifications.
Note 2 A/B port sizes do not differ for the push-in fitting L type (upward) mix (CX).
Note 3 In the case of a discrete solenoid valve, set the port size of "00".
Note 4 Select M4GB*80R when mixing with 4, 5 port valves. Select MN3GB*80R when mixing with the masking plate.
Note 5 Combination with the external pilot (K) is not available. Dimensions are the same as the respective 2-position double.
Note 6 Please select option "L" at the same time as items other than single solenoids.
Note 7 The push-in fitting cannot be mixed with the discrete valve's 4 (A) or 2 (B) port.
Note 8 Only the single solenoid are supported.

(Port size, Wiring method list)

Sym-bol	Descriptions		Ⓐ Model No. Manifold: Dual 3 port valve integrated type MN3GB1	MN3GB2	5 port valve MN4GB1	MN4GB2	Discrete valve block with solenoid valve/discrete solenoid valve (N) 3GB1	(N) 3GB2	(N) 4GB1	(N) 4GB2
Ⓔ Terminal and connector pin array										
Blank	Standard wiring	Note 9	●	●	●	●	●	●	●	●
W	Double wiring	Note 9	●	●	●	●	●	●	●	●
W1	Double wiring (With single spare wiring)	Note 9, Note 10	●	●	●	●	●	●	●	●
Ⓕ Option										
Blank	Non-locking/locking common manual override		●	●	●	●	●	●	●	●
M	Non-locking manual override		●	●	●	●	●	●	●	●
H	With malfunction prevention valve	Note 11	●	●	●	●	●	●	●	●
K	External pilot	Note 12			●	●			●	●
A	Ozone/cutting oil proof		●	●	●	●	●	●	●	●
S	Surgeless	Note 13	●	●	●	●	●	●	●	●
E	Low heat and energy saving circuit	Note 13, Note14	●	●	●	●	●	●	●	●
L	With piping adaptor		●	●	●	●	●	●	●	●
Q	Reduced wiring mall	Note 18	●	●	●	●	●	●	●	●
F	A/B port filter integrated	Note 15	●	●	●	●	●	●	●	●
Z1	Air supply spacer	Note 16	●	●	●	●				
Z2	In stop valve spacer	Note 16, Note 17	●	●	●	●				
Z3	Exhaust spacer	Note 16	●	●	●	●				
Z6	Spacer type pilot check valve	Note 16				●				
Ⓖ Station no.										
1 to 24	1 station / to / 24 Stations (The max. station no. of MN4GB2 is 20.)		●	●	●	●				
Ⓗ Voltage										
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●
Ⓓ Reduced wiring connection (light and surge suppressor provided as standard) 12/24 VDC										
T10	Common terminal block (M3 thread)	Left side specifications	●	●	●	●				
T10R		Right side specifications	●	●	●	●				
T11	Common terminal block (push tightening)	Left side specifications	●	●	●	●				
T11R		Right side specifications	●	●	●	●				
T30	D sub-connector	Left side specifications	●	●	●	●				
T30R		Right side specifications	●	●	●	●				
T50	20 pin flat cable connector (with power supply terminal)	Left side specifications	●	●	●	●				
T50R		Right side specifications	●	●	●	●				
T51	20 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T51R		Right side specifications	●	●	●	●				
T52	10 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T52R		Right side specifications	●	●	●	●				
T53	26 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T53R		Right side specifications	●	●	●	●				
Ⓓ Serial transmission (light and surge suppressor provided as standard) 24 VDC										
T6A0	UNIWIRE SYSTEM	NPN 8 points	●	●	●	●				
T6A1		NPN 16 points	●	●	●	●				
T6C0	CompoBus/S	NPN 8 points	●	●	●	●				
T6C1		NPN 16 points	●	●	●	●				
T6E0	S-LINK	NPN 8 points	●	●	●	●				
T6E1		NPN 16 points	●	●	●	●				
T6G1	CC-Link	NPN 16 points	●	●	●	●				
T6J0	UNIWIRE H SYSTEM	NPN 8 points	●	●	●	●				
T6J1		NPN 16 points	●	●	●	●				
T7C0	CompoBus/S	NPN 8 points	●	●	●	●				
T7C1		NPN 16 points	●	●	●	●				
T7D1	DeviceNet (Thin type)	NPN 16 points	●	●	●	●				
T7E0	S-LINK (Thin type)	NPN 8 points	●	●	●	●				
T7E1		NPN 16 points	●	●	●	●				
T7G1	CC-Link (Thin type)	NPN 16 points	●	●	●	●				
T7L1	SAVE NET (Thin type)	NPN 16 points	●	●	●	●				
T7S1	CompoNet (Thin type)	NPN 16 points	●	●	●	●				
T7SP1		PNP 16 points	●	●	●	●				
T8G1	CC-Link (Thin type)	NPN 16 points	●	●	●	●				
T8G2		NPN 32 points	●	●	●	●				
T8GP1		PNP 16 points	●	●	●	●				
T8GP2		PNP 32 points	●	●	●	●				
T8P1	PROFIBUS-DP (Thin type)	NPN 16 points	●	●	●	●				
T8P2		NPN 32 points	●	●	●	●				
T8PP1		PNP 16 points	●	●	●	●				
T8PP2		PNP 32 points	●	●	●	●				
T8EC1	EtherCAT (Thin type)	NPN 16 points	●	●	●	●				
T8EC2		NPN 32 points	●	●	●	●				
T8ECP1		PNP 16 points	●	●	●	●				
T8ECP2		PNP 32 points	●	●	●	●				
T8EN1	EtherNet/IP (Thin type)	NPN 16 points	●	●	●	●				
T8EN2		NPN 32 points	●	●	●	●				
T8ENP1		PNP 16 points	●	●	●	●				
T8ENP2		PNP 32 points	●	●	●	●				
A2N	Without lead wire (without socket)	with surge suppressor/light					●	●	●	●

Ozone specifications / Coolant proof specifications

Select the option "A" of Ⓕ in how to order

Clean room specifications (Catalog No. CB-033SA)

● Clean room specifications

** - Voltage - **P7***

Specification for secondary battery production (Catalog No. CC-947A)

● In order to be applicable for secondary battery manufacturing process, confine materials for air passage andsliding section

** - Voltage - **P4**

⚠ Cautions for model No. selection

Note 9 Blank····Wired based on the type of valve used.
W*·····Wired for the double solenoid regardless of the type of valve used.

Note10 Spare wiring (A type socket assembly) is attached to the cap side.
The discrete valve (A2N) comes with a holder for holding the socket assembly. Refer to page 293 for details.

Note11 3-position all ports closed and PAB connection are not provided with exhaust malfunction prevention valve (H). Refer to Page 628 for details on the check valve.

Note12 Contact CKD when using a vacuum with the external pilot (K).

Note13 In addition, the surgeless "S" and low heat energy-saving circuit "E" cannot be selected at the same time.

Note14 This is surgeless specifications.

Note15 The P port has a filter built inside as a standard.

Note16 Specify the spacer mounting location and quantity in manifold specifications.
Stacking multiple spacers is not supported.
Combination with the masking plate is not supported.
L type push-in fitting (upward) cannot be selected at the same time.
Refer to page 287 to 291 for details.

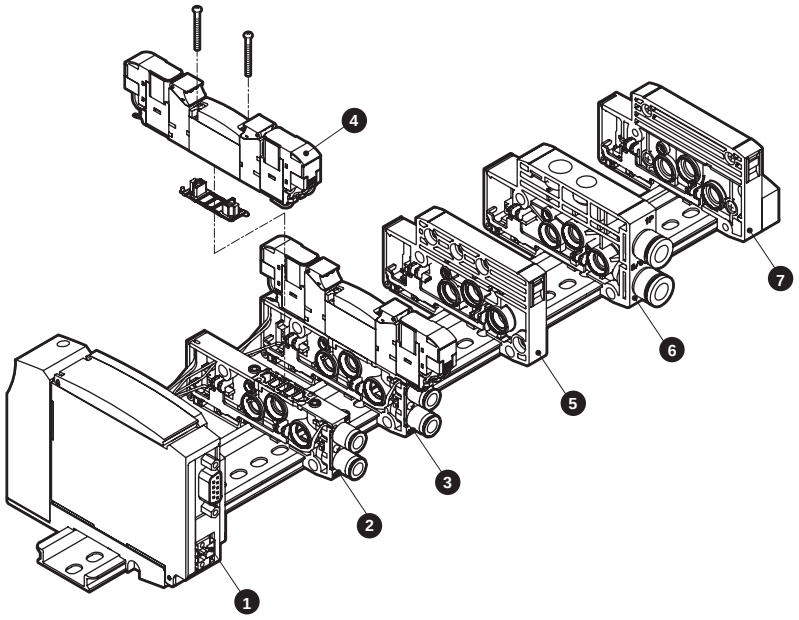
Note17 Combination with the external pilot (K) is not available.

Note18 L type push-in fitting are available only for the 2-position single.

MN4GB1/2-T* Series

Reduced wiring block manifold; base piping

Manifold components explanation and parts list



Main parts list (refer to page 276 to 294 for details)

Product No.	Component name	Model no. (example)	No.	Component name	Model no. (example)
1	Electrical block	N4G1R-T8P1	5	Partition block	N4G1R-S
2	Discrete valve block	N4GB1R-V2-C6	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GB120R-C6-A2NH-3	7	End block R	N4G1R - ER
4	Solenoid valve body	4GB129R-00-A2NH-3			

B type reduced wiring weight

4GB1 (g)

Product name	Model no.	Weight	Product name	Model no.	Weight	Product name	Model no.	Weight
Valve block with solenoid valve	N4GB110R-C6-A2N-3	69	Supply and exhaust block	N4G1R-Q-8	58	Electrical block	N4G1R-T10(R)	207
	N4GB120R-C6-A2N-3	88		N4G1R-QK-8	60		N4G1R-T30(R)	165
	N4GB1$\frac{3}{4}_{5}$0R-C6-A2N-3	89	End block	N4G1R-E*	60		N4G1R-T50(R)	167
	N3GB1660R-C6-A2N-3	88		N4G1R-EX*	60		N4G1R-T6*	295
Valve block with masking plate	N4GB1R-MP*-C6	37	Partition block	N4G1R-S	45		N4G1R-T7*	203
							N4G1R-T8*	229

4GB2 (g)

Product name	Model no.	Weight	Product name	Model no.	Weight	Product name	Model no.	Weight
Valve block with solenoid valve	N4GB210R-C8-A2N-3	130	Supply and exhaust block	N4G2R-Q-10	83	Electrical block	N4G2R-T10 (R)	223
	N4GB220R-C8-A2N-3	149		N4G2R-QK-10	85		N4G2R-T30 (R)	182
	N4GB2$\frac{3}{4}_{5}$0R-C8-A2N-3	160	End block	N4G2R-E*	84		N4G2R-T50 (R)	184
	N4GB2660R-C8-A2N-3	149		N4G2R-EX*	85		N4G2R-T6*	312
Valve block with masking plate	N4GB2R-MP*-C8	69	Partition block	N4G2R-S	60		N4G2R-T7*	204
							N4G2R-T8*	242

Parts list

Application	Parts name	Model no.
Valve 4G1	φ1.8 barbed type	4G1R-JOINT-CF
	φ1.8 straight type	4G1R-JOINT-C18
	φ4 straight type	4G1R-JOINT-C4
	φ6 straight type	4G1R-JOINT-C6
	φ1.8 elbow type	4G1R-JOINT-CL18, CLL18
	φ4 elbow type	4G1R-JOINT-CL4, CLL4
	φ6 elbow type	4G1R-JOINT-CL6, CLL6
	φ1/8 inch straight type	4G1R-JOINT-C3N
	φ5/32 inch straight type	4G1R-JOINT-C4N
	φ1/8 inch elbow type Note 1	4G1R-JOINT-CL3N
	φ5/32 inch elbow type Note 1	4G1R-JOINT-CL4N
	Plug cartridge	4G1R-JOINT-CPG
Valve 4G2	φ4 straight type	4G2R-JOINT-C4
	φ6 straight type	4G2R-JOINT-C6
	φ8 straight type	4G2R-JOINT-C8
	φ6 elbow type	4G2R-JOINT-CL6, CLL6
	φ8 elbow type	4G2R-JOINT-CL8, CLL8
	φ1/4 inch straight type	4G2R-JOINT-C6N
	φ5/16 inch straight type	4G2R-JOINT-C8N

Application	Parts name	Model no.
Valve 4G2	φ1/4 inch elbow type Note 1	4G2R-JOINT-CL6N
	φ5/16 inch elbow type Note 1	4G2R-JOINT-CL8N
	Plug cartridge	4G2R-JOINT-CPG
Valve	Coil assembly	4GR-A2N-[*2]-COIL-[*3] *2: Ozone/cutting oil proof (blank, A) *3: Voltage (1, 3, 4)
Manifold	Expansion socket assembly (Details on page 401)	For a side solenoid N4GR−SOCKET−ASSY− (Selection no.)
		For b side solenoid N4GR−RELAY−SOCKET−(Selection no.)

Note 1: This is a available consult factory order.

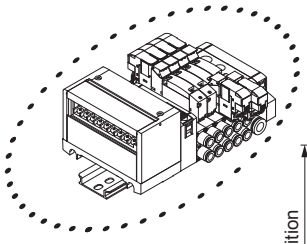
Dimensions CAD

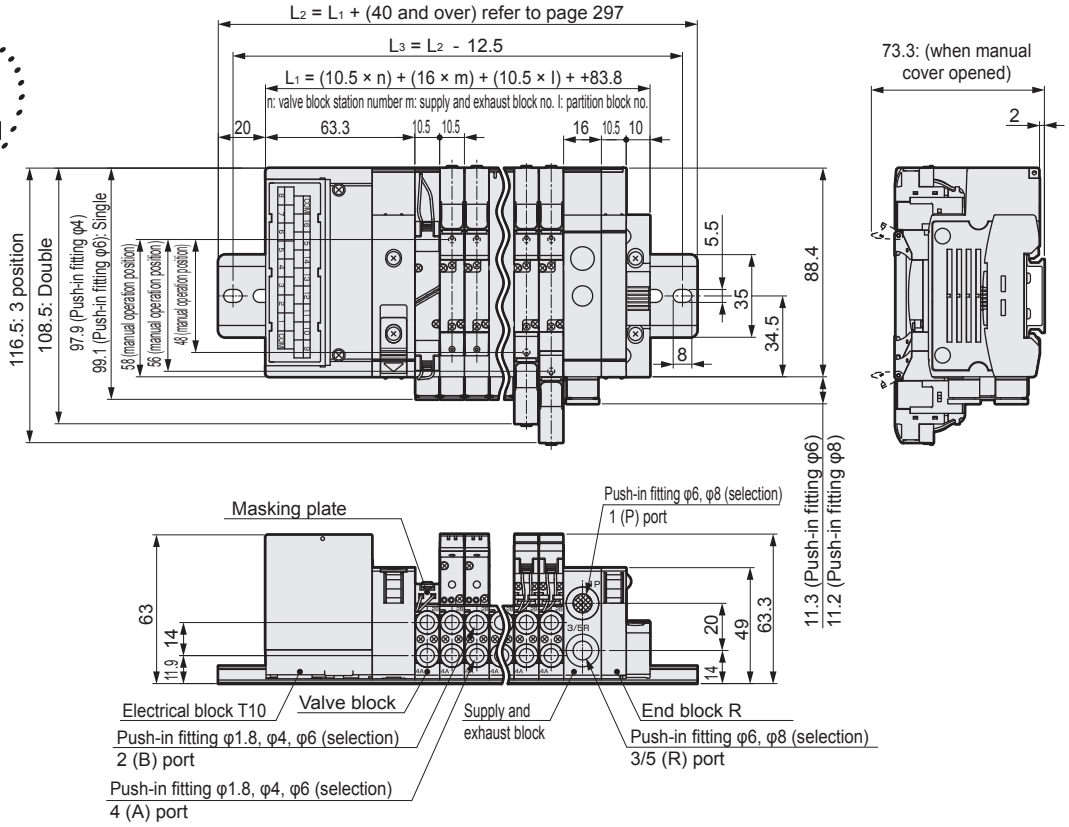
MN4GB1

Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.

● Common terminal block (M3 thread) Left side (T10)

Note: There are push tightening specifications (T11)
The dimensions are the same as T10.

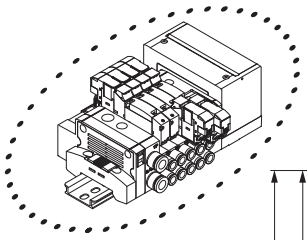


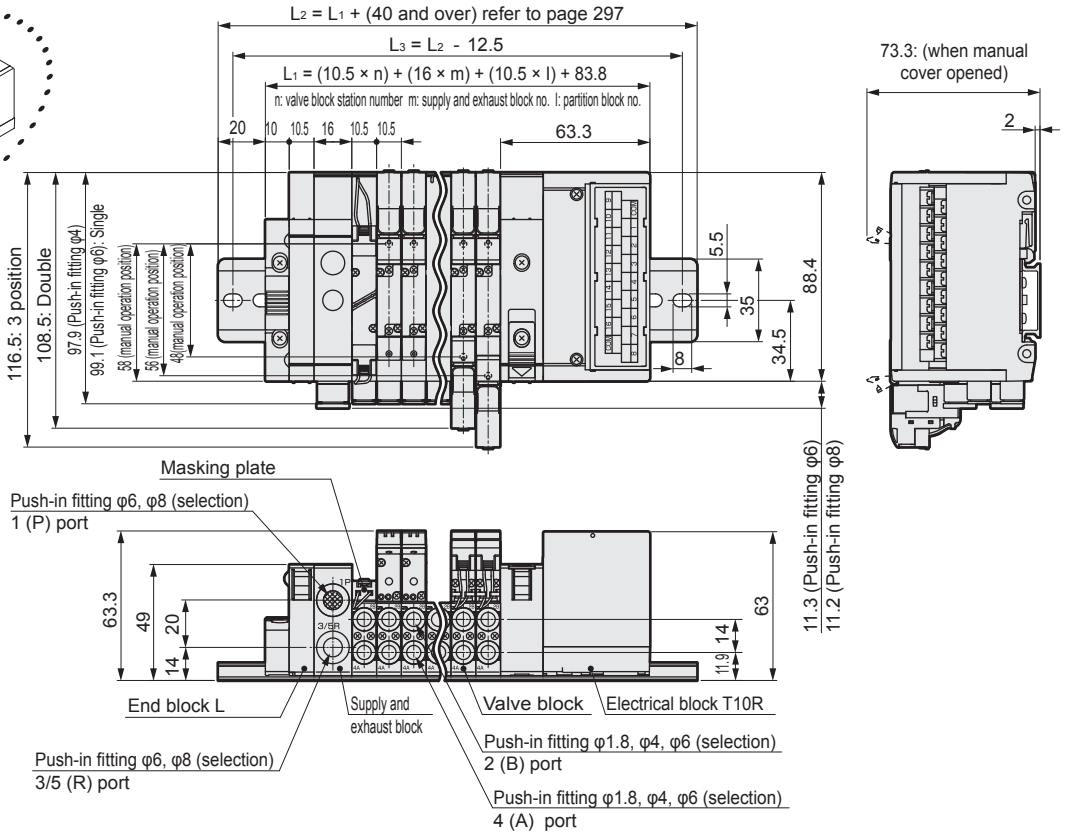


Note: Refer to 266 pagefor details on L type push-in fitting.

● Common terminal block (M3 thread) Right side (T10R)

Note: There are push tightening specifications (T11R).
The dimensions are the same as T10R.





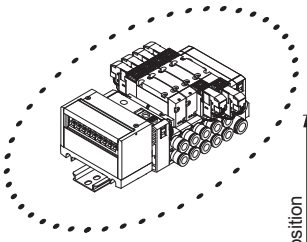
Dimensions CAD

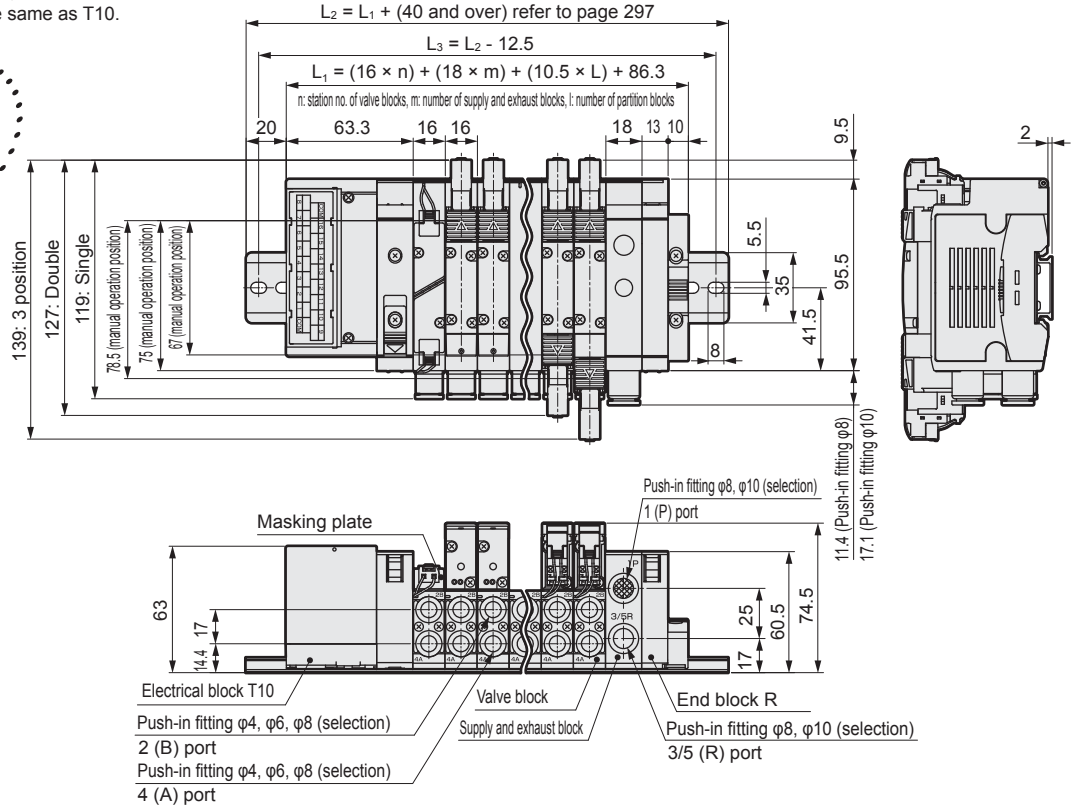
MN4GB2

Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.

● Common terminal block (M3 thread) left side (T10)

Note: There are push tightening specifications (T11)
The dimensions are the same as T10.

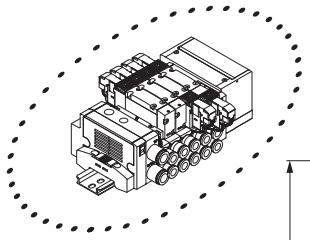


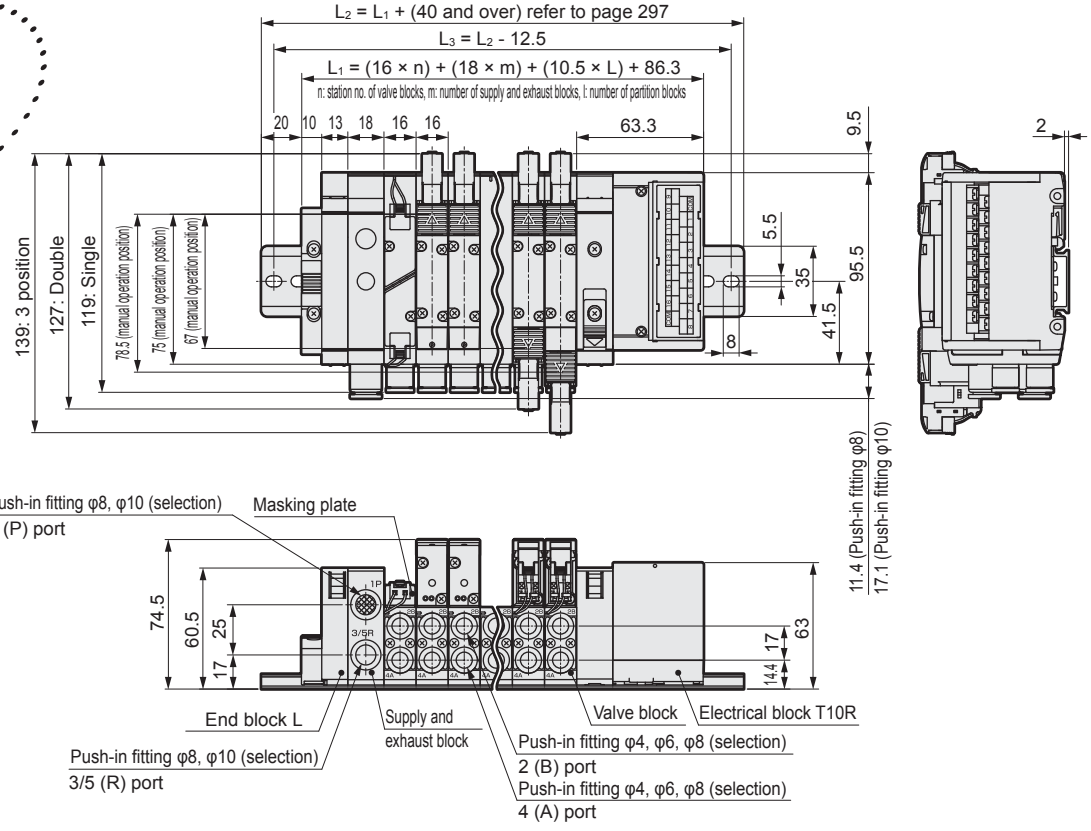


● Common terminal block (M3 thread) right side (T10R)

Note: There are push tightening specifications (T11R).
The dimensions are the same as T10R.

Note: Refer to 268 page for details on L type push-in fitting.



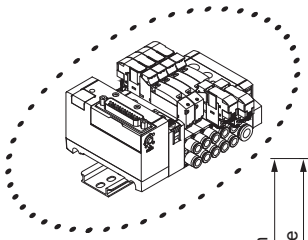


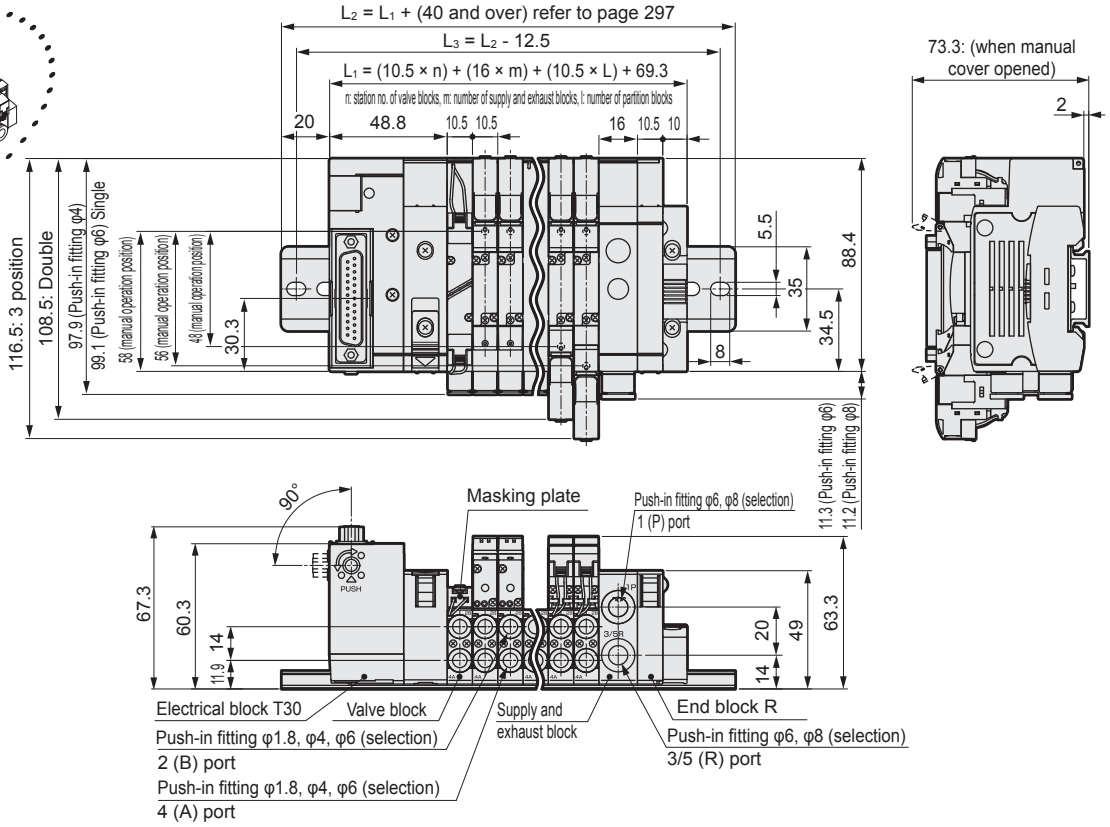
Dimensions

MN4GB1

Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.

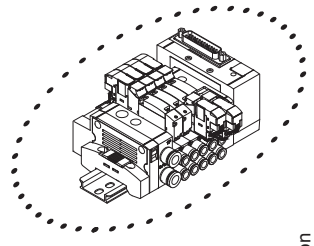
● D-sub connector left side (T30)

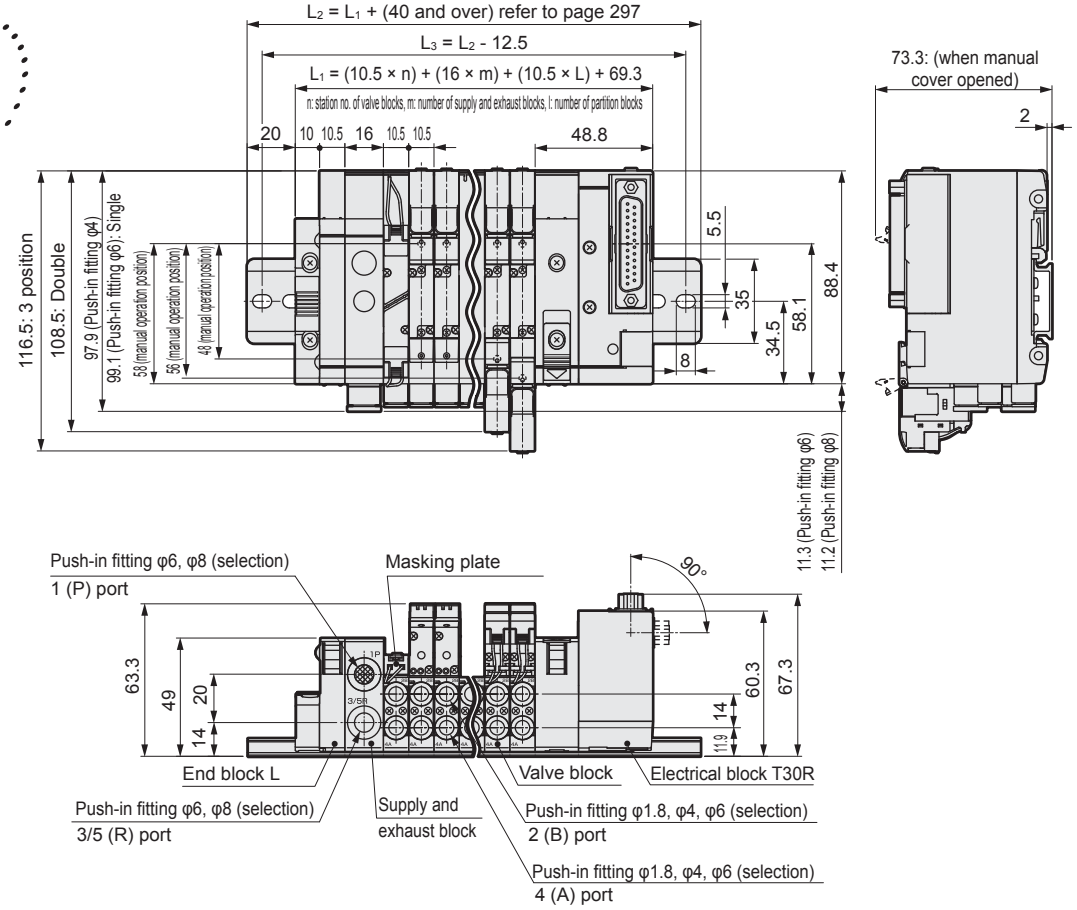




Note: Refer to 266 page for details on L type push-in fitting.

● D-sub connector right side (T30R)



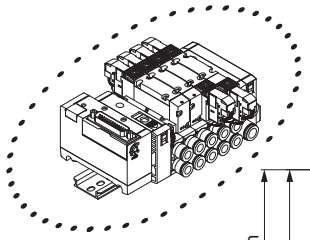


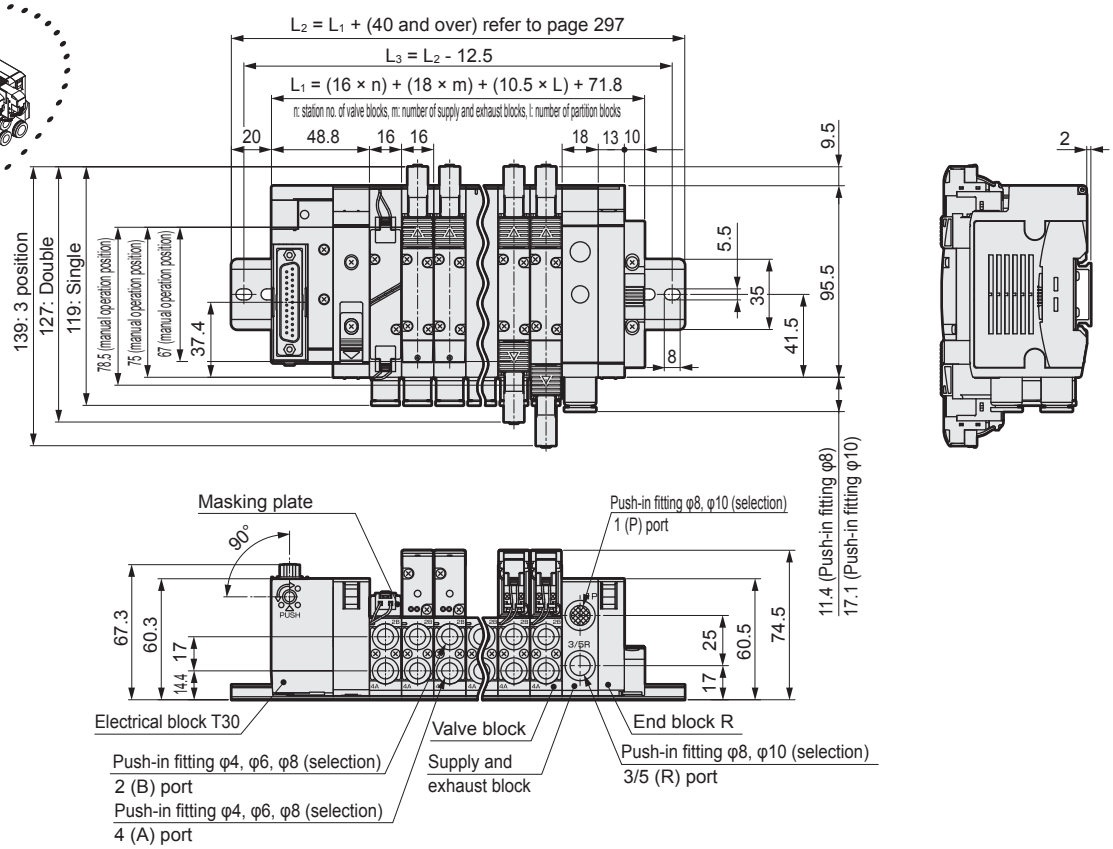
Dimensions CAD

MN4GB2

Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.

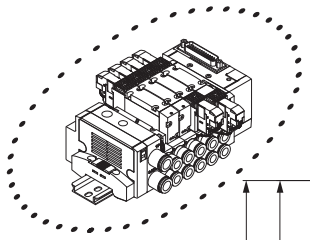
● D-sub connector left side (T30)

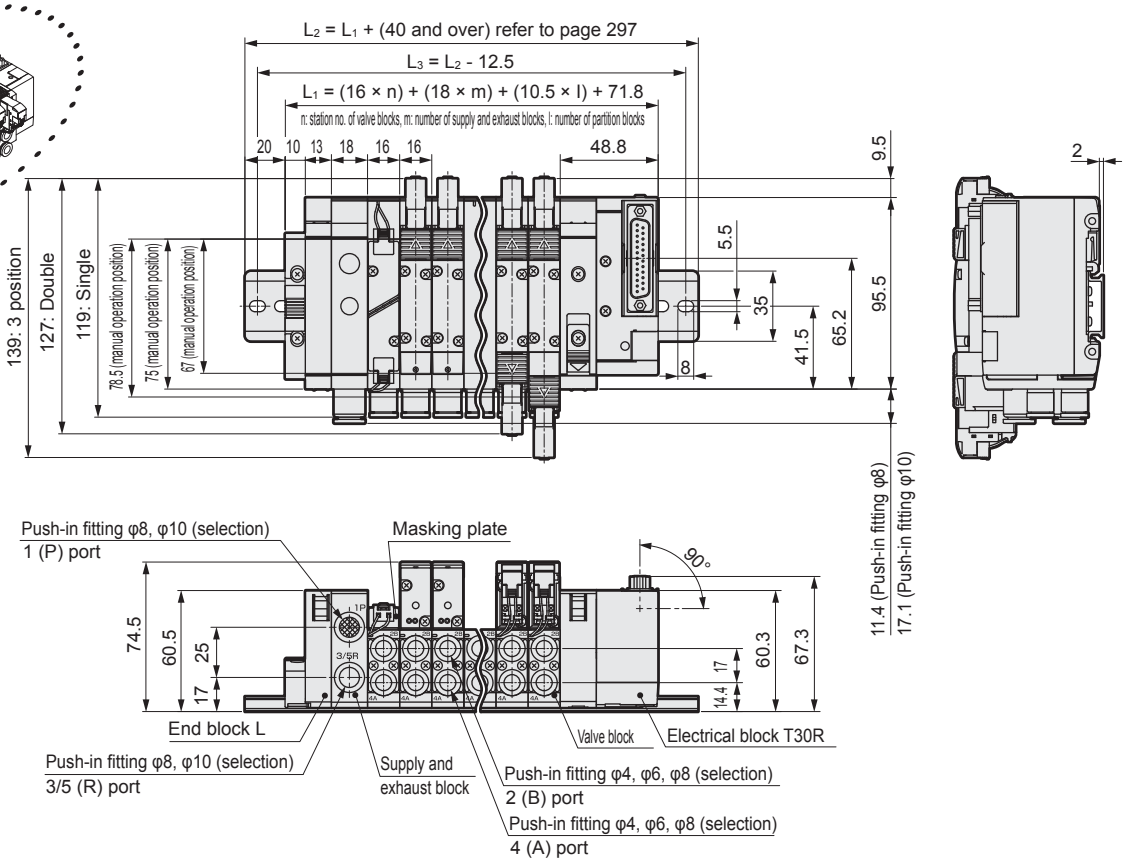




● D-sub connector right side (T30R)

Note: Refer to 268 page for details on L type push-in fitting.



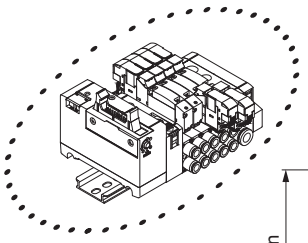


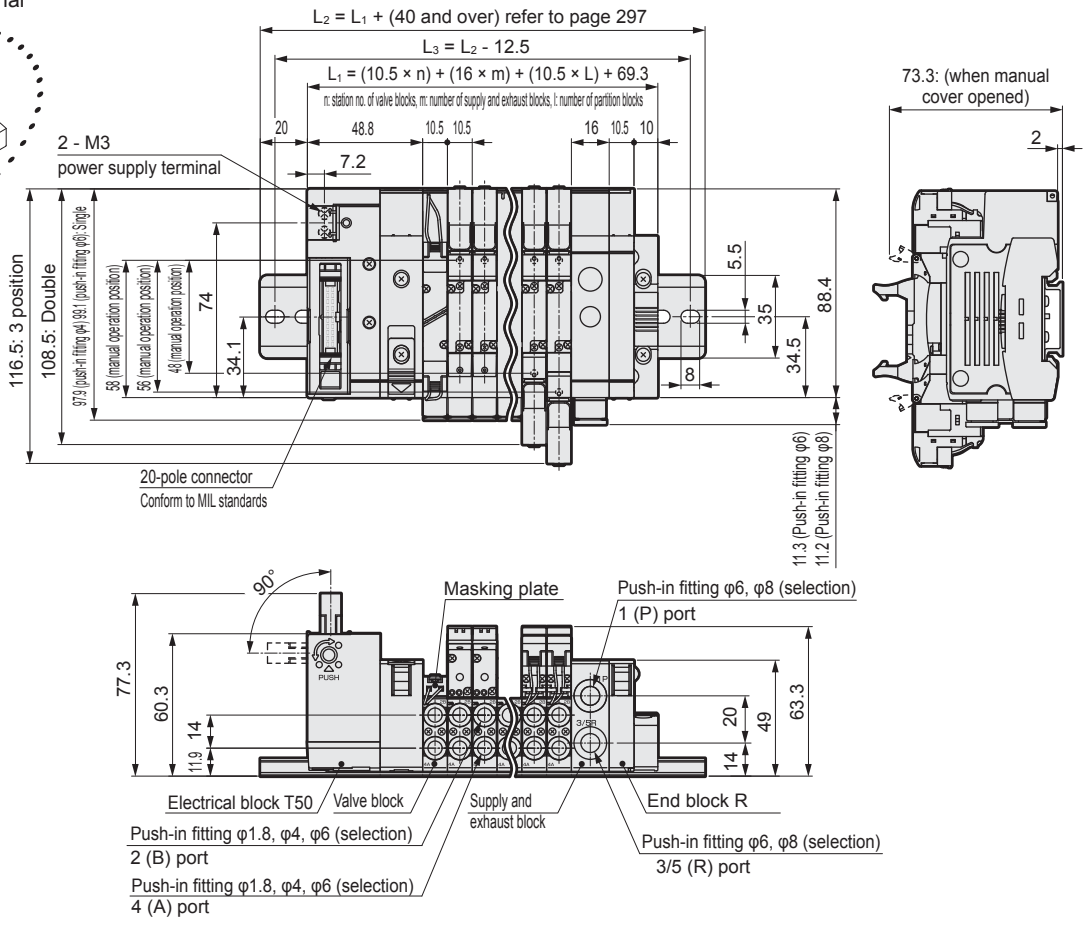
Dimensions CAD

MN4GB1

Note 1: T51, T52, and T53 flat cable connectors are also available. The dimensions are the same as T50.
Note 2: The dimension of dual 3 port valve integrated type is the same as that of the double type.

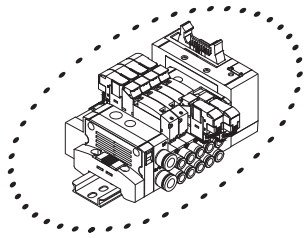
● Flat cable connector left side (T50)
With power supply terminal

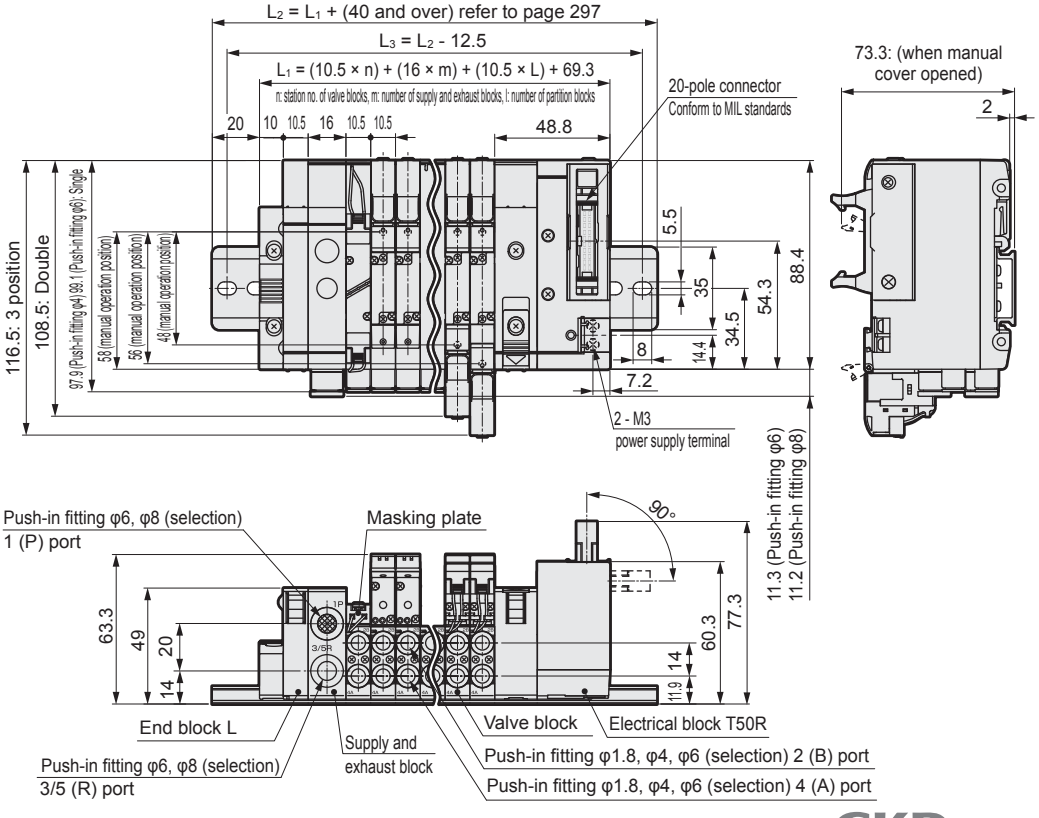




● Flat cable connector right type (T50R)
With power supply terminal

Note: Refer to 266 page for details on L type push-in fitting.



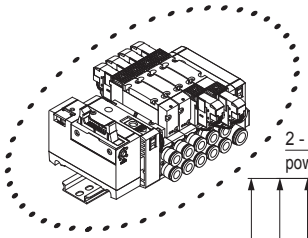


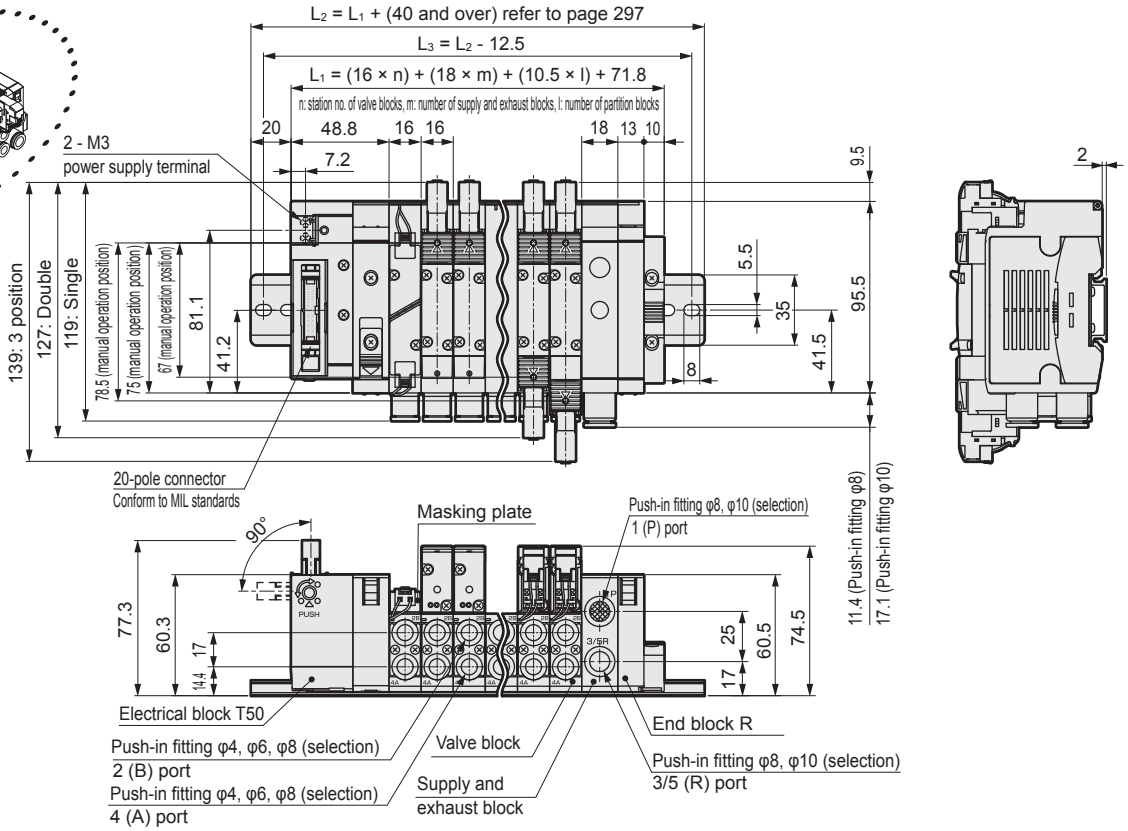
Dimensions CAD

MN4GB2

Note 1: T51, T52, and T53 flat cable connectors are also available. The dimensions are the same as T50.
Note 2 The dimension of dual 3 port valve integrated type is the same as that of the double type.

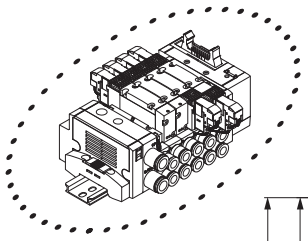
● Flat cable connector left side
With power supply terminal (T50)

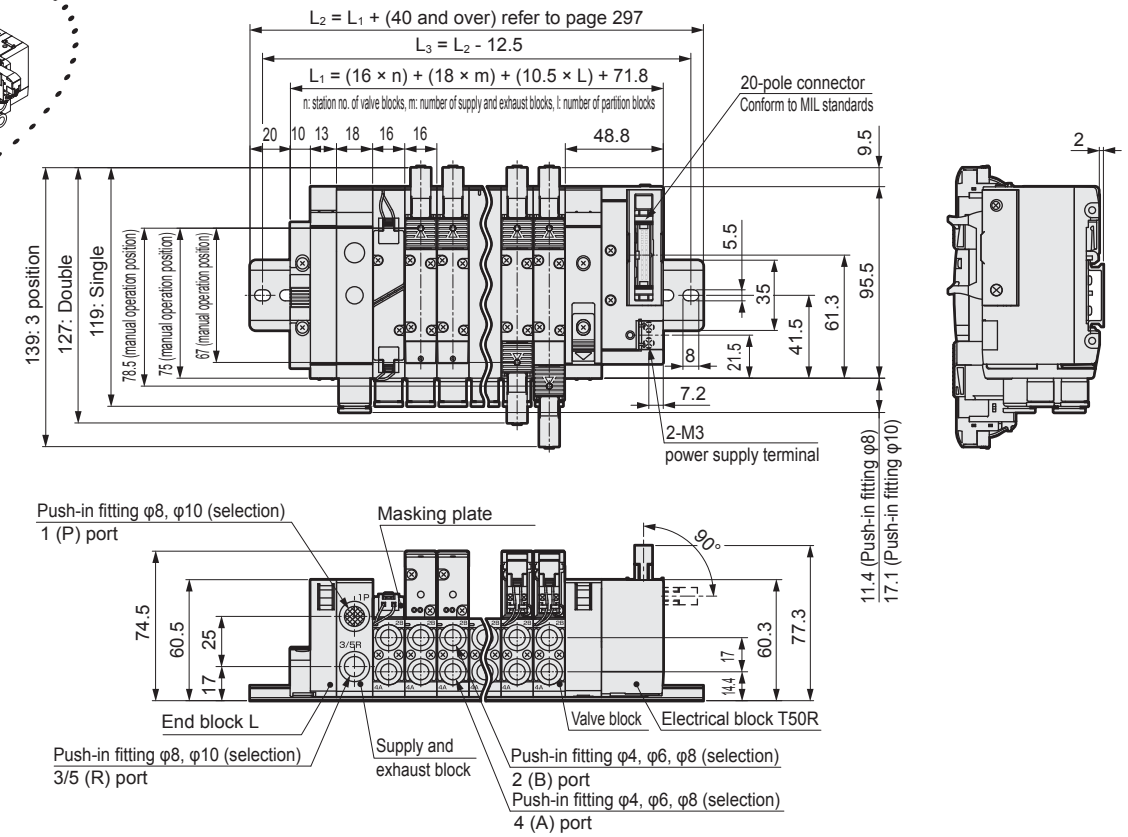




● Flat cable connector right type
With power supply terminal (T50R)

Note: Refer to 268 page for details on L type push-in fitting.



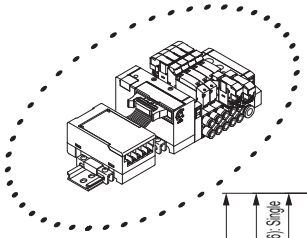


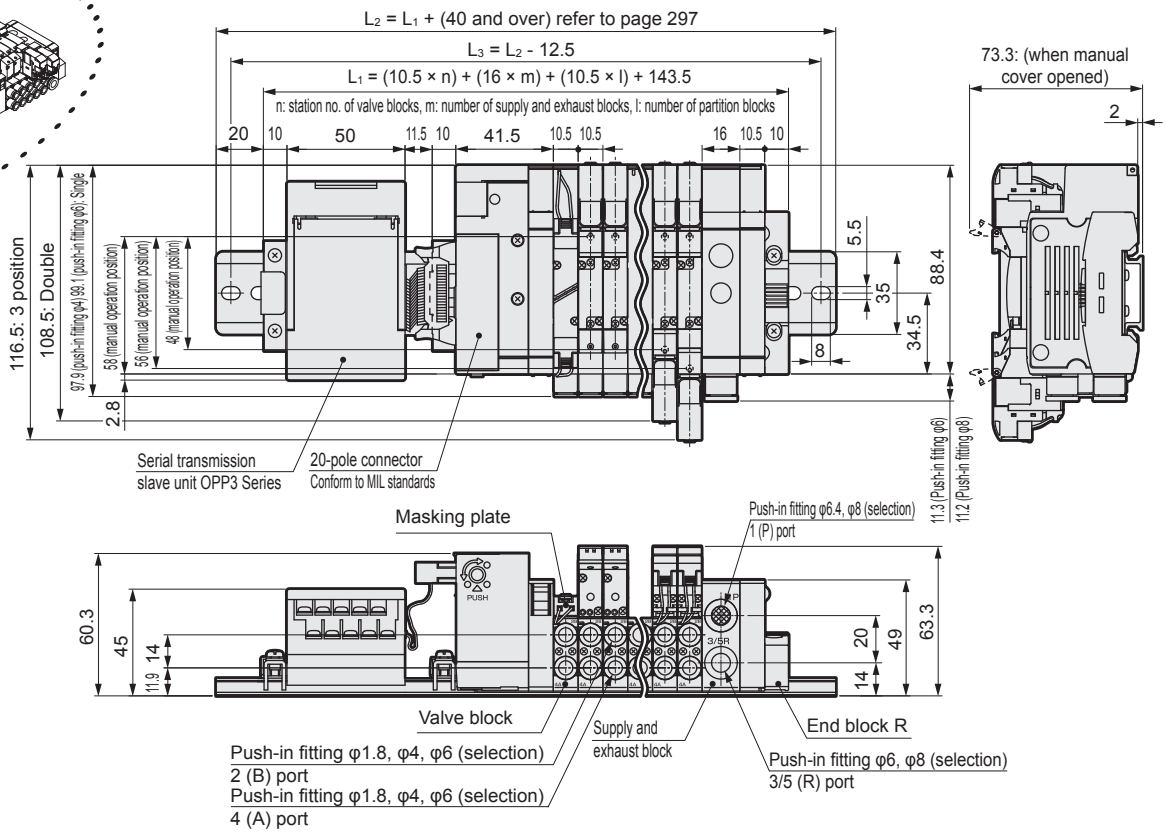
Dimensions CAD

MN4GB1

Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.

● Serial transmission (T6*)

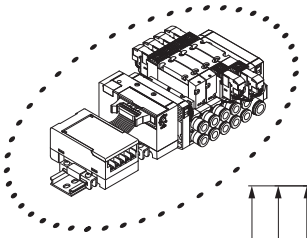


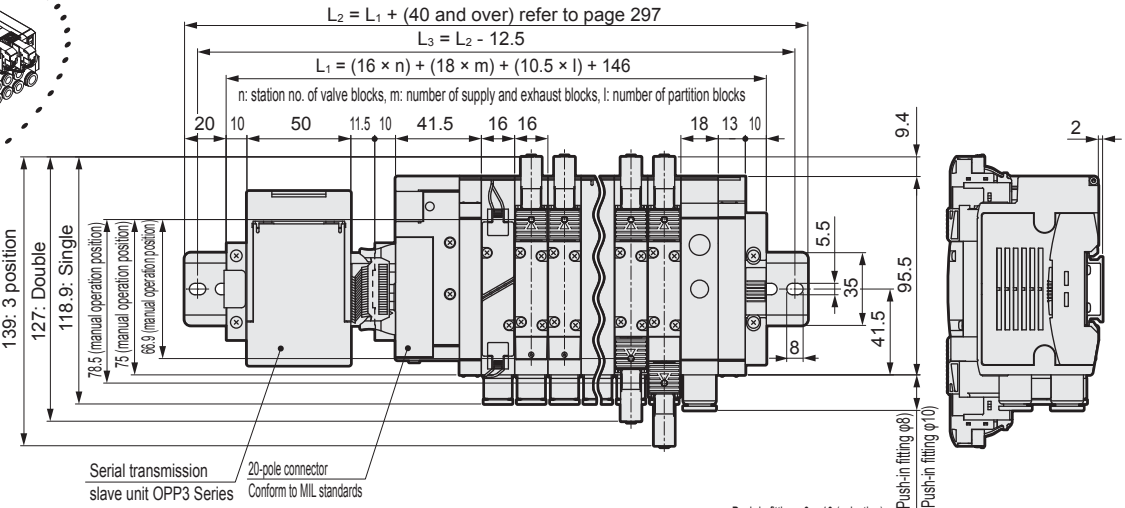


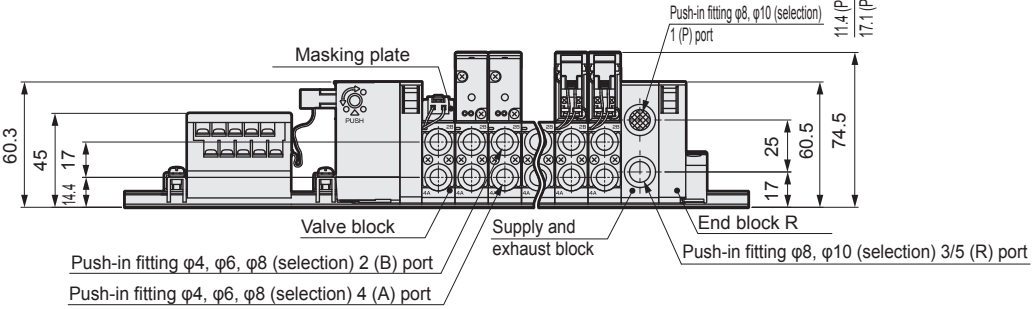
MN4GB2

Note: Refer to 266 page for details on L type push-in fitting.

● Serial transmission (T6*)







MN4GB1/2-T7* Series

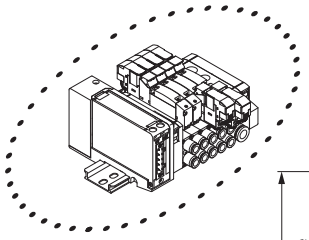
Reduced wiring block manifold; base piping

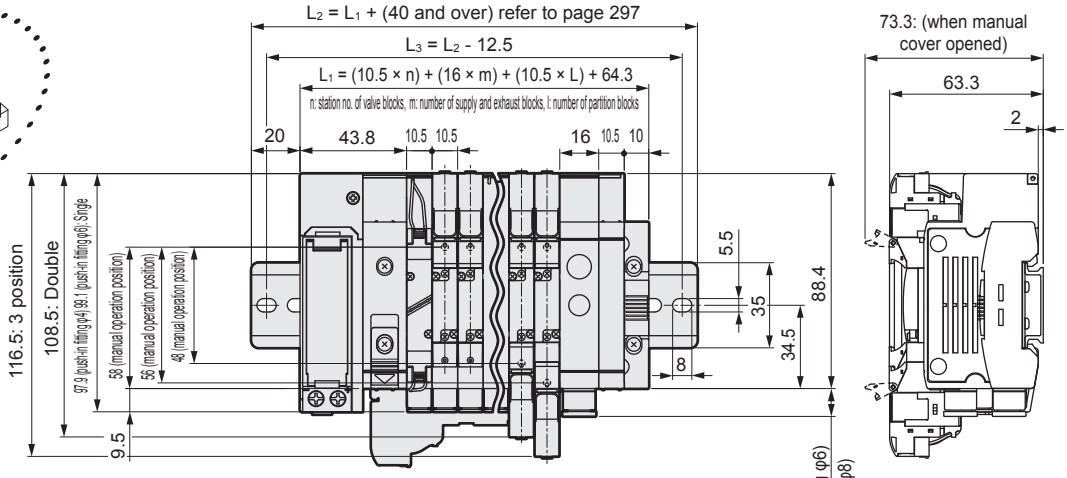
Dimensions CAD

MN4GB1

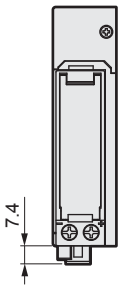
● Thin serial transmission (T7*)

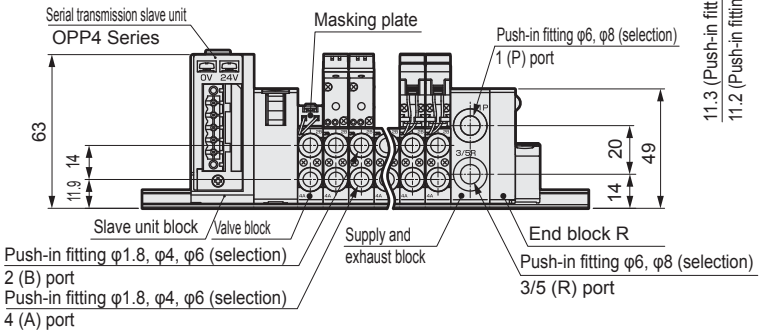
Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.





With T7S*1

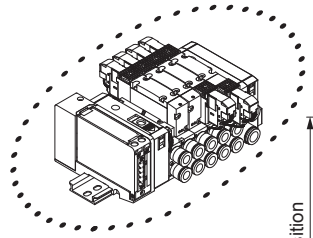


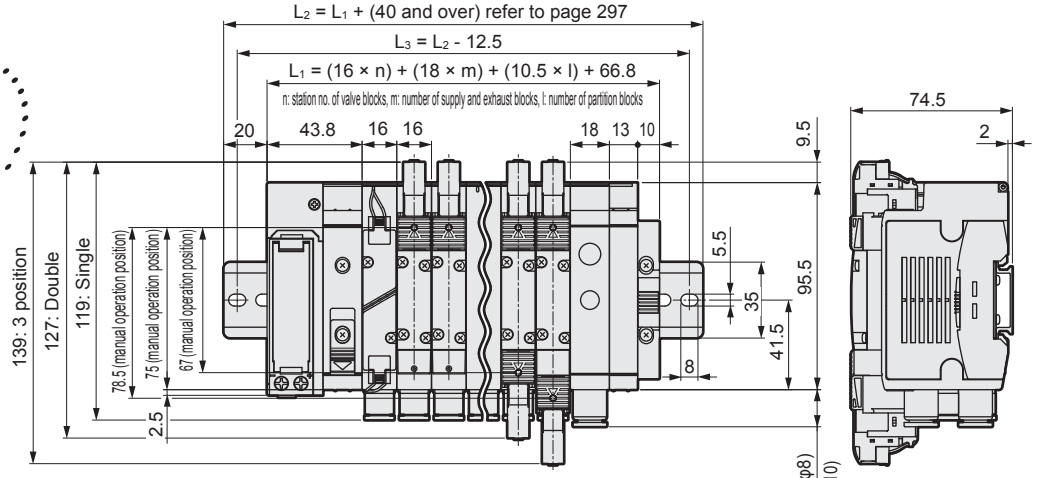


MN4GB2

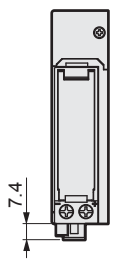
● Thin serial transmission (T7*)

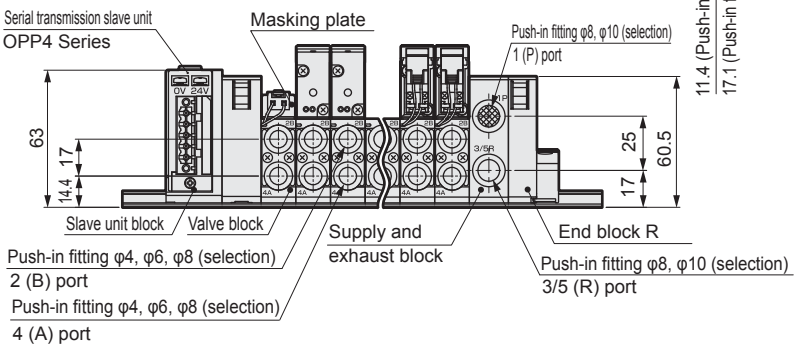
Note: Refer to 266 page for details on L type push-in fitting.





With T7S*1



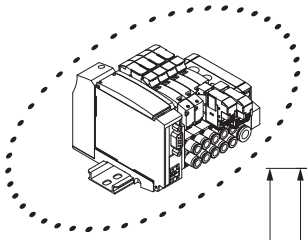


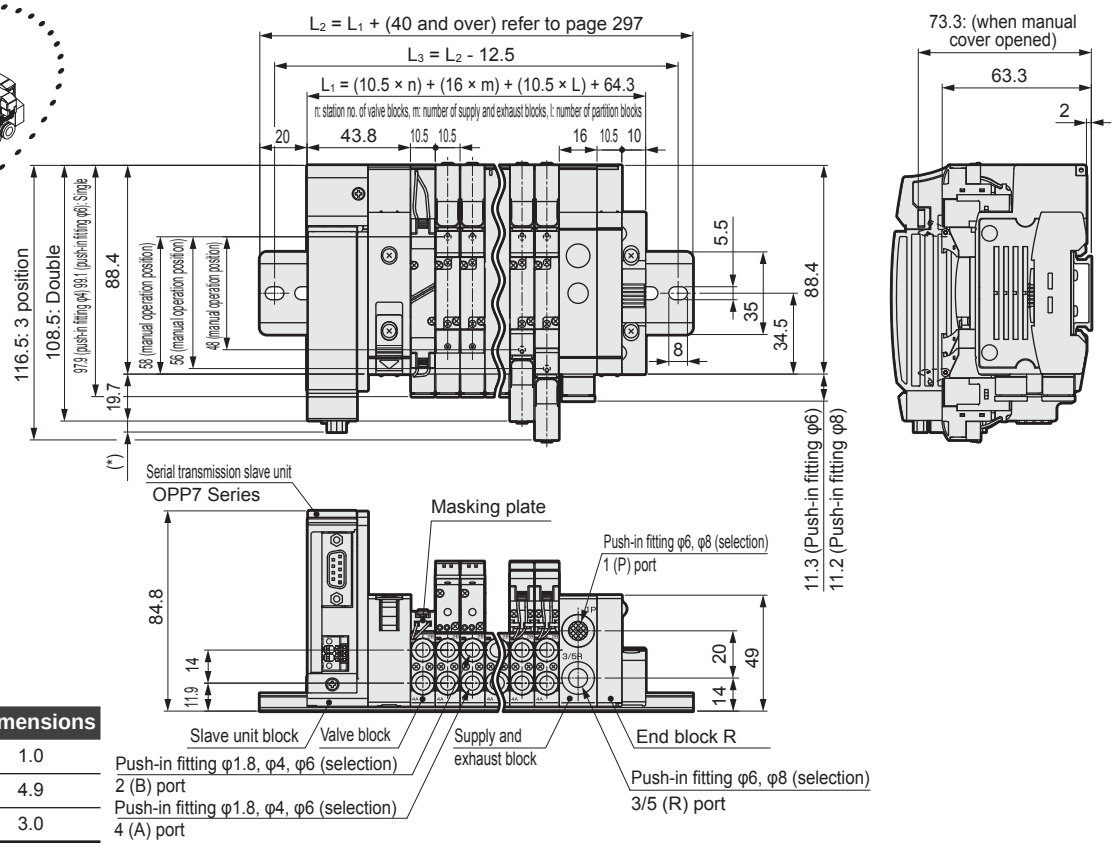
Dimensions CAD

MN4GB1

● Thin serial transmission (T8*)

Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.



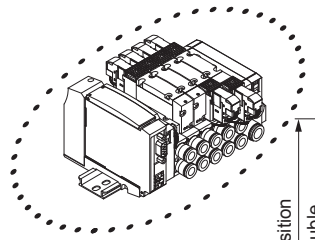


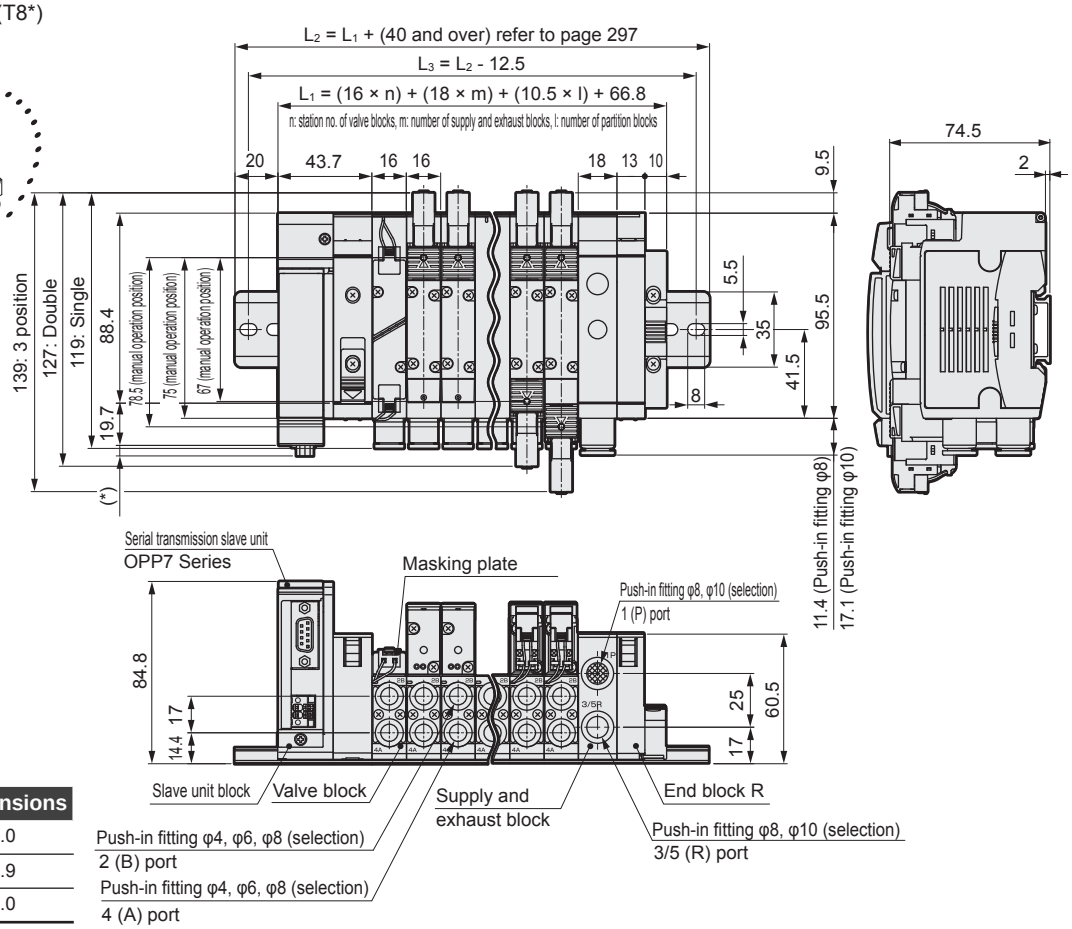
Serial transmission	*Dimensions
T8G*	1.0
T8P*	4.9
T8E*	3.0

Note: Refer to 266 page for details on L type push-in fitting.

MN4GB2

● Thin serial transmission (T8*)





Serial transmission	*Dimensions
T8G*	1.0
T8P*	4.9
T8E*	3.0

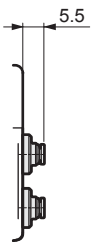
Dimensions

MN4GB1 Valve block

● Fitting straight

● φ1.8 (CF)

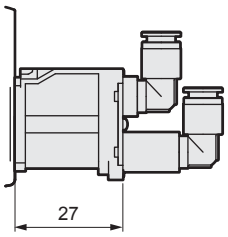
● φ1.8 (C18)



● φ4 (C4)

● φ6 (C6)

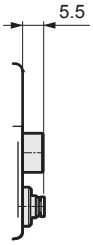
● Option L (With piping adaptor)
Add 27mm during selection.



● Fitting straight, single plug

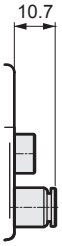
● φ1.8 (CFNC)

● φ1.8 (C18NC)



● φ4 (C4NC)

● φ6 (C6NC)



● φ1.8 (CFNO)

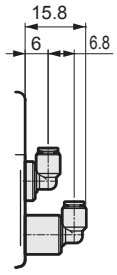
● φ1.8 (C18NO)

● φ4 (C4NO)

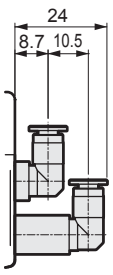
● φ6 (C6NO)

● Fitting L type (upward)

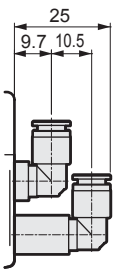
● φ1.8 (CL18)



● φ4 (CL4)

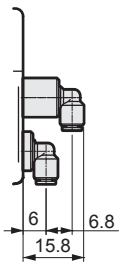


● φ6 (CL6)

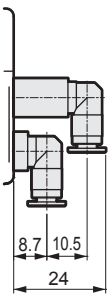


● Fitting L type (downward)

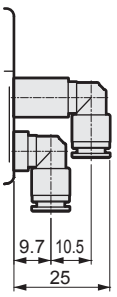
● φ1.8 (CD18)



● φ4 (CD4)

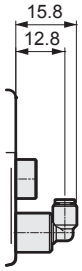


● φ6 (CD6)

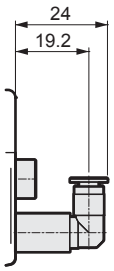


● Fitting L type (upward), single plug

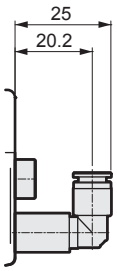
● φ1.8 (CL18NC)



● φ4 (CL4NC)



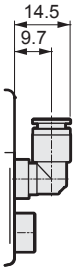
● φ6 (CL6NC)



● φ1.8 (CL18NO)

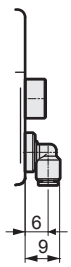
● φ4 (CL4NO)

● φ6 (CL6NO)



● Fitting L type (downward), single plug

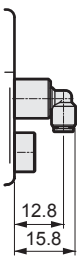
● φ1.8 (CD18NC)



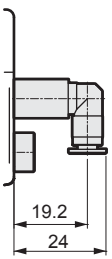
● φ4 (CD4NC)

● φ6 (CD6NC)

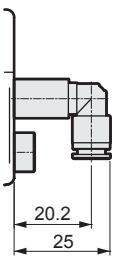
● φ1.8 (CD18NO)



● φ4 (CD4NO)



● φ6 (CD6NO)

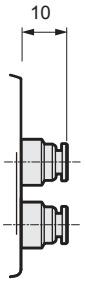


Dimensions

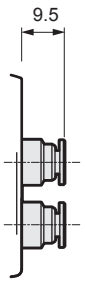
MN4GB1 Valve block

● Fitting straight

● φ1/8 inch (C3N)

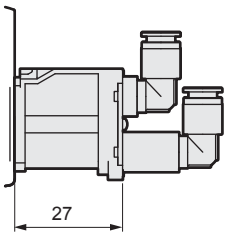


● φ5/32 inch (C4N)



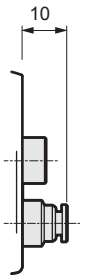
● Option L (With piping adaptor)

Add 27mm during selection.

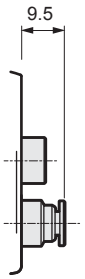


●Fitting straight, single plug

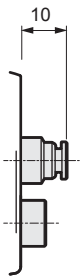
● φ1/8 inch (C3NCN)



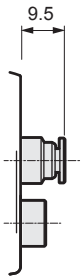
● φ5/32 inch (C4NCN)



● φ1/8 inch (C3NON)

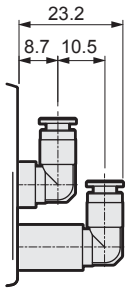


● φ5/32 inch (C4NON)

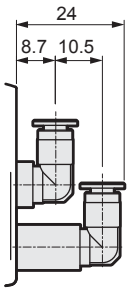


● Fitting L type (upward)

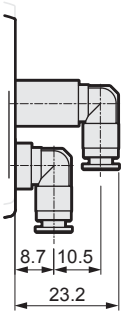
● φ1/8 inch (CL3N)



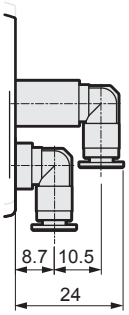
● φ5/32 inch (CL4N)



● φ1/8 inch (CD3N)

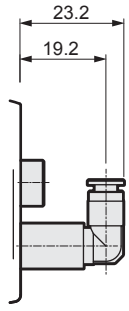


● φ5/32 inch (CD4N)

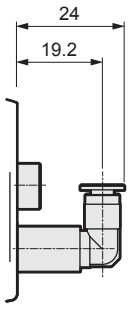


● Fitting L type (upward), single plug

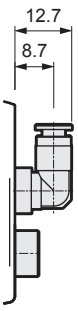
● φ1/8 inch (CL3NCN)



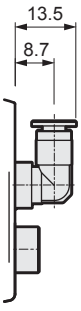
● φ5/32 inch (CL4NCN)



● φ1/8 inch (CL3NON)

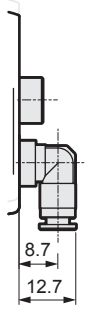


● φ5/32 inch (CL4NON)

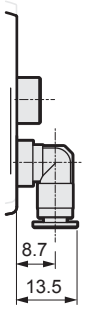


● Fitting L type (downward), single plug

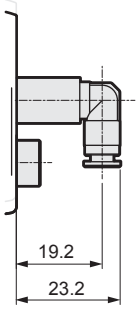
● φ1/8 inch (CD3NCN)



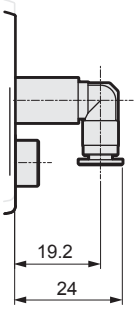
● φ5/32 inch (CD4NCN)



● φ1/8 inch (CD3NON)



● φ5/32 inch (CD4NON)

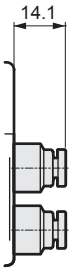


Dimensions

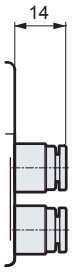
MN4GB2 Valve block

● Fitting straight

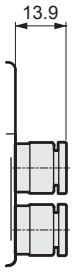
● φ4 (C4)



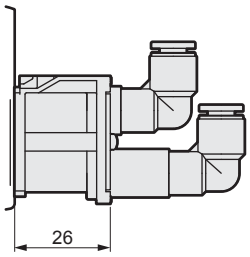
● φ6 (C6)



● φ8 (C8)

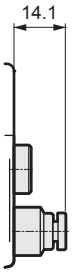


● Option L (With piping adaptor)
Add 26mm during selection.

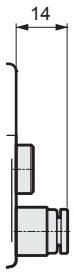


● Fitting straight, single plug

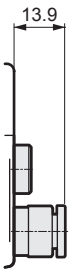
● φ4 (C4NC)



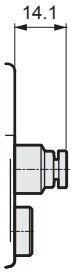
● φ6 (C6NC)



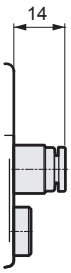
● φ8 (C8NC)



● φ4 (C4NO)



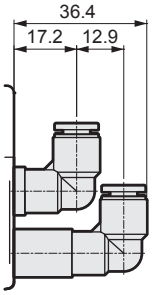
● φ6 (C6NO)



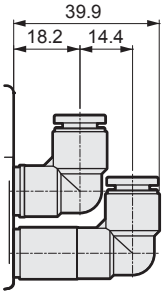
● φ8 (C8NO)

● Fitting L type (upward)

● φ6 (CL6)

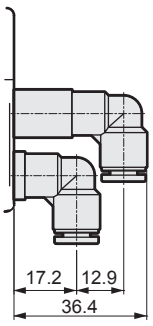


● φ8 (CL8)

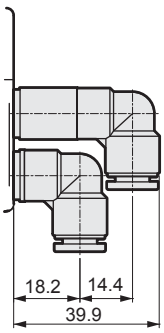


● Fitting L type (downward)

● φ6 (CD6)

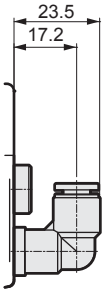


● φ8 (CD8)

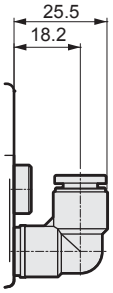


● Fitting L type (upward), single plug

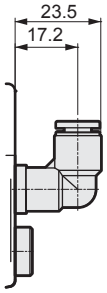
● φ6 (CL6NC)



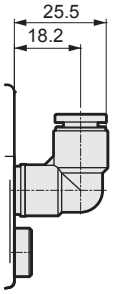
● φ8 (CL8NC)



● φ6 (CL6NO)

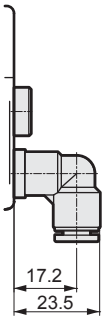


● φ8 (CL8NO)

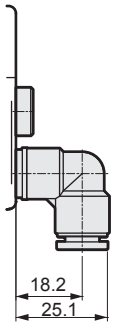


● Fitting L type (downward), single plug

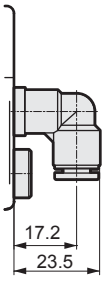
● φ6 (CD6NC)



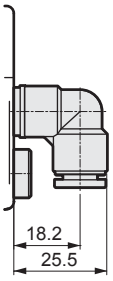
● φ8 (CD8NC)



● φ6 (CD6NO)



● φ8 (CD8NO)

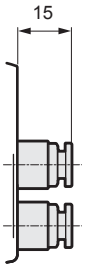


Dimensions

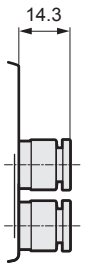
MN4GB2 Valve block

● Fitting straight

● φ1/4 inch (C6N)

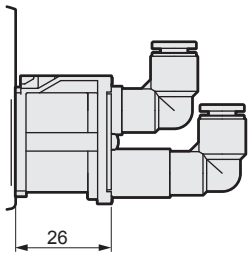


● φ5/16 inch (C8N)



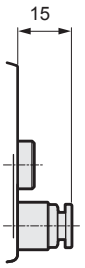
● Option L (With piping adaptor)

Add 26mm during selection.

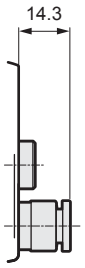


● Fitting straight, single plug

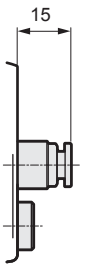
● φ1/4 inch (C6NNC)



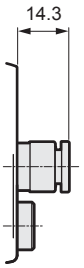
● φ5/16 inch (C8NNC)



● φ1/4 inch (C6NON)

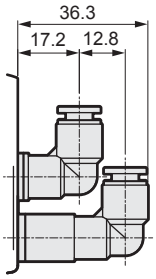


● φ5/16 inch (C8NON)

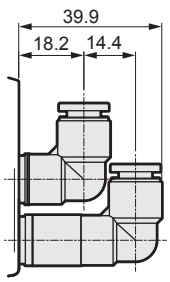


● Fitting L type (upward)

● φ1/4 inch (CL6N)

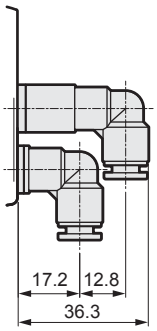


● φ5/16 inch (CL8N)

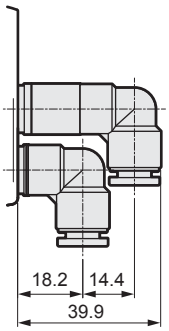


● Fitting L type (downward)

● φ1/8 inch (CD6N)

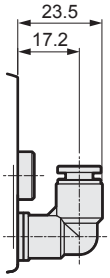


● φ5/32 inch (CD8N)

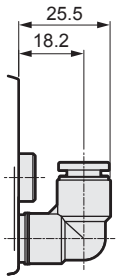


● Fitting L type (upward), single plug

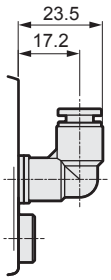
● φ1/4 inch (CL6NNC)



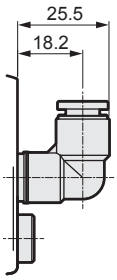
● φ5/16 inch (CL8NNC)



● φ1/4 inch (CL6NON)

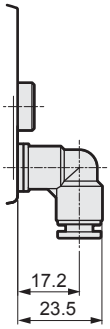


● φ5/16 inch (CL8NON)

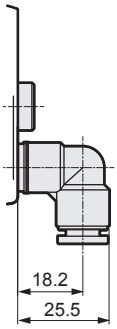


● Fitting L type (downward), single plug

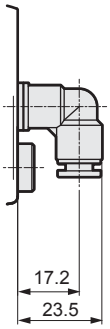
● φ1/4 inch (CD6NNC)



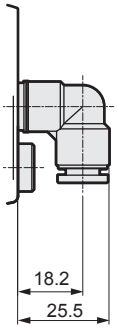
● φ5/16 inch (CD8NNC)



● φ1/4 inch (CD6NON)



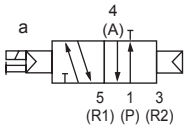
● φ5/16 inch (CD8NON)

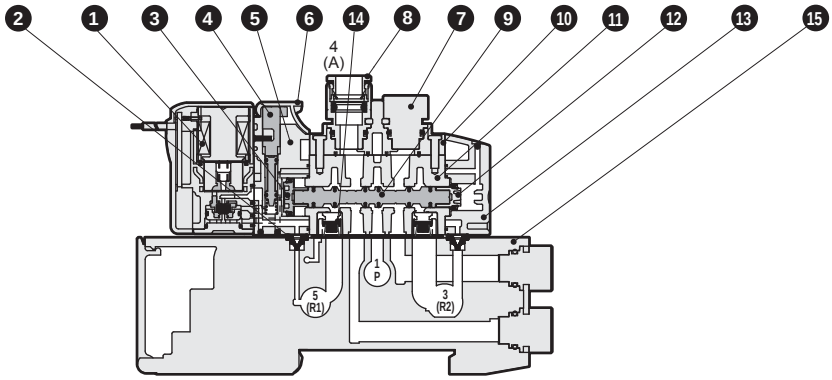


Internal structure and parts list

N3GA110R/N3GA210R

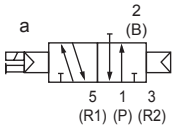
● 2-position single: Normally closed
Grommet lead wire (blank)

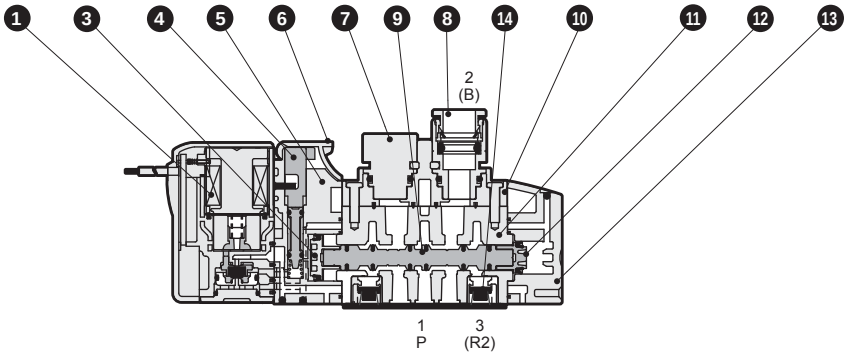




N3GA1110R/N3GA2110R

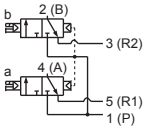
● 2-position single: Normally closed
Grommet lead wire (blank)

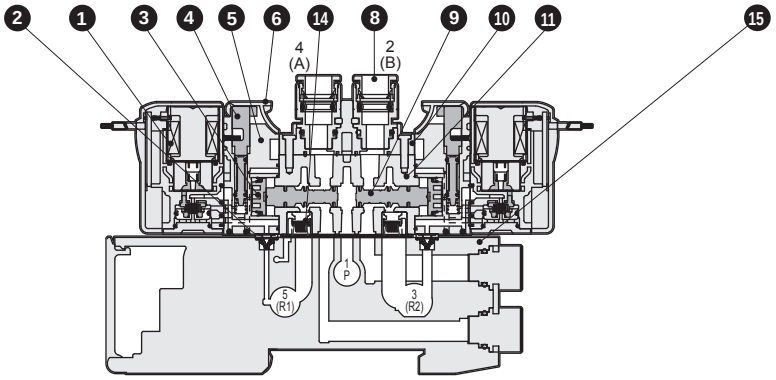




N3GA1660R/N3GA2660R

● Dual 3 port valve integrated type
A side valve: Normally closed, B side valve: Normally closed
Grommet lead wire (blank)





Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston D assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Plug cartridge	Aluminum
8	Cartridge type push-in fitting	-
9	Spool assembly	-
10	Fitting adaptor	Plastic
11	Body	Aluminum alloy die-casting
12	Piston S assembly	-
13	Cap	Plastic
14	Malfunction prevention valve	-
15	Valve block	Plastic

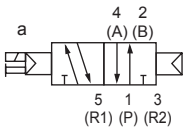
Parts list

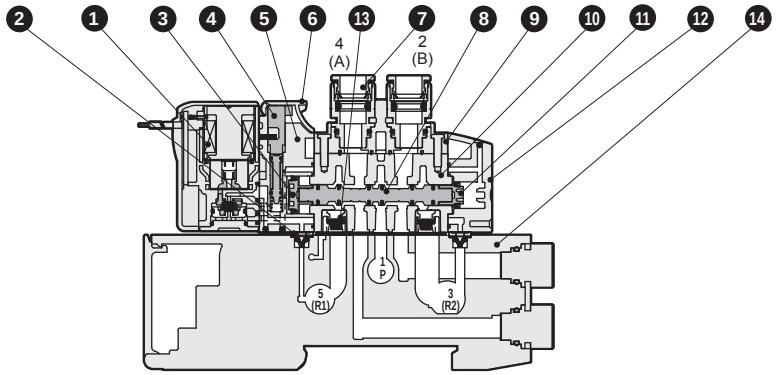
No.	Parts name			Model no.
1	Coil assembly			4GR-[Electrical connections]-*-COIL-[Voltage] Blank: Standard A: Ozone specifications
8	Cartridge type Push-in fitting and related parts	3G1 4G1	φ1.8 barbed type	4G1R-JOINT-CF
			φ1.8 straight type	4G1R-JOINT-C18
			φ4 straight type	4G1R-JOINT-C4
			φ6 straight type	4G1R-JOINT-C6
			φ1/8 inch straight type	4G1R-JOINT-C3N
			φ5/32 inch straight type	4G1R-JOINT-C4N
			Plug cartridge	4G1R-JOINT-CPG
		3G2 4G2	φ4 straight type	4G2R-JOINT-C4
			φ6 straight type	4G2R-JOINT-C6
			φ8 straight type	4G2R-JOINT-C8
			φ1/4 inch straight type	4G2R-JOINT-C6N
			φ5/16 inch straight type	4G2R-JOINT-C8N
			Plug cartridge	4G2R-JOINT-CPG
-	E type connector socket assembly			4GR-SOCKET-ASSY-[Electrical connection]-[Voltage]
-	EJ type connector socket assembly			4GR-SOCKET-ASSY-[Electrical connections]
-	DIN terminal box assembly (only 3GA2)			4GR-TERMINAL-BOX-[Voltage]

Internal structure and parts list

N4GA110R/N4GA210R

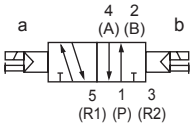
● 2-position single
Grommet lead wire (blank)

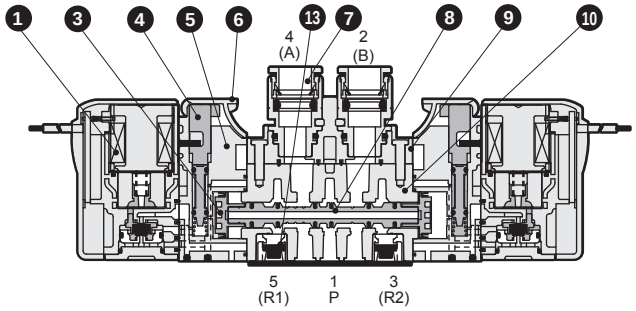




N4GA120R/N4GA220R

● 2-position double
Grommet lead wire (blank)

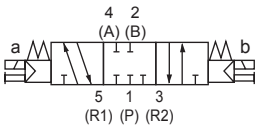




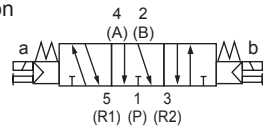
N4GA1$^{3}_{4}{}_{5}$0R/N4GA2$^{3}_{4}{}_{5}$0R

● 3-position
Grommet lead wire (blank)

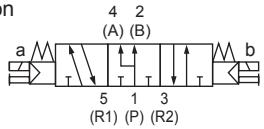
All ports closed

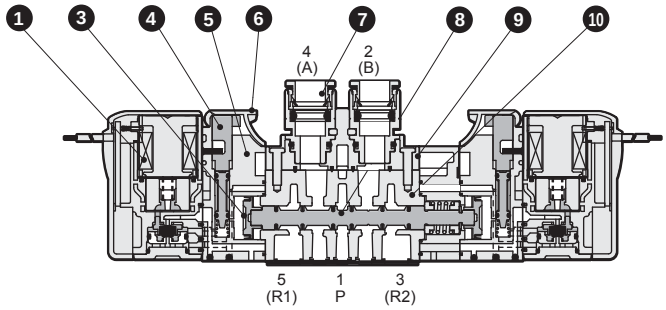


A/B/R connection



P/A/B Connection





Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston D assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Cartridge type push-in fitting	-
8	Spool assembly	-
9	Fitting adaptor	Plastic
10	Body	Aluminum alloy die-casting
11	Piston S assembly	-
12	Cap	Plastic
13	Malfunction prevention valve	-
14	Valve block	Plastic

Parts list

No.	Parts name			Model no.
1	Coil assembly			4GR-[Electrical connections]-*-COIL-[Voltage] Blank: Standard A: Ozone specifications
7	Cartridge type Push-in fitting and related parts	3G1 4G1	φ1.8 barbed type	4G1R-JOINT-CF
			φ1.8 straight type	4G1R-JOINT-C18
			φ4 straight type	4G1R-JOINT-C4
			φ6 straight type	4G1R-JOINT-C6
			φ1/8 inch straight type	4G1R-JOINT-C3N
			φ5/32 inch straight type	4G1R-JOINT-C4N
			Plug cartridge	4G1R-JOINT-CPG
		3G2 4G2	φ4 straight type	4G2R-JOINT-C4
			φ6 straight type	4G2R-JOINT-C6
			φ8 straight type	4G2R-JOINT-C8
			φ1/4 inch straight type	4G2R-JOINT-C6N
			φ5/16 inch straight type	4G2R-JOINT-C8N
			Plug cartridge	4G2R-JOINT-CPG
-	E type connector socket assembly			4GR-SOCKET-ASSY-[Electrical connection]-[Voltage]
-	EJ type connector socket assembly			4GR-SOCKET-ASSY-[Electrical connections]
-	DIN terminal box assembly (only 4GA2)			4GR-TERMINAL-BOX-[Voltage]

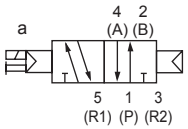
Internal structure and parts list

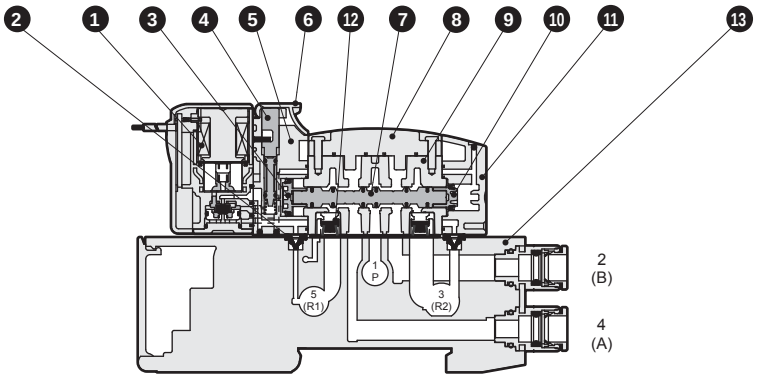
N3GB1660R/N3GB2660R

● Dual 3 port valve integrated type A side valve: Normally closed, B side valve: Normally closed
Grommet lead wire (Blank) Refer to page 273.

N4GB110R/N4GB210R

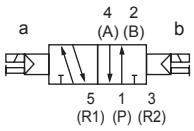
● 2-position single
Grommet lead wire (blank)

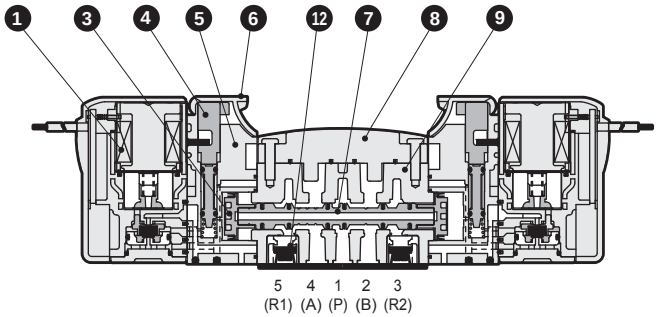




N4GB120R/N4GB220R

● 2-position double
Grommet lead wire (blank)

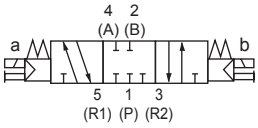




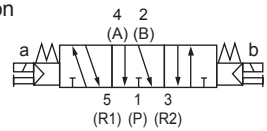
N4GB1$^{3}_{4}_{5}$0R/N4GB2$^{3}_{4}_{5}$0R

● 3-position
Grommet lead wire (blank)

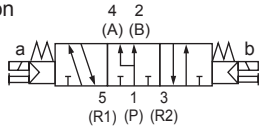
All ports closed

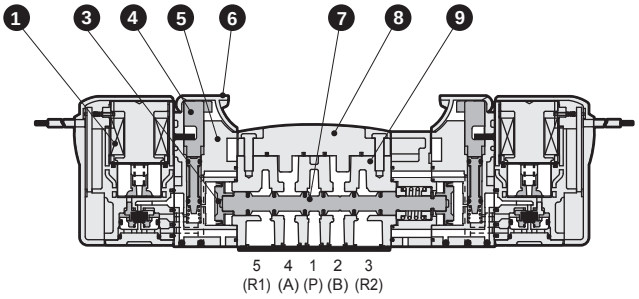


A/B/R connection



P/A/B Connection





Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston D assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Spool assembly	-
8	Plate	Plastic
9	Body	Aluminum alloy die-casting
10	Piston S assembly	-
11	Cap	Plastic
12	Malfunction prevention valve	-
13	Valve block	Plastic

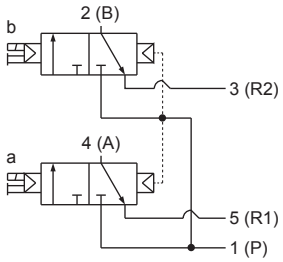
Parts list

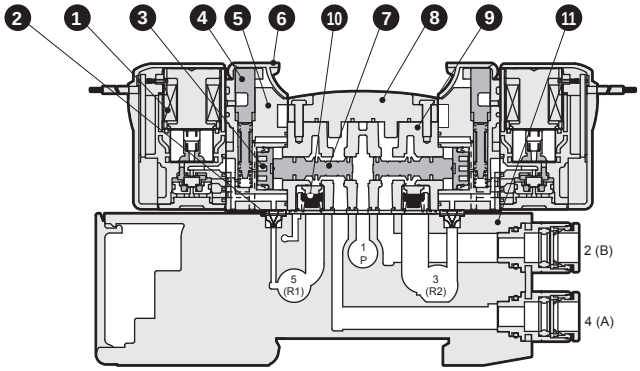
No.	Parts name	Model no.
1	Coil assembly	4GR-[Electrical connections]-*-COIL-[Voltage] Blank: Standard A: Ozone specifications
-	E type connector socket assembly	4GR-SOCKET-ASSY-[Electrical connection]-[Voltage]
-	EJ type connector socket assembly	4GR-SOCKET- ASSY-[Electrical connections]
-	DIN terminal box assembly (only 4GB2)	4GR-TERMINAL-BOX-[Voltage]

Internal structure and parts list

N3GB1660R/N3GB2660R

● Dual 3 port valve integrated type A side valve: Normally closed, B side valve: Normally closed
Grommet lead wire (blank)



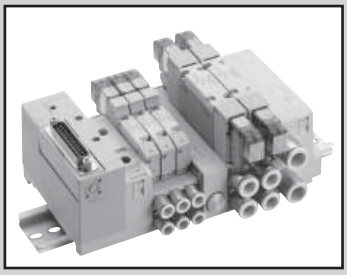


Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR
3	Piston assembly	-
4	Manual operating device	Plastic
5	Piston room	Plastic
6	Manual protection cover	Plastic
7	Spool assembly	-
8	Plate	Plastic
9	Body	Aluminum alloy die-casting
10	Malfunction prevention valve	-
11	Valve block	Plastic

Parts list

No.	Parts name	Model no.
1	Coil assembly	4GR-[Electrical connections]-*-COIL-[Voltage] Blank: Standard A: Ozone specifications
-	E type connector socket assembly	4GR-SOCKET-ASSY-[Electrical connection]-[Voltage]
-	EJ type connector socket assembly	4GR-SOCKET-ASSY-[Electrical connections]
-	DIN terminal box assembly (only 3GB2)	4GR-TERMINAL-BOX-[Voltage]



4G1/2 Mix manifold

MN3GAX12, MN4GAX12 MN4GBX12 Series

● Applicable cylinder bore size: φ20 to φ80

RoHS CAD

Specifications

Common to each series.

For individual wiring, refer to page 220 (body piping) or page 228 (base piping), and for reduced wiring, refer to page 236 (body piping) or page 252 (base piping).

How to order

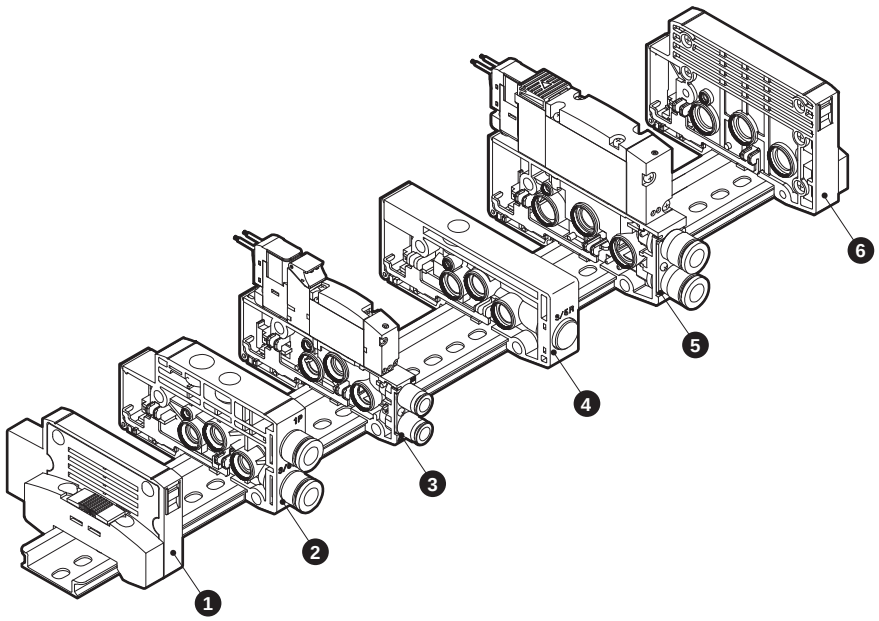
MN3G$^{A}_{B}$X12R - ○ - ○ ○ ○ - ○ - ○

MN4G$^{A}_{B}$X12R - ○ - ○ ○ ○ ○ - ○ - ○

Ⓐ Model no. Ⓑ Port size Ⓒ Electrical connections (Reduced wiring connection) Ⓓ Terminal and connector pin array Ⓔ Option Ⓕ Station no. Ⓖ Voltage

* The model no. will be "MN*G*X12R-". Other items are common with the example of model no. for each series.
For individual wiring, refer to page 222 (body piping) or page 230 (base piping), and for reduced wiring, refer to page 238 (body piping) or page 254 (base piping).

Manifold components explanation and parts list



* Precautions regarding 4G1/2 mix manifolds
With the fitting facing forward, the left side of the mix block will be 4G1 Series while the right side will be the 4G2 Series.
(Note that a reverse position cannot be set.)

Main parts list (refer to page 276 to 294 for details)

No.	Component name	Model no. (example)
1	End block L	N4G1R - EL
2	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GB110R-C6-H-3
4	Mix block	N4G12R-MIX
5	Discrete valve block with solenoid valve	N4GB210R-C8-H-3
6	End block R	N4G2R-ER

Weight

N4G12R-MIX: 49g

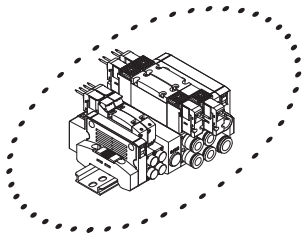
Refer to the specifications of each series for other components.

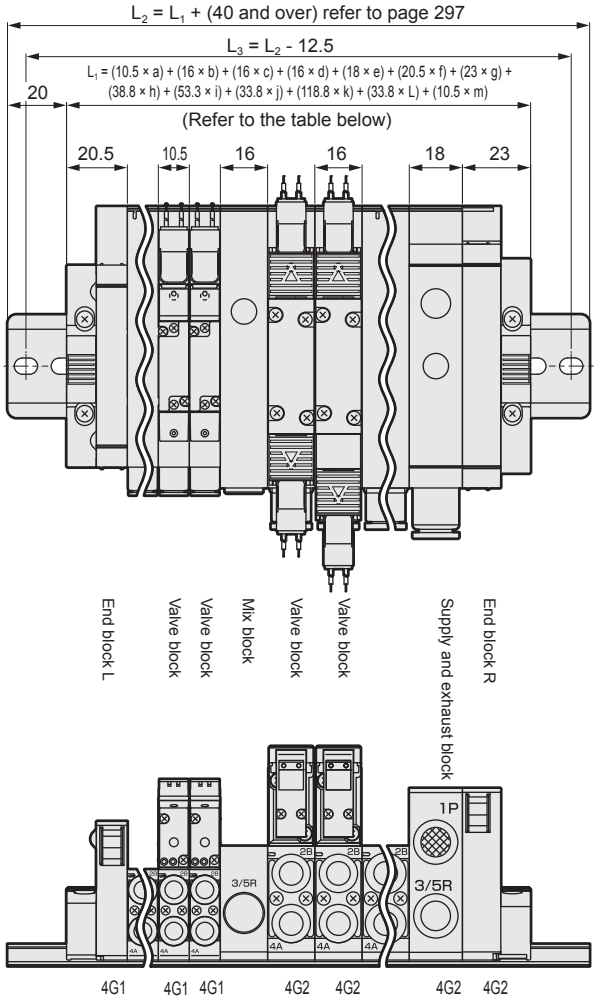
Mix block: dimensions

Unit: mm

MN4GBX12R

Note: For details regarding E type connector, EJ type connector, and DIN terminal box, refer to the pages of each model (MN4GA: from page 225~, MN4GB: from page 233~).
Note: Refer to pages 266 to 269 for details of the L type push-in fitting.





This diagram is an example of a mix manifold.
The combinations can be configured freely.
As the dimensions are as listed below, configure combinations while referring to the previous page.

Part name		Dimensions
a: 4G1	number of valve blocks	10.5 × a
b: 4G2	number of valve blocks	16 × b
c: number of mix blocks		16 × c
d: 4G1	number of supply and exhaust blocks	16 × d
e: 4G2	number of supply and exhaust blocks	18 × e
f: 4G1	number of end block L	20.5 × f
g: 4G2	number of end block R	23 × g
h: 4G1/2	number of T30/T5* reduced wiring	38.8 × h
i: 4G1/2	number of T10 reduced wiring	53.3 × i
j: 4G1/2	number of T7* reduced wiring	33.8 × j
k: 4G1/2	number of T6* reduced wiring	118. 8 × K
l: 4G1/2	number of T8* reduced wiring	33. 8 × L
m: 4G1/2	number of partition blocks	10. 5 × m

Note 1: The mix block is placed between 4G1 and 4G2.
Note 2: The max. station no. is 20.

Block manifold; block configuration

Flexible assembly enables expansion of stations and maintenance.

● Valve block with solenoid valve

(1) The required types of solenoid valves for the required number of stations can be arranged on a DIN rail. Note that the number of stations is determined based on the wiring method. (Refer to Page 236, 252.)

(2) The solenoid valve no. is numbered in a series as 1, 2, 3 and so forth from the left side with the fitting facing forward.

● Supply and exhaust block

(1) A necessary number of these can be freely arranged at the connecting sections of each block.

(2) As there are blocks for internal pilots and external pilots, configure an appropriate model depending on the type of solenoid valve.

● End block

(1) Install end blocks on both sides for individual wiring specifications.

(2) Install end blocks on only the opposite side of the wiring block for reduced wiring specifications.

● Partition block

(1) Install as a combination with supply and exhaust blocks when using different pressure specifications.

● Mix block

(1) Install when combining 4G1 and 4G2 as a mix on the same DIN rail. This effectively reduces piping.

Block manifold configuration

Piping section

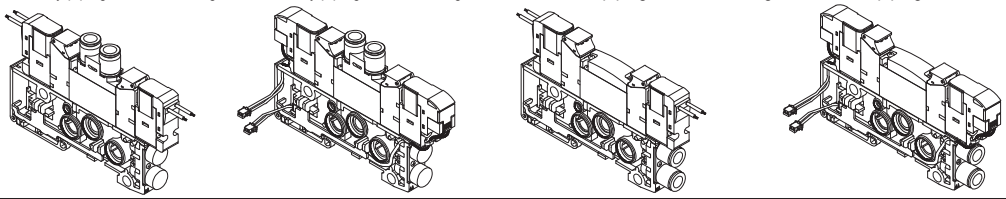
Wiring section

Related products

Piping block

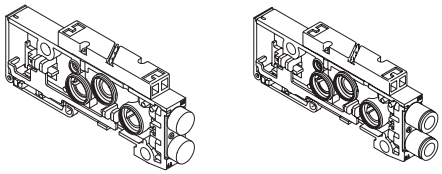
A Discrete valve block with solenoid valve

- For body piping individual wiring
- For body piping reduced wiring
- For base piping individual wiring
- For base piping reduced wiring



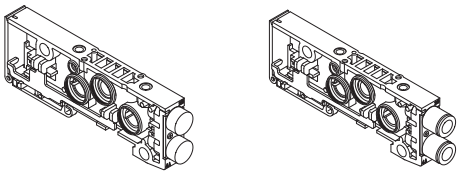
B Discrete valve block with masking plate

- For body piping
- For base piping



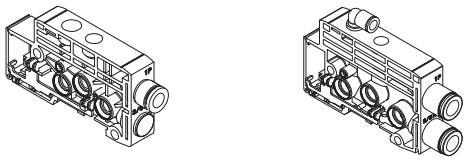
C Discrete valve block

- For body piping
- For base piping



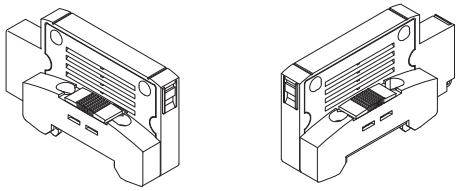
D Supply and exhaust block

- For internal pilot
- For external pilot

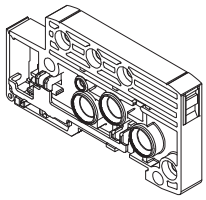


E End block

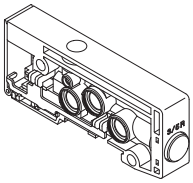
- For left
- For right



F Partition block



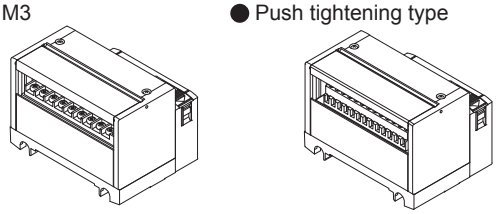
G Mix block



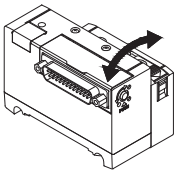
Wiring block

H Common terminal block

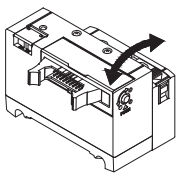
- M3
- Push tightening type



I D sub-connector block

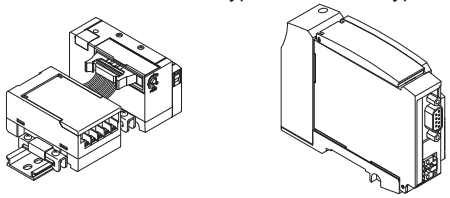


J Flat cable connector block



K Serial transmission block

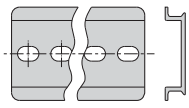
- Connector connection type
- Thin slot type



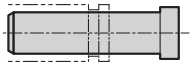
Related products

L Related products

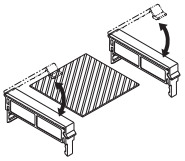
- Mounting rail



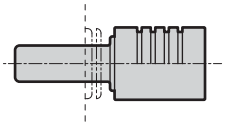
- Blank plug



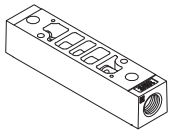
- Tag plate



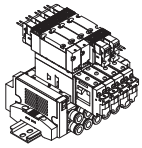
- Silencer



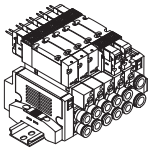
- Air supply spacer



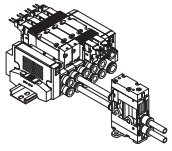
- Spacer type pilot check valve



- In stop valve spacer



- Pilot check valve



Piping section

A. Discrete valve block with solenoid valve

A block assembled with solenoid valve and a valve block (split plastic base). For selection guides, refer to the following pages.
Body piping individual wiring: page 222, base piping individual wiring: page 230, body piping reduced wiring: page 238,
base piping reduced wiring: page 254

B. Discrete valve block with masking plate

A block assembled with a masking plate and a valve block (split plastic base).

N4GA1 R - MP ——— 3

N4GB1 R - MPD - C4 - 3 F

Ⓐ Model no. Ⓑ Type Ⓒ Port size Ⓓ Cable length Note 2 Ⓔ Option

Ⓑ Type

MP	For individual wiring
MPS	For reduced wiring single
MPD	For reduced wiring double/3-position

Ⓓ Cable length Note 3

Blank	For individual wiring
2 to 10	Select a length from page 280.

Ⓔ Option

Blank	No option
L	With piping adaptor
F	A/B port filter integrated

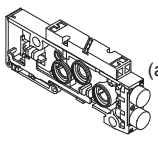
Note 2 When a purchase is made for the expansion of stations of reduced wiring, a socket assembly will be attached to the product, select "2 to 10". Select a cable length from the following Ⓓ page 280 and indicate the length in the field for the D cable length. When ordering the part with the manifold specifications, the cable length does not need to be filled in.

Symbol	Descriptions		Ⓐ Model No. N4GA1	N4GA2	N4GB1	N4GB2
Ⓒ Post size (it is necessary to configure this with base piping.)						
Type	Milli fitting/Rc thread					
CF	φ1.8 barbed fitting (applicable tube UP-9102-**)				●	
C18	φ1.8 push-in fitting (applicable tube UP-9402-**)				●	
C4	φ4 push-in fitting				●	●
C6	φ6 push-in fitting				●	●
C8	φ8 push-in fitting					●
CL18	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)				●	
CL4	L type φ4 push-in fitting (upward)				●	
CL6	L type φ6 push-in fitting (upward)				●	●
CL8	L type φ8 push-in fitting (upward)					●
CD18	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)				●	
CD4	L type φ4 push-in fitting (downward)				●	
CD6	L type φ6 push-in fitting (downward)				●	●
CD8	L type φ8 push-in fitting (downward)					●
Single side plugged specifications	A Port	B Port				
CFNC	φ1.8 barbed fitting (applicable tube UP-9102-**)	Plug			●	
C18NC	φ1.8 push-in fitting (applicable tube UP-9402-**)				●	
C4NC	φ4 push-in fitting				●	●
C6NC	φ6 push-in fitting				●	●
C8NC	φ8 push-in fitting					●
CFNO	Plug	φ1.8 barbed fitting (applicable tube UP-9102-**)			●	
C18NO		φ1.8 push-in fitting (applicable tube UP-9402-**)			●	
C4NO		φ4 push-in fitting			●	●
C6NO		φ6 push-in fitting			●	●
C8NO		φ8 push-in fitting				●
CL18NC	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)	Plug			●	
CL4NC	L type φ4 push-in fitting (upward)				●	●
CL6NC	L type φ6 push-in fitting (upward)				●	●
CL8NC	L type φ8 push-in fitting (upward)					●
CL18NO	Plug	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)			●	
CL4NO		L type φ4 push-in fitting (upward)			●	
CL6NO		L type φ6 push-in fitting (upward)			●	●
CL8NO		L type φ8 push-in fitting (upward)				●

Symbol	Descriptions		Ⓐ Model No. N4GA1	N4GA2	N4GB1	N4GB2
Type	Milli fitting/Rc thread					
Single side plugged specifications	A Port	B Port				
CD18NC	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)	Plug			●	
CD4NC	L type φ4 push-in fitting (downward)				●	
CD6NC	L type φ6 push-in fitting (downward)				●	●
CD8NC	L type φ8 push-in fitting (downward)					●
CD18NO	Plug	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)			●	
CD4NO		L type φ4 push-in fitting (downward)			●	
CD6NO		L type φ6 push-in fitting (downward)			●	●
CD8NO		L type φ8 push-in fitting (downward)				●
Type	Inch fitting/Inch thread					
C3N	φ1/8 inch push-in fitting				●	
C4N	φ5/32 inch push-in fitting				●	
C6N	φ1/4 inch push-in fitting					●
C8N	φ5/16 inch push-in fitting					●
CL3N	L type φ1/8 inch push-in fitting (upward) Note 1				○	
CL4N	L type φ5/32 inch push-in fitting (upward) Note 1				○	
CL6N	L type φ1/4 inch push-in fitting (upward) Note 1					○
CL8N	L type φ5/16 inch push-in fitting (upward) Note 1					○
Single side plugged specifications	A Port	B Port				
C3NCN	φ1/8 inch push-in fitting	Plug			●	
C4NCN	φ5/32 inch push-in fitting				●	
C6NCN	φ1/4 inch push-in fitting					●
C8NCN	φ5/16 inch push-in fitting					●
C3NON	Plug	φ1/8 inch push-in fitting			●	
C4NON		φ5/32 inch push-in fitting			●	
C6NON		φ1/4 inch push-in fitting				●
C8NON		φ5/16 inch push-in fitting				●
CL3NCN	L type φ1/8 inch push-in fitting (upward) Note 1	Plug			○	
CL4NCN	L type φ5/32 inch push-in fitting (upward) Note 1				○	
CL6NCN	L type φ1/4 inch push-in fitting (upward) Note 1					○
CL8NCN	L type φ5/16 inch push-in fitting (upward) Note 1					○
CL3NON	Plug	L type φ1/8 inch push-in fitting (upward) Note 1			○	
CL4NON		L type φ5/32 inch push-in fitting (upward) Note 1			○	
CL6NON		L type φ1/4 inch push-in fitting (upward) Note 1				○
CL8NON		L type φ5/16 inch push-in fitting (upward) Note 1				○

Note 1: This is a available consult factory order.
is not available.
○ Contact CKD for price and availability.

N4GA1R-MP



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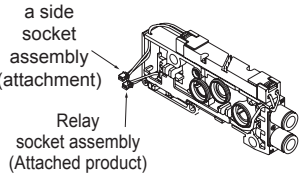

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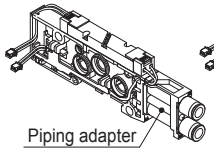

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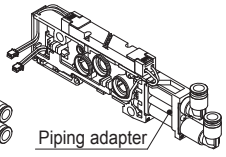
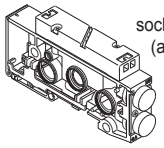
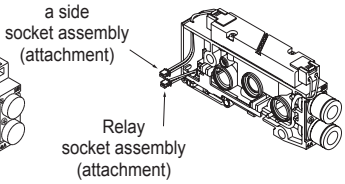


N4GA2R-MP



N4GB2R-MPD-C6-5

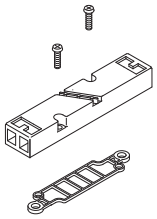


B-1. Masking plate

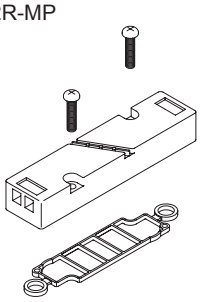
4G1R - MP

Ⓐ Model no.

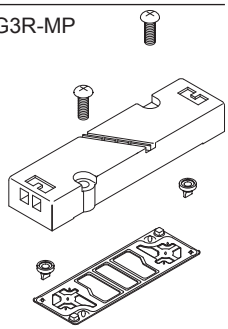
4G1R-MP



4G2R-MP



4G3R-MP



Piping section

C. Discrete valve block (discrete only)

A discrete valve block (split plastic base).

N4GA1 R - V1 ——— 3

N4GB1 R - V2 - C4 - 3 F

Ⓐ Model no. Ⓑ Type Ⓒ Port size Ⓓ Cable length Note 2 Ⓔ Option

Ⓑ Type

V1	For individual wiring For reduced wiring single
V2	For reduced wiring double/3-position

Ⓓ Cable length Note 3

Blank	For individual wiring
2 to 10	Select a length from page 280.

Ⓔ Option

Blank	No option
L	With piping adaptor
F	A/B port filter integrated

Note 2 When a purchase is made for the expansion of stations of reduced wiring, a socket assembly will be attached to the product, select "2 to 10". Select a cable length from the following Ⓓ page 280 and indicate the length in the field for the D cable length. However, it will not be necessary to include the cable length when making arrangements with the manifold specifications.

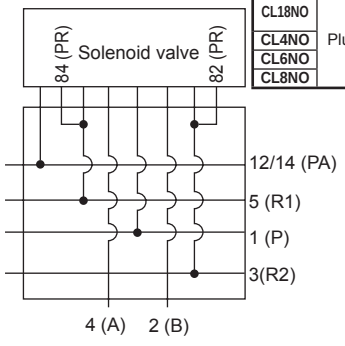
Symbol	Descriptions		Ⓐ Model No. N4GA1	N4GA2	N4GB1	N4GB2
Ⓒ Post size (it is necessary to configure this with base piping.)						
Type	Milli fitting/Rc thread					
CF	φ1.8 barbed fitting (applicable tube UP-9102-**)				●	
C18	φ1.8 push-in fitting (applicable tube UP-9402-**)				●	
C4	φ4 push-in fitting				●	●
C6	φ6 push-in fitting				●	●
C8	φ8 push-in fitting					●
CL18	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)				●	
CL4	L type φ4 push-in fitting (upward)				●	
CL6	L type φ6 push-in fitting (upward)				●	●
CL8	L type φ8 push-in fitting (upward)					●
CD18	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)				●	
CD4	L type φ4 push-in fitting (downward)				●	
CD6	L type φ6 push-in fitting (downward)				●	●
CD8	L type φ8 push-in fitting (downward)					●
Single side plugged specifications	A Port	B Port				
CFNC	φ1.8 barbed fitting (applicable tube UP-9102-**)	Plug			●	
C18NC	φ1.8 push-in fitting (applicable tube UP-9402-**)				●	
C4NC	φ4 push-in fitting				●	●
C6NC	φ6 push-in fitting				●	●
C8NC	φ8 push-in fitting					●
CFNO	Plug	φ1.8 barbed fitting (applicable tube UP-9102-**)			●	
C18NO		φ1.8 push-in fitting (applicable tube UP-9402-**)			●	
C4NO		φ4 push-in fitting			●	●
C6NO		φ6 push-in fitting			●	●
C8NO		Φ8 push-in fitting				●
CL18NC	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)	Plug			●	
CL4NC	L type φ4 push-in fitting (upward)				●	●
CL6NC	L type φ6 push-in fitting (upward)				●	●
CL8NC	L type φ8 push-in fitting (upward)					●
CL18NO	Plug	L type φ1.8 push-in fitting (upward) (applicable tube UP-9402-**)			●	
CL4NO		L type φ4 push-in fitting (upward)			●	
CL6NO		L type φ6 push-in fitting (upward)			●	●
CL8NO		L type φ8 push-in fitting (upward)				●

Symbol	Descriptions		Ⓐ Model No. N4GA1	N4GA2	N4GB1	N4GB2
Type	Milli fitting/Rc thread					
Single side plugged specifications	A Port	B Port				
CD18NC	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)	Plug			●	
CD4NC	L type φ4 push-in fitting (downward)				●	
CD6NC	L type φ6 push-in fitting (downward)				●	●
CD8NC	L type φ8 push-in fitting (downward)					●
CD18NO	Plug	L type φ1.8 push-in fitting (downward) (applicable tube UP-9402-**)			●	
CD4NO		L type φ4 push-in fitting (downward)			●	
CD6NO		L type φ6 push-in fitting (downward)			●	●
CD8NO		L type φ8 push-in fitting (downward)				●
Type	Inch fitting/Inch thread					
C3N	φ1/8 inch push-in fitting				●	
C4N	φ5/32 inch push-in fitting				●	
C6N	φ1/4 inch push-in fitting					●
C8N	φ5/16 inch push-in fitting					●
CL3N	L type φ1/8 inch push-in fitting (upward) Note 1				○	
CL4N	L type φ5/32 inch push-in fitting (upward) Note 1				○	
CL6N	L type φ1/4 push-in fitting (upward) Note 1					○
CL8N	L type φ5/16 inch push-in fitting (upward) Note 1					○
Single side plugged specifications	A Port	B Port				
C3NCN	φ1/8 inch push-in fitting	Plug			●	
C4NCN	φ5/32 inch push-in fitting				●	
C6NCN	φ1/4 inch push-in fitting					●
C8NCN	φ5/16 inch push-in fitting					●
C3NON	Plug	φ1/8 inch push-in fitting			●	
C4NON		φ5/32 inch push-in fitting			●	
C6NON		φ1/4 inch push-in fitting				●
C8NON		φ5/16 inch push-in fitting				●
CL3NCN	L type φ1/8 inch push-in fitting (upward) Note 1	Plug			○	
CL4NCN	L type φ5/32 inch push-in fitting (upward) Note 1				○	
CL6NCN	L type φ1/4 inch push-in fitting (upward) Note 1					○
CL8NCN	L type φ5/16 inch push-in fitting (upward) Note 1					○
CL3NON	Plug	L type φ1/8 inch push-in fitting (upward) Note 1			○	
CL4NON		L type φ5/32 inch push-in fitting (upward) Note 1			○	
CL6NON		L type φ1/4 inch push-in fitting (upward) Note 1				○
CL8NON		L type φ5/16 inch push-in fitting (upward) Note 1				○

Note 1: This is a available consult factory order.

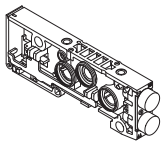
is not available.

○ Contact CKD for price and availability.

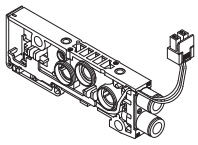


Discrete valve lock circuit diagram

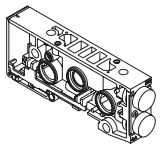
N4GA1R - V1



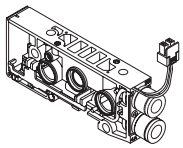
N4GB1R-V2-C4



N4GA2R-V1

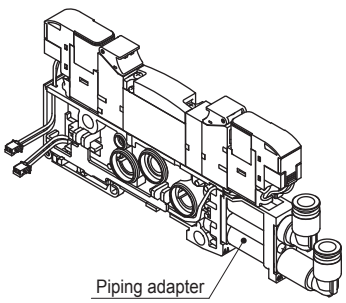


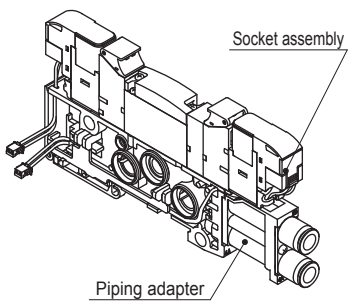
N4GB2R-V2-C6



● Option L (With piping adaptor)

Select L (with piping adapter) if using a L type push-in fitting (upward) in 2 or 3 positions.
In addition, tube desorption workability is improved for fittings that protrude from the socket assembly in the combination of the push-in fitting straight type and piping adapter.





MN4GA & 4GB Series

Block manifold: piping section

Piping section

Problems could arise depending on the structure, so the function of each block should be studied in detail before making a selection.

C. Discrete valve block (discrete only)

Valve block for expansion, cable length

Calculate the distance W between the expansion position and the electrical block (Fig. 1), and select a cable of an appropriate length from <Table 1>. Please be aware that the required socket assembly is different between a side solenoid and b side solenoid.
Although Fig. 1 shows specifications where the electrical block is on the left side, similarly calculate the distance W between the expansion position and the electrical block with right side specifications.

Calculation of W

· For MN4G1

W = (10.5 × n) + (16 × m) + (10.5 × l)

· For MN4G2

W = (16 × n) + (18 × m) + (10.5 × l)

n: station no. of valve blocks, m: number of supply and exhaust blocks, l: number of partition blocks

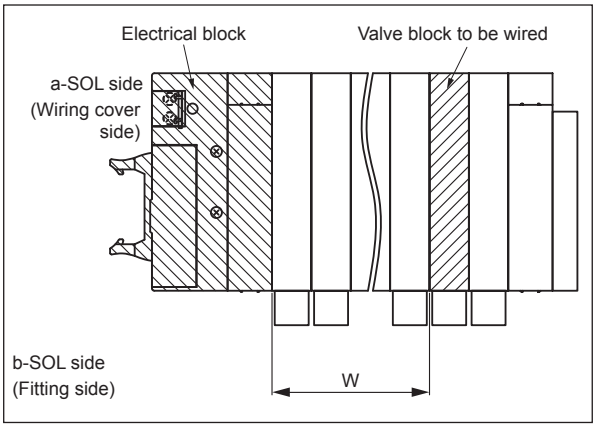
· For MN4GX

Calculate using 16 for the mix block width.

<Table 1> W length - selection no. compatibility table

Selection no.	Wiring type		
	T10/11 (R)	T30/5*/6*(R)	T7*/T8*
2		0	25 or less
3	20 or less	Over 0 to 30	Over 25 to 55
4	Over 20 to 70	Over 30 to 80	Over 55 to 105
5	Over 70 to 120	Over 80 to 130	Over 105 to 155
6	Over 120 to 170	Over 130 to 180	Over 155 to 205
7	Over 170 to 260	Over 180 to 270	Over 205 to 295
8	Over 260 to 350	Over 270 to 360	Over 295 to 385
9	Over 350 to 450	Over 360 to 460	Over 385 to 485
10	Over 450 to 570	Over 460 to 580	Over 485 to 605

Fig. 1



D. Supply/exhaust block

The supply and exhaust block can be installed at any position adjacent to the valve block.
As there is no set number of units, install two or more units when reguiring combinations with partition blocks or when increasing the flow rate for supply and exhaust.
In order to prevent foreign matters from entering in, P port is equipped with a filter.

N4G1 R - Q - 8 X

Model no. — A Type — B Port size — C Exhaust

A Type	
Q	Internal pilot
QK	External pilot

Note 1: This is a available consult factory order.
Note 2: Select 6*M and 8*M if using a silencer in the inch fitting specifications.
Note 3: When designating X, select the atmosphere release (EX) for the end block.

B Port size		
6	φ6 push-in fitting	
6L	φ6 push-in fitting	(upward)
6D	φ6 push-in fitting	(downward)
8	φ8 push-in fitting	
8L	φ8 push-in fitting	(upward)
8D	φ8 push-in fitting	(downward)
6N	φ1/4 inch push-in fitting	
6LN	φ1/4 inch push-in fitting	(upward) Note 1
6DN	φ1/4 inch push-in fitting	(downward) Note 1
8N	φ5/16 inch push-in fitting	
8LN	φ5/16 inch push-in fitting	(upward) Note 1
8DN	φ5/16 inch push-in fitting	(downward) Note 1
6M Note 2	P port φ1/4 inch push-in fitting R port φ6 push-in fitting	
6LM Note 1, Note 2	P port φ1/4 inch push-in fitting R port φ6 push-in fitting	(upward) (upward)
6DM Note 1, Note 2	P port φ1/4 inch push-in fitting R port φ6 push-in fitting	(downward) (downward)
8M Note 2	P port φ5/16 inch push-in fitting R port φ8 push-in fitting	Note 2
8LM Note 1, Note 2	P port φ5/16 inch push-in fitting R port φ8 push-in fitting	(upward) (upward)
8DM Note 1, Note 2	P port φ5/16 inch push-in fitting R port φ8 push-in fitting	(downward) (downward)

C Exhaust	
Blank	Common exhaust
X Note 3	Atmospheric release

N4G2 R - QK - 10L X

Model no. — A Type — B Port size — C Exhaust

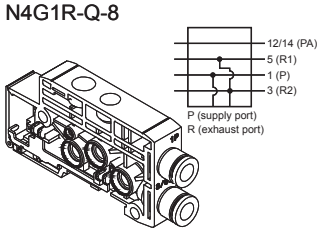
A Type	
Q	Internal pilot
QK	External pilot

Note 1: This is a available consult factory order.
Note 2: Select 6*M and 8*M if using a silencer in the inch fitting specifications.
Note 3: When designating X, select the atmosphere release (EX) for the end block.

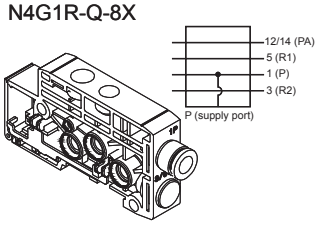
B Port size		
8	φ8 push-in fitting	
8L	φ8 push-in fitting	(upward)
8D	φ8 push-in fitting	(downward)
10	φ10 push-in fitting	
10L	φ10 push-in fitting	(upward)
10D	φ10 push-in fitting	(downward)
8N	φ5/16 inch push-in fitting	
8LN	φ5/16 inch push-in fitting	(upward) Note 1
8DN	φ5/16 inch push-in fitting	(downward) Note 1
10N	φ3/8 inch push-in fitting	
10LN	φ3/8 inch push-in fitting	(upward) Note 1
10DN	φ3/8 inch push-in fitting	(downward) Note 1
8M Note 2	P port φ5/16 inch push-in fitting R port φ8 push-in fitting	
8ML Note 1, Note 2	P port φ5/16 inch push-in fitting R port φ8 push-in fitting	(upward)
8DM Note 1, Note 2	P port φ5/16 inch push-in fitting R port φ8 push-in fitting	(downward)
10M Note 2	P port φ3/8 inch push-in fitting R port φ10 push-in fitting	
10LM Note 1, Note 2	P port φ3/8 inch push-in fitting R port φ10 push-in fitting	(upward)
10DM Note 1, Note 2	P port φ3/8 inch push-in fitting R port φ10 push-in fitting	(downward)

C Exhaust	
Blank	Common exhaust
X Note 3	Atmospheric release

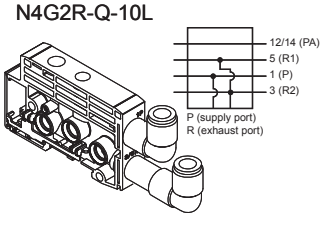
N4G1R-Q-8



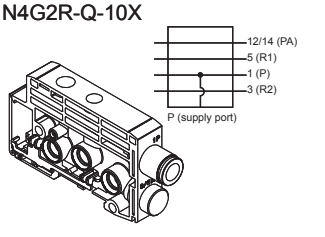
N4G1R-Q-8X



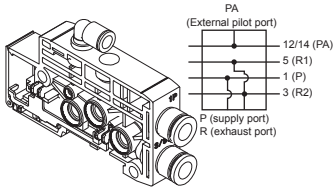
N4G2R-Q-10L



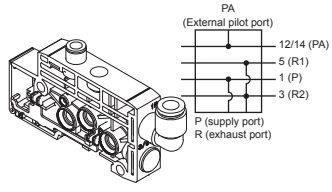
N4G2R-Q-10X



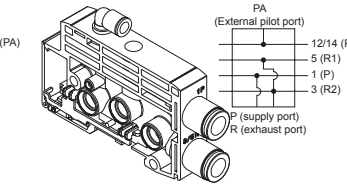
N4G1R-QK-8



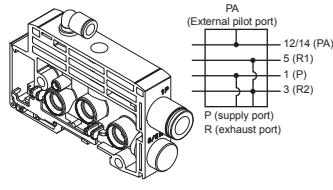
N4G1R-QK-8LX



N4G2R-QK-10



N4G2R-QK-10X



* External pilot port: φ6 push-in fitting

*External pilot port: φ6 push-in fitting

Piping section

E. End block

Install the units on both ends of the manifold with individual wiring. Install the units on opposite sides of the electrical block with reduced wiring. An exhaust muffler is built into the released to air type.

N4G1 R - E R

Model no. Ⓐ Type Ⓑ Installation position

Common exhaust type: 12/14 (PA), 5 (R1), 1 (P), 3(R2)

Released to air type: 12/14 (PA), 5 (R1), 1 (P), 3(R2)

Ⓐ Type		Ⓑ Installation position	
E	Common exhaust	L	Left
EX	Atmospheric release	R	Right

N4G2 R - EX L

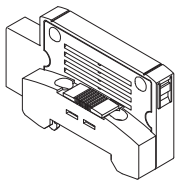
Model no. Ⓐ Type Ⓑ Installation position

Common exhaust type: 12/14 (PA), 5 (R1), 1 (P), 3 (R2)

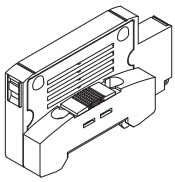
Atmospheric release type: 12/14 (PA), 5 (R1), 1 (P), 3 (R2)

Ⓐ Type		Ⓑ Installation position	
E	Common exhaust	L	Left
EX	Atmospheric release	R	Right

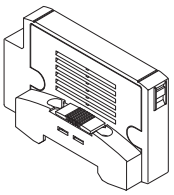
N4G1R - EL



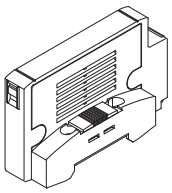
N4G1R - ER



N4G2R-EL



N4G2R-ER



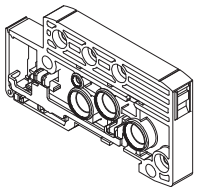
F. Partition block

It is possible to implement measures to prevent mixture of different pressures and increase of back pressure by using the combination of a partition block and a supply and exhaust block.

N4G1 R - S

Model no. Ⓐ Type

N4G1-S

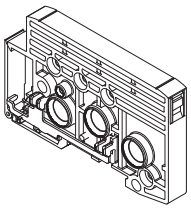


Ⓐ Type	
SA	P/R/PA stop
S	P/R stop PA through
SP	P stop R/PA through
SE	R stop P/PA through

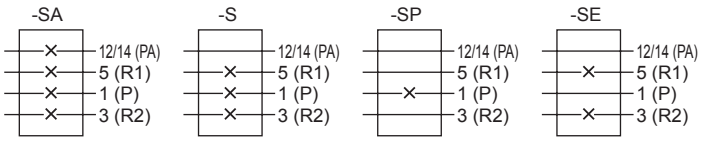
N4G2 R - SA

Model no. Ⓐ Type

N4G2-S



Ⓐ Type	
SA	P/R/PA/ stop
S	P/R stop PA through
SP	P stop R/PA through
SE	R stop P/PA through

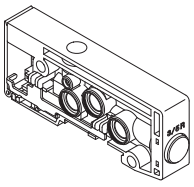


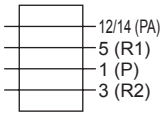
G. Mix block

Installed in cases when 4G1 and 4G2 coexist in the same manifold.

The installation positions will be 4G1 on the left side of the mix block and 4G2 on the right side.

N4G12 R - MIX





MN4GA & 4GB Series

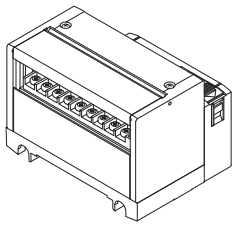
Block manifold: wiring section

Wiring section (Electrical block) * Orders cannot be placed for only an electrical block.

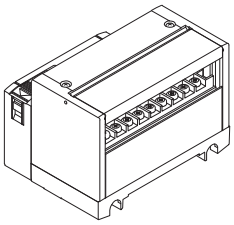
H. Common terminal block

M3 thread specifications

N4G1R-T10

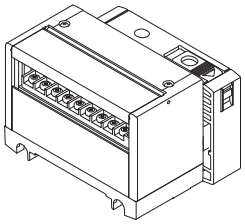


N4G1R-T10R

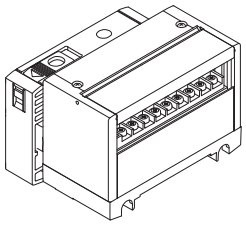


M3 thread specifications

N4G2R-T10

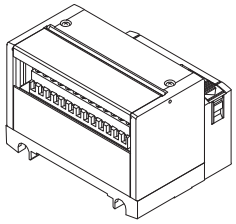


N4G2R-T10R

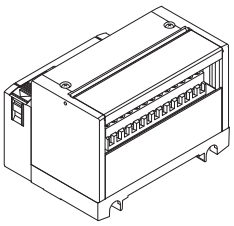


Push tightening specifications

N4G1R-T11

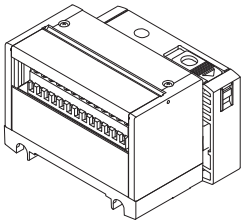


N4G1R-T11R

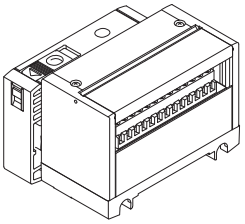


Push tightening specifications

N4G2R-T11

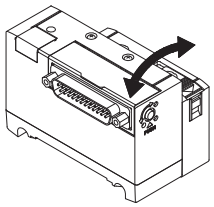


N4G2R-T11R

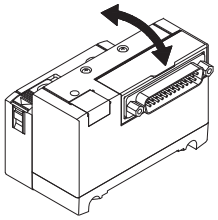


I. D sub-connector block

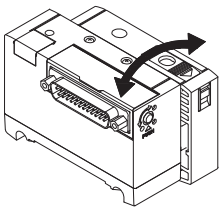
N4G1R-T30



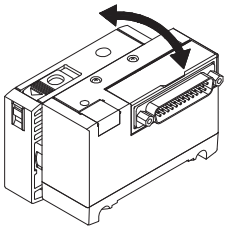
N4G1R-T30R



N4G2R-T30



N4G2R-T30R

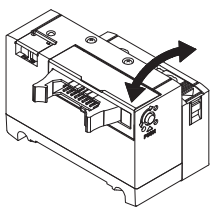


*Refer to page 597 for cable model no. with D-sub connector.

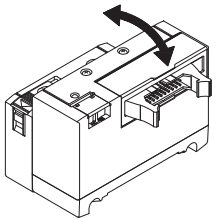
J. Flat cable connector block

● With power supply terminal

N4G1R-T50

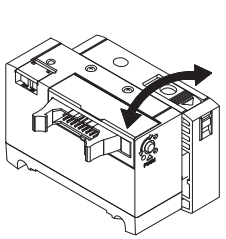


N4G1R-T50R

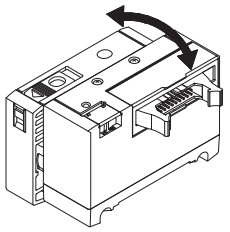


● With power supply terminal

N4G2R-T50

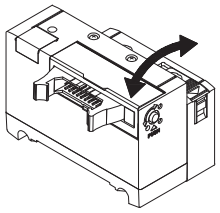


N4G2R-T50R

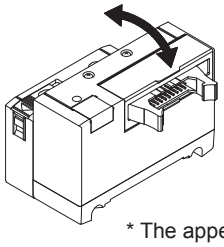


● Without power supply terminal

N4G1R-T51 (N4G1R-T52) (N4G1R-T53)

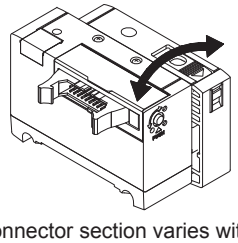


N4G1R-T51R (N4G1R-T52R) (N4G1R-T53R)

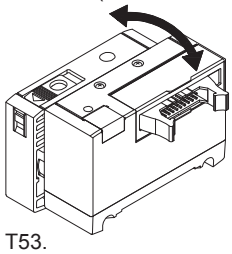


● Without power supply terminal

N4G2R-T51 (N4G2R-T52) (N4G2R-T53)



N4G2R-T51R (N4G2R-T52R) (N4G2R-T53R)



* The appearance of the connector section varies with T52 and T53.

Wiring section (Electrical block) * Orders cannot be placed for only an electrical block.

K. Serial transmission block

● Connector connection type

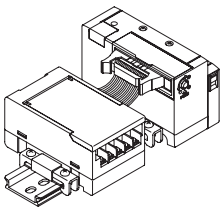
N4G1 R - T6G1

Model no. Ⓐ Type

Ⓐ Type			
T6A0/1	UNIWIRE SYSTEM	NPN	8 points/16 points
T6C0/1	CompoBus/S		8 points/16 points
T6G1	CC-Link		16 points
T6E0/1	S-LINK		8 points/16 points
T6J0/1	UNIWIRE H SYSTEM		8 points/16 points

* T6C0/1 does not support the long-distance communication mode.

N4G1R-T6*



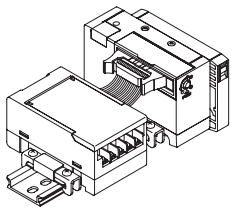
N4G2 R - T6G1

Model no. Ⓐ Type

Ⓐ Type			
T6A0/1	UNIWIRE SYSTEM	NPN	8 points/16 points
T6C0/1	CompoBus/S		8 points/16 points
T6G1	CC-Link		16 points
T6E0/1	S-LINK		8 points/16 points
T6J0/1	UNIWIRE H SYSTEM		8 points/16 points

* T6C0/1 does not support the long-distance communication mode.

N4G2R-T6*



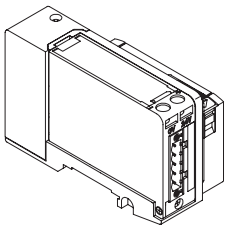
● Thin slot type

N4G1 R - T7D1

Model no. Ⓐ Type

Ⓐ Type			
T7C0/1	CompoBus/S	NPN	8 points/16 points
T7D1	DeviceNet		16 points
T7E0/1	S-LINK		8 points/16 points
T7G1	CC-Link		16 points
T7L1	SAVE NET		16 points
T7S1	CompoNet	NPN	16 points
T7SP1		PNP	

N4G1R-T7*

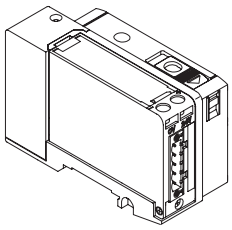


N4G2 R - T7G1

Model no. Ⓐ Type

Ⓐ Type			
T7C0/1	CompoBus/S	NPN	8 points/16 points
T7D1	DeviceNet		16 points
T7E0/1	S-LINK		8 points/16 points
T7G1	CC-Link		16 points
T7L1	SAVE NET		16 points
T7S1	CompoNet	NPN	16 points
T7SP1		PNP	

N4G2R-T7*



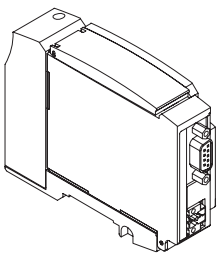
● Discrete serial transmission slave unit
(Thin slot-insertion type)

N4G1 R - T8G1

Ⓐ Wiring method

Ⓐ Wiring method			
T8G1	CC-Link (Thin type)	NPN	16 points
T8G2			32 points
T8GP1		PNP	16 points
T8GP2			32 points
T8P1	PROFIBUS-DP (Thin type)	NPN	16 points
T8P2			32 points
T8PP1		PNP	16 points
T8PP2			32 points
T8EC1	EtherCAT (Thin type)	NPN	16 points
T8EC2			32 points
T8ECP1		PNP	16 points
T8ECP2			32 points
T8EN1	EtherNet/IP (Thin type)	NPN	16 points
T8EN2			32 points
T8ENP1		PNP	16 points
T8ENP2			32 points

N4G1R-T8*

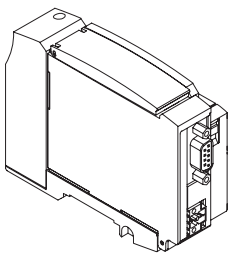


N4G2 R - T8G1

Ⓐ Wiring method

Ⓐ Wiring method			
T8G1	CC-Link (Thin type)	NPN	16 points
T8G2			32 points
T8GP1		PNP	16 points
T8GP2			32 points
T8P1	PROFIBUS-DP (Thin type)	NPN	16 points
T8P2			32 points
T8PP1		PNP	16 points
T8PP2			32 points
T8EC1	EtherCAT (Thin type)	NPN	16 points
T8EC2			32 points
T8ECP1		PNP	16 points
T8ECP2			32 points
T8EN1	EtherNet/IP (Thin type)	NPN	16 points
T8EN2			32 points
T8ENP1		PNP	16 points
T8ENP2			32 points

N4G2R-T8*



L. Serial transmission slave unit

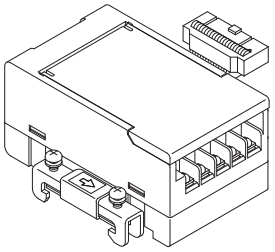
* It is possible to place an order for only the serial transmission slave unit.

● Discrete serial transmission slave unit (Connector connection type)

4GR - OPP3 - 0A

Ⓐ Wiring method

Symbol	Descriptions			
Ⓐ Wiring method				
0A	T6A0	UNIWIRE SYSTEM	NPN	8 points
1A	T6A1			16 points
0C	T6C0	CompoBus/S		8 points
1C	T6C1			16 points
0E	T6E0	S-LINK		8 points
1E	T6E1			16 points
1G	T6G1	CC-Link		16 points
0J	T6J0	UNIWIRE H SYSTEM		8 points
1J	T6J1			16 points

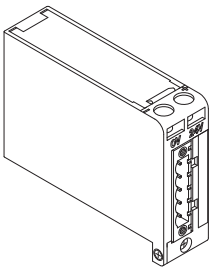


● Discrete serial transmission slave unit (Thin slot-insertion type)

4GR - OPP4 - 0CA

Ⓐ Wiring method

Symbol	Descriptions			
Ⓐ Wiring method				
0CA	T7C0	CompoBus/S (Thin type)	NPN	8 points
1CA	T7C1			16 points
1D	T7D1	DeviceNet (Thin type)	NPN	16 points
0E	T7ED	S-LINK (Thin type)	NPN	8 points
1E	T7E1			16 points
1G	T7G1	CC-Link (Thin type)	NPN	16 points
1L	T7L1	SAVE NET (Thin type)	NPN	16 points
1S	T7S1	CompoNet (Thin type)	NPN	16 points
1S-P	T7SP1		PNP	16 points

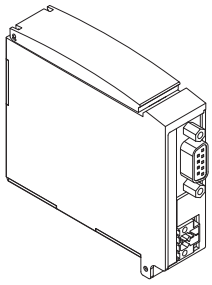


● Discrete serial transmission slave unit (Thin slot-insertion type)

4GR - OPP7 - 2G

Ⓐ Wiring method

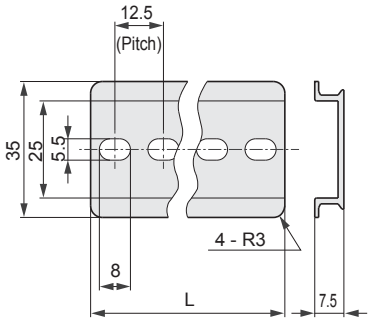
Symbol	Descriptions			
Ⓐ Wiring method				
1G	**T8G1**	CC-Link (Thin type)	NPN	16 points
2G	**T8G2**			32 points
1G-P	**T8GP1**		PNP	16 points
2G-P	**T8GP2**			32 points
1P	**T8P1**	PROFIBUS-DP (Thin type)	NPN	16 points
2P	**T8P2**			32 points
1P-P	**T8PP1**		PNP	16 points
2P-P	**T8PP2**			32 points
1EC	**T8EC1**	EtherCAT (Thin type)	NPN	16 points
2EC	**T8EC2**			32 points
1EC-P	**T8ECP1**		PNP	16 points
2EC-P	**T8ECP2**			32 points
1EN	**T8EN1**	EtherNet/IP (Thin type)	NPN	16 points
2EN	**T8EN2**			32 points
1EN-P	**T8ENP1**		PNP	16 points
2EN-P	**T8ENP2**			32 points



Related products Mounting rail, silencer, blank plug, tag plate

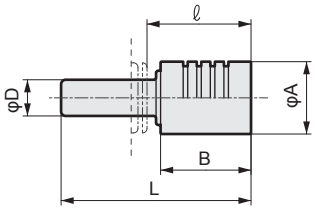
● Mounting rail

N4GR-BAA <length>



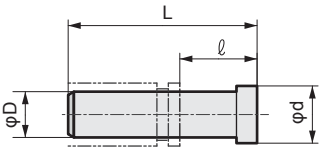
- The min. length is 87.5 mm.
- Select the length in pitches of 12.5 mm.
- Refer to page 297 for details.

● Silencer



Model no.	D	L	A	B	ℓ
SLW-H6	φ6	41	16	20	23.5
SLW-H8	φ8	42	16	20	23
SLW-H10	φ10	53	20	27	31.5

● Blanking plug



Model no.	D	L	ℓ	d
GWP4-B	φ4	27	16	6
GWP6-B	φ6	29	11.5	8
GWP8-B	φ8	33	14	10
GWP10-B	φ10	40	18.5	12

● Tag plate Shipped upon being attached to the manifold.

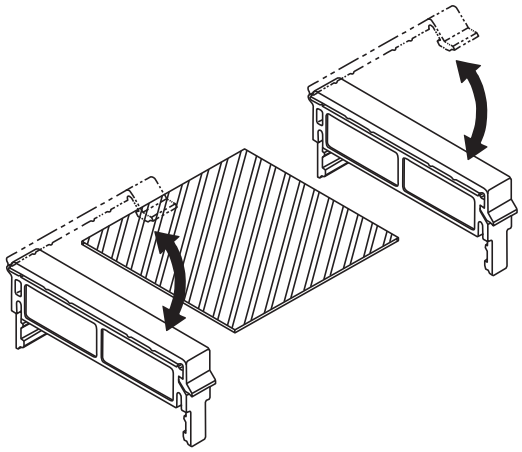
When required, place a circle on the field for tag plates in the manifold specifications on pages 299 to 302.

<Tag holder>

N4G1 R-TAG-HOLDER

Ⓐ Model No.
N4G1
N4G2

(Available in sets of 2.)



<Tag plate>

N4G1 R-TAG-PLATE-A-200 Note 1

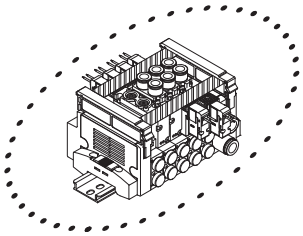
Ⓐ Model No.	Ⓑ Type		Ⓒ Length (mm) Note1
N4G1	A	MN4GA1/2 shared	200
	B1	Wide type for MN4GB1	300
	B2	Narrow type for MN4GB1 Note 2	400
N4G2	B	For MN4GB2	

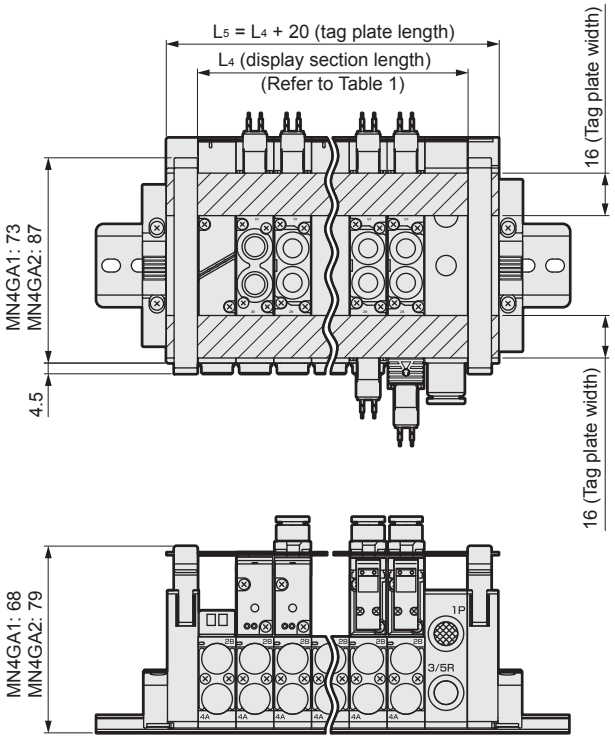
Note 1: As the <length> of the plates are available in the three different lengths of 200, 300, and 400, cut the plates to suit the product length.
Note 2: With the narrow type, manual operations are possible even with the tag plate covering the unit.
Note 3: Tag plates cannot be attached when spacers are used in the manifold specifications.

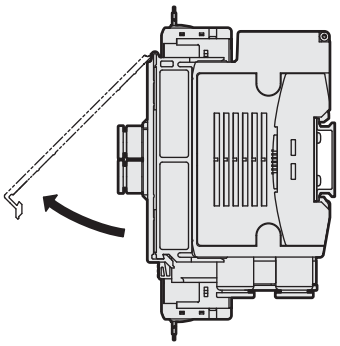
Dimensions: tag plate

MN4GA1/2

● Tag plate

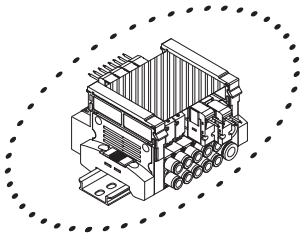


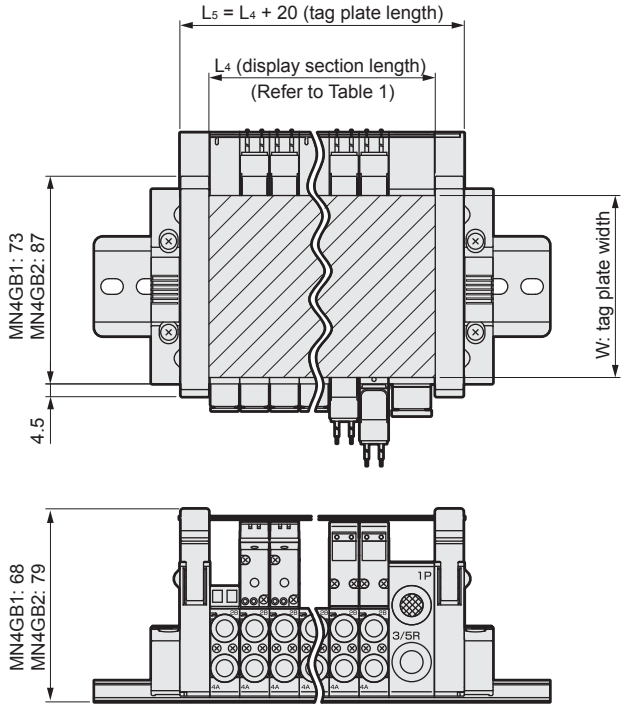


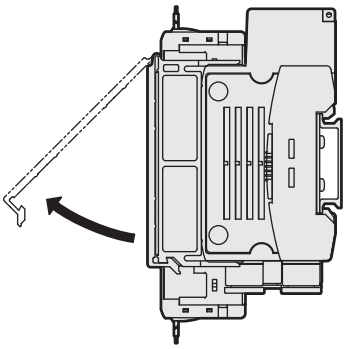


MN4GB1/2

● Tag plate







Model no.	W
N4G1R-TAG-PLATE-B1-length □	64
N4G1R-TAG-PLATE-B2-length □	30
N4G2R-TAG-PLATE-B-length □	45

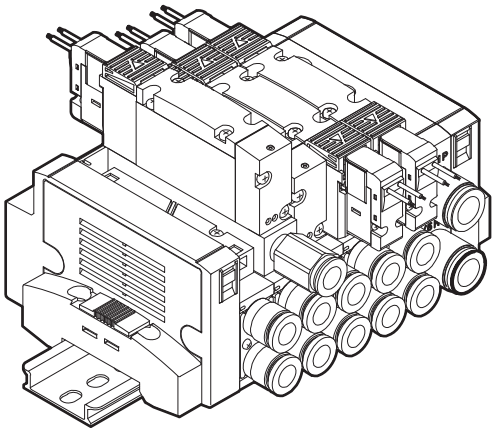
Table 1: Formula for calculation of L_5 (tag plate length)

MN4GA		MN4GB	
MN4GA1	$L_5 = (10.5 \times n) + (16 \times m) + (10.5 \times l) + 20$	MN4GB1	$L_5 = (10.5 \times n) + (16 \times m) + (10.5 \times l) + 20$
MN4GA2	$L_5 = (16 \times n) + (18 \times m) + (10.5 \times l) + 20$	MN4GB2	$L_5 = (16 \times n) + (18 \times m) + (10.5 \times l) + 20$

n: number of valve blocks
m: number of supply and exhaust blocks
l: number of partition blocks

Related products Air supply spacer

● Air supply spacer



Specifications

Model no.	P→A/B		A/B→R		Weight
	C (dm³/(s·bar))	b	C (dm³/(s·bar))	b	g
4G1	0.70	0.23	0.93	0.16	8
4G2	1.6	0.17	1.8	0.16	35

Note 1: These are values when a valve is mounted.
Note 2: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 × C.

How to order discrete part

4G **2** **R** – **P** – **GWS6**

Ⓐ Air supply spacer model no.

Ⓑ Port size Note 1

Symbol	Descriptions	Model no. 4GA1	4GB1	4GA2	4GB2
Ⓐ Air supply spacer model no.					
1	For 4G1	●			
2	For 4G2			●	
Ⓑ Port size					
Blank	M5 thread (4G1), Rc thread (4G2)	(1)		(2)	
GWS4	φ4 fitting	●			
GWS6	φ6 fitting	●		●	
GWS8	φ8 fitting			●	
06N	1/8NPT thread			●	
06G	G 1/8 thread			●	

is not available.

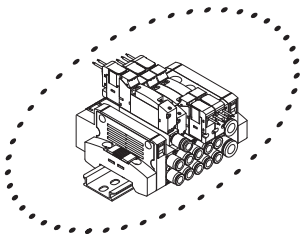
Accessories: 4G1 set screws (2), dedicated gasket (1) 4G2 set screws (2), PR check valves (2), body gasket (1)

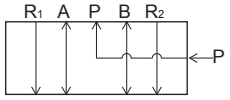
⚠ Cautions for model No. selection

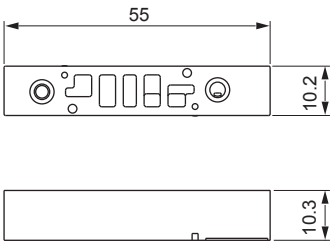
Note 1 Blank indicates (1) M5, (2) Rc1/8.
Note 2 Indicate the mounting positions and quantity of the air supply spacers for manifolds in the manifold specifications.
Note 3 When the A/B port fitting is an elbow type, the intake port of the air supply spacer will be faced towards the opposite side (a solenoid side).
Note 4 With the reduced wiring manifold, when the A/B port fitting is an elbow type (upward), the air supply spacer cannot be selected.
Note 5 Combination with the masking plate is not available.

Dimensions

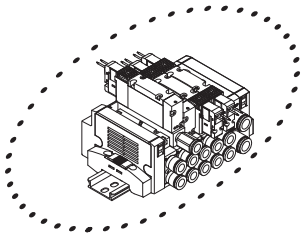
● 4G1

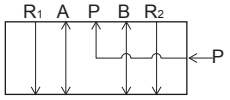


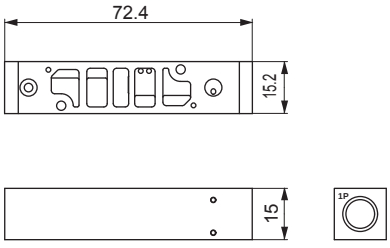




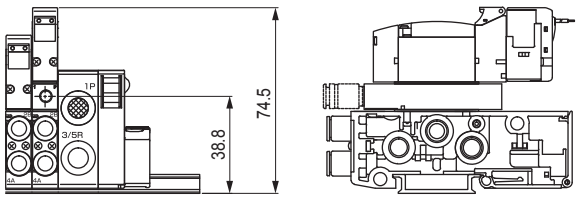
● 4G2



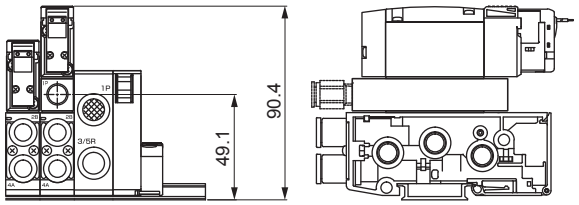




Dimensions when mounted

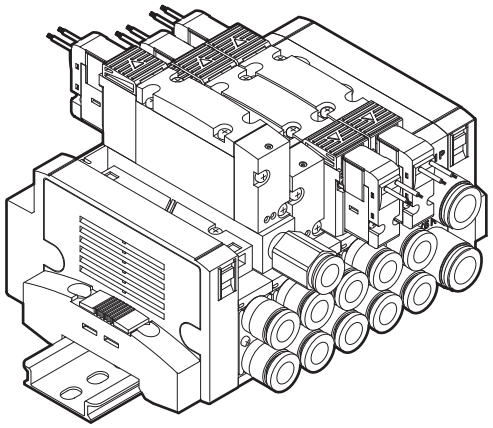


Dimensions when mounted



Related products Exhaust spacer

● Exhaust spacer



Specifications

Model no.	P→A/B		A/B→R		Weight g
	C (dm³/(s·bar))	b	C (dm³/(s·bar))	b	
4G1	0.94	0.28	0.68	0.33	7
4G2	1.5	0.24	1.9	0.24	34

Note 1: These are values when a valve is mounted.
Note 2: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 × C.

How to order discrete part

4G (2) R – (R) – GWS6

(A) Exhaust spacer model no.
(B) Port size Note 1

Symbol	Descriptions	Model no. 4GA1	4GB1	4GA2	4GB2
(A) Exhaust spacer model no.					
1	For 4G1	●			
2	For 4G2			●	
(B) Port size					
Blank	M5 thread (4G1), Rc thread (4G2)	(1)		(2)	
GWS4	φ4 fitting	●			
GWS6	φ6 fitting	●		●	
GWS8	φ8 fitting			●	
06N	1/8NPT thread			●	
06G	G 1/8 thread			●	

is not available.

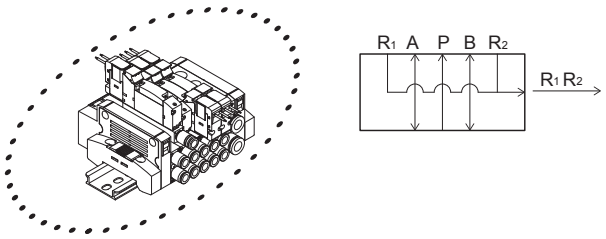
Accessories: 4G1 set screws (2), dedicated gasket (1)
4G2 set screws (2), PR check valves (2), body gasket (1)

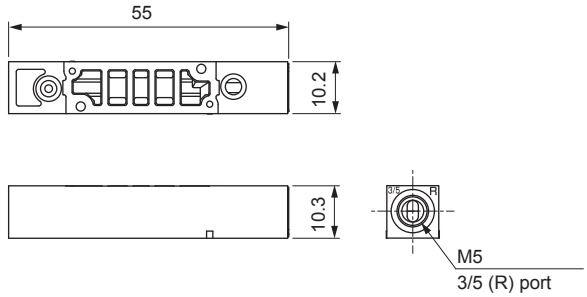
⚠ Cautions for model No. selection

Note 1 Blank indicates (1) M5, (2) Rc1/8.
Note 2 Indicate the mounting positions and quantity of the air supply spacers for manifolds in the manifold specifications.
Note 3 When the A/B port fitting is an elbow type, the intake port of the air supply spacer will be faced towards the opposite side (a solenoid side).
Note 4 With the reduced wiring manifold, when the A/B port fitting is an elbow type (upward), the air supply spacer cannot be selected.
Note 5 Combination with the masking plate is not available.

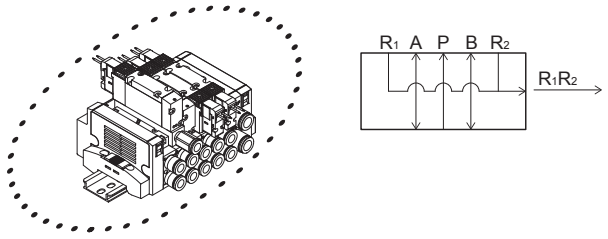
Dimensions

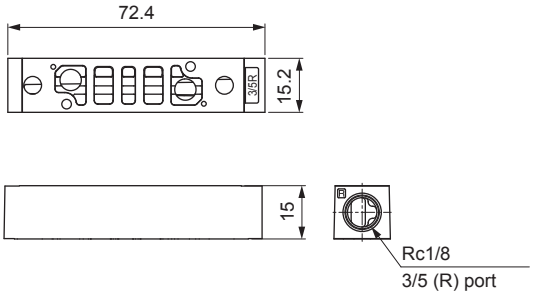
● 4G1



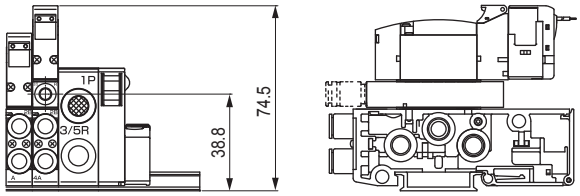


● 4G2

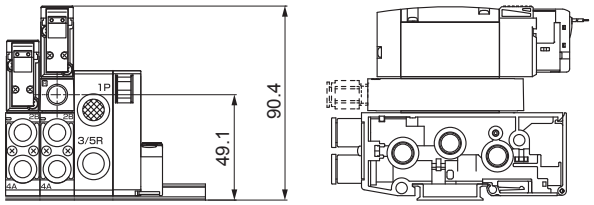




Dimensions when mounted

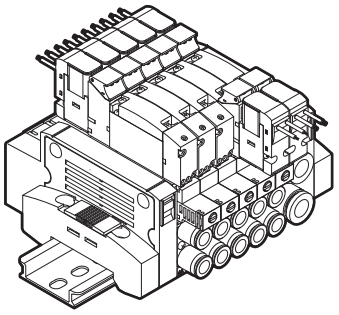


Dimensions when mounted



Related products In stop valve spacer

● In stop valve spacer



Specifications

Model no.	P→A/B		A/B→R		Weight
	C (dm³/(s·bar))	b	C (dm³/(s·bar))	b	g
4G*1	0.54	0.03	0.82	0.27	17
4G*2	1.5	0.17	1.6	0.20	63

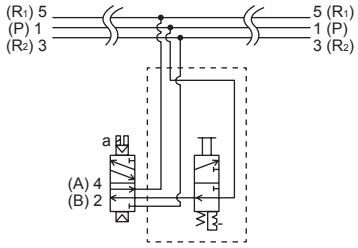
Note 1: These are values when base piping and 2-position valve are mounted.
Note 2: The effective cross-sectional area when discharging residual pressure is 1.0 mm² (reference value).
Note 3: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 × C.
Attached product: PR check valve 2, body gasket 1

How to order discrete part

4G1 R - IS
4G2 R - IS

In stop valve spacer

JIS symbol

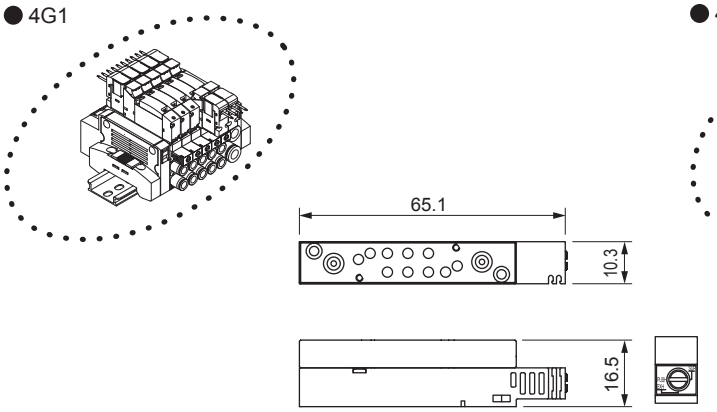


⚠ Note on model no. selection

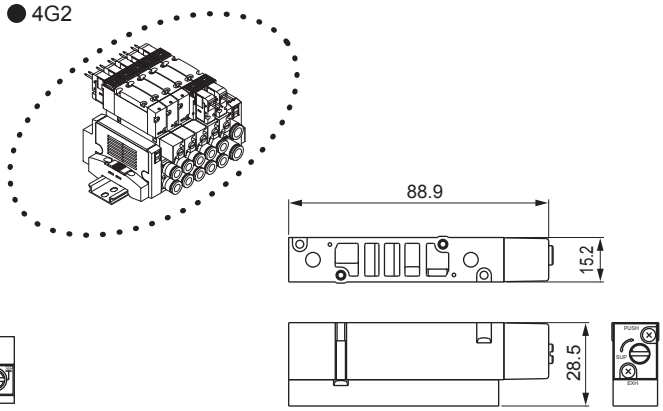
Note 1: Specify the spacer mounting position and quantity in manifold specifications.
Note 2: If the A/B port fitting is the elbow type (upward), turn the operation part of the in stop valve spacer toward the reverse side (a solenoid side).
Note 3: If the elbow type (upward) A/B port fitting is used for the reduced wiring manifold, the in stop valve spacer cannot be selected.
Note 4: The in stop valve spacer cannot be used with the external pilot (K).
Note 5 When adding to the reduced wiring manifold, the existing electric wire may be too short. Contact CKD for details.

Dimensions

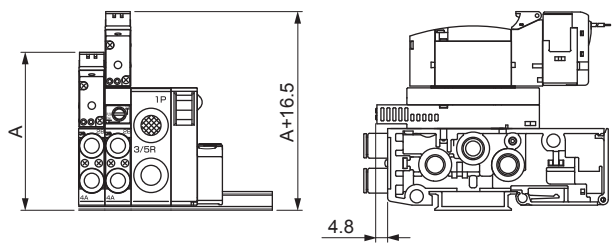
● 4G1



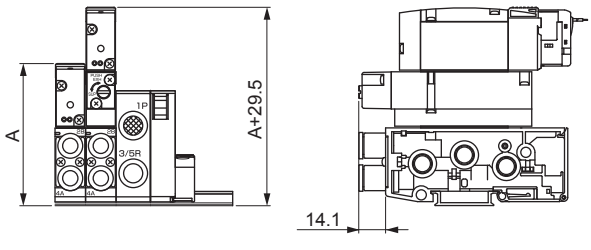
● 4G2



Dimensions when mounted



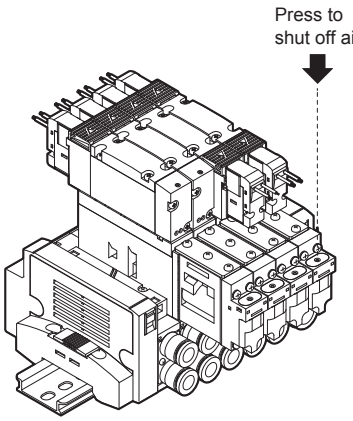
Dimensions when mounted



Note: For A dimensions, check the dimensions of respective specifications.

Related products Spacer type pilot check valve

● Spacer type pilot check valve

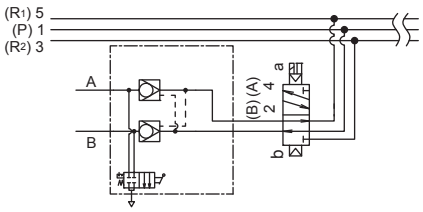


Specifications

Pilot check valve		4G2R-PC-M
Working fluid		Compressed air
Max. working pressure	MPa	0.7
Min. working pressure	MPa	0.2
Proof pressure	MPa	1.05
Effective sectional area	mm^2	4 (With solenoid valve)
Ambient temperature	°C	-5 to 55 (no freezing)
Fluid temperature	°C	5 to 55
Lubrication	Note 1	Not required
Atmosphere		Containing corrosive gas is not permissible
Weight	g	182.5

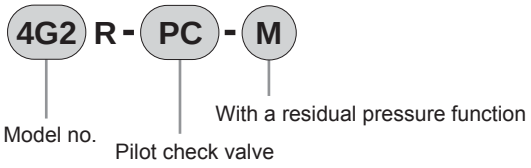
Note 1: Use the turbine oil Class 1 ISO VG32 if lubricated.
Excessive or intermittent lubrication results in unstable operation.

JIS symbol



Note: Please be careful since this may lead to a bad intermediate stop as well as a decline in the used intermediate stop frequency in the diameter of a large cylinder (standard more than φ50) that has almost no diaphragm on the exhaust side (ex: no speed controller, no silencer).

Discrete model no.

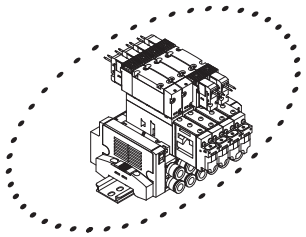


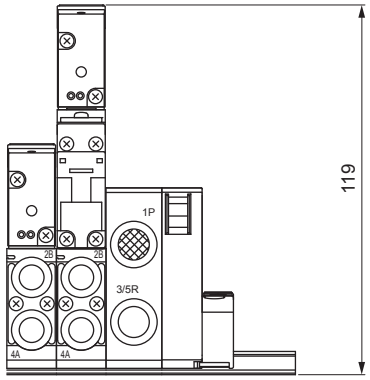
⚠ Note on model no. selection

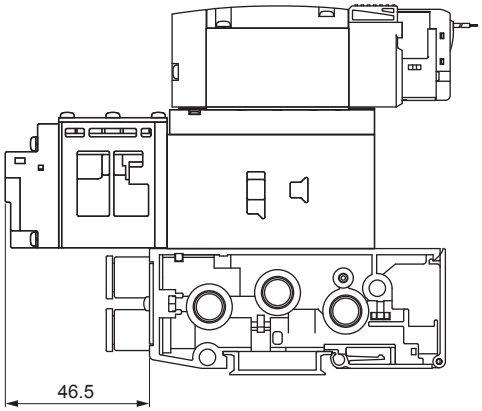
Note 1: Specify the spacer mounting position and quantity in manifold specifications.
Note 2: The spacer type pilot check valve cannot be selected in the case of an elbow A/B port fitting.
Note 3: Stacking multiple spacers is not supported.
Note 4: The spacer and masking plate can not be combined.
Note 5: The spacer type pilot check valve that can be installed in the piping system is only the base piping type.

Dimensions

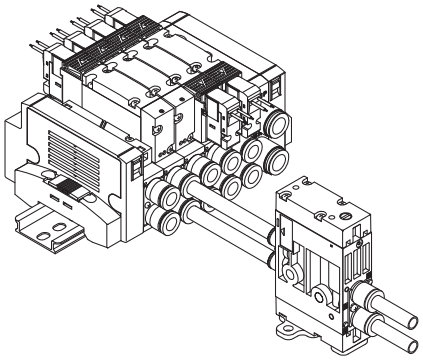
● MN4GB2







● Pilot check valve

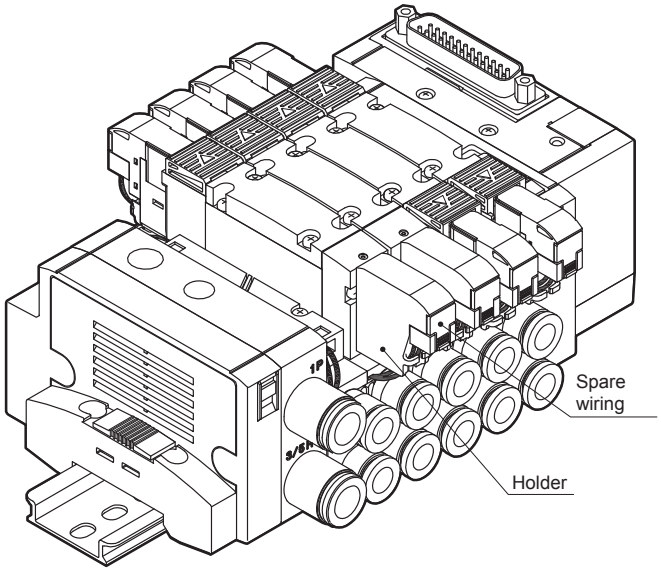


Refer to page 186 for details.

Related products Double wiring (With single spare wiring)

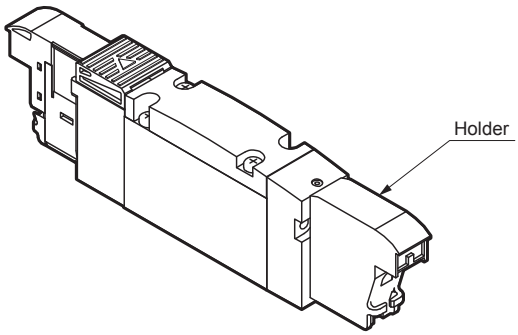
● Double wiring (With single spare wiring) (W1)

Manifold



The single solenoid valve cap side spare wiring (holder and A type socket assembly) is attached.
If you want to change the valve from the from a single solenoid to a double solenoid, valve change work is easier because there is no need to arrange the A type socket assembly separately.

Discrete valve (A2N)



This comes with a holder for holding the socket assembly. (The A type socket assembly is not attached.)
If you want to change the valve from a double solenoid to a single solenoid, the unnecessary socket assembly is assembled and held.

Example of model no.

● Manifold model no. (example)

MN4GB1 **1** 0 R - **C6** - **T30** W1 **H** - **10** - **3**

- **A** Model no.
- **B** Valve Position
- **C** Port size
- **D** Wiring method
- **F** Option
- **G** Station no.
- **H** Voltage

Symbol	Descriptions
E	**Terminal and connector pin array**
W1	Double wiring (With single spare wiring)

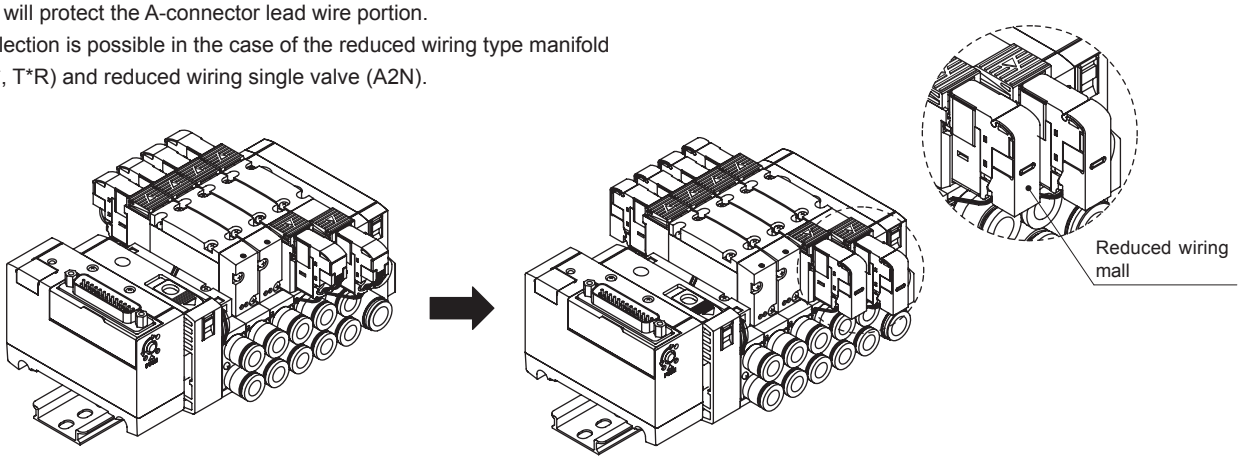
* Refer to How to order of each series for details.

Related products Reduced wiring mall

● Reduced wiring mall (Q)

This will protect the A-connector lead wire portion.

- Selection is possible in the case of the reduced wiring type manifold (T*, T*R) and reduced wiring single valve (A2N).



Standard

When Q (Reduced wiring mall) is selected

Example of model no.

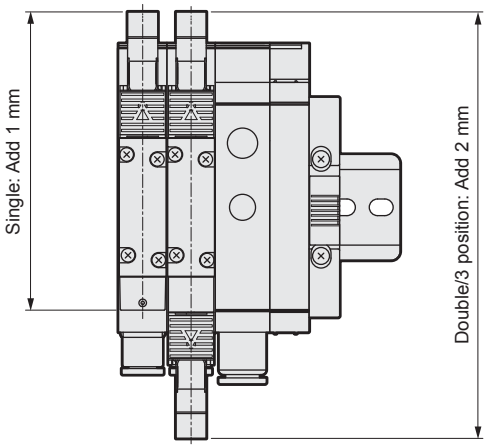
● Manifold model no. (example)

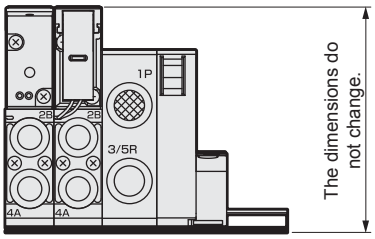
MN4GB1 1 0 R - C6 - T30 W Q - 10 - 3

- A Model no.
- B Valve Position
- C Port size
- D Wiring method
- E Terminal and connector pin array
- G Station no.
- H Voltage

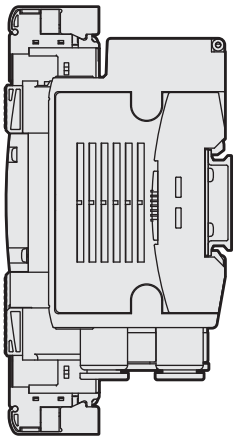
Symbol	Descriptions
F Option	
Q	Reduced wiring mall

● Dimensions

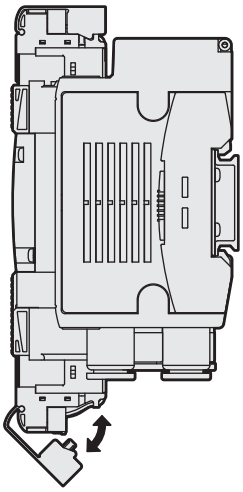




Reduced wiring mall closed

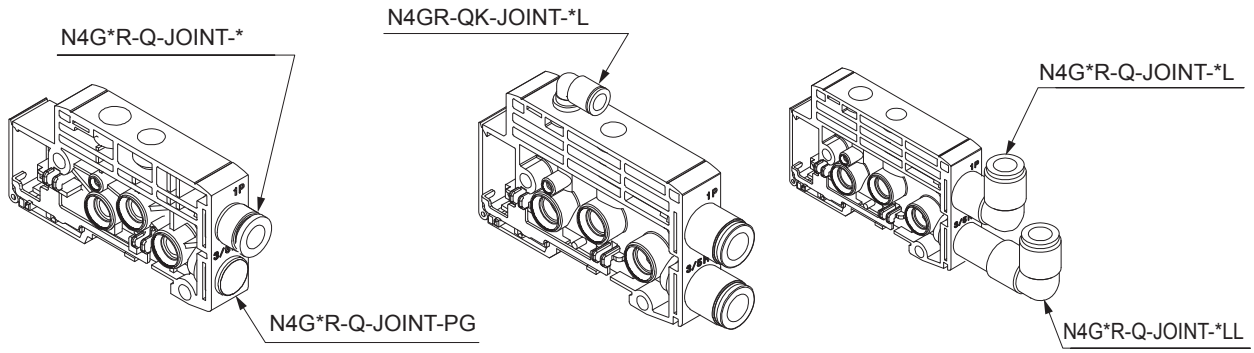


Open



Related parts

1. Cartridge type push-in fitting for MN4G supply and exhaust blocks



1.1 MN4G1 supply and exhaust block, fitting for 1(P), 3/5(R)

Port size	Part model no.
φ6 straight type	N4G1R-Q-JOINT-6
φ8 straight type	N4G1R-Q-JOINT-8
φ6 elbow type	N4G1R-Q-JOINT-6L,6LL
φ8 elbow type	N4G1R-Q-JOINT-8L,8LL
φ1/4 inch straight type	N4G1R-Q-JOINT-6N
φ5/16 inch straight type	N4G1R-Q-JOINT-8N
φ1/4 inch elbow type	N4G1R-Q-JOINT-6LN, 6LLN
φ5/16 inch elbow type	N4G1R-Q-JOINT-8LN, 8LLN
Plug cartridge	N4G1R-Q-JOINT-PG

1.2 MN4G2 supply and exhaust block, fitting for 1(P), 3/5(R)

Port size	Part model no.
φ8 straight type	N4G2R-Q-JOINT-8
φ10 straight type	N4G2R-Q-JOINT-10
φ8 elbow type	N4G2R-Q-JOINT-8L,8LL
φ10 elbow type	N4G2R-Q-JOINT-10L,10LL
φ5/16 inch straight type	N4G2R-Q-JOINT-8N
φ3/8 inch straight type	N4G2R-Q-JOINT-10N
φ5/16 inch elbow type	N4G2R-Q-JOINT-8LN,8LLN
φ3/8 inch elbow type	N4G2R-Q-JOINT-10LN,10LLN
Plug cartridge	N4G2R-Q-JOINT-PG

1.3 MN4G1/2 common, fitting for 12/14(PA)

Port size	Part model no.
φ6 straight type	N4GR-QK-JOINT-6
φ6 elbow type	N4GR-QK-JOINT-6L

MN4GA & 4GB Series

How to prepare block manifold MN4G Series manifold specifications

● Example of manifold model no.

MN 4 GA1 8 0R− CX − T50 W H − 8 − 3

Ⓐ Model No. Ⓑ Valve Position Ⓒ Port size Ⓓ Electric connection (Reduced wiring connection) Ⓔ Terminal/connector pin Array (Note: Indicate for reduced wiring.) Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When filling in this field, select the model no. from "Block configurations" (pages 277 to 294) .

Part name	Model no.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Electrical block (page 282, 283)	N4G1R-T 50	○																														1
Valve block with solenoid valve (page 278)	N4GA1 1 0R- C4		○	○																												2
	N4GA1 2 0R- C6					○																										1
	N4GA1 3 0R- C4				○																											1
	N4GA1 0R-																															
	N4GA1 0R-																															
	N4GA1 0R-																															
	N3GA1 1 0R- C4									○	○	○																				3
	N3GA1 0R-																															
Valve block with masking plate (page 278)	N4GA1R-MP																															
	N4GA1R-MPS																															
	N4GA1R-MPD						○																									1
Supply and exhaust blocks (page 280)	N4G1R-Q - 8L							○					○																			2
	N4G1R-Q -																															
	N4G1R-Q -																															
Partition blocks (page 281)	N4G1R-S A								○																							1
	N4G1R-S																															
	N4G1R-S																															
End block (page 281)	N4G1R-E R													○																		1
	N4G1R-E																															

Mounting rail	L_2 = (How to calculate length on next page)	Blanking plug								Silencer				Tag plate (attached)		Accessories
		GWP4-B		GWP6-B			GWP8-B			SLW-H6		SLW-H8		A	○	
		Cable with D-sub connector			4GR-CABLE-D0*-*					Push-in fitting tube remover (standard) ☑ Not required						

* A circuit diagram of the above manifold model no. (example) is provided on the next page. Use this for reference.

Check if the tube remover (standard attached product) is not required.

Preparing the manifold specifications

● Fill in order from the left with the piping port facing forward.
(Please include the model no. of the block selected from block configurations (pages 277 to 294) and instructions for the arrangement.)
● Indicate the total number of blocks specified in the quantity on the right end of the table.
● Place a circle on the required accessories.
● Indicate the mounting rail length. (indicate only when a length other than the standard length is required.)
● Manifold specifications are available for individual series, so fill out corresponding specifications.

- MN4GA1: Page 299
- MN4GB1: Page 300
- MN4GA2: Page 301
- MN4GB2: Page 302
- MN4GA × 1/2 (mix manifold): Page 303
- MN4GB × 1/2 (mix manifold): Page 304

Mounting rail length (L2)

(1) Determine the rail length using the calculation method shown below.
The obtained length is standard.
(2) For the standard length, it is not necessary to indicate the length (L2) in the specifications.
Indicate the length when using a non-standard length.

● Calculating the mounting rail length

Manifold length (L1) = (A × Valve Block Quantity) + (B × Supply and exhaust Block Quantity) + (C × Partition Block Quantity) + (Electrical block D + Mix block E)

Mounting rail length (L2) = L2' × 12.5 A, B, C, D, and E each indicate the length (width) of each block.

$$L2' : \frac{L1 + 40}{12.5} \rightarrow \text{rounded up to integer}$$

Rail mounting pitch (L3) = L2 - 12.5

Block length (width) dimensions table (mm)

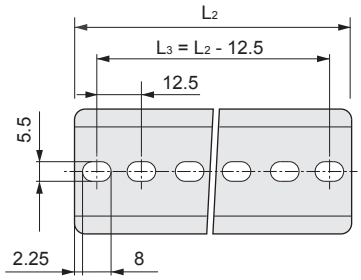
			MN4GA/B1	MN4GA/B2	MN4G1/2MIX	
					MN4GA/B1	MN4GA/B2
A	Valve block		10.5	16	10.5	16
B	Supply and exhaust block		16	18	16	18
C	Partition block		10.5	10.5	10.5	10.5
D	Individual wiring		41	46	44.5	
	Electrical block for reduced wiring	T10/T11	83.8	86.3	86.3	
		T10R/T11R	83.8	86.3	83.8	
		T30/T5*	69.3	71.8	71.8	
		T30R/T5*R	69.3	71.8	69.3	
		T6*	143.5	146	146	
		T7*	64.3	66.8	66.8	
		T8*	64.3	66.8	66.8	
E	Mix block				16	

* The end block is included in the electrical block.

● DIN rail length quick reference table

L_1: Manifold length	47.5 or less	Over 47.5 to 60 or less	60 to 72.5	72.5 to 85	85 to 97.5	97.5 to 110	110 to 122.5	122.5 to 135	135 to 147.5	147.5 to 160	160 to 172.5	172.5 to 185	185 to 197.5	197.5 to 210	210 to 222.5	222.5 to 235	235 to 247.5	247.5 to 260	260 to 272.5	272.5 to 285	285 to 297.5	297.5 to 310	310 to 322.5	322.5 to 335	335 to 347.5	347.5 to 360
L_2: Rail length	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5	400
Pitch L_3	75	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5

Note 1: When L1 exceeds this table, calculate the length by referring to "How to calculate the length of the mounting rail".



MN4GA & 4GB Series

How to fill out wiring specifications form

This is not required for standard wiring and double wiring.

● Wiring specifications (example)

* The following example is completed based on the previous page's manifold specifications.

Connector pin no.				Valve No.																							
T50/T50R	T51/T51R	T52/T52R	T53/T53R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1	1	**a**																							
2	2	2	2		**a**																						
3	3	3	3				**a**																				
4	4	4	4				**b**																				
5	5	5	5					**a**																			
6	6	6	6					**b**																			
7	7	7	7			**a**																					
8	8	8	8			**b**																					
9 - Power supply	9	9 COM	9																								
10 + (COM) Power supply	10	10 COM	10																								
11	11		11						**a**																		
12	12		12							**a**																	
13	13		13								**a**																
14	14		14																								
15	15		15																								
16	16		16																								
17	17		17																								
18	18		18																								
19 - Power supply	19 COM		19																								
20 + (COM) Power supply	20 COM		20																								
			21																								
			22																								
			23																								
			24																								
			25 COM																								
			26 COM																								

* When selecting T50/T50R wiring, the COM polarity will be + (plus).

● Precaution regarding wiring specifications

(1) Fill in and attach the form to the manifold specifications for those other than the standard wiring or double wiring. Contact CKD since products will be prepared as available consult factory order in such case.

(2) The valve no. is determined by counting the valve blocks only in order from the left with the ports facing forward. This will differ from the numbers for the installation positions.

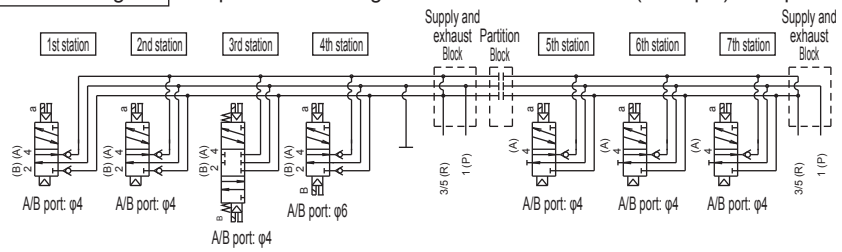
(3) As the connector pin no. and valve no. will differ for every reduced wiring method (T1*/T30/T5*/T6*/T7*/T8*), fill out the form upon reviewing the precautions (pages 593 to 611) for each reduced wiring method.

(4) Wiring (socket assembly) will be included in the valve blocks with masking plates. A side only for "-MPS". On both the A and B sides for "-MPD".

(5) It is not possible to assemble a double solenoid or 3-position solenoid valve to "-MPS". Make arrangements for the valve block with solenoid valve and perform the task of expansion.

(6) It is not possible to install spare wires for expansions of stations in advance. Wire the socket assembly of the solenoid valve for expansion of stations. Refer to page 612 for instructions on how to expand stations.

Reference circuit diagram Simplified circuit diagram of manifold model no. (example) from previous page



* Manifold stations are set in order from the left with the piping port facing forward.
(The electrical blocks, supply and exhaust blocks, partition block, and end block are not included in the number of manifold stations)

* Select the model no. from block configurations (pages 277 to 294) and the page for model nos. of each of the specifications.

* The positions of arrangements are set in order from the left with the piping port facing forward.

MN4GA1 Block manifold specifications

● Contact ● Quantity set ● Request date month day

Slip No.	Order No.

Issue / /

Your company name

Contact

Order no.

● Manifold model no.

MN [ ] GA1 [ ] 0R– [ ] – – [ ] [ ] [ ] – [ ] [ ]

Ⓐ Model No. Ⓑ Valve Position Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin Array (Note: Indicate for reduced wiring.) Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When completing this form, select the type from the "Block configuration" (pages 277 to 294).

Part name (Reference page)	Model no.	Layout position																													Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Electrical block (page 282, 283)	N4G1R-T [ ]																															
Valve block with solenoid valve (page 278)	N4GA1 [ ] 0R- [ ]																															
	N4GA1 [ ] 0R- [ ]																															
	N4GA1 [ ] 0R- [ ]																															
	N4GA1 [ ] 0R- [ ]																															
	N4GA1 [ ] 0R- [ ]																															
	N4GA1 [ ] 0R- [ ]																															
	N3GA1 [ ] 0R- [ ]																															
	N3GA1 [ ] 0R- [ ]																															
Valve block with masking plate (page 278)	N4GA1R-MP																															
	N4GA1R-MPS																															
	N4GA1R-MPD																															
Air supply spacer (page 287)	4G1R-P- [ ]																															
	4G1R-P- [ ]																															
Exhaust spacer (page 289)	4G1R-R- [ ]																															
In stop valve spacer (page 291)	4G1R-IS																															
Supply and exhaust block (page 280)	N4G1R-Q [ ] - [ ]																															
	N4G1R-Q [ ] - [ ]																															
	N4G1R-Q [ ] - [ ]																															
Partition block (page 281)	N4G1R-S [ ]																															
	N4G1R-S [ ]																															
	N4G1R-S [ ]																															
End block (page 281)	N4G1R-E [ ]																															
	N4G1R-E [ ]																															

Mounting rail	L_2= [ ] * Fill in the integral multiple of 12.5. (How to determine the length refer to page 297)	Blanking plug						Silencer				Tag plate (attached)		Attached Part
		GWP4-B		GWP6-B		GWP8-B		SLW - 6S		SLW - 6S		A		
		Cable with D-sub connector			4GR-CABLE-D0*-*			Push-in fitting tube remover (standard)				☐ Not required (check)		

MN4GB1 Block manifold specifications

● Contact ● Quantity set ● Request date month day

Slip No.	Order No.

Issue / /
Your company name
Contact
Order no.

● Manifold model no.

MN4GB1 [ ] **0R–** [ ] **–** [ ] [ ] [ ] **–** [ ] **–** [ ]

Ⓐ Model No. Ⓑ Valve Position Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin Array (Note: Indicate for reduced wiring.) Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When completing this form, select the type from the "Block configuration" (pages 277 to 294).

Part name (Reference page)	Model no.	Layout position																												Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Electrical block (page 282, 283)	N4G1R-T																														
Valve block with solenoid valve (page 278)	N4GB1 0R-																														
	N4GB1 0R-																														
	N4GB1 0R-																														
	N4GB1 0R-																														
	N4GB1 0R-																														
	N4GB1 0R-																														
	N3GB1 0R-																														
	N3GB1 0R-																														
Valve block with masking plate (page 278)	N4GB1R-MP-																														
	N4GB1R-MPS-																														
	N4GB1R-MPD-																														
Air supply spacer (page 287)	4G1R-P-																														
	4G1R-P-																														
Exhaust spacer (page 289)	4G1R-R-																														
In stop valve Spacer (page 291)	4G1R-IS																														
Supply and exhaust block (page 280)	N4G1R-Q -																														
	N4G1R-Q -																														
	N4G1R-Q -																														
Partition block (page 281)	N4G1R-S																														
	N4G1R-S																														
	N4G1R-S																														
End block (page 281)	N4G1R-E																														
	N4G1R-E																														

Mounting rail	L_2=	Blanking plug						Silencer				Tag plate (attached)				Attached
	* Fill in the integral multiple of 12.5. (How to determine the length refer to page 297)	GWP4-B		GWP6-B		GWP8-B		SLW-H6		SLW-H8		B1		B2		Part
		Cable with D-sub connector			4GR-CABLE-D0*-*				Push-in fitting tube remover (standard)			☐ Not required (check)				

MN4GA2 Block manifold specifications

● Contact ● Quantity set ● Request date month day

Slip No.	Order No.

Issue / /

Your company name

Contact

Order no.

● Manifold model no.

MN [ ] GA2 [ ] 0R– [ ] – – [ ] [ ] [ ] – [ ] [ ]

Ⓐ Model No. Ⓑ Valve Position Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin Array (Note: Indicate for reduced wiring.) Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When completing this form, select the type from the "Block configuration" (pages 277 to 294).

Part name (Reference page)	Model no.	Layout position 1–30	Quantity
Electrical block (page 282, 283)	N4G2R-T [ ]		
Valve block with solenoid valve (page 278)	N4GA2 [ ] 0R- [ ]		
	N4GA2 [ ] 0R- [ ]		
	N4GA2 [ ] 0R- [ ]		
	N4GA2 [ ] 0R- [ ]		
	N4GA2 [ ] 0R- [ ]		
	N4GA2 [ ] 0R- [ ]		
	N3GA2 [ ] 0R- [ ]		
	N3GA2 [ ] 0R- [ ]		
Valve block with masking plate (page 278)	N4GA2R-MP		
	N4GA2R-MPS		
	N4GA2R-MPD		
Air supply spacer (Note 287)	4G2R-P- [ ]		
	4G2R-P- [ ]		
Exhaust spacer (page 289)	4G2R-R- [ ]		
In stop valve Spacer (page 291)	4G2R-IS		
Supply and exhaust block (page 280)	N4G2R-Q [ ] - [ ]		
	N4G2R-Q [ ] - [ ]		
	N4G2R-Q [ ] - [ ]		
Partition block (page 281)	N4G2R-S [ ]		
	N4G2R-S [ ]		
	N4G2R-S [ ]		
End block (page 281)	N4G2R-E [ ]		
	N4G2R-E [ ]		

Layout positions: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

Mounting rail	L_2= [ ] * Fill in the integral multiple of 12.5. (How to determine the length refer to page 297)	Blanking plug				Silencer		Tag plate (attached)		Attached
		GWP4-B		GWP8-B		SLW-H8		A		
		GWP6-B		GWP10-B		SLW-H10				Part
		Cable with D-sub connector		4GR-CABLE-D0*-*						

MN4GB2 Block manifold specifications

● Contact ● Quantity set ● Request date month day

Slip No.	Order No.

Issue / /
Your company name
Contact
Order no.

● Manifold model no.

MN4GB2 □ 0R− □ − □ □ □ − □ − □

Ⓐ Model No. Ⓑ Valve Position Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin Array (Note: Indicate for reduced wiring.) Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When completing this form, select the type from the "Block configuration" (pages 277 to 294).

Part name (Reference page)	Model no.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Electrical block (page 282, 283)	N4G2R-T □																														
Valve block with solenoid valve (page 278)	N4GB2 □ 0R- □																														
	N4GB2 □ 0R- □																														
	N4GB2 □ 0R- □																														
	N4GB2 □ 0R- □																														
	N4GB2 □ 0R- □																														
	N4GB2 □ 0R- □																														
	N3GB2 □ 0R- □																														
	N3GB2 □ 0R- □																														
Valve block with masking plate (page 278)	N4GB2R-MP- □																														
	N4GB2R-MPS- □																														
	N4GB2R-MPD- □																														
Air supply spacer (page 287)	4G2R-P- □																														
	4G2R-P- □																														
Exhaust spacer (page 289)	4G2R-R- □																														
In stop valve Spacer (page 291)	4G2R-IS																														
Spacer type Pilot check valve (page ●●●)	4G2R-PC-M																														
Supply and exhaust block (page 280)	N4G2R-Q □ - □																														
	N4G2R-Q □ - □																														
	N4G2R-Q □ - □																														
Partition block (page 281)	N4G2R-S □																														
	N4G2R-S □																														
	N4G2R-S □																														
End block (page 281)	N4G2R-E □																														
	N4G2R-E □																														

Mounting rail	Blanking plug				Silencer		Tag plate (attached)		Attached Part
L_2= □ * Fill in the integral multiple of 12.5. (How to determine the length refer to page 297)	GWP4-B		GWP8-B		SLW-H8		B		
	GWP6-B		GWP10-B		SLW-H10				
	Cable with D-sub connector		4GR-CABLE-D0*-*						

MN4GA1/2 Mix manifold specifications

● Contact ● Quantity set ● Request date month day

Slip No. | Order No.

Issue / /

Your company name

Contact

Order no.

● Manifold model no.

MN □ GAX12R− □ − □ □ □ − □ − □

Ⓐ Model No. Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin Ⓕ Option Ⓖ Station no. Ⓗ Voltage

Array (Note: Indicate for reduced wiring.)

When completing this form, select the type from the "Block configuration" (pages 277 to 294).

Part name (Reference page)	Model no.	Layout position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	Quantity
Electrical block (page 282, 283)	N4G □ R-T □		
Valve block with solenoid valve (page 278)	N4GA □ 0R- □		
	N4GA □ 0R- □		
	N4GA □ 0R- □		
	N4GA □ 0R- □		
	N4GA □ 0R- □		
	N4GA □ 0R- □		
	N3GA □ 0R- □		
	N3GA □ 0R- □		
Valve block with masking plate (page 278)	N4GA □ R-MP		
	N4GA □ R-MPS		
	N4GA □ R-MPD		
Air supply spacer (page 287)	4G1R-P- □		
	4G2R-P- □		
Exhaust spacer (page 289)	4G1R-R- □		
	4G2R-R- □		
In stop valve spacer (page 291)	4G1R-1S		
	4G2R-1S		
Mix block (page 765)	N4G12R-MIX		
Supply and exhaust blocks (page 280)	N4G □ R-Q □ - □		
	N4G □ R-Q □ - □		
	N4G □ R-Q □ - □		
Partition blocks (page 281)	N4G □ R-S □		
	N4G □ R-S □		
	N4G □ R-S □		
End block (page 281)	N4G □ R-E □		
	N4G □ R-E □		
Mounting rail	L_2= □ * Fill in the integral multiple of 12.5. (How to determine the length refer to page 297)	Blanking plug: GWP □ -B □ GWP □ -B □ GWP □ -B □ GWP □ -B □ / Silencer: SLW-H □ □ SLW-H □ / Cable with D-sub connector / 4GR-CABLE-D0*-* / Push-in fitting tube remover (standard) ☐ Not required (check)	Attached Part

MN4GB1/2 Mix manifold specifications

● Contact ● Quantity set ● Request date month day

Slip No.	Order No.

Issue / /
Your company name
Contact
Order no.

● Manifold model no.

MN4GBX12R− ☐ **–** ☐ ☐ ☐ **–** ☐ **–** ☐

Ⓐ Model No. Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin Array (Note: Indicate for reduced wiring.) Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When completing this form, select the type from the "Block configuration" (pages 277 to 294).

Part name	Model no.	Layout position																													Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Electrical block (page 282, 283)	N4G ☐ R-T ☐																														
Valve block with solenoid valve (page 278)	N4GB ☐ 0R- ☐																														
	N4GB ☐ 0R- ☐																														
	N4GB ☐ 0R- ☐																														
	N4GB ☐ 0R- ☐																														
	N4GB ☐ 0R- ☐																														
	N4GB ☐ 0R- ☐																														
	N3GB ☐ 0R- ☐																														
	N3GB ☐ 0R- ☐																														
Valve block with masking plate (page 278)	N4GB ☐ R-MP- ☐																														
	N4GB ☐ R-MPS- ☐																														
	N4GB ☐ R-MPD- ☐																														
Air supply spacer (page 287)	4G1R-P- ☐																														
	4G2R-P- ☐																														
Mix block (page 765)	N4G12R-MIX																														
Supply and exhaust blocks (page 280)	N4G ☐ R-Q ☐ - ☐																														
	N4G ☐ R-Q ☐ - ☐																														
	N4G ☐ R-Q ☐ - ☐																														
Partition blocks (page 281)	N4G ☐ R-S ☐																														
	N4G ☐ R-S ☐																														
	N4G ☐ R-S ☐																														
End block (page 281)	N4G ☐ R-E ☐																														
	N4G ☐ R-E ☐																														

Mounting rail	L2= ☐ * Fill in the integral multiple of 12.5. (How to determine the length refer to page 297)	Blanking plug				Silencer		Attached Part
		GWP ☐ -B	GWP ☐ -B	GWP ☐ -B	GWP ☐ -B	SLW-H ☐	SLW-H ☐	
		Cable with D-sub connector	4GR-CABLE-D0*-*		Push-in fitting tube remover (standard)	☐ Not required (check)		

Common terminal block type (T10/T11) wiring specifications

* Please fill in and attach to the manifold specifications for those other than the standard wiring or double wiring. (Available consult factory order)
* This is not required for standard wiring/double wiring.

Connector pin no.		Valve No.																							
T10 ☐	T11 ☐	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1																								
2	2																								
3	3																								
4	4																								
5	5																								
6	6																								
7	7																								
8	8																								
9	9																								
10	10																								
11	11																								
12	12																								
13	13																								
14	14																								
15	15																								
16	16																								
COM	17																								
COM	18																								
	19																								
	20																								
	21																								
	22																								
	23																								
	24																								
	COM																								
	COM																								

D sub-connector type (T30) wiring specifications

* Please fill in and attach to the manifold specifications for those other than the standard wiring or double wiring. (Available consult factory order)
* This is not required for standard wiring/double wiring.

Connector pin no.	Valve No.																								
T30 ☐	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1																								
14																								
2																								
15																								
3																								
16																								
4																								
17																								
5																								
18																								
6																								
19																								
7																								
20																								
8																								
21																								
9																								
22																								
10																								
23																								
11																								
24																								
12																								
25																								
13 (COM)																								

Flat cable connector type (T50/T51/T52/T53) wiring specifications

* Please fill in and attach to the manifold specifications for those other than the standard wiring or double wiring. (Available consult factory order)
* This is not required for standard wiring/double wiring.

Connector pin no.				Valve No.																							
T50/ T50R	**T51/ T51R**	**T52/ T52R**	**T53/ T53R**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1	1																								
2	2	2	2																								
3	3	3	3																								
4	4	4	4																								
5	5	5	5																								
6	6	6	6																								
7	7	7	7																								
8	8	8	8																								
9 - Power supply	9	9 COM	9																								
10 + (COM) Power supply	10	10 COM	10																								
11	11		11																								
12	12		12																								
13	13		13																								
14	14		14																								
15	15		15																								
16	16		16																								
17	17		17																								
18	18		18																								
19 - Power supply	19 COM		19																								
20 + (COM) Power supply	20 COM		20																								
			21																								
			22																								
			23																								
			24																								
			25 COM																								
			26 COM																								

* When selecting T50/T50R wiring, the COM polarity will be + (plus).

Serial transmission (T6*/T7*) wiring specifications

* Please fill in and attach to the manifold specifications for those other than the standard wiring or double wiring. (Available consult factory order)
* This is not required for standard wiring/double wiring.

Serial transmission type	Connector pin no.		Valve No.														
	T6*	**T7***	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Connector connection type	1	1																
T6A0: UNIWIRE SYSTEM 8 points	2	2																
T6A1: UNIWIRE SYSTEM 16 points	3	3																
T6C0: CompoBus/S 8 points	4	4																
T6C1: CompoBus/S 16 points	5	5																
T6G1: CC-Link 16 points	6	6																
T6E0: S-LINK 8 points	7	7																
T6E1: S-LINK 16 points	8	8																
T6J0: UNIWIRE H SYSTEM 8 points	9	9																
T6J1: UNIWIRE H SYSTEM 16 points	10 COM	10																
	11	11																
	12	12																
Thin slot-insertion type	13	13																
T7C0: CompoBus/S 8 points	14	14																
T7C1: CompoBus/S 16 points	15	15																
T7D1: DeviceNet 16 points	16	16																
T7E0: S-LINK 8 points	17	17																
T7E1: S-LINK 16 points	18	18																
T7G1: CC-Link 16 points	19	19																
T7L1: SAVE NET 16 points	20 COM	20																

Serial transmission (T8*) wiring specifications

* Please fill in and attach to the manifold specifications for those other than the standard wiring or double wiring. (Available consult factory order)
* This is not required for standard wiring/double wiring.

Serial transmission type			
T8G1	CC-Link	NPN	16 points
T8G2			32 points
T8GP1		PNP	16 points
T8GP2			32 points
T8P1	PROFIBUS-DP	NPN	16 points
T8P2			32 points
T8PP1		PNP	16 points
T8PP2			32 points
T8EC1	EtherCAT	NPN	16 points
T8EC2			32 points
T8ECP1		PNP	16 points
T8ECP2			32 points
T8EN1	EtherNet/IP	NPN	16 points
T8EN2			32 points
T8ENP1		PNP	16 points
T8ENP2			32 points

Connector pin no.	Valve No.																							
T8*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
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