

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.**



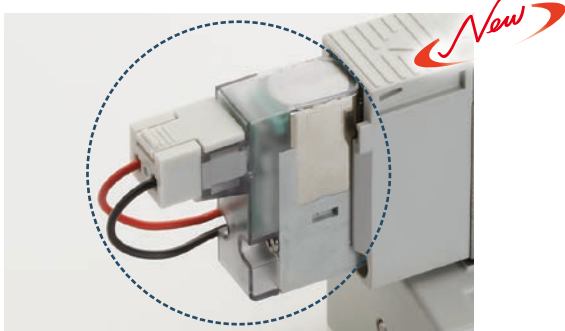
New 4G! Start!

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

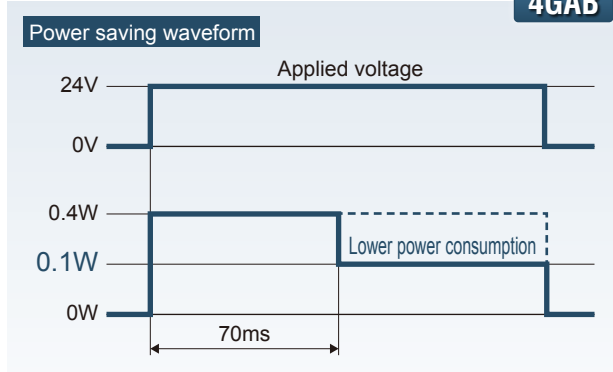
Power consumption 0.1w Minimal heat generated with integrated energy saving circuit 4GAB	Power consumption 0.35w Standard products
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Power Consumption

Continuous energization OK (single solenoid type)
Improved Solenoid Design. **4GAB**



Lower power consumption **4GAB**

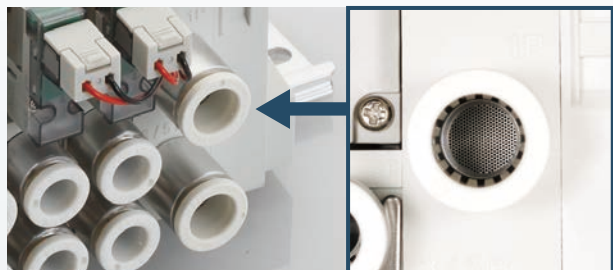


Safety

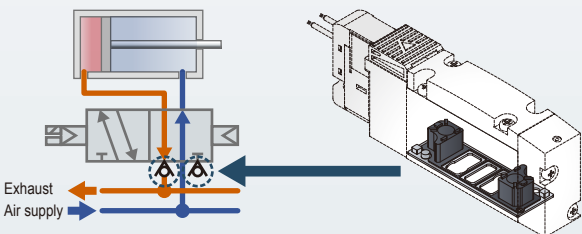
Manual override protection
Manual override with protective covers.



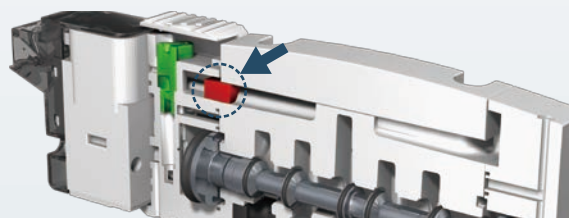
Contamination prevention
Filter standard equipment
(Available on A and B ports as an option)

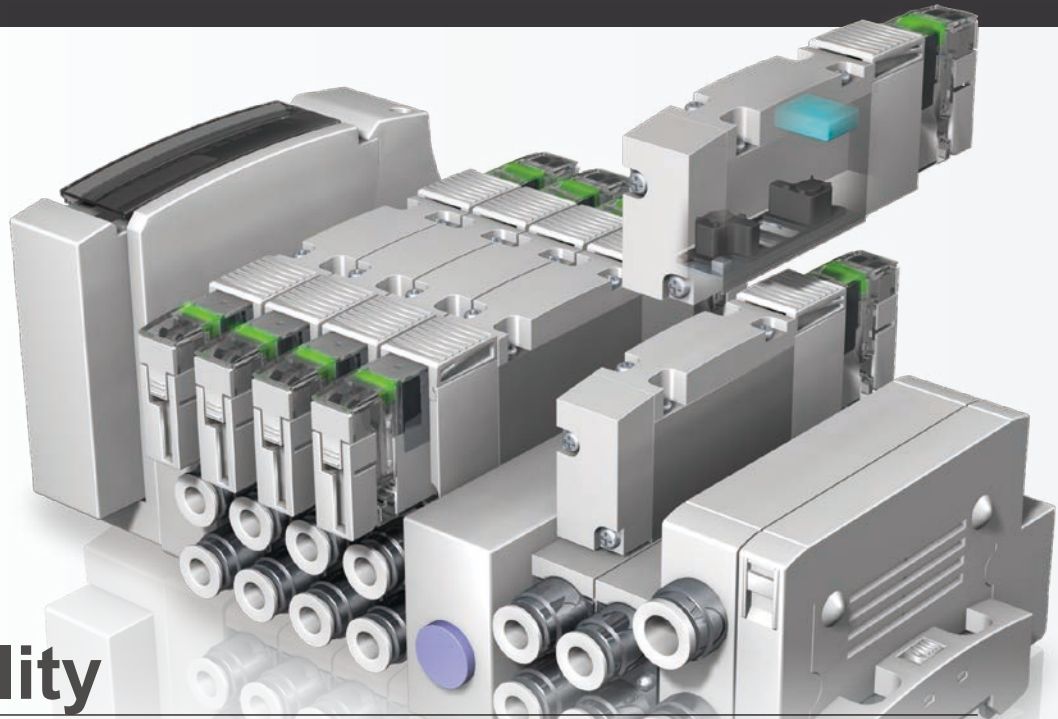


Potential for exhaust back-pressure eliminated.
Exhaust malfunction prevention valve.
Standard feature in both metal and plastic base designs.



Internal pilot filter is standard equipment.





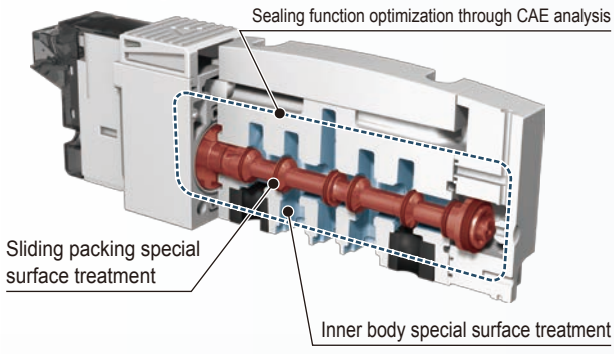
Reliability

Low friction design with improved life cycle rating
 Excellent response time and long life achieved with the main spool. **4GAB**



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

Response time
12±2ms
 4G1 test results

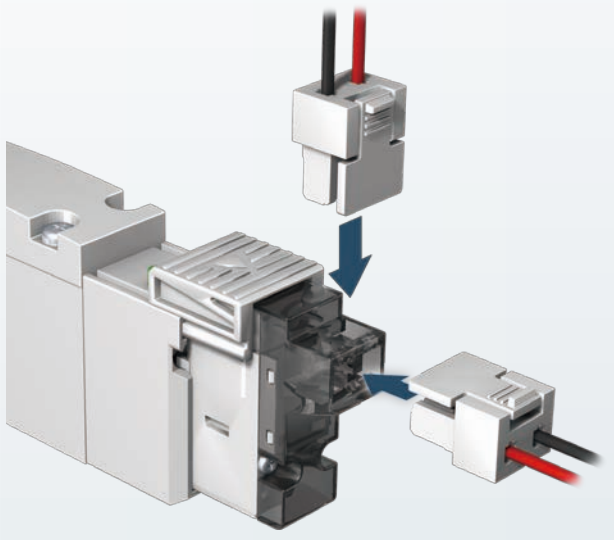


Improved response even after weekend shutdown

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

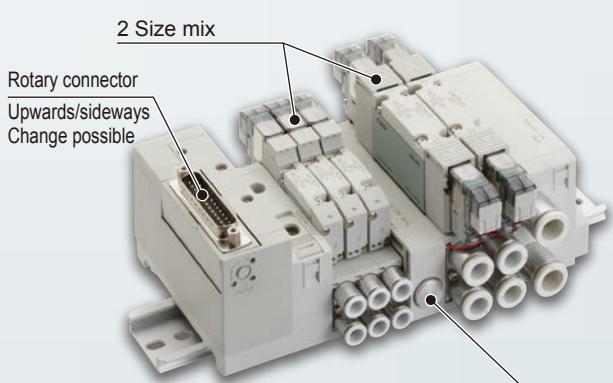
Flexible Functionality

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.



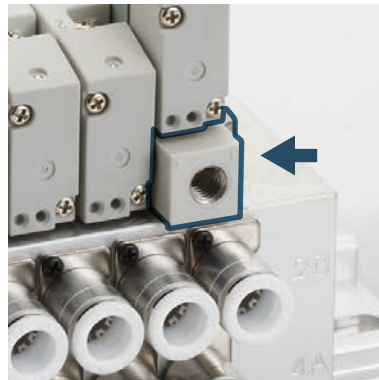
Manifolds can include a mixture of valve sizes and port sizes

Variety of options



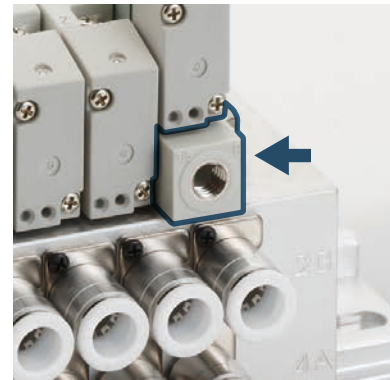
Individual Valve shut-off

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



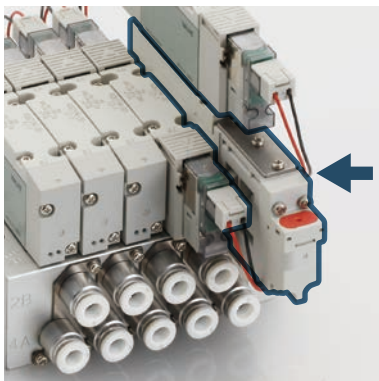
Individual supply spacer

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



Exhaust spacer

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



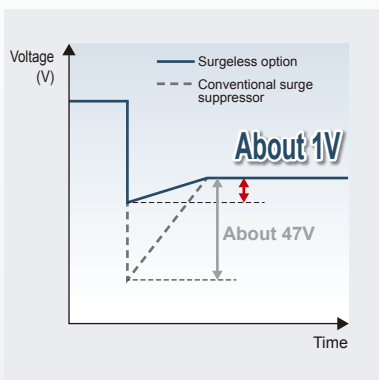
Pilot check valve spacer

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



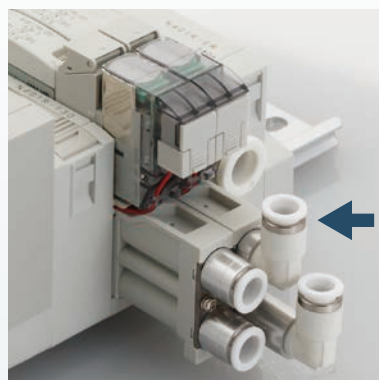
More valve porting options

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



Surge Protection

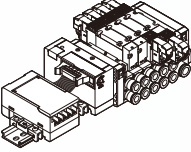
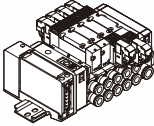
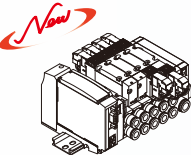
The coil surge voltage is reduced about 1V to protect the output contacts!



Elbow fitting option for block manifold

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

Automation communication protocols supported

		CC-Link	Compo Bus/S	S-LINK	Uniwire H system	Device Net	SAVE NET	Compo Net	PROFI BUS-DP	Ether CAT	EtherNet /IP
	OPP3 Output 8/16points	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	M4G Metal Manifold										
	OPP4 Output 8/16points Thin type	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	MN4G Resin Manifold										
	OPP7 Output 16/32 points Thin type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	M4G Metal Manifold										
	MN4G Resin Manifold										

Applications/environment table

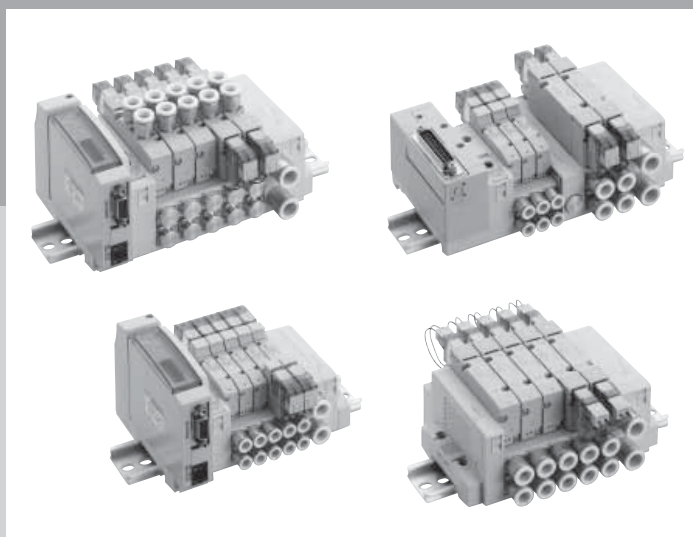
		Multi function type 4GA/B R	Standard type 4GD/E R
Reliability	Air quality		
	Ultra-dry air • N2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Dry air	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Oil contaminated air/ low ozone	<input type="checkbox"/>	<input type="checkbox"/>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

Recommended

MN4GD & 4GE

3, 5 port pilot operated valve

Block manifold



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* Refer to page 2 for the metal base (integrated model).

	Appearance	Model no.	Electrical connections	Position No. of solenoid JIS symbol	Valve performance		Voltage (V)	
					Flow rate characteristics C (dm ³ /(s·bar)) Note 1	Applicable Cylinder diameter		
Individual wiring manifold	Body piping	MN4GD180R	MN4GD1	Blank -E*	<ul style="list-style-type: none"> ● 3 port valve 2-position single N.C. type 	1.0 to 1.2	φ20 to φ40	100 VAC 200 VAC 24 VDC (Note 2)
		MN4GD2	Blank -E* -B	2.2 to 2.5		φ40 to φ80		
	Base piping	MN4GE180R	MN4GE1	Blank -E*	<ul style="list-style-type: none"> 2-position single N.O. type 	1.0 to 1.2	φ20 to φ40	
		MN4GE2	Blank -E* -B	2.2 to 2.5		φ40 to φ80		
Reduced wiring manifold	Body piping	Terminal block MN4GD280R	MN4GD1 (N3GD1) (N4GD1)	-T10 -T11 (-A2N)	<ul style="list-style-type: none"> ● 5 port valve 2-position single 	1.0 to 1.2	φ20 to φ40	24 VDC 12 VDC
			MN4GD2 (N3GD1) (N4GD2)			2.2 to 2.5	φ40 to φ80	
		Connector type MN4GD280R	MN4GD1 (N3GD1) (N4GD1)	-T30 -T5* (-A2N)	<ul style="list-style-type: none"> 2-position double 	1.0 to 1.2	φ20 to φ40	
			MN4GD2 (N3GD1) (N4GD2)			2.2 to 2.5	φ40 to φ80	
		Serial transmission MN4GD180R	MN4GD1 (N3GD1) (N4GD1)	-T6* -T7* (-A2N)	<ul style="list-style-type: none"> 3-position all ports closed 	1.0 to 1.2	φ20 to φ40	
			MN4GD2 (N3GD2) (N4GD2)	-T8* (-A2N)		2.2 to 2.5	φ40 to φ80	
	Base piping	Terminal block MN4GE180R	MN4GE1 (N4GE1)	-T10 -T11 (-A2N)	<ul style="list-style-type: none"> 3-position A/B/R connection 	1.0 to 1.2	φ20 to φ40	24 VDC 12 VDC
			MN4GE2 (N4GE2)			2.2 to 2.5	φ40 to φ80	
		Connector type MN4GE180R	MN4GE1 (N4GE1)	-T30 -T5* (-A2N)	<ul style="list-style-type: none"> 3-position P/A/B connection 	1.0 to 1.2	φ20 to φ40	
			MN4GE2 (N4GE2)			2.2 to 2.5	φ40 to φ80	
		Serial transmission MN4GE280R	MN4GE1 (N4GE1)	-T6* -T7* (-A2N)	<ul style="list-style-type: none"> ● Dual 3 port valve integrated type N.C./N.C. type 	1.0 to 1.2	φ20 to φ40	
			MN4GE2 (N4GE2)	-T8* (-A2N)		2.2 to 2.5	φ40 to φ80	

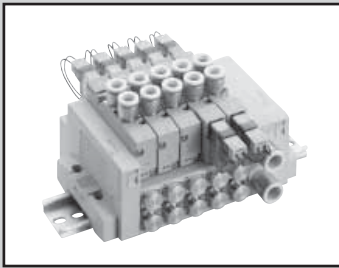
MN4GD & 4GE Series

		Electrical connections				Manual operating device	Other options
		Discrete valve/individual wiring manifold		Reduced wiring manifold			
4GAB	Blank	Grommet lead wire (W)	E3 E type connector with socket terminal (S/L)	T10 Common terminal block type M3 thread specifications (left side)	T50 Flat cable with power supply terminal (left side)	Blank	Non-locking/locking common type
M4GAB	● Lead wire length 300mm					(standard)	H With check valve
MN4GAB	EO E type connector (W)	A2N A type connector downward without socket	T10R Common terminal block type M3 thread specifications (right side)	T50R Flat cable with power supply terminal (right side)		A	Ozone/cutting water proof
4GAB Master valve	● Lead wire length 300mm 500mm 1m 2m 3m						
	E0N E type connector without socket	● For 100 VAC, dimension (a) is 3.5 mm longer than 12/24 VDC.	T11 Common terminal block type Push tightening specifications (left side)	T5 ₃ ¹ Flat cable without power supply terminal (left side)	(1) As non locking ON when pushed OFF when released	F	AB port filter integrated
4GD/E					(2) As locking push and turn 90° clockwise to hold the ON state. Turn counterclockwise to release lock OFF		A/B port filter
M4GD/E	E1 E type connector with socket terminal	BN DIN terminal box (BN: Without terminal box)	T11R Common terminal block type Push tightening specifications (right side)	T5 ₃ R Flat cable power supply without terminal (right side)		Z1 Z3	Air supply spacer Exhaust spacer
MN4GD/E	E2 E type connector (W/S/L)	E0*J EJ type connector (W)	T30 D-sub connector type (left side)	T6*0 T6*1 Serial transmission			Pilot check valve (separate type)
Technical data		● Lead wire length 1m 2m 3m					
	E2N E type connector without socket (S/L)	E2*J EJ type connector (W/S/L)	T30R D-sub connector type (right side)	T7*0 T7*1 Serial transmission Thin slot type			
Safety precautions							
Manifold Specifications				T8*1 T8*2 Serial transmission Thin slot type			

Electric connection circuit diagram

Electrical connections		Without lead wire	With lead wire	With 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)	●			●		

4GAB	M4GA/B	MN4GA/B	4GAB Master valve	4GD/E	M4GD/E	MN4GD/E	Technical data	Safety precautions	Manifold Specifications
------	--------	---------	-------------------	-------	--------	---------	----------------	--------------------	-------------------------



Individual wiring block manifold
Body piping

MN4GD1/2 Series

● Applicable cylinder bore size: $\phi 20$ to $\phi 80$



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

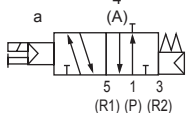
Technical data

Safety
precautions

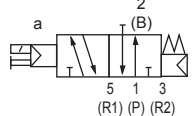
Manifold
Specifications

JIS symbol

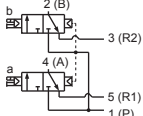
- 3 port valve
2-position single N.C. type



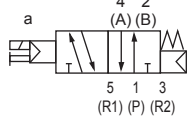
- 2-position single N.O. type



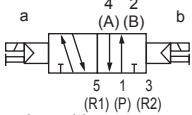
- Dual 3 port valve integrated type
(A side valve: N.C. type, B side valve: N.C. type)



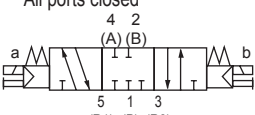
- 5 port valve
2-position single



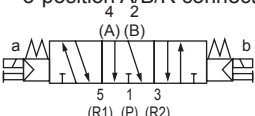
- 2-position double



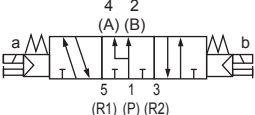
- 3-position
All ports closed



- 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
Withstanding 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
Lubrication	Note 1 Not required
Degree of protection	Note 2 Dust proof
Vibration/shock m/s ²	50 or less / 300 or less
Working environment	Containing corrosive gas is not permissible

- Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated. When lubricated excessively or intermittently, the operation could result in unstable.
- Note 2 The degree of protection is dust proof. The unit is not water proof. Avoid water drops or oil, etc. during use.

Electrical specification

Descriptions				
Rated voltage V	24 VDC	12 VDC	100 VAC	200 VAC
Voltage fluctuation range	±10%			
Holding current A (Note 3)	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W (Note 3)	0.35 0.40)		-	
Apparent power VA (Note 3) (Note 4)	-		0.93 (0.98)	1.26
Thermal class	B			
Surge suppressor	Option			
Indicator	Light (option)			

Note 3 Values in () apply when a light is attached. Note 4 200 VAC is the DIN terminal box (with light) value .

Individual specifications

Descriptions		MN3GD1/MN4GD1	MN3GD2/MN4GD2
Max. station no.		24 stations	20 stations
Port size	A/B port	Push-in fitting $\phi 4, \phi 6$ M5	Push-in fitting $\phi 4, \phi 6, \phi 8$ Rc1/8
	P/R port	Push-in fitting $\phi 6, \phi 8, \phi 6.4$	Push-in fitting $\phi 8, \phi 10$

- Refer to "Mounting attitude" on Page 630 for DIN rail installation.
- Refer to page 514 for weight.

Descriptions		MN3GD1/MN4GD1		MN3GD2/MN4GD2		
		ON	OFF	ON	OFF	
Response time ms	Dual 3 port valve integrated type	12	15	15	30	
	2-position	Single	15	25	20	30
		Double	15	-	20	-
	3-position	ABR connection	20	30	25	35

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→R		
		C (dm ³ /(s·bar))	b	C (dm ³ /(s·bar))	b	
MN3GD1 MN4GD1	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 -	
MN3GD2 MN4GD2	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 $S \approx 5.0 \times C$.

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

Ozone proof specifications / Cutting oil proof type specifications

Select the option "A" of ⊕ in how to order on page 512.

Specifications for secondary battery

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

** - Voltage - **P4**

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD1/2 Series

Individual wiring block manifold; body piping

How to order

Manifold model no.

MN4GD1 (1) 0 R - **C6** - **E2** **H** - **10** - **3**

3 port manifold model no.

MN3GD1 (1) 0 R - **C6** - **E2** **H** - **10** - **3**

Discrete valve block with solenoid valve

N4GD1 (1) 0 R - **C6** - **E2** **H** - **3**

Discrete 3 port valve block with solenoid valve

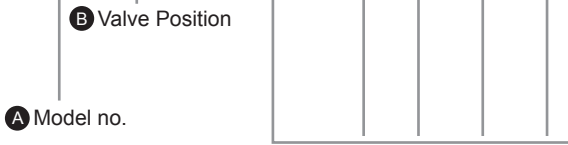
N3GD1 (1) 0 R - **C6** - **E2** **H** - **3**

Discrete solenoid valve

4GD1 (1) 9 R - **C6** - **E2** **H** - **3**

Discrete 3 port solenoid valve

3GD1 (1) 9 R - **C6** - **E2** **H** - **3**



A Model No.							
Manifold				Discrete block with solenoid valve			
3 port valve		5 port valve		Discrete block/Discrete solenoid valve			
MN3GD1	MN3GD2	MN4GD1	MN4GD2	(N)3GD1	(N)3GD2	(N)4GD1	(N)4GD2

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								
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								
8	Mix manifold (In case of multiple Valve Positions)	●	●	●	●	●	●	●	●

C Port size (A/B port)									
Type									
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	Rc1/8		●		●			●	●

D Electrical connections
Refer to the next page for wire connections.

E Option									
Blank	Non-locking/locking common manual override	●	●	●	●	●	●	●	●
H	With malfunction prevention valve Note 5	●	●	●	●	●	●	●	●
A	Ozone/Cutting oil proof	●	●	●	●	●	●	●	●
F	A/B port filter integrated Note 6	●	●	●	●	●	●	●	●
Z1	Air supply spacer Note 7	●	●	●	●				
Z3	Exhaust spacer Note 7	●	●	●	●				

F Station no.									
1	1 station								
to	to	●	●	●	●				
24	24 Stations (The max. station no. of MN3GD2/MN4GD2 is 20.)								

G Voltage									
1	100 VAC (rectifier integrated)	●	●	●	●	●	●	●	●
2	200 VAC (rectifier integrated) Note 8		●		●		●		●
3	24 VDC	●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●

is not available.

⚠ Cautions for model No. selection

- Note 1 Designate P/R port sizes with the supply/exhaust block in manifold specifications.
- Note 2 Select MN4GD*80R when mixing with 4, 5 port valves. Select MN3GD*80R when mixing with the masking plate.
- Note 3 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 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 6 The P port has a filter built inside as a standard.
- Note 7 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 575 to 578 for details.
- Note 8 Only the DIN terminal box are supported. Dual 3 port valve integrated type is not available.

4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

MN4GD1/2 Series

Individual wiring block manifold; body piping

(Electrical connection list)

A Model No.		Manifold				Discrete block with solenoid valve			
		3 port valve		5 port valve		Discrete block/Discrete solenoid valve			
		MN3GD1	MN3GD2	MN4GD1	MN4GD2	(N)3GD1	(N)3GD2	(N)4GD1	(N)4GD2

D Electrical connections									
Blank	Grommet lead wire (300 mm)	Note 9	●	●	●	●	●	●	●
B	DIN terminal box (Pg7)	with surge suppressor/light	Note 10	●	●	●	●	●	●
BN	DIN terminal box (Pg7) (without terminal box)	with surge suppressor	Note 10	●	●	●	●	●	●
E type connector (upward/lateral direction common)									
E0	Lead wire (300mm)	Note 11	●	●	●	●	●	●	●
E00	Lead wire (500mm)	Note 11	●	●	●	●	●	●	●
E01	Lead wire (1000 mm)	Note 11	●	●	●	●	●	●	●
E02	Lead wire (2000mm)	Note 11	●	●	●	●	●	●	●
E03	Lead wire (3000mm)	Note 11	●	●	●	●	●	●	●
E0N	Without lead wire (without socket)	Note 11	●	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal)	Note 11	●	●	●	●	●	●	●
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 11	●	●	●	●	●	●	●
E02J	Lead wire (2000mm)	Note 11	●	●	●	●	●	●	●
E03J	Lead wire (3000mm)	Note 11	●	●	●	●	●	●	●
E21J	Lead wire(1000mm)	with surge suppressor/light	●	●	●	●	●	●	●
E22J	Lead wire(2000mm)	with surge suppressor/light	●	●	●	●	●	●	●
E23J	Lead wire(3000mm)	with surge suppressor/light	●	●	●	●	●	●	●

Note 9 Grommet lead wire specifications are only for DC voltage.

Note 10 The light is also attached to the terminal box.

Note 11 AC voltage comes with a rectifier circuit.

Electrical connections	
Discrete valve/individual wiring manifold	
Blank	Grommet lead wire
E1 E3	E type connector with socket terminal
● Lead wire length 300mm	
E0 E2	E type connector
B	DIN terminal box
● Lead wire length 300mm 500mm 1000mm 2000mm 3000mm	
E0N E2N	E type connector without socket
BN	DIN terminal box without terminal box
E0*J E2*J	EJ type connector
● Lead wire length 1m 2m 3m	

4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

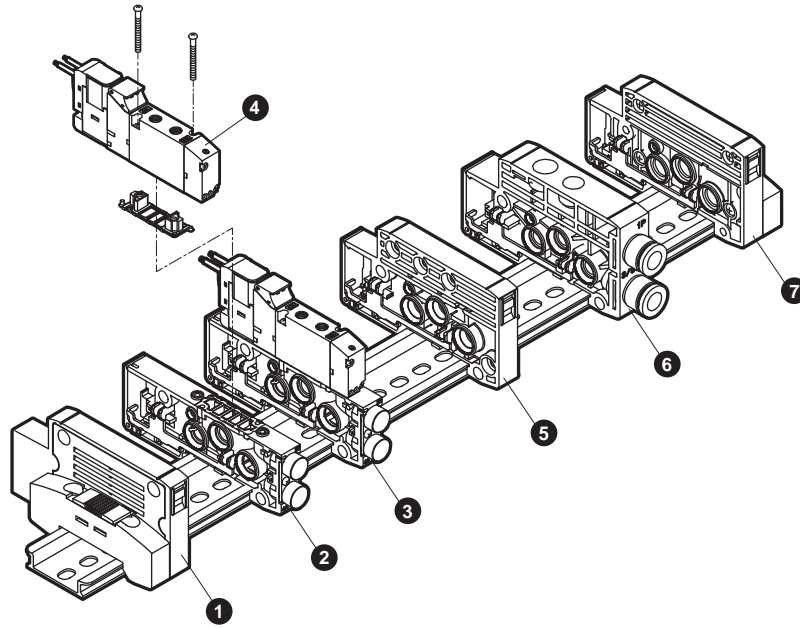
Safety
precautions

Manifold
Specifications

MN4GD1/2 Series

Individual wiring block manifold; body piping

Manifold components explanation and parts list



Main parts list (refer to page 564 to 578 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	N4GD110R-M5-H-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GD119R-M5-H-3			

D type reduced wiring weight

4GD1

Block type	Weight	Block type	Weight		
Valve block with solenoid valve	N3GD110R-C6-3	70	Valve block with masking plate	N4GA1R-MP	34
	N3GD1110R-C6-3	70		Supply and exhaust block	N4G1R-QR-8
	N4GD110R-C6-3	70	End block		N4G1R-E*
	N4GD120R-C6-3	87		N4G1R-EX*	60
	N4GD110R-C6-3	89	Partition block	N4G1R-S	45
	N3GD1660R-C6-3	87			

4GD2

Block type	Weight	Block type	Weight		
Valve block with solenoid valve	N3GD210R-C8-3	135	Valve block with masking plate	N4GA2R-MP	66
	N3GD2110R-C8-3	135		Supply and exhaust block	N4G2R-Q-10
	N4GD210R-C8-3	135	End block		N4G2R-E*
	N4GD220R-C8-3	154		N4G2R-EX*	85
	N4GD210R-C8-3	166	Partition block	N4G2R-S	60
	N3GD2660R-C8-3	154			

Parts list

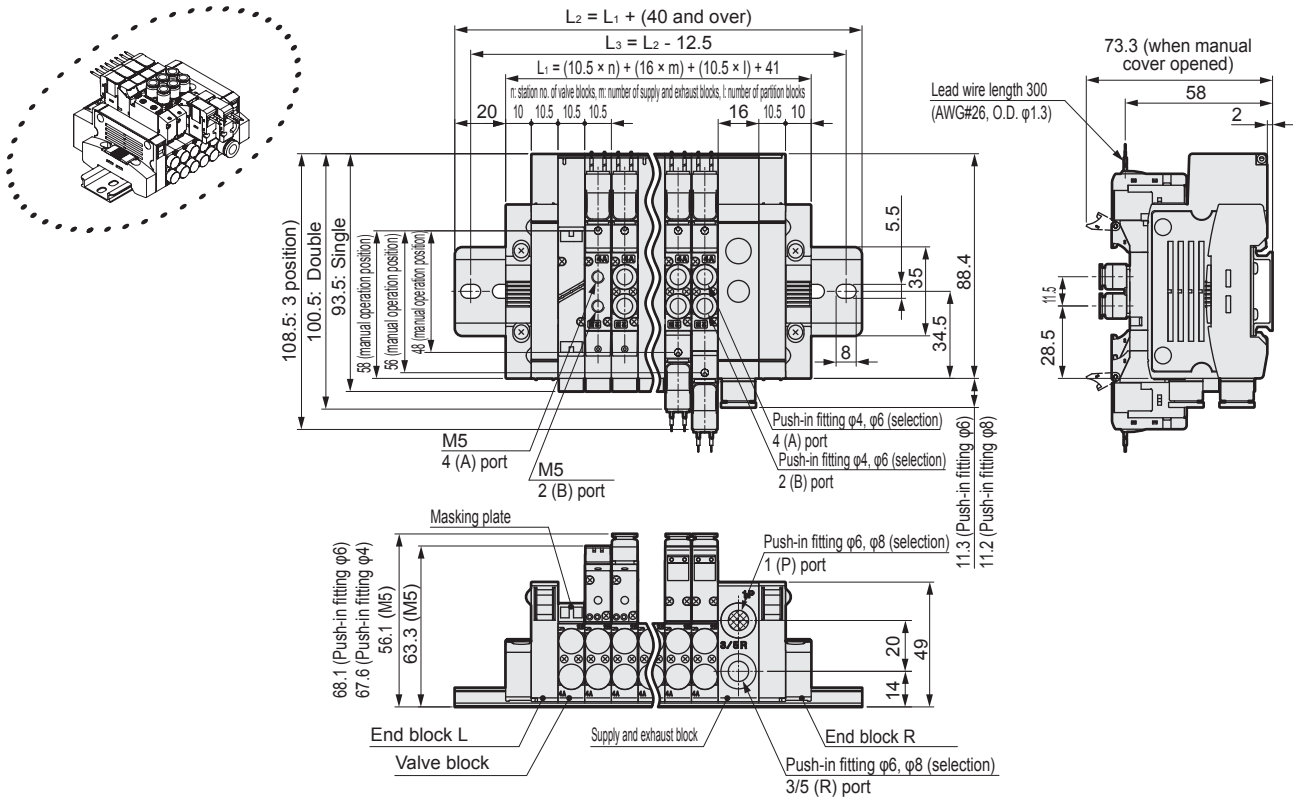
Application	Parts name	Model no.	Application	Parts name	Model no.
Valve 4G1	Cartridge fitting ϕ 4 straight type	4G1R-JOINT-C4	Valve	Coil assembly	4GR-[*1]-[*2]-COIL-[*3]
	Cartridge fitting ϕ 6 straight type	4G1R-JOINT-C6			*1: Electrical connection (blank, B, E0, ...), *3: Voltage (1, 2, 3, 4)
	Plug cartridge	4G1R-JOINT-CPG		*2: Ozone/cutting oil proof (blank, A)	
Valve 4G2	Cartridge fitting ϕ 4 straight type	4G2R-JOINT-C4		E type connector socket assembly	4GR-SOCKET-ASSY-[*1]-[*3]
	Cartridge fitting ϕ 6 straight type	4G2R-JOINT-C6		*1: Electrical connection (E0, E00, ...), *3: Voltage (1, 3, 4)	
	Cartridge fitting ϕ 8 straight type	4G2R-JOINT-C8		EJ type connector socket assembly	4GR-SOCKET-ASSY-[*1]
	Plug cartridge	4G2R-JOINT-CPG	*1: Electrical connection (E01J, E02J, ...)		
Valve 4G2			DIN terminal box assembly	4GR-TERMINAL-BOX-[*3]	
				*3: Voltage (1,2,3,4)	

Dimensions

MN4GD1

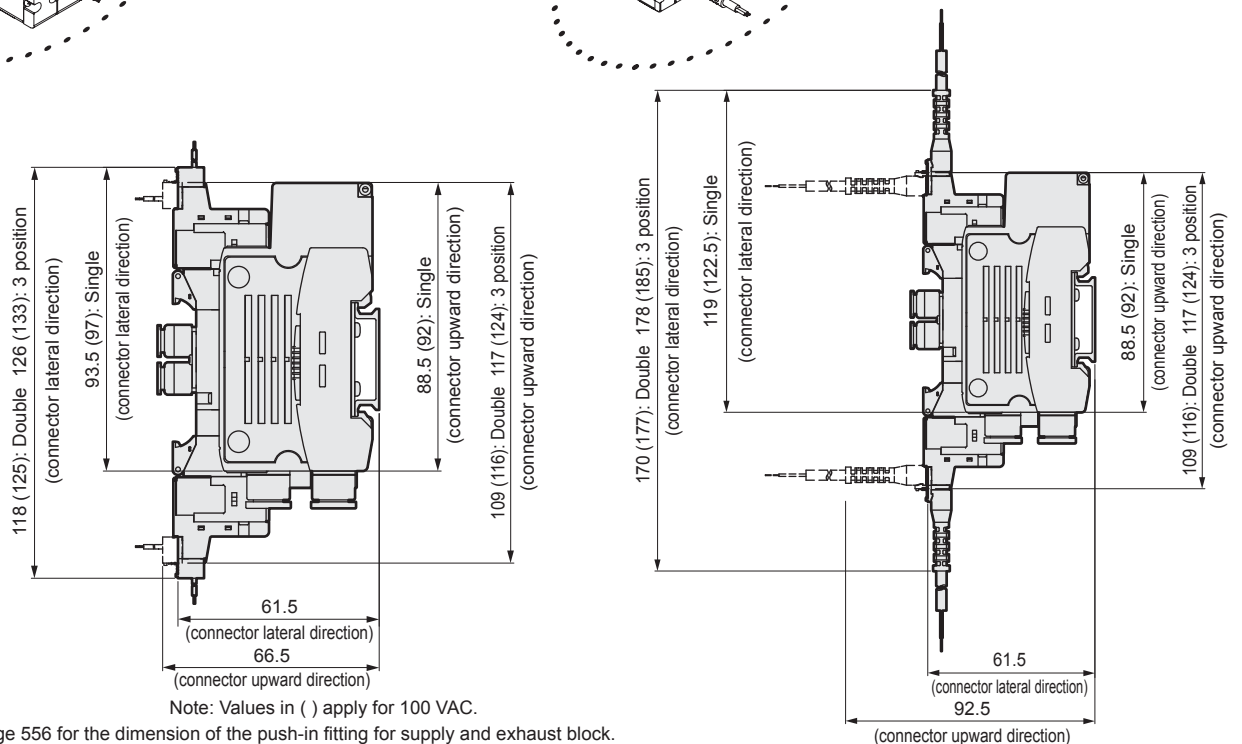
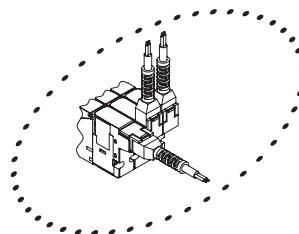
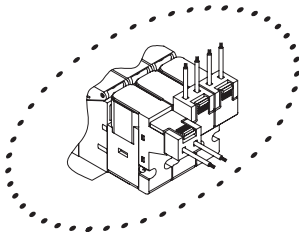
- Grommet lead wire (blank)

* 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)

- EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

* Refer to page 556 for the dimension of the push-in fitting for supply and exhaust block.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD2 Series

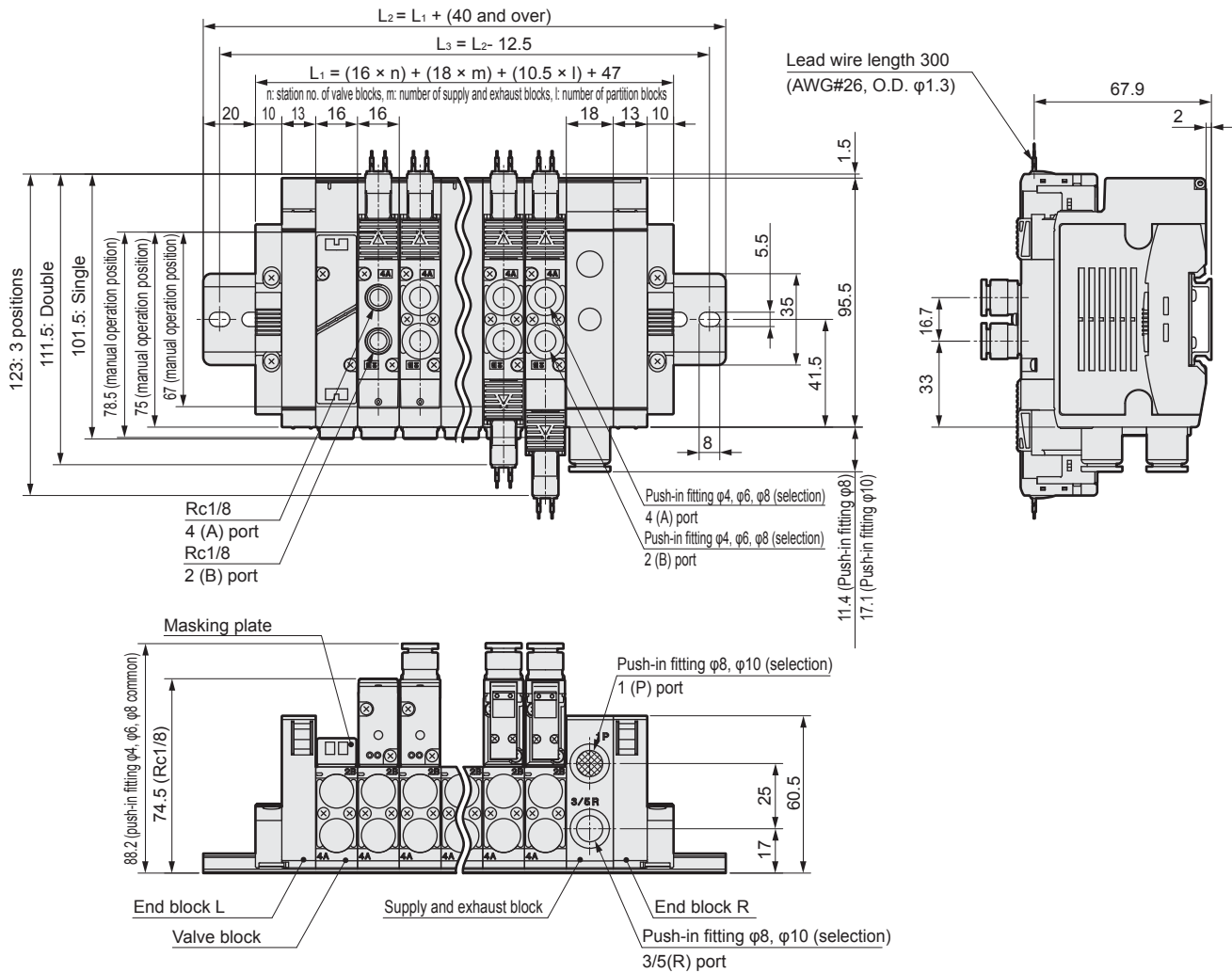
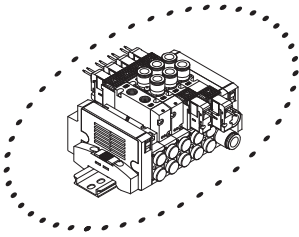
Individual wiring manifold; body piping

Dimensions 

MN4GD2

- Grommet lead wire (blank)

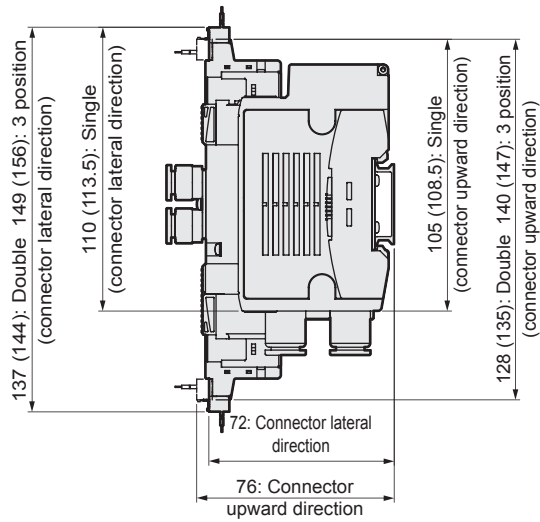
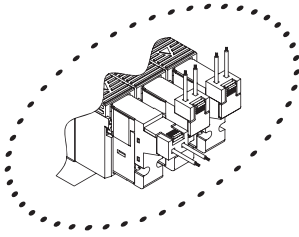
* For 2-position single 3 port valve, the port A or port B is a plug.
The dimension of dual 3 port valve integrated type is the same as that of the double type.



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

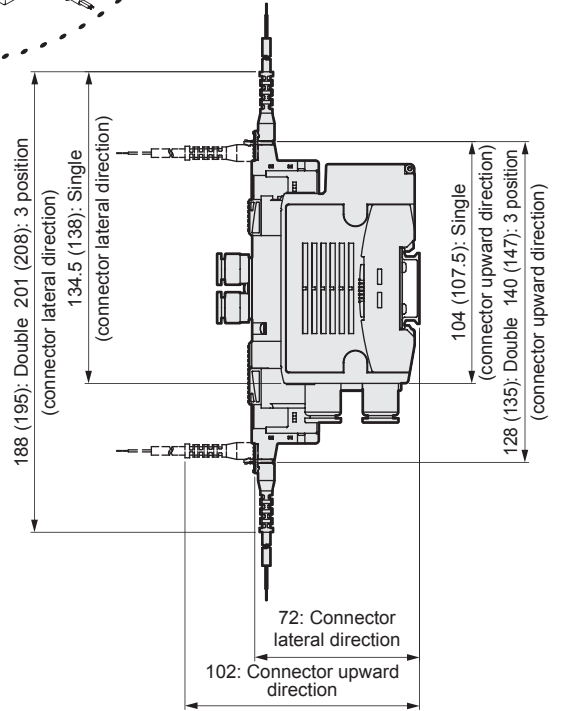
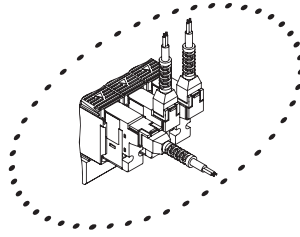
Dimensions

● E type connector type (E)

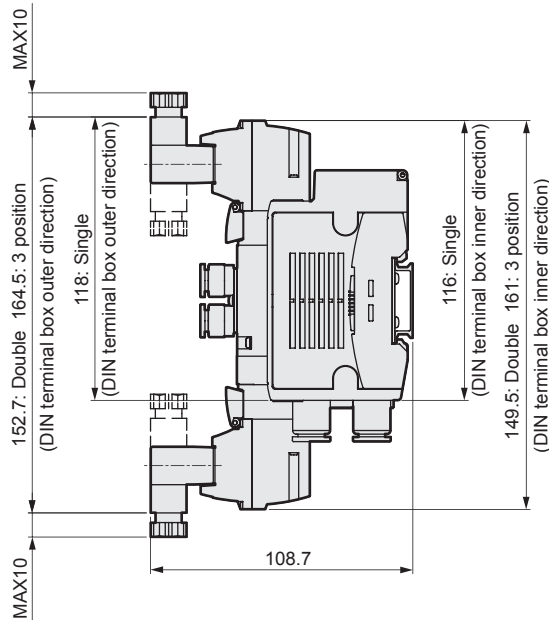
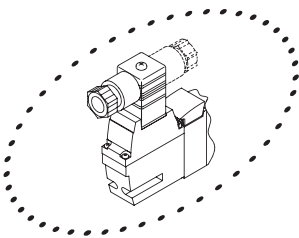


Note: Values in () apply for 100 VAC.

● EJ type connector type (E**J)

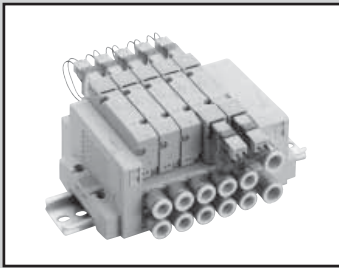


● DIN terminal box type (B)



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

* Refer to page 556 for the dimension drawings of the push-in fitting for supply and exhaust block.



Individual wiring block manifold
Base piping

MN4GE1/2 Series

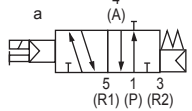
● Applicable cylinder bore size: $\phi 20$ to $\phi 80$



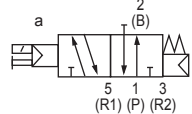
4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

JIS symbol

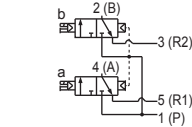
- 3 port valve
2-position single N.C. type



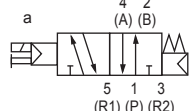
- 2-position single N.O. type



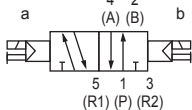
- Dual 3 port valve integrated type
(A side valve: N.C. type, B side valve: N.C. type)



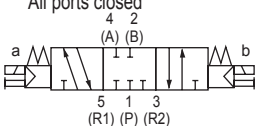
- 5 port valve
2-position single



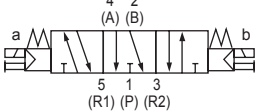
- 2-position double



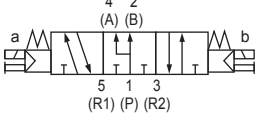
- 3-position
All ports closed



- 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	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
Withstanding 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
Lubrication Note 1	Not required
Degree of protection Note 2	Dust proof
Vibration/shock m/s ²	50 or less / 300 or less
Working environment	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.

Electrical specification

Descriptions					
Rated voltage V		24 VDC	12 VDC	100 VAC	200 VAC
Voltage fluctuation range		±10%			
Holding current A (Note 3)		0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W (Note 3)		0.35 (0.40)		-	
Apparent power VA (Note 3) (Note 4)		-		0.93 (0.98)	1.26
Thermal class		B			
Surge suppressor		Option			
Indicator		Light (option)			

Note 3 Values in () apply when a light is attached.

Note 4 200 VAC is the DIN terminal box (with light) value.

Individual specifications

Descriptions		MN3GE1/MN4GE1	MN3GE2/MN4GE2
Max. station no.		24 station	20 station
Port size	A/B port	Push-in fitting $\phi 4$, $\phi 6$	Push-in fitting $\phi 4$, $\phi 6$, $\phi 8$
	P/R port	Push-in fitting $\phi 6$, $\phi 8$	Push-in fitting $\phi 8$, $\phi 10$

• Refer to "Mounting attitude" on Page 630 for DIN rail installation.

• Refer to page 522 for weight.

Descriptions		MN3GE1/MN4GE1		MN3GE2/MN4GE2	
		ON	OFF	ON	OFF
Response time ms	Dual 3 port valve integrated type	12	15	15	30
	2-position Single	15	25	20	30
		Double	15	-	20
	3-position ABR connection	20	30	25	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→R		
		C (dm ³ /(s·bar))	b	C (dm ³ /(s·bar))	b	
MN3GE1 MN4GE1	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 -	
MN3GE2 MN4GE2	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 $S \approx 5.0 \times C$.

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

Ozone specifications / Cutting oil proof type specifications

Select the option "A" of (E) in how to order on page 520.

Specifications for secondary battery

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

** - Voltage - **P4**

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GE1/2 Series

Individual wiring manifold; base piping

How to order

Manifold model no.

MN4GE1 **1** **0** **R** - **C6** - **E2** **H** - **10** - **3**

3 port manifold model no.

MN3GE1 **1** **0** **R** - **C6** - **E2** **H** - **10** - **3**

Discrete valve block with solenoid valve

N4GE1 **1** **0** **R** - **C6** - **E2** **H** - **3**

Discrete 3 port valve block with solenoid valve

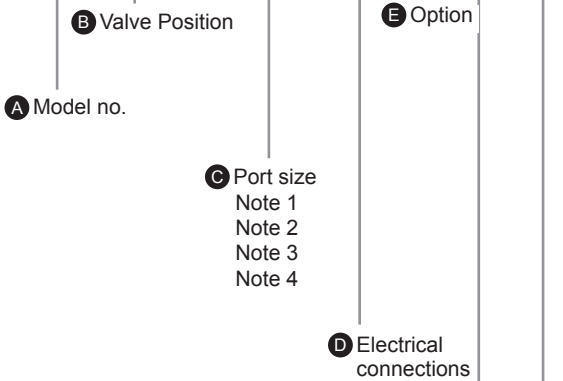
N3GE1 **1** **0** **R** - **C6** - **E2** **H** - **3**

Discrete solenoid valve

4GE1 **1** **9** **R** - **00** - **E2** **H** - **3**

Discrete 3 port solenoid valve

3GE1 **1** **9** **R** - **00** - **E2** **H** - **3**



⚠ 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 CL* push-in fitting L type (upward) is available only for the single solenoid manifold. The port A is a long elbow and the port B is short elbow.
- Note 3 A/B port sizes do not differ for the push-in fitting L type (upward) mix (CX).
- Note 4 In the case of a discrete solenoid valve, set the port size of "00".
- Note 5 Select MN4GE*80R when mixing with 4, 5 port valves. Select MN3GE*80R when mixing with the masking plate.
- Note 6 Dimensions are the same as the respective 2-position double.
- Note 7 Push-in fitting cannot be mixed with the discrete valve's 4 (A) or 2 (B) port.
- Note 8 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 9 The P port has a filter built inside as a standard.
- Note 10 Specify the spacer mounting location 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 575 to 578 for details.
- Note 11 Only the DIN terminal box are supported. Dual 3 port valve integrated type is not available.

A Model No.							
Manifold				Discrete valve block with solenoid valve			
Dual 3 port valve integrated type		5 port valve		Discrete solenoid valve			
MN3GE1	MN3GE2	MN4GE1	MN4GE2	(N)3GE1	(N)3GE2	(N)4GE1	(N)4GE2

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 5, Note 6	A side valve: Normally closed B side valve: Normally closed		●	●		●
8	Mix manifold (In case of multiple Valve Positions)			●	●		●

C Port size (A/B port)							
Type							
C4	φ4 push-in fitting			●	●		●
C6	φ6 push-in fitting			●	●		●
C8	φ8 push-in fitting			●	●		●
CL4	L type φ4 push-in fitting (upward)			●	●		●
CL6	L type φ6 push-in fitting (upward)			●	●		●
CL8	L type φ8 push-in fitting (upward)			●	●		●
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 side plugged specifications	A Port		B Port					
C4NC	φ4 push-in fitting	Plug			●	●		●
C6NC	φ6 push-in fitting				●	●		●
C8NC	φ8 push-in fitting				●	●		●
C4NO	Plug		φ4 push-in fitting			●	●	●
C6NO			φ6 push-in fitting			●	●	●
C8NO			φ8 push-in fitting			●	●	●
CL4NC	L type φ4 push-in fitting (upward)	Plug			●	●		●
CL6NC	L type φ6 push-in fitting (upward)				●	●		●
CL8NC	L type φ8 push-in fitting (upward)				●	●		●
CL4NO	Plug		L type φ4 push-in fitting (upward)			●	●	●
CL6NO			L type φ6 push-in fitting (upward)			●	●	●
CL8NO			L type φ8 push-in fitting (upward)			●	●	●
CD4NC	L type φ4 push-in fitting (downward)	Plug			●	●		●
CD6NC	L type φ6 push-in fitting (downward)				●	●		●
CD8NC	L type φ8 push-in fitting (downward)				●	●		●
CD4NO	Plug		L type φ4 push-in fitting (downward)			●	●	●
CD6NO			L type φ6 push-in fitting (downward)			●	●	●
CD8NO			L type φ8 push-in fitting (downward)			●	●	●
00	Discrete valve for mounting base						●	●

D Electric connection
 Refer to the next page for wire connections.

E Option							
Blank	Non-locking/locking common manual override			●	●		●
H	With malfunction prevention valve	Note 8		●	●		●
A	Ozone/Cutting oil proof			●	●		●
F	A/B port filter integrated	Note 9		●	●		●
Z1	Air supply spacer	Note 10		●	●		●
Z3	Exhaust spacer	Note 10		●	●		●

F Station no.							
1	1 stations						
to	to			●	●		●
24	24 Stations (The max. station no. of MN4GE2 is 20.)			●	●		●

G Voltage							
1	100 VAC (rectifier integrated)			●	●		●
2	200 VAC (rectifier integrated)	Note 11		●	●		●
3	24 VDC			●	●		●
4	12 VDC			●	●		●

MN4GE1/2 Series

Individual wiring manifold; base piping

(Electrical connection list)

A Model No.		Manifold				Discrete valve block with solenoid valve / Discrete solenoid valve			
		Dual 3 port valve integrated type		5 port valve					
		MN3GE1	MN3GE2	MN4GE1	MN4GE2	(N)3GE1	(N)3GE2	(N)4GE1	(N)4GE2

D Electric connection													
Blank	Grommet lead wire (300 mm)	Note 12		●	●	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7)	with surge suppressor/light Note 13			●				●				●
BN	DIN terminal box (Pg7) (without terminal box)	with surge suppressor Note 13			●				●				●
E type connector (upward/lateral direction common)													
E0	Lead wire (300mm)	Note 14		●	●	●	●	●	●	●	●	●	●
E00	Lead wire (500mm)	Note 14		●	●	●	●	●	●	●	●	●	●
E01	Lead wire (1000mm)	Note 14		●	●	●	●	●	●	●	●	●	●
E02	Lead wire (2000mm)	Note 14		●	●	●	●	●	●	●	●	●	●
E03	Lead wire (3000mm)	Note 14		●	●	●	●	●	●	●	●	●	●
E0N	Without lead wire (without socket)	Note 14		●	●	●	●	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal)	Note 14		●	●	●	●	●	●	●	●	●	●
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 (1000mm)	Note 14		●	●	●	●	●	●	●	●	●	●
E02J	Lead wire (2000mm)	Note 14		●	●	●	●	●	●	●	●	●	●
E03J	Lead wire (3000mm)	Note 14		●	●	●	●	●	●	●	●	●	●
E21J	Lead wire (1000mm)	with surge suppressor/light		●	●	●	●	●	●	●	●	●	●
E22J	Lead wire (2000mm)	with surge suppressor/light		●	●	●	●	●	●	●	●	●	●
E23J	Lead wire (3000mm)	with surge suppressor/light		●	●	●	●	●	●	●	●	●	●

Note12 Grommet lead wire specifications are only for DC voltage.
 Note13 The light is also attached to the terminal box.
 Note14 AC voltage comes with a rectifier circuit.

Electrical connections		Discrete valve/individual wiring manifold	
Blank	Grommet lead wire	E1 E3	E type connector with socket terminal
● Lead wire length 300mm			
E0 E2	E type connector	B	DIN terminal box
● Lead wire length 300mm 500mm 1000mm 2000mm 3000mm			
E0N E2N	E type connector without socket	BN	DIN terminal box without terminal box
		E0*J E2*J	EJ type connector
		● Lead wire length 1m 2m 3m	

4GAB

M4GAB/B

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

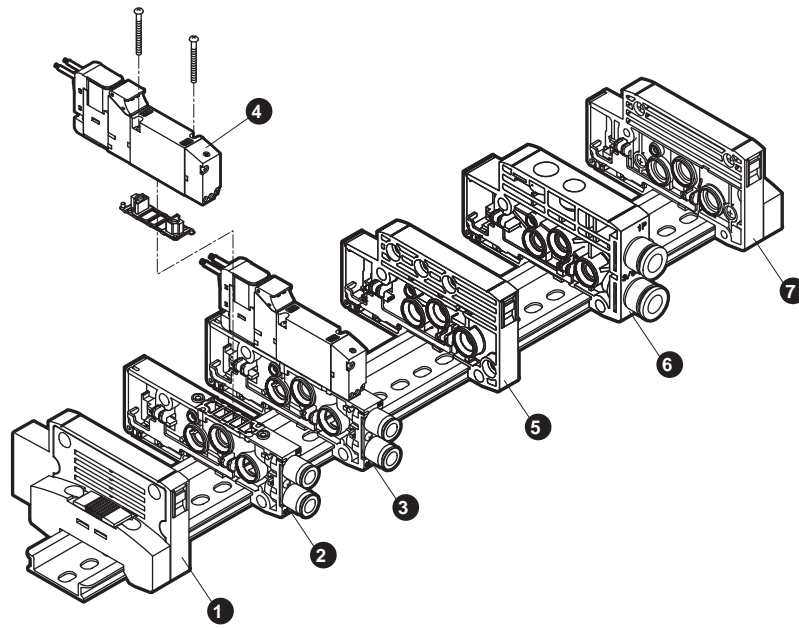
Safety
precautions

Manifold
Specifications

MN4GE1/2 Series

Individual wiring manifold; base piping

Manifold components explanation and parts list



Main parts list (refer to page 564 to 578 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	N4GB1R-V1-C6	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GE110R-C6-H-3	7	End block R	N4G1R - ER
4	Solenoid valve body	4GE119R-00-H-3			

E type reduced wiring weight

4GE1

Block type	Weight	Block type	Weight		
Valve block with solenoid valve	N4GE110R-C6-3	68	Supply and exhaust block	N4G1R-Q-8	58
	N4GE120R-C6-3	84	End block	N4G1R-E*	60
	N4GE1 ₁₀₊₃ 0R-C6-3	85	Partition block	N4G1R-S	45
	N3GE1660R-C6-3	84			
Valve block with masking plate	N4GB1R-MP-C6	37			

4GE2

Block type	Weight	Block type	Weight		
Valve block with solenoid valve	N4GE210R-C8-3	132	Supply and exhaust block	N4G2R-Q-10	83
	N4GE220R-C8-3	147	End block	N4G2R-E*	84
	N4GE2 ₁₀₊₃ 0R-C8-3	158		N4G2R-EX*	85
	N3GE2660R-C8-3	147	Partition block	N4G2R-S	60
Valve block with masking plate	N4GB2R-MP-C8	69			

Parts list

Application	Parts name	Model no.	Application	Parts name	Model no.
Valve 4G1	Cartridge fitting φ4 straight type	4G1R-JOINT-C4	Valve	Coil assembly	4GR-[*1]-[*2]-COIL-[*3]
	Cartridge fitting φ6 straight type	4G1R-JOINT-C6			*1: Electrical connection (blank, B, E0, ...), *3: Voltage (1, 2, 3, 4) *2: Ozone/cutting oil proof (blank A)
	Cartridge fitting φ4 (short) elbow type	4G1R-JOINT-CL4			E type connector socket
	Cartridge fitting φ4 (long) elbow type	4G1R-JOINT-CLL4			*1: Electrical connection (E0, E00, ...), *3: Voltage (1, 3, 4)
	Cartridge fitting φ6 (short) elbow type	4G1R-JOINT-CL6		EJ type connector socket	4GR-SOCKET-ASSY-[*1]
	Cartridge fitting φ6 (long) elbow type	4G1R-JOINT-CLL6			*1: Electrical connection (E01J, E02J, ...)
	Plug cartridge	4G1R-JOINT-CPG	Valve 4G2R	DIN terminal box assembly	4GR-TERMINAL-BOX-[*3]
Valve 4G2R	Cartridge fitting φ4 straight type	4G2R-JOINT-C4			*3: Voltage (1,2,3,4)
	Cartridge fitting φ6 straight type	4G2R-JOINT-C6			
	Cartridge fitting φ8 straight type	4G2R-JOINT-C8			
	Cartridge fitting φ6 (short) elbow type	4G2R-JOINT-CL6			
	Cartridge fitting φ6 (long) elbow type	4G2R-JOINT-CLL6			
	Cartridge fitting φ8 (short) elbow type	4G2R-JOINT-CL8			
	Cartridge fitting φ8 (long) elbow type	4G2R-JOINT-CLL8			
	Plug cartridge	4G2R-JOINT-CPG			

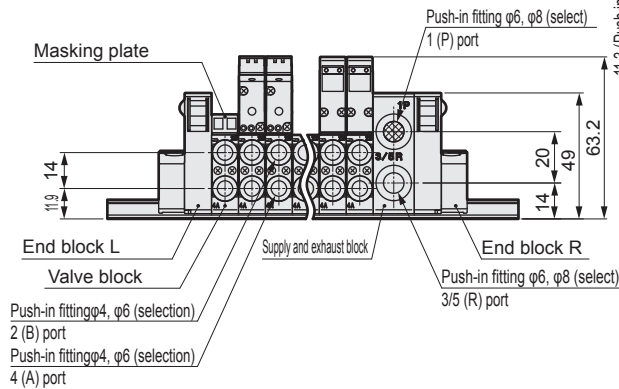
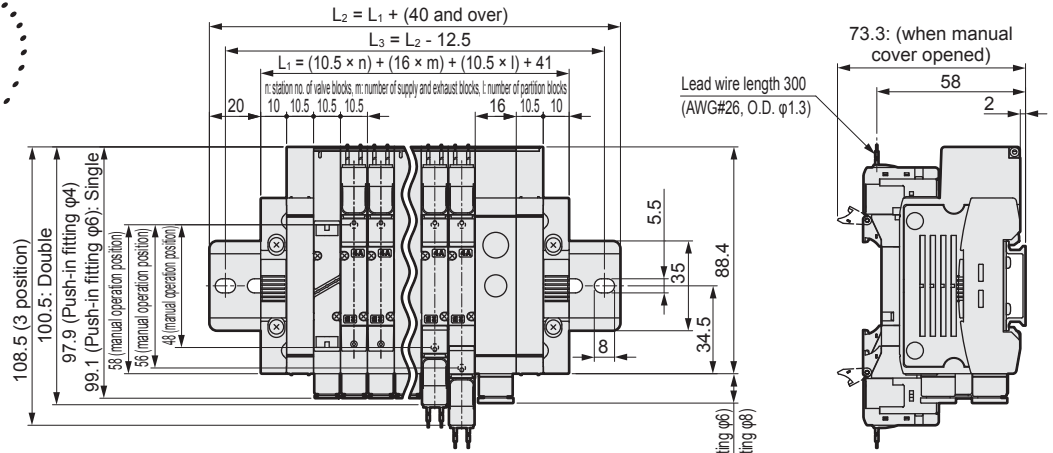
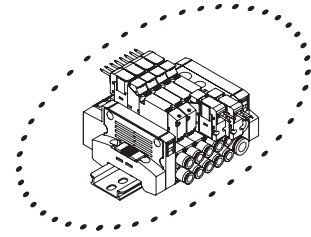
Dimensions



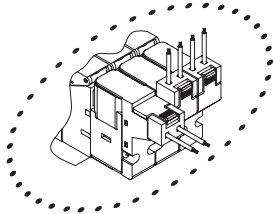
MN4GE1

- Grommet lead wire (blank)

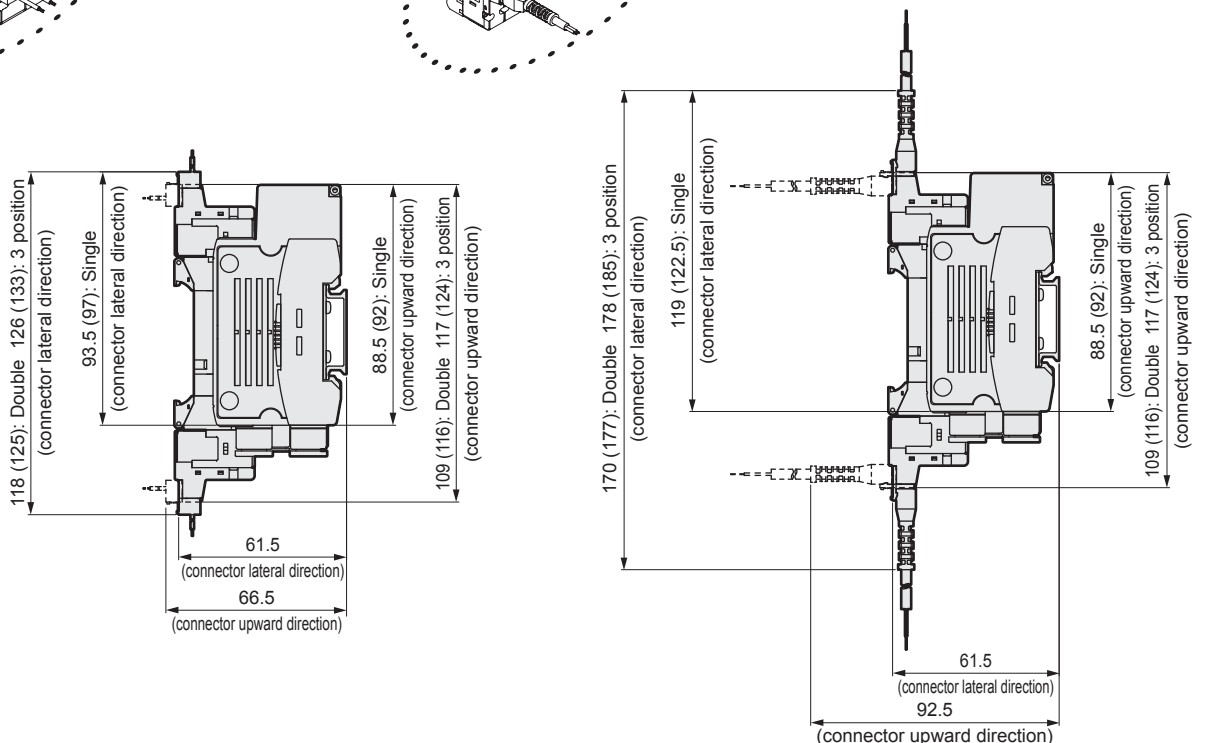
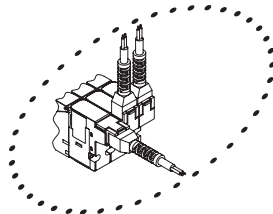
* For 2-position single 3 port valve, the port A or port B is a plug.
The dimension of dual 3 port valve integrated type is the same as that of the double type.



- E type connector type (E)



- EJ type connector type (E**J)



* Refer to page 556 for the dimension of the push-in fitting for valve block and supply/exhaust block.

MN4GE2 Series

Individual wiring manifold; base piping

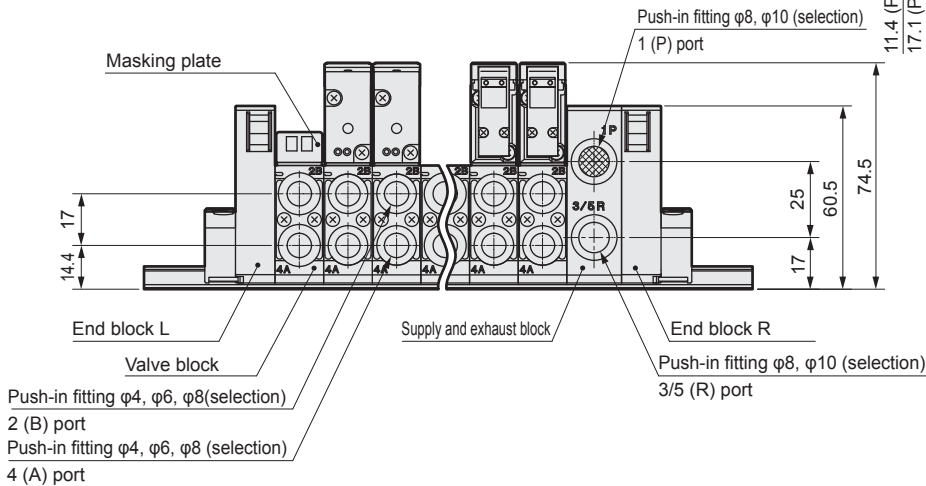
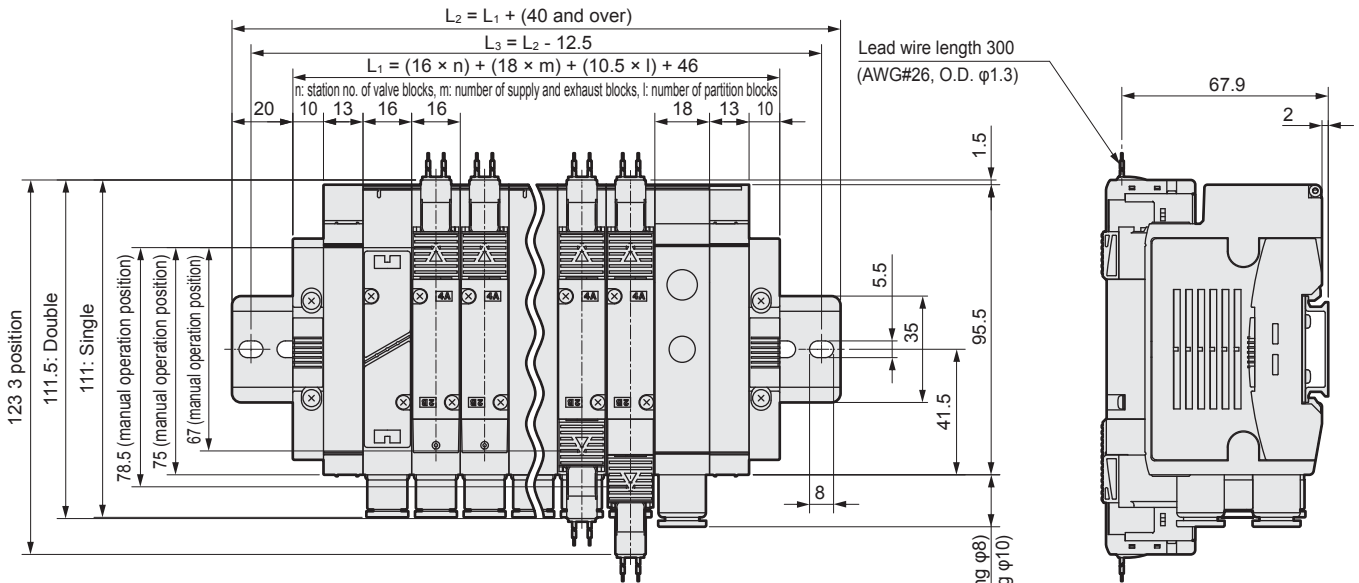
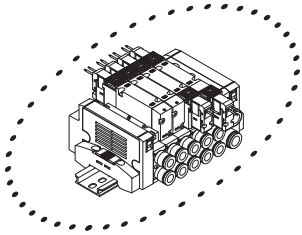
Dimensions



MN4GE2

- 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.



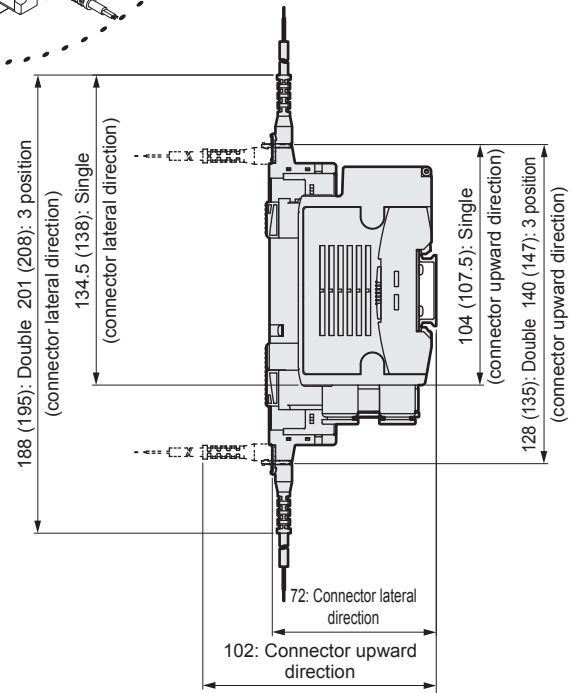
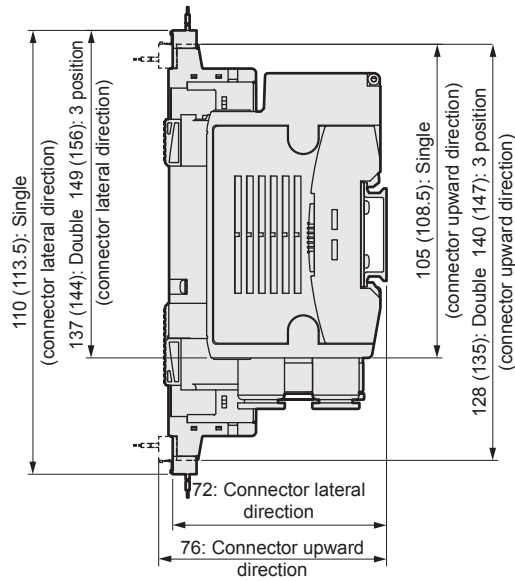
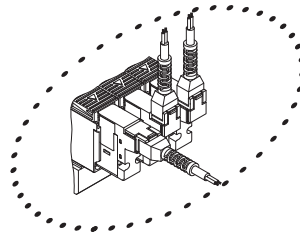
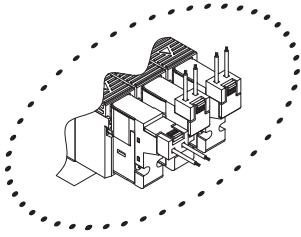
* Refer to page 556 for the dimension of the push-in fitting for valve block and supply/exhaust block.

4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

Dimensions

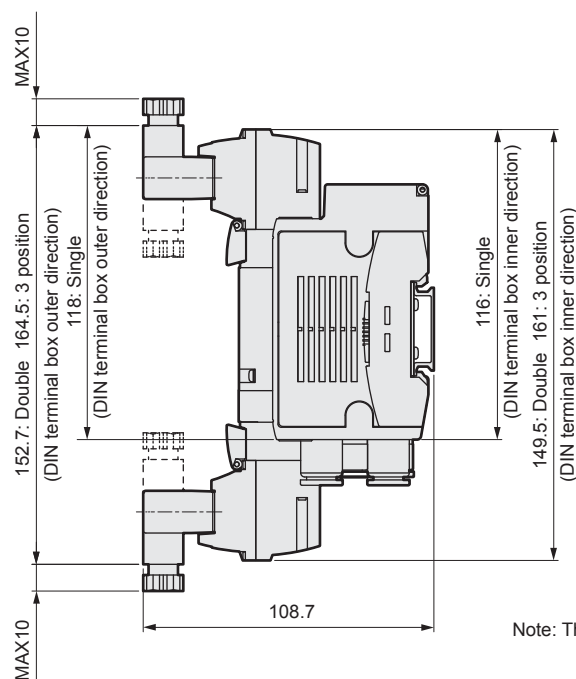
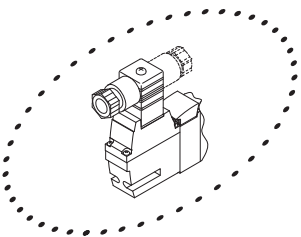
● E type connector type (E)

● EJ type connector type (E**J)



Note: Values in () apply for 100 VAC.

● DIN terminal box type (B)



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

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

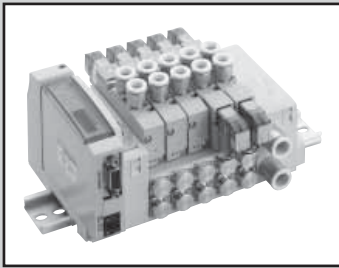
M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications



Reduced wiring block manifold
Body piping

MN4GD1/2-T* Series

● Applicable cylinder bore size: $\phi 20$ to $\phi 80$



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

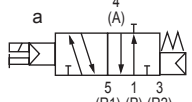
Technical data

Safety
precautions

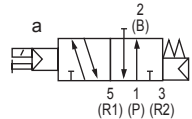
Manifold
Specifications

JIS symbol

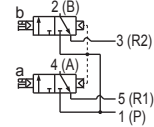
- 3 port valve
2-position single N.C. type



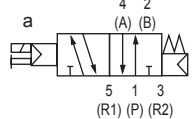
- 2-position single N.O. type



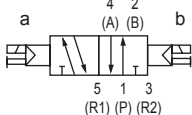
- Dual 3 port valve integrated type
(A side valve: N.C. type, B side valve: N.C. type)



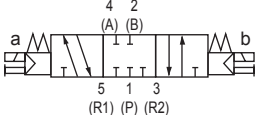
- 5 port valve
2-position single



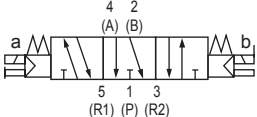
- 2-position double



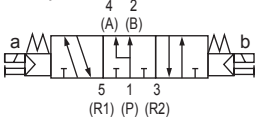
- 3-position all ports closed



- 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
Withstanding 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
Lubrication Note 1	Not required
Degree of protection Note 2	Dust proof
Vibration/shock m/s ²	50 or less / 300 or less
Working environment	Containing corrosive gas is not permissible

Note 1: Use the turbine oil Class 1 ISO VG32 if lubricated. When lubricated excessively or intermittently, the operation could result in unstable.

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

Electrical specification

Descriptions	T1*, T30*, T5*			T6*, T8*	
	24 VDC	12 VDC	24 VDC	24 VDC	
Rated voltage V	24 VDC	12 VDC	24 VDC	24 VDC	
Voltage fluctuation range (Note 3)	±10%		+10%, -5%		
Holding current A	0.017	0.034	0.017		
Power consumption W	0.4				
Thermal class	B				
Surge suppressor	Zener diode				
Indicator	LED				

Note 3: Please note the voltage fluctuation range since the T6* and T8* (Serial transmission type) have a voltage drop due to the internal circuit.

Individual specifications

Descriptions	MN3GD1/MN4GD1									
	T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station no.	16 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	8/16 stations	8/16 stations	16/24 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	Push-in fitting $\phi 4$, $\phi 6$ M5									
	Push-in fitting $\phi 6$, $\phi 8$, $\phi 6.4$									

Descriptions	MN3GD2/MN4GD2									
	T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station no.	16 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	8/16 stations	8/16 stations	16/20 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	Push-in fitting $\phi 4$, $\phi 6$, $\phi 8$ Rc1/8									
	Push-in fitting $\phi 8$, $\phi 10$									

• Refer to page 530 for weight.

Flow characteristics

Model no.	Valve Position	P→A/B		A/B→R		
		C (dm ³ /(s·bar))	b	C (dm ³ /(s·bar))	b	
MN3GD1 MN4GD1	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
MN3GD2 MN4GD2	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 $S \approx 5.0 \times C$.

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 screw 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		UNIWIRESYSTEM		UNIWIRESYSTEM H		S-LINK	
Power supply voltage	Unit side	24 VDC ±10%			24 VDC +10%, -5%				
	Valve side	24 VDC +10%, -5%			Power supply terminal common				
Current consumption	Unit side	100mA or less (when all output points are ON)			100mA or less (when all output points are ON)				
	Valve side	15mA or less (when all output points are OFF)			Load current is not included				
	Communication side	-	-	-	-	-	-	-	-
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%				
	Valve side	24 VDC +10%, -5%			Power supply terminal common				
Current consumption	Unit side	50 mA or less (when all output points are ON)		90mA or less (when all output points are ON)		110mA or less (when all output points are ON)		40mA or less (when all output points are ON)	
	Valve side	15mA or less (when all output points are OFF)		Load current is not included		Load current is not included		Load current is not included	
	Communication side	-	-	-	-	-	11 VDC to 25 VDC *8	14.0 VDC to 26.4 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 1 node (16 point)	
Operating indication	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 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.

4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

MN4GD1/2-T* Series

Reduced wiring manifold; body piping

How to order

Manifold model no.

MN4GD1 (1) 0R - C6 - T30 W H - 10 - 3

3 port manifold model no.

MN3GD1 (1) 0R - C6 - T30 W H - 10 - 3

Discrete valve block with solenoid valve

N4GD1 (1) 0R - C6 - A2N*1 H — 3

Discrete 3 port valve block with solenoid valve

N3GD1 (1) 0R - C6 - A2N*1 H — 3

Discrete solenoid valve

4GD1 (1) 9R - C6 - A2N H — 3

Discrete 3 port solenoid valve

3GD1 (1) 9R - C6 - A2N H — 3

B Valve Position

A Model no.

C Port size
Note 1

D Reduced wiring

E Terminal/connector
pin array

F Option

G Station no.

H Voltage

A Model No.					
Manifold			Discrete valve block with solenoid valve		
3 port valve		5 port valve	Discrete solenoid valve		
M	N	M	M	N	N
3	3	4	3	3	4
G	G	G	G	G	G
D	D	D	D	D	D
1	2	1	1	2	2

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			●	●
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, Note 3			●	●
	A side valve: Normally closed				
	B side valve: Normally closed				
8	Mix manifold (In case of multiple Valve Positions)	●	●	●	●

C Port size (A/B port)					
Type					
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	Rc1/8		●		●

D Reduced wiring connection, serial transmission					
Refer to the next page for wire connections, serial transmission.					

E Terminal connector pin array					
Blank	Standard wiring Note 5	●	●	●	●
W	Double wiring Note 5	●	●	●	●

F Option					
Blank	Non-locking/locking common manual override	●	●	●	●
H	With malfunction prevention valve Note 6	●	●	●	●
A	Ozone/Cutting oil proof	●	●	●	●
F	A/B port filter integrated Note 7	●	●	●	●
Z1	Air supply spacer Note 8	●	●	●	
Z3	Exhaust spacer Note 8	●	●	●	

G Station no.					
1	1 stations				
to	to	●	●	●	
24	24 stations (Refer to page 526 for the max. station no. for each model).				

H Voltage					
3	24 VDC	●	●	●	●
4	12 VDC	●	●	●	●

is not available.

⚠ Cautions for model No. selection

- Note 1 Designate P/R port sizes with the supply/exhaust block in manifold specifications.
- Note 2 Select MN4GD*80R when mixing with 4, 5R port valves. Select MN3GD*80R when mixing with the masking plate.
- Note 3 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 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 7 The P port has a filter built inside as a standard. Specify the spacer mounting position and quantity in manifold specifications.
- Note 8 Stacking multiple spacers is not supported. Combination with the masking plate is not supported.
Refer to page 575 to 578 for details.

MN4GD1/2-T* Series

Reduced wiring manifold; body piping

A Model No.							
Manifold				Discrete valve block with solenoid valve			
3 port valve		5 port valve		Discrete solenoid valve			
MN3GD1	MN3GD2	MN4GD1	MN4GD2	(N)3GD1	(N)3GD2	(N)4GD1	(N)4GD2

D 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	●	●	●	●	
D Serial transmission (light and surge suppressor provided as standard) 24 VDC							
T6A0	UNIWIRESYSTEM	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	UNIWIRESYSTEM H	NPN 8 points	●	●	●	●	
T6J1		NPN 16 points	●	●	●	●	
T7C0	CompoBus/S (Thin type)	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				●	●

is not available.

Ozone specifications / Cutting oil proof type specifications

Select the option "A" of (F) in how to order on page 528.

Specifications for secondary battery

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

** - Voltage - P4

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

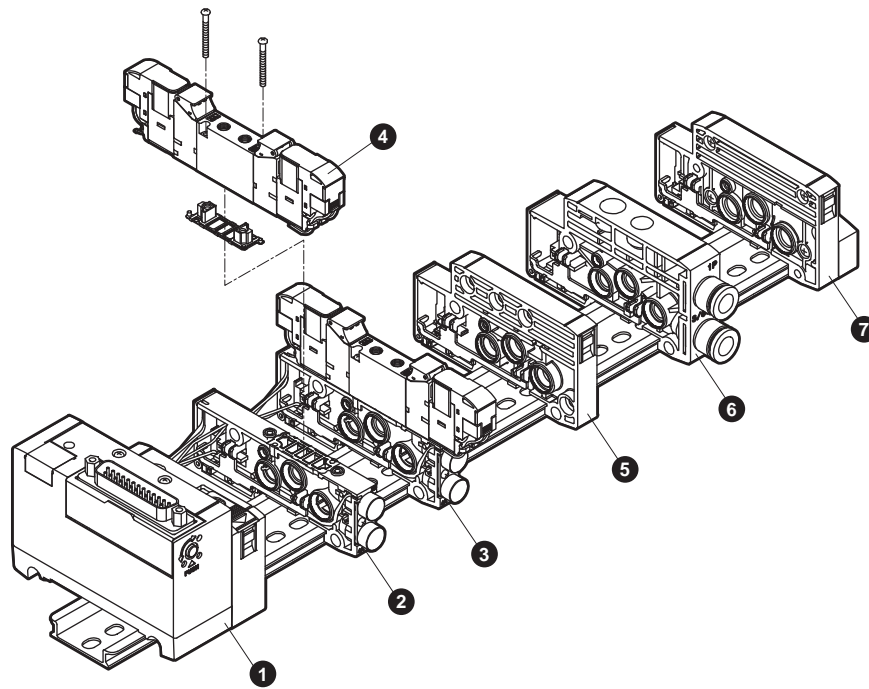
Safety
precautions

Manifold
Specifications

MN4GD1/2-T* Series

Reduced wiring manifold; body piping

Manifold components explanation and parts list



Main parts list (refer to page 564 to 578 for details)

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	N4GD120R-M5-A2NH-3	7	End block R	N4G1R - ER
4	Solenoid valve body	4GD129R-M5-A2NH-3			

A type reduced wiring weight

4GD1

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N3GD110R-C6-A2N-3	72	Supply and exhaust block	N4G1R-Q-8	53	Electrical block	N4G1R-T10(R)	207
	N3GD1110R-C6-A2N-3	72		End block	N4G1R-E*		60	N4G1R-T30(R)
	N4GD110R-C6-A2N-3	72	Partition block		N4G1R-EX*		60	N4G1R-T50(R)
	N4GD120R-C6-A2N-3	91		Electrical block	N4G1R-S		45	N4G1R-T6*
	N4GD1 $\frac{3}{4}$ 0R-C6-A2N-3	93	N4G1R-T7*		203			
	N3GD1660R-C6-A2N-3	91	N4G1R-T8*		229			
Valve block with masking plate	N4GA1R-MP*	34						

4GD2

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N3GD210R-C8-A2N-3	137	Supply and exhaust block	N4G2R-Q-10	83	Electrical block	N4G2R-T10(R)	223
	N3GD2110R-C8-A2N-3	137		End block	N4G2R-E*		84	N4G2R-T30(R)
	N4GD210R-C8-A2N-3	137	Partition block		N4G2R-EX*		85	N4G2R-T50(R)
	N4GD220R-C8-A2N-3	157		Electrical block	N4G2R-S		60	N4G2R-T6*
	N4GD2 $\frac{3}{4}$ 0R-C8-A2N-3	169	N4G2R-T7*		244			
	N3GD2660R-C8-A2N-3	157	N4G2R-T8*		242			
Valve block with masking plate	N4GA2R-MP*	66						

Parts list

Application	Parts name	Model no.	Application	Parts name	Model no.
Valve 4G1	Cartridge fitting ϕ 4 straight type	4G1R-JOINT-C4	Valve	Coil assembly	4GR-A2N-[*2]-COIL-[*3]
	Cartridge fitting ϕ 6 straight type	4G1R-JOINT-C6			*2: Ozone/cutting oil proof (Blank, A)
	Plug cartridge	4G1R-JOINT-CPG			*3: Voltage (3,4)
Valve 4G2	Cartridge fitting ϕ 4 straight type	4G2R-JOINT-C4	manifold	Expansion socket assembly model no. (Details on page 263)	For a side solenoid N4GR-SOCKET-ASSY-(Selection no.)
	Cartridge fitting ϕ 6 straight type	4G2R-JOINT-C6			For b side solenoid N4GR-RELAY-SOCKET-(Selection no.)
	Cartridge fitting ϕ 8 straight type	4G2R-JOINT-C8			
	Plug cartridge	4G2R-JOINT-CPG			

MEMO

4GA/B

M4GA/B

MN4GA/B

4GA/B
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD1/2-T10 Series

Reduced wiring manifold; body piping

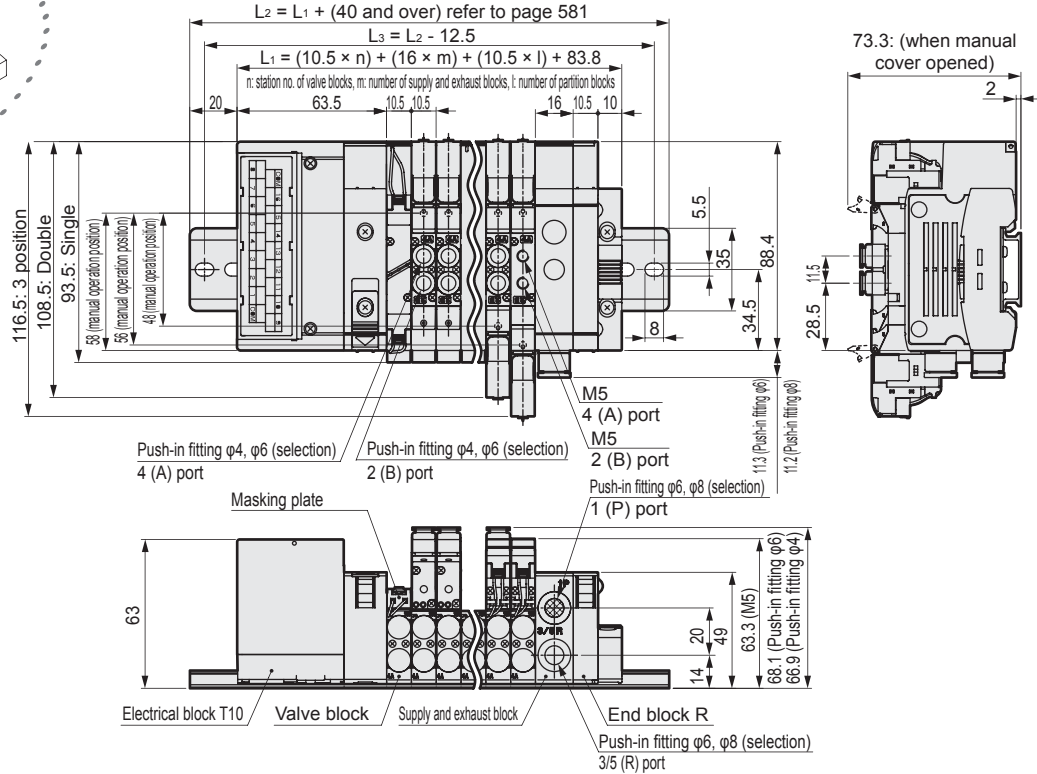
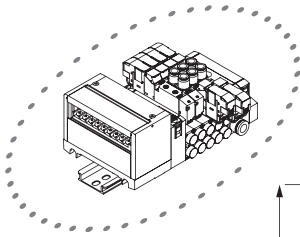
Dimensions 

MN4GD1

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

Note 1: There are push tightening specifications (T11).
The dimensions are the same as T10.

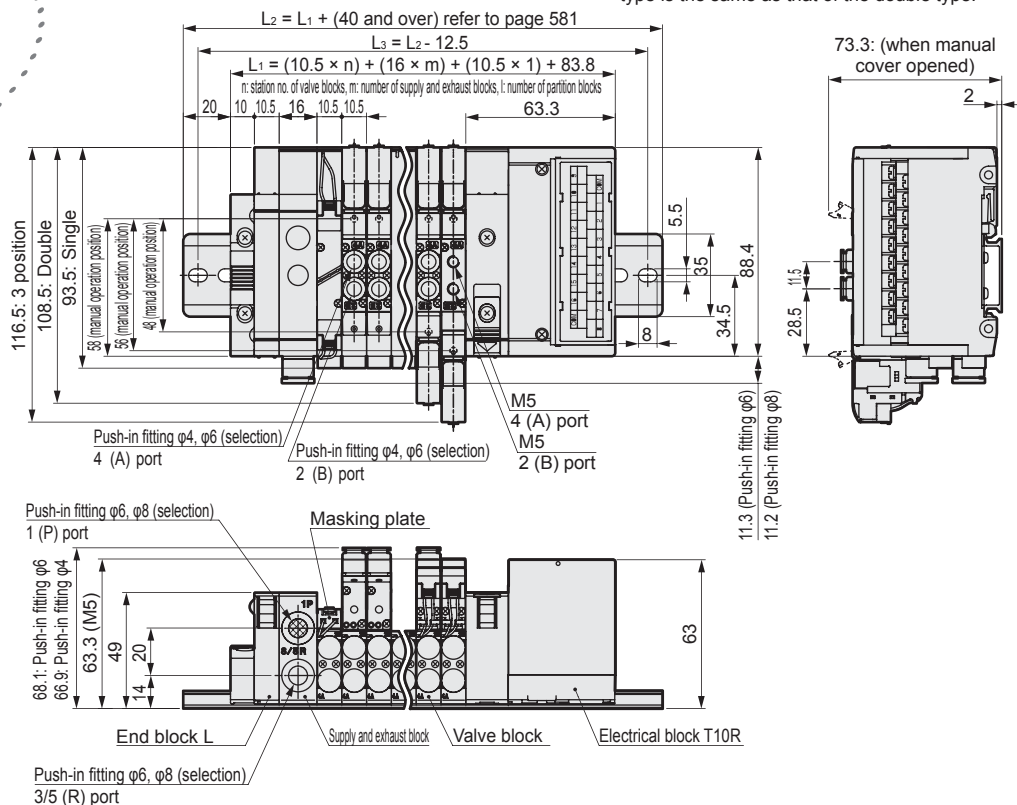
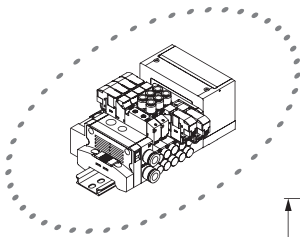
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.



● 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.



Dimensions

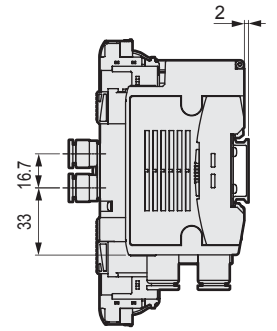
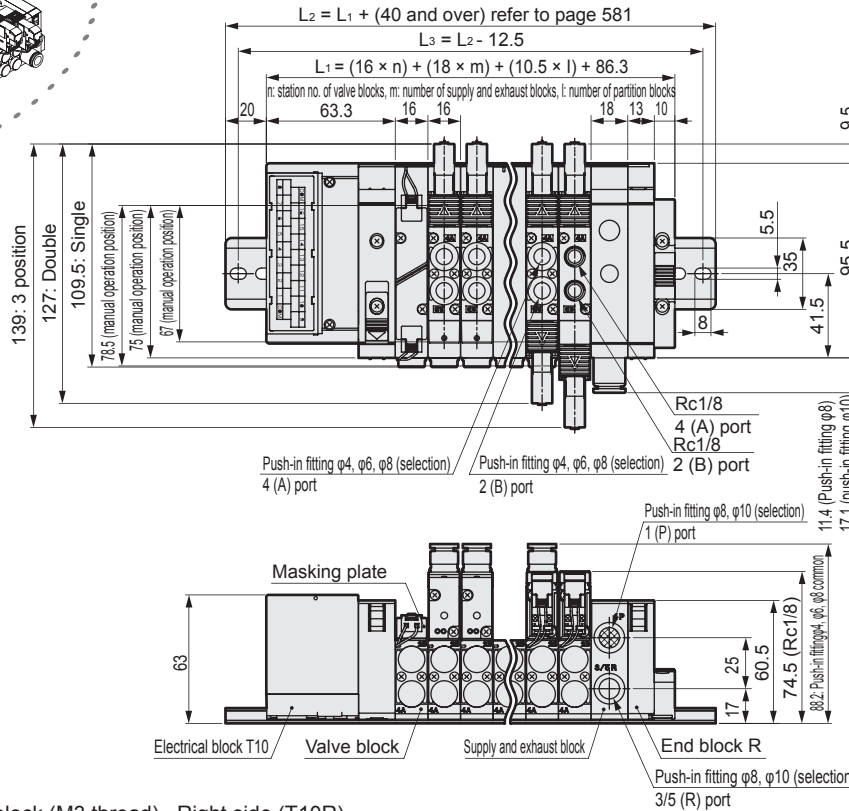
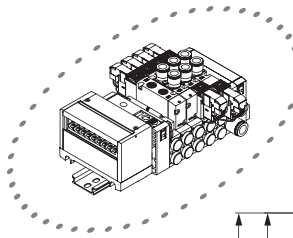


MN4GD2

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

Note 1: There are push tightening specifications (T11).
The dimensions are the same as T10.

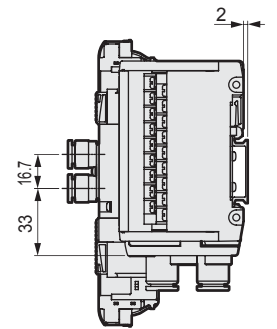
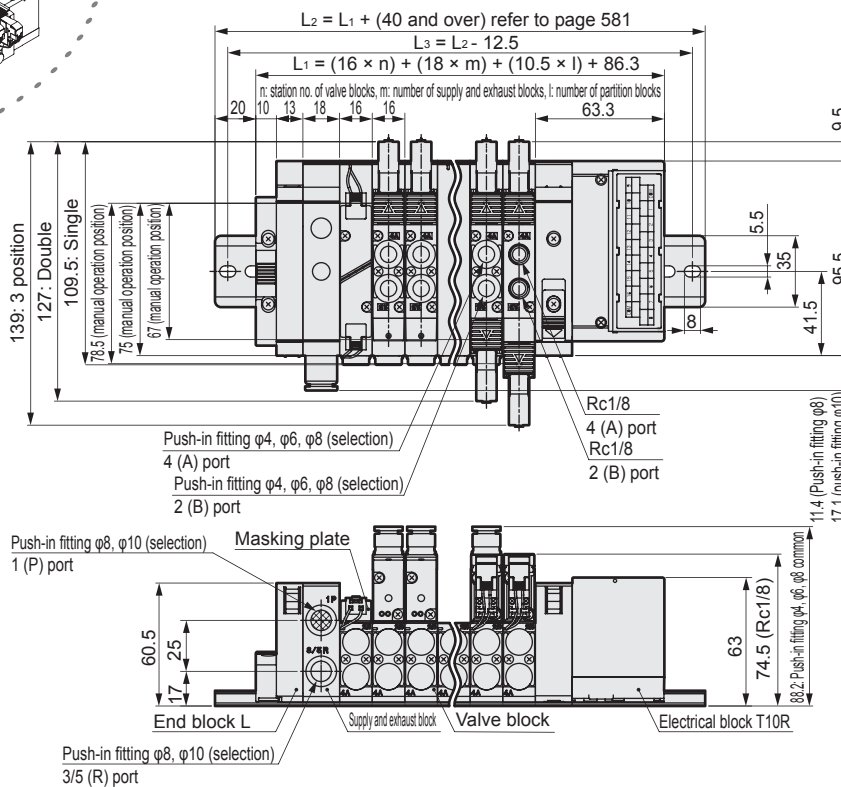
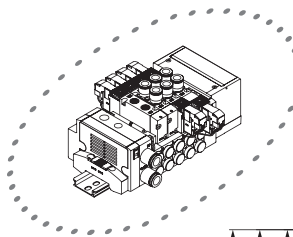
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.



- 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.



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD1/2-T30 Series

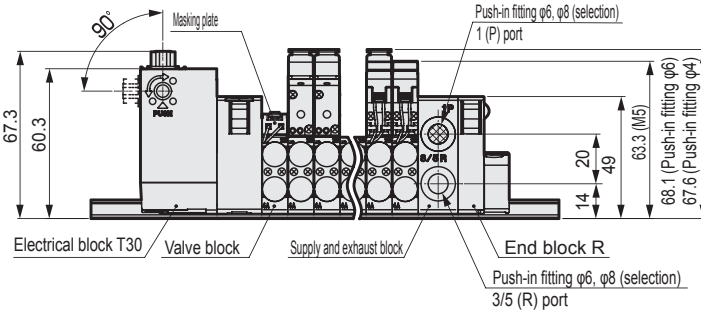
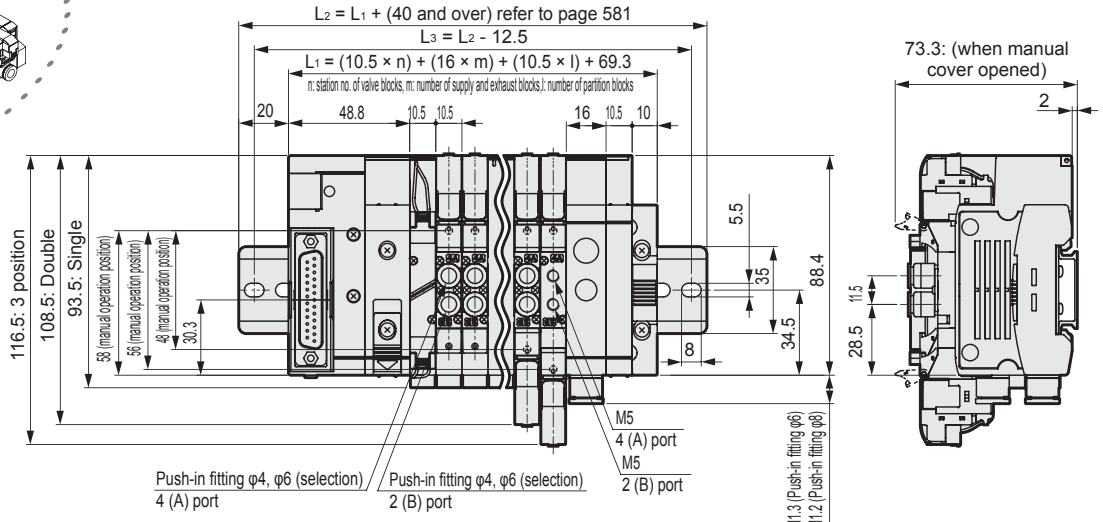
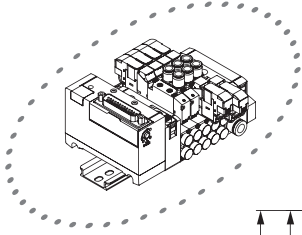
Reduced wiring manifold; body piping

Dimensions 

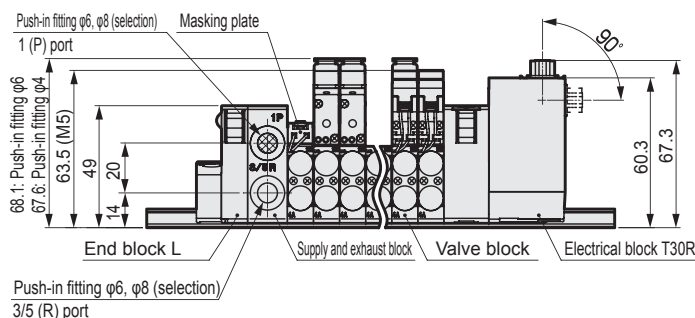
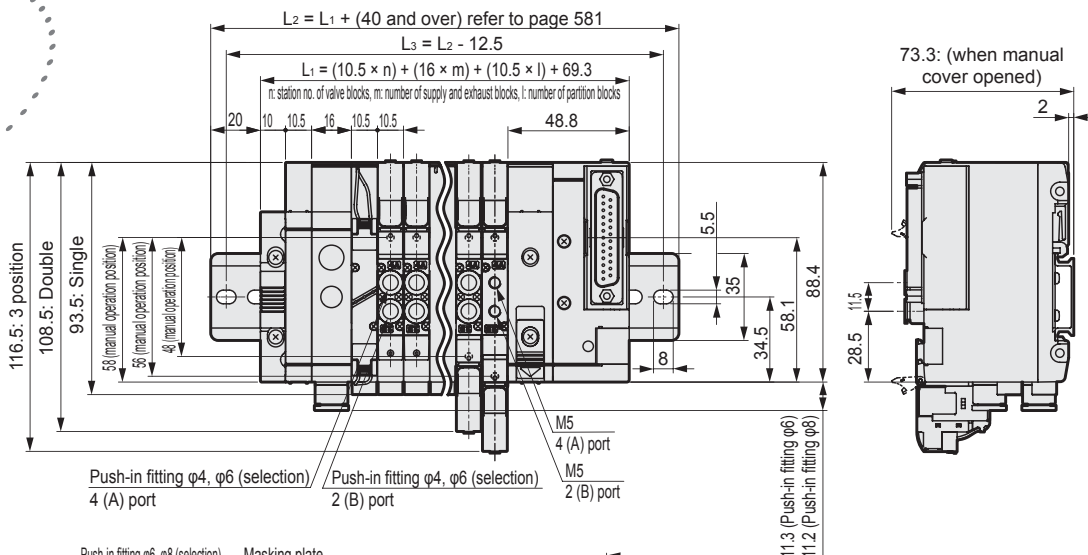
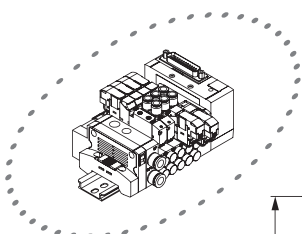
MN4GD1

● 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.



● D-sub connector Right side (T30R)



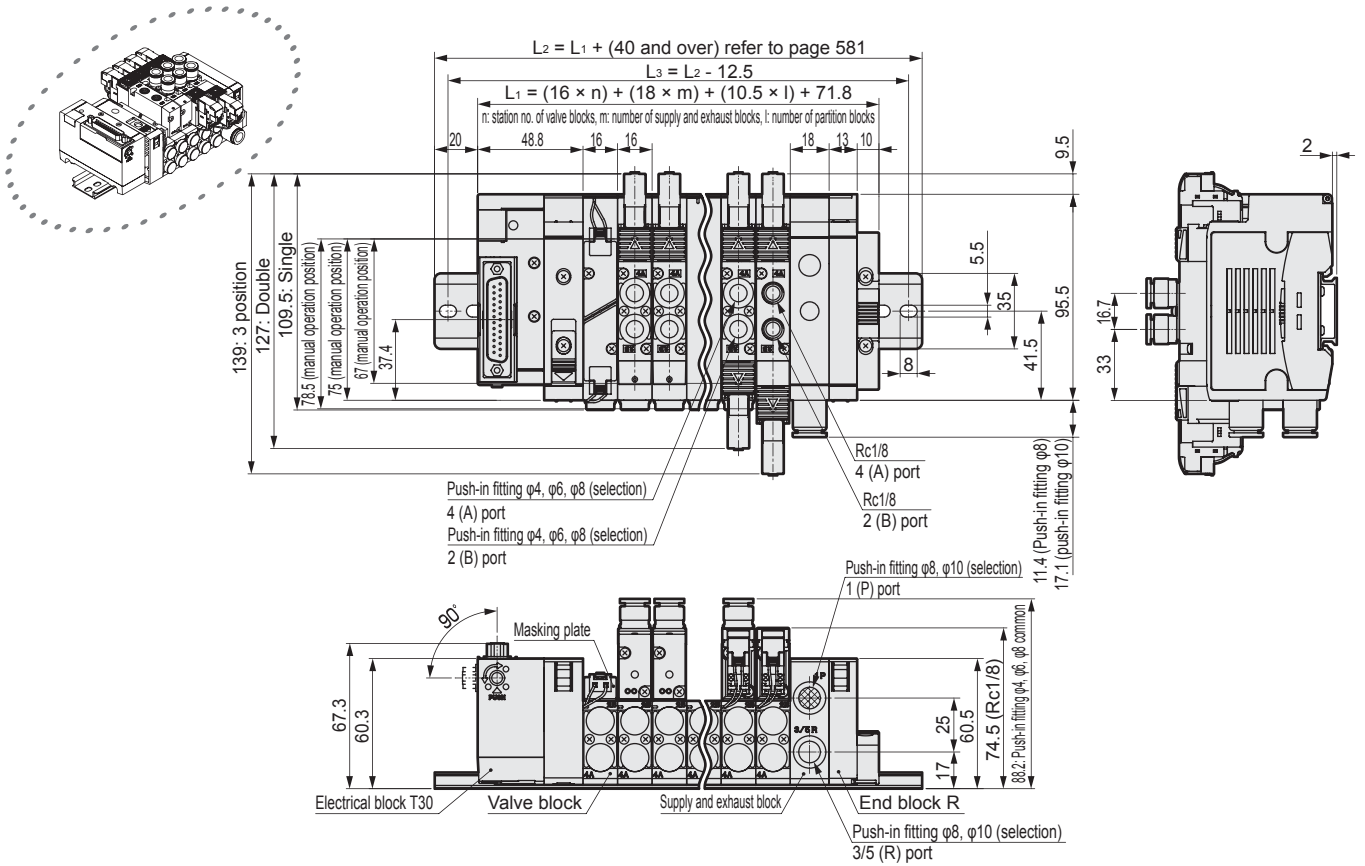
Dimensions



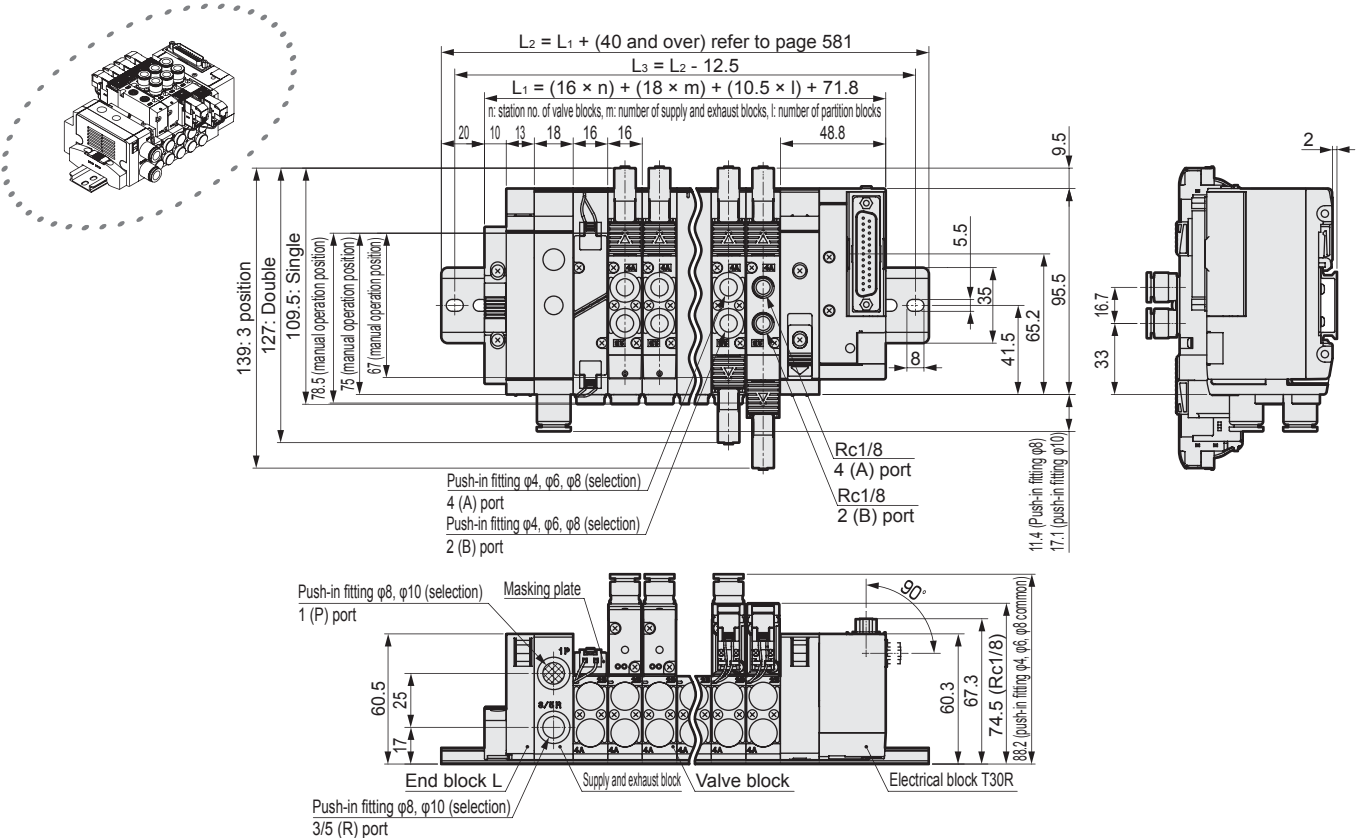
MN4GD2

● 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.



● D-sub connector Right side (T30R)



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD1/2-T50 Series

Reduced wiring manifold; body piping

Dimensions

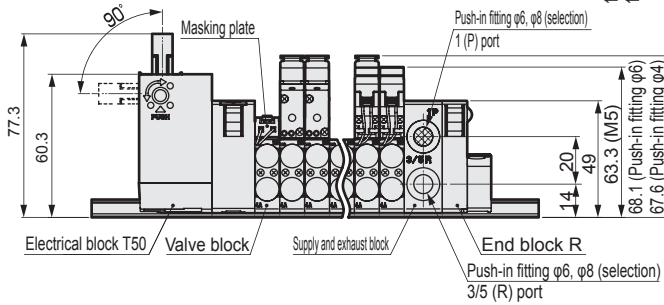
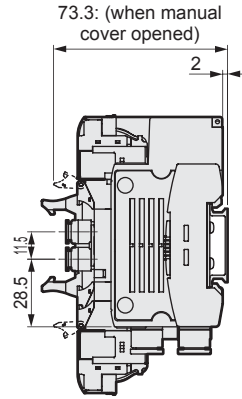
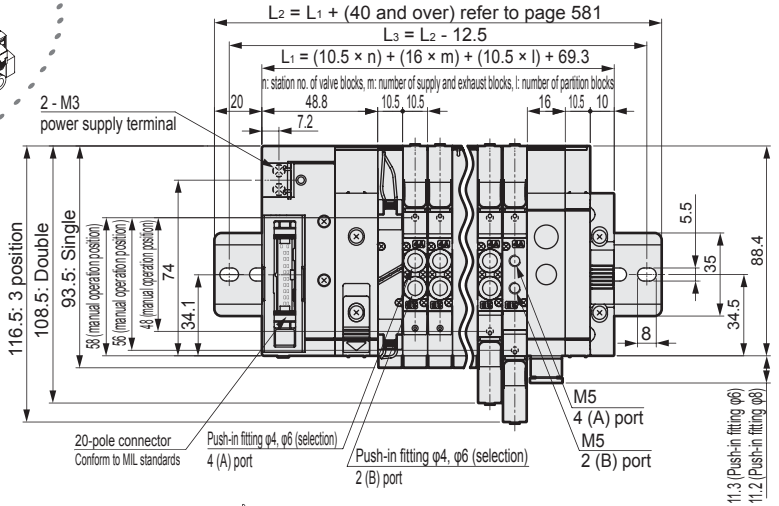
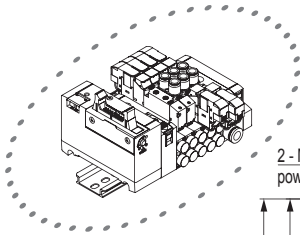


MN4GD1

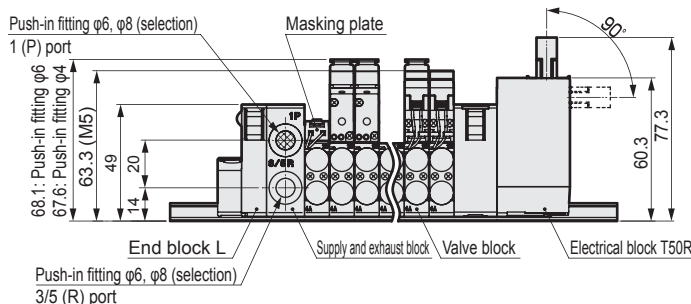
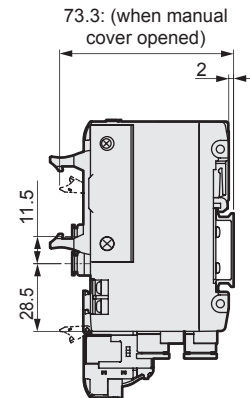
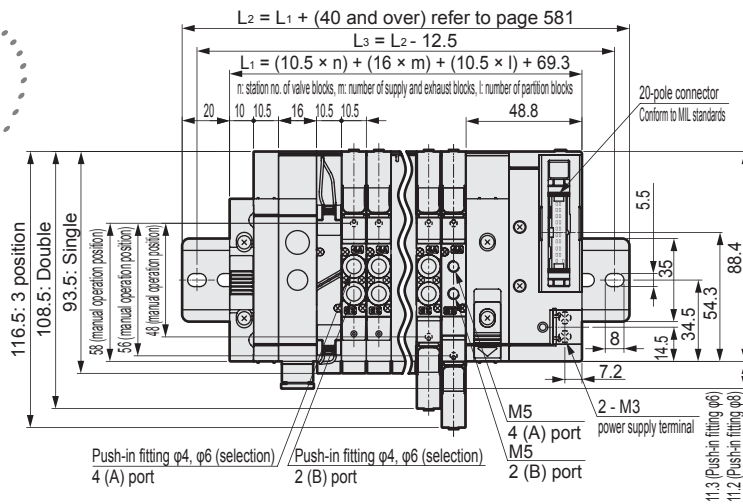
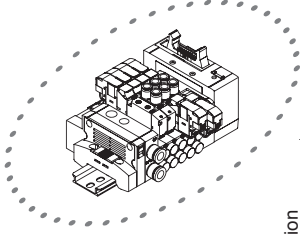
- Flat cable connector Left side (T50)
With power supply terminal

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.



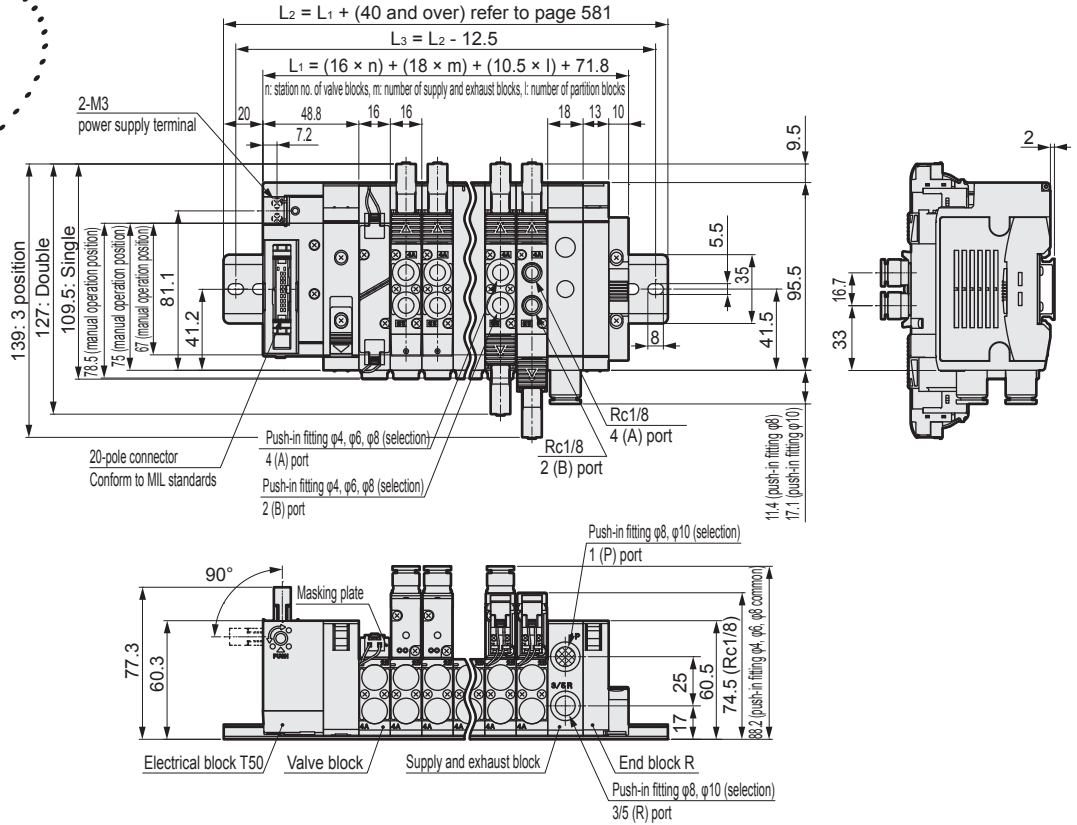
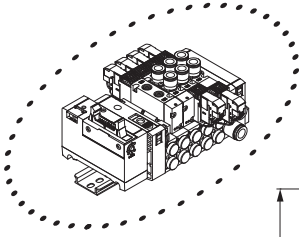
- Flat cable connector Right type (T50R)
With power supply terminal



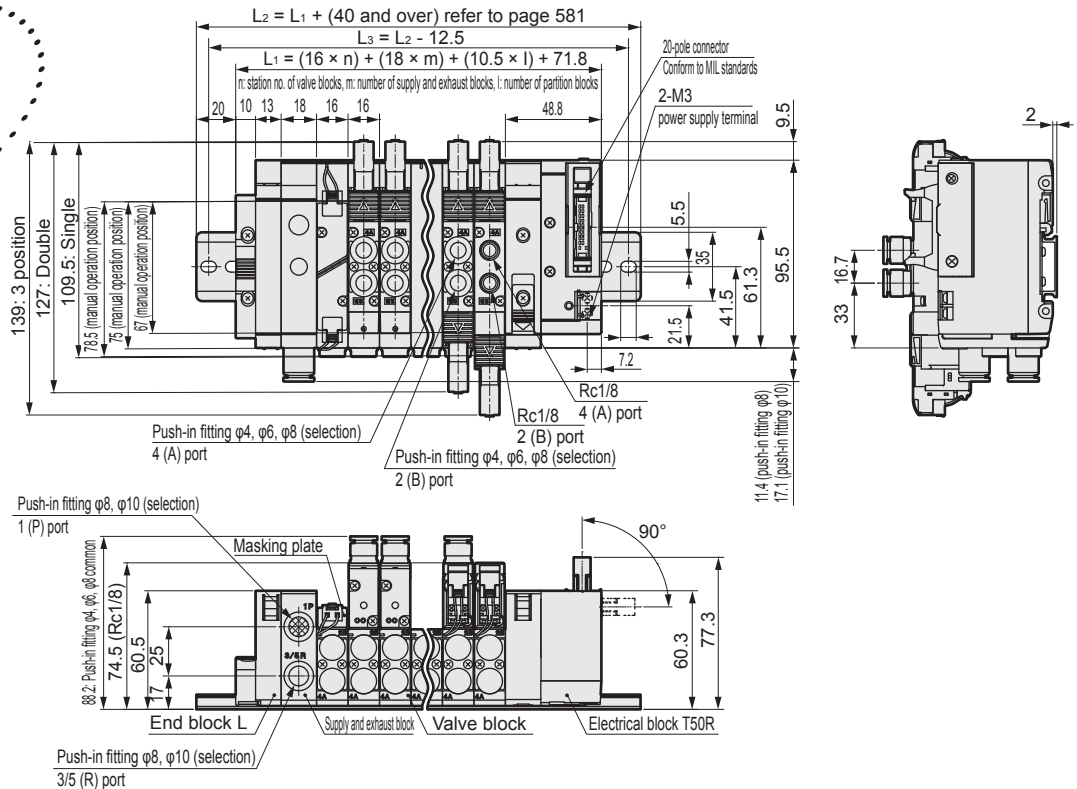
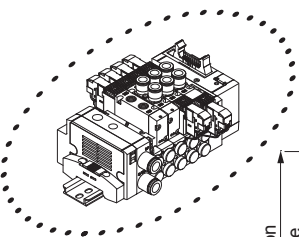
Dimensions

MN4GD2

- Flat cable connector Left side (T50)
With power supply terminal



- Flat cable connector Right type (T50R)
With power supply terminal



4GAB

M4GAB/B

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautionsManifold
Specifications

MN4GD1/2-T6* Series

Reduced wiring manifold; body piping

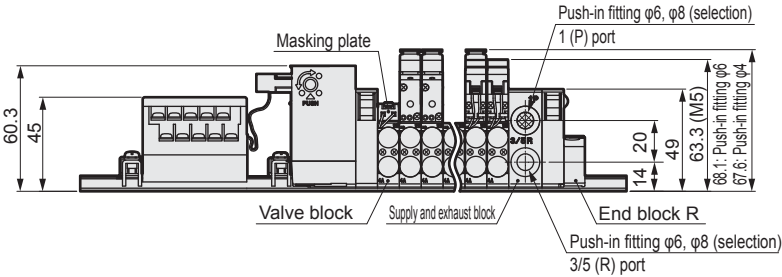
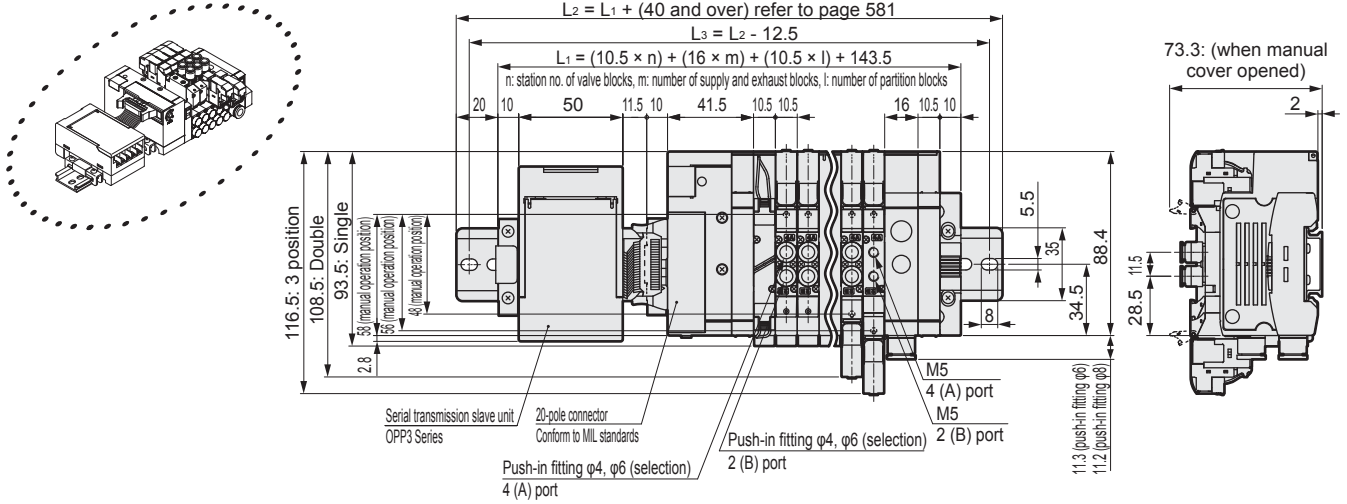
Dimensions



MN4GD1

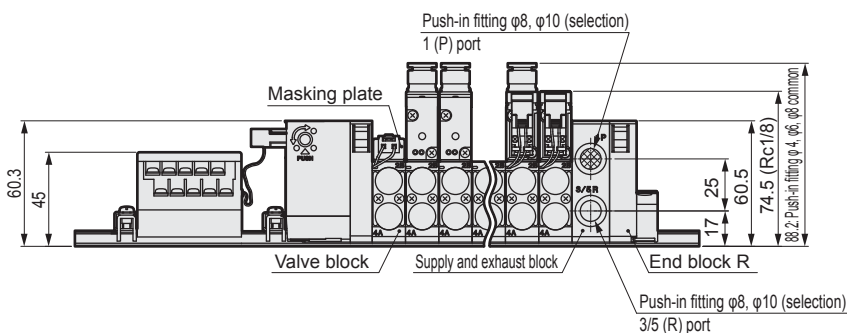
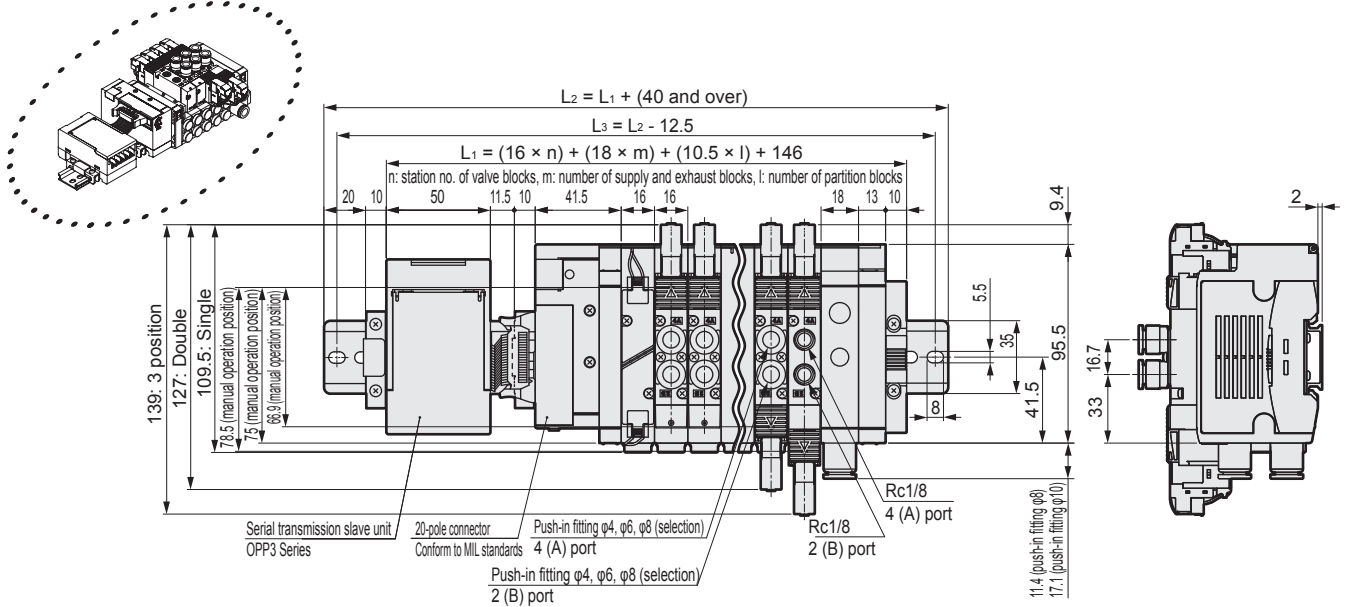
- Serial transmission (T6*)

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.



MN4GD2

- Serial transmission (T6*)



MN4GD1/2-T7* Series

Reduced wiring manifold; body piping

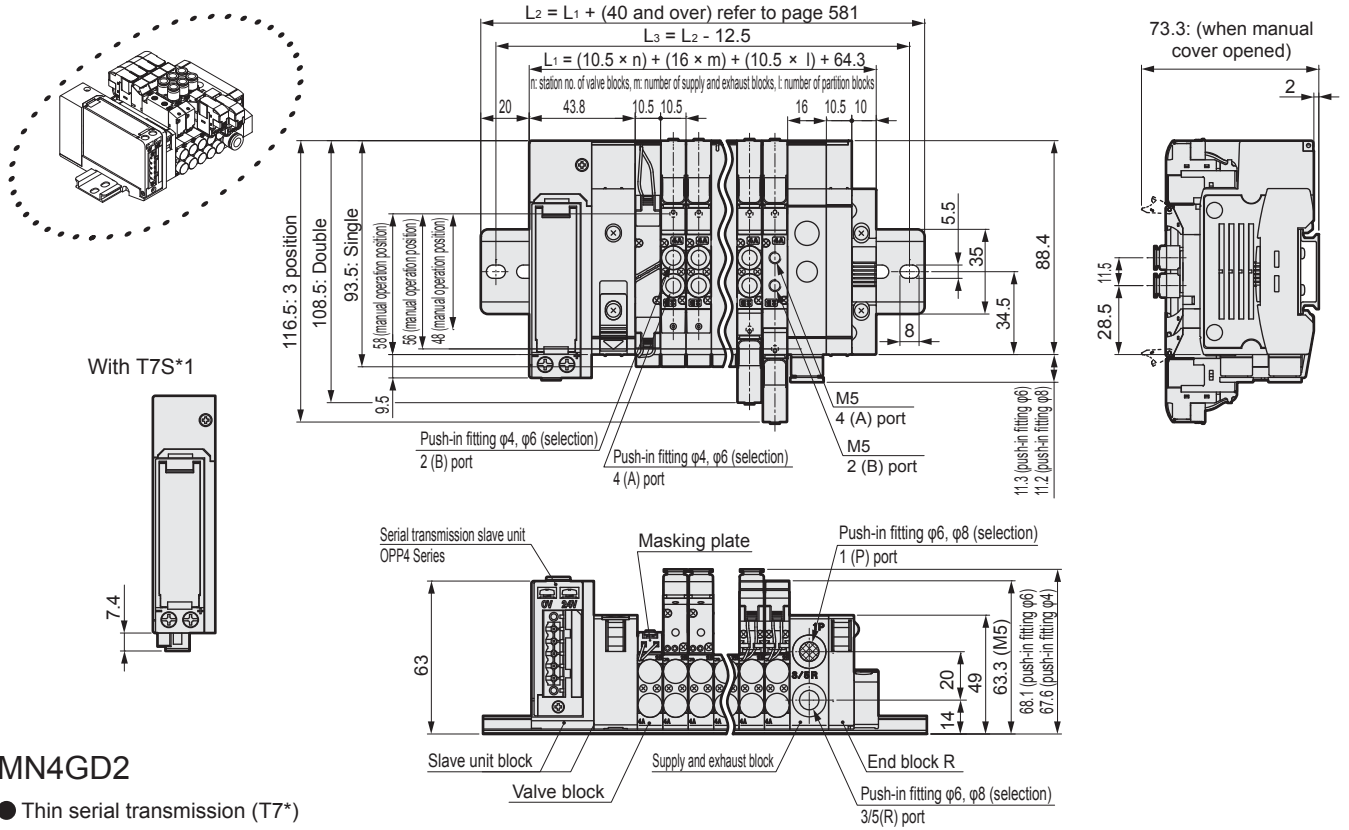
Dimensions



MN4GD1

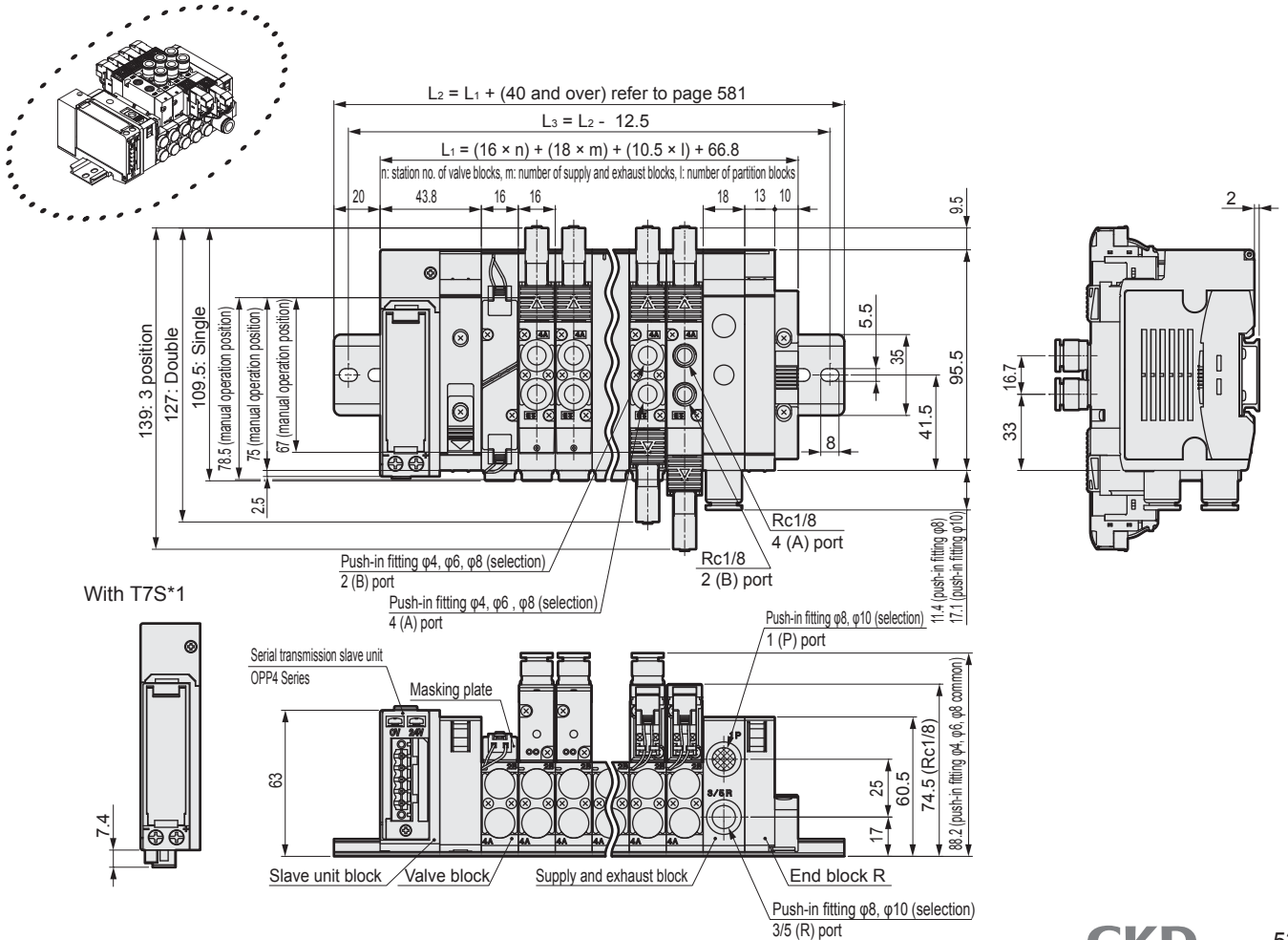
- Thin serial transmission (T7*)

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.



MN4GD2

- Thin serial transmission (T7*)



4GAB	M4GAB/B	MN4GAB/B	4GAB Master valve	4GD/E	M4GD/E	MN4GD/E	Technical data	Safety precautions	Manifold Specifications
------	---------	----------	-------------------	-------	--------	---------	----------------	--------------------	-------------------------

MN4GD1/2-T8* Series

Reduced wiring manifold; body piping

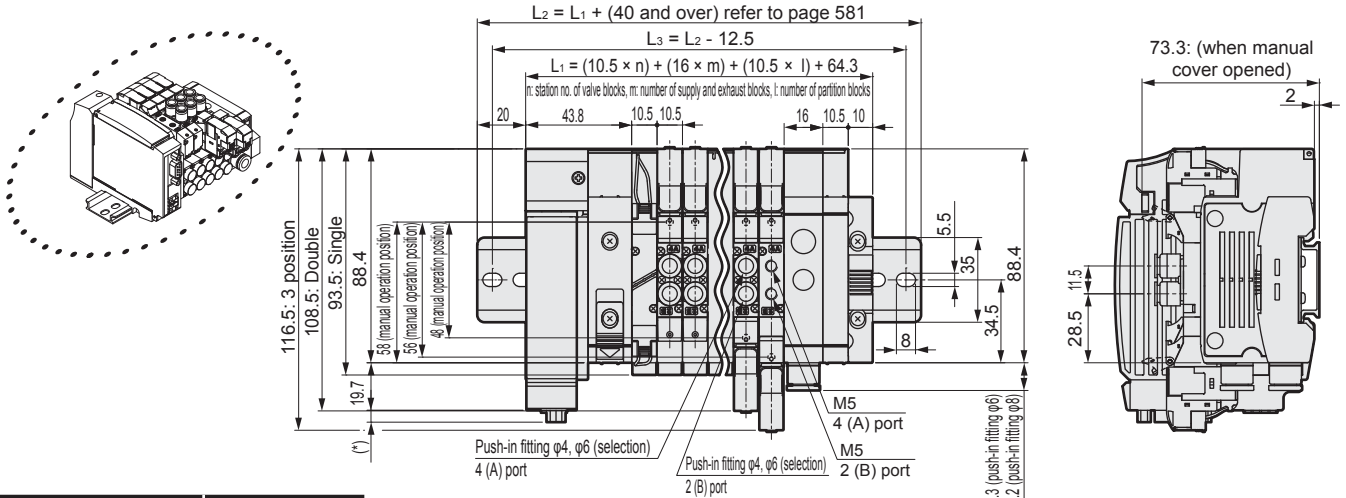
Dimensions



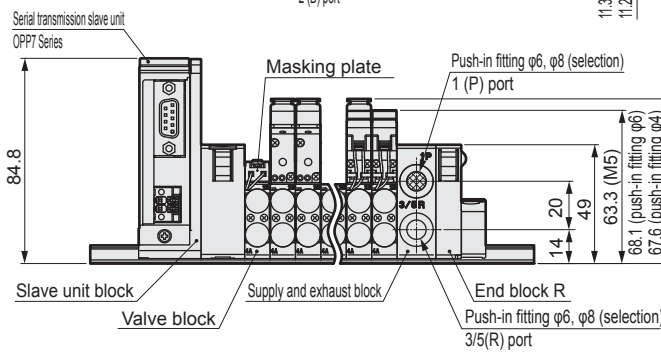
MN4GD1

- 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.

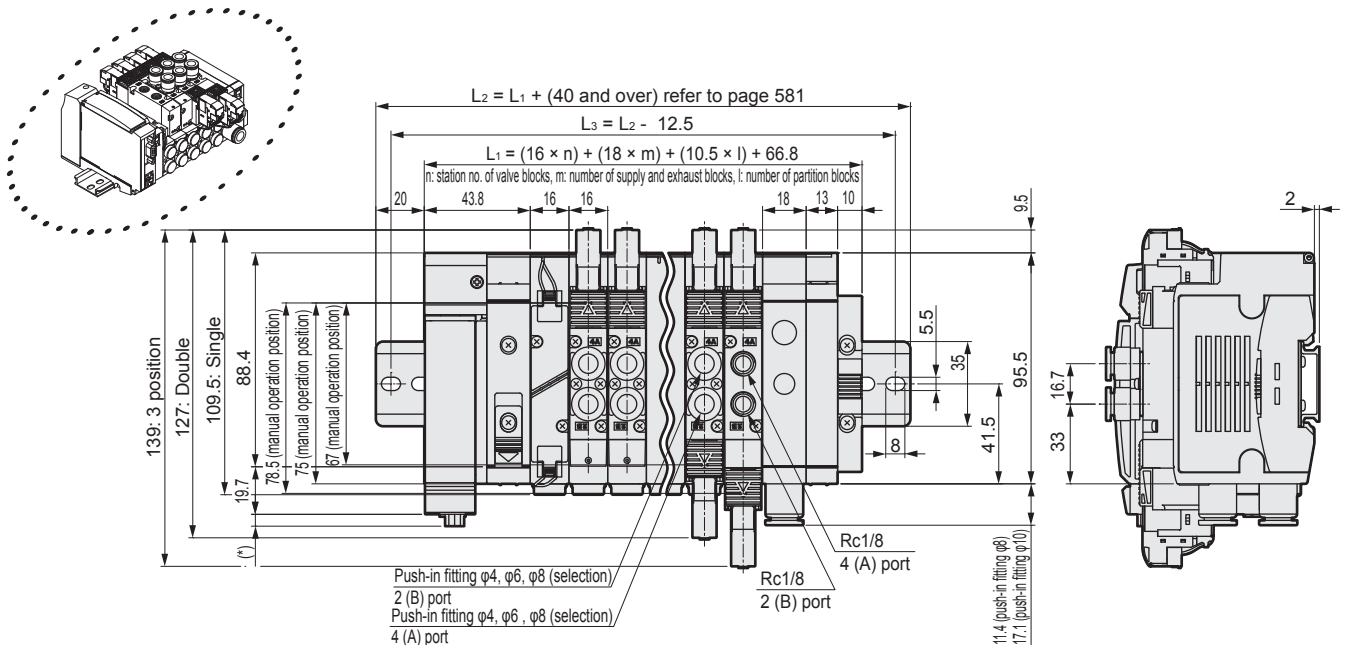


Serial transmission	*Dimensions
T8G*	1.0
T8P*	4.9
T8E*	3.0

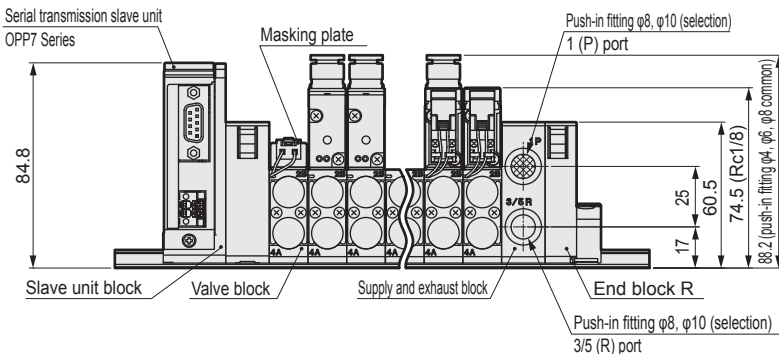


MN4GD2

- Serial transmission (T8*)



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



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

MEMO

4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

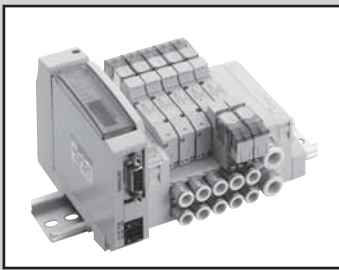
M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications



Reduced wiring block manifold
Base piping

MN4GE1/2-T* Series

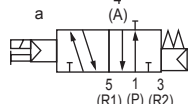
● Applicable cylinder bore size: $\phi 20$ to $\phi 80$



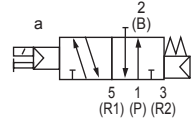
4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

JIS symbol

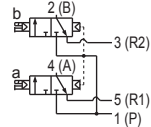
- 3 port valve
2-position single N.C. type



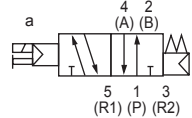
- 2-position single N.O. type



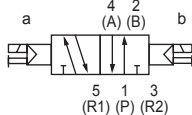
- Dual 3 port valve integrated type
(A side valve: N.C. type, B side valve: N.C. type)



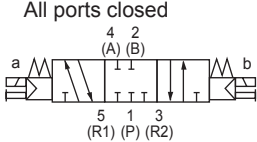
- 5 port valve
2-position single



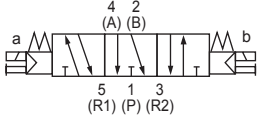
- 2-position double



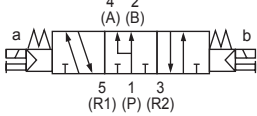
- 3-position
All ports closed



- 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
Withstanding 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
Lubrication Note 1	Not required
Degree of protection Note 2	Dust proof
Vibration/shock m/s ²	50 or less / 300 or less
Working environment	Containing corrosive gas is not permissible

Note 1: Use the turbine oil Class 1 ISO VG32 if lubricated. When lubricated excessively or intermittently, the operation could result in unstable.

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

Electrical specification

Descriptions	T1*, T30*, T5*		T6*, T8*
	24 VDC	12 VDC	24 VDC
Rated voltage	24 VDC	12 VDC	24 VDC
Voltage fluctuation range (Note 3)	±10%		+10%, -5%
Holding current A	0.017	0.034	0.017
Power consumption W	0.4		
Thermal class	B		
Surge suppressor	Zener diode		
Indicator	LED		

Note 3: Please note the voltage fluctuation range since the T6* and T8* (Serial transmission type) have a voltage drop due to the internal circuit.

Individual specifications

Descriptions	MN3GE1 · MN4GE1										
	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
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	A/B port	Push-in fitting $\phi 4$, $\phi 6$									
	P/R port	Push-in fitting $\phi 6$, $\phi 8$									

• Refer to page 546 for weight.

Descriptions	MN3GE2/MN4GE2										
	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
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	A/B port	Push-in fitting $\phi 4$, $\phi 6$, $\phi 8$									
	P/R port	Push-in fitting $\phi 8$, $\phi 10$									

• Refer to page 546 for weight.

Flow characteristics

Model no.	Valve Position	P → A/B		A/B → R		
		C (dm ³ /(s·bar))	b	C (dm ³ /(s·bar))	b	
MN3GE1 MN4GE1	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)
MN3GE2 MN4GE2	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 $S \approx 5.0 \times C$.

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 screw 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		UNIWIRESYSTEM		UNIWIRESYSTEM H		S-LINK	
Power supply voltage	Unit side	24 VDC ±10%			24 VDC +10%, -5%				
	Valve side	24 VDC +10%, -5%			Power supply terminal common				
Current consumption	Unit side	100mA or less (when all output points are ON)			100mA or less (when all output points are ON)				
	Valve side	15mA or less (when all output points are OFF)			Load current is not included				
	Communication side	-	-	-	-	-	-	-	-
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%				
	Valve side	24 VDC +10%, -5%			Power supply terminal common				
	Communication side	-	-	-	-	-	11 VDC to 25 VDC *8	14.0 VDC to 26.4 VDC	
Current consumption	Unit side	50mA or less (when all output points are ON)		90mA or less (when all output points are ON)		110mA or less (when all output points are ON)		40mA or less (when all output points are ON)	
	Valve side	15mA or less (when all output points are OFF)		Load current is not included		Load current is not included		Load current is not included	
	Communication side	-	-	-	-	-	50mA or less	65mA or less (all points ON: 24 VDC) 95mA 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 byte	Word slave node (16 point)	
Operating indication	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 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.

4GAB
M4GA/B
MN4GA/B
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

MN4GE1/2-T* Series

Reduced wiring block manifold; base piping

How to order

Manifold model no.

MN4GE1 **1** **0R** - **C6** - **T30** **W** **H** - **10** - **3**

3 port manifold model no.

MN3GE1 **1** **0R** - **C6** - **T30** **W** **H** - **10** - **3**

Discrete valve block with solenoid valve

N4GE1 **1** **0R** - **C6** - **A2N***1 **H** - **3**

Discrete 3 port valve block with solenoid valve

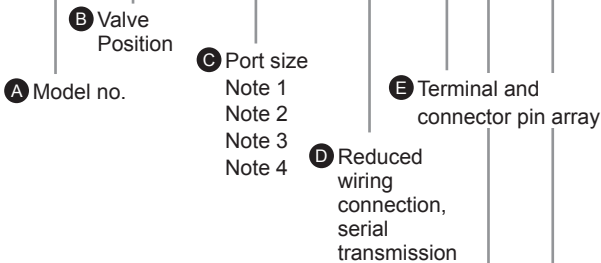
N3GE1 **1** **0R** - **C6** - **A2N***1 **H** - **3**

Discrete solenoid valve

4GE1 **1** **9R** - **00** - **A2N** **H** - **3**

Discrete 3 port solenoid valve

3GE1 **1** **9R** - **00** - **A2N** **H** - **3**



A Model No.					
Manifold		Discrete valve block with solenoid valve			
Dual 3 port valve integrated type	5 port valve	Discrete solenoid valve		Discrete solenoid valve	
MN3GE1	MN3GE2	MN4GE1	MN4GE2	(N)3GE1	(N)3GE2
(N)4GE1	(N)4GE2				

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 5, 6	A side valve: Normally closed					
		B side valve: Normally closed					
8	Mix manifold (In case of multiple Valve Positions)						

C Port size (A/B port)							
Model							
C4	φ4 push-in fitting						
C6	φ6 push-in fitting						
C8	φ8 push-in fitting						
CL4	L type φ4 push-in fitting (upward)						
CL6	L type φ6 push-in fitting (upward)						
CL8	L type φ8 push-in fitting (upward)						
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						

General plug specifications		A Port	B Port						
C4NC	φ4 push-in fitting	Plug							
C6NC	φ6 push-in fitting								
C8NC	φ8 push-in fitting								
C4NO	Plug		φ4 push-in fitting						
C6NO			φ6 push-in fitting						
C8NO			φ8 push-in fitting						
CL4NC	L type φ4 push-in fitting (upward)	Plug							
CL6NC	L type φ6 push-in fitting (upward)								
CL8NC	L type φ8 push-in fitting (upward)								
CL4NO	Plug		L type φ4 push-in fitting (upward)						
CL6NO			L type φ6 push-in fitting (upward)						
CL8NO			L type φ8 push-in fitting (upward)						
CD4NC	L type φ4 push-in fitting (downward)	Plug							
CD6NC	L type φ6 push-in fitting (downward)								
CD8NC	L type φ8 push-in fitting (downward)								
CD4NO	Plug		L type φ4 push-in fitting (downward)						
CD6NO			L type φ6 push-in fitting (downward)						
CD8NO			L type φ8 push-in fitting (downward)						
00	Discrete valve for mounting base								

D Reduced wiring connection, serial transmission

Refer to the next page for wire connections, serial transmission.

E Terminal and connector pin array							
Blank	Standard wiring	Note 8					
W	Double wiring	Note 8					

F Option							
Blank	Non-locking/locking common manual override						
H	With malfunction prevention valve	Note 9					
A	Ozone/Cutting oil proof						
F	A/B port filter integrated	Note 10					
Z1	Air supply spacer	Note 11					
Z3	Exhaust spacer	Note 11					

G Station no.							
1	1 stations						
to	to						
24	24 Stations (The max. station no. of MN4GE2 is 20.)						

H Voltage							
3	24 VDC						
4	12 VDC						

⚠ 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 CL* push-in fitting L type is available only for the single solenoid manifold. The port A is a long elbow and the port B is short elbow.
- Note 3 A/B port sizes do not differ for the push-in fitting L type mix (CX).
- Note 4 In the case of a discrete solenoid valve, set the port size of "00".
- Note 5 Select MN4GE*80R when mixing with 4, 5 port valves. Select MN3GE*80R when mixing with the masking plate.
- Note 6 Dimensions are the same as the respective 2-position double.
- Note 7 The push-in fitting cannot be mixed with the discrete valve's 4 (A) or 2 (B) port.
- Note 8 Blank...Wired based on the type of valve used.
W*.....Wired for the double solenoid regardless of the type of valve used.
- 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 The P port has a filter built inside as a standard.
- Note 11 Specify the spacer mounting position and quantity in manifold specifications. Stacking multiple spacers is not supported. Combination with the masking plate is not supported. Push-in fitting L (upward) cannot be selected at the same time. Refer to page 575 to 578 for details.

F Option

G Station no.

H Voltage

is not available.

MN4GE1/2-T* Series

Reduced wiring block manifold; base piping

(Port size, wiring method list)

			A Model No.							
			Manifold				Discrete valve block with solenoid valve Discrete solenoid valve			
			Dual 3 port valve integrated type		5 port valve					
			MN3GE1	MN3GE2	MN4GE1	MN4GE2	(N)3GE1	(N)3GE2	(N)4GE1	(N)4GE2
C 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	●	●	●	●				
D Serial transmission (light and surge suppressor provided as standard) 24 VDC										
T6A0	UNIWIRESYSTEM	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	UNIWIRESYSTEM H	NPN 8 points	●	●	●	●				
T6J1		NPN 16 points	●	●	●	●				
T7C0	CompoBus/S (Thin type)	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 / Cutting oil proof type specifications

Select the option "A" of (F) in how to order on page 544.

Specifications for secondary battery

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

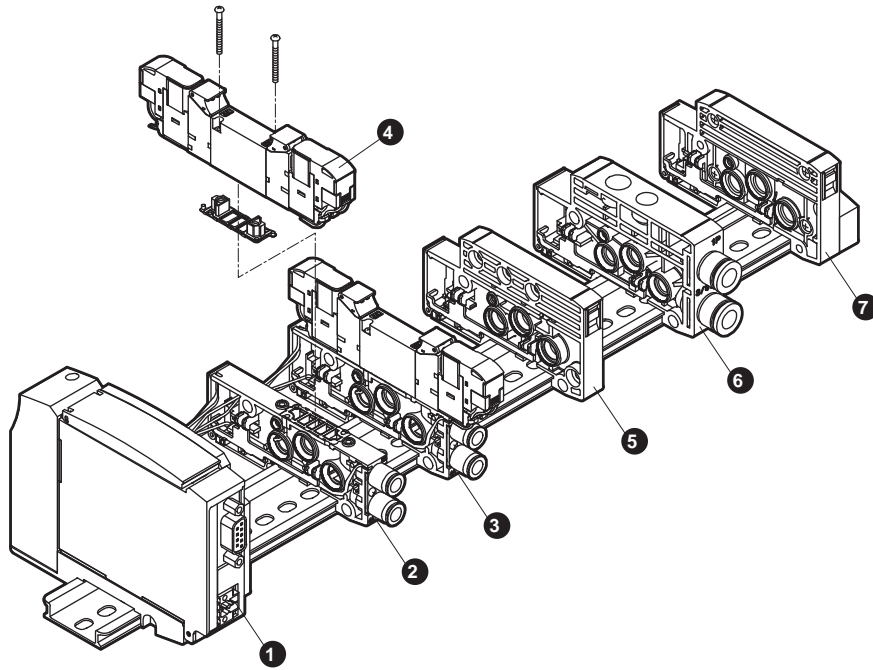
** - Voltage - P4

4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

MN4GE1/2-T* Series

Reduced wiring block manifold; base piping

Manifold components explanation and parts list



Main parts list (refer to page 564 to 570 for details)

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	N4GE120R-C6-A2NH-3	7	End block R	N4G1R - ER
4	Solenoid valve body	4GE129R-00-A2NH-3			

E type reduced wiring weight

4GE1

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N4GE110R-C6-A2N-3	70	Supply and exhaust block	N4G1R-Q-8	58	Electrical block	N4G1R-T10(R)	207
	N4GE120R-C6-A2N-3	88		End block	N4G1R-E*		60	N4G1R-T30(R)
	N4GE1 $\frac{3}{4}$ 0R-C6-A2N-3	89	Partition block		N4G1R-EX*		60	N4G1R-T50(R)
	N3GE1660R-C6-A2N-3	88		N4G1R-S	45		N4G1R-T6*	285
Valve block with masking plate	N4GB1R-MP*-C6	37					N4G1R-T7*	203
							N4G1R-T8*	229

4GE2

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N4GE210R-C8-A2N-3	134	Supply and exhaust block	N4G2R-Q-10	83	Electrical block	N4G2R-T10(R)	223
	N4GE220R-C8-A2N-3	151		End block	N4G2R-E*		84	N4G2R-T30(R)
	N4GE2 $\frac{3}{4}$ 0R-C8-A2N-3	162	Partition block		N4G2R-EX*		85	N4G2R-T50(R)
	N3GE2660R-C8-A2N-3	151		N4G2R-S	60		N4G2R-T6*	312
Valve block with masking plate	N4GB2R-MP*-C8	69					N4G2R-T7*	244
							N4G2R-T8*	242

Parts list

Application	Parts name	Model no.	Application	Parts name	Model no.
Valve 4G1	Cartridge fitting ϕ 4 straight type	4G1R-JOINT-C4	Valve	Coil assembly	4GR-A2N-[*2]-COIL-[*3] *2: Ozone/cutting oil proof (Blank, A) *3: Voltage (3,4)
	Cartridge fitting ϕ 6 straight type	4G1R-JOINT-C6			
	Cartridge fitting ϕ 4 (short) elbow type	4G1R-JOINT-CL4			
	Cartridge fitting ϕ 4 (long) elbow type	4G1R-JOINT-CLL4	Manifold	Expansion socket assembly (Details on page 263)	For a side solenoid N4GR-SOCKET-ASSY-(Selection no.) For b side solenoid N4GR-RELAY-SOCKET-(Selection no.)
	Cartridge fitting ϕ 6 (short) elbow type	4G1R-JOINT-CL6			
	Cartridge fitting ϕ 6 (long) elbow type	4G1R-JOINT-CLL6			
	Plug cartridge	4G1R-JOINT-CPG			
Valve 4G2	Cartridge fitting ϕ 4 straight type	4G2R-JOINT-C4			
	Cartridge fitting ϕ 6 straight type	4G2R-JOINT-C6			
	Cartridge fitting ϕ 8 straight type	4G2R-JOINT-C8			
	Cartridge fitting ϕ 6 (short) elbow type	4G2R-JOINT-CL6			
	Cartridge fitting ϕ 6 (long) elbow type	4G2R-JOINT-CLL6			
	Cartridge fitting ϕ 8 (short) elbow type	4G2R-JOINT-CL8			
	Cartridge fitting ϕ 8 (long) elbow type	4G2R-JOINT-CLL8			
Plug cartridge	4G2R-JOINT-CPG				

Dimensions

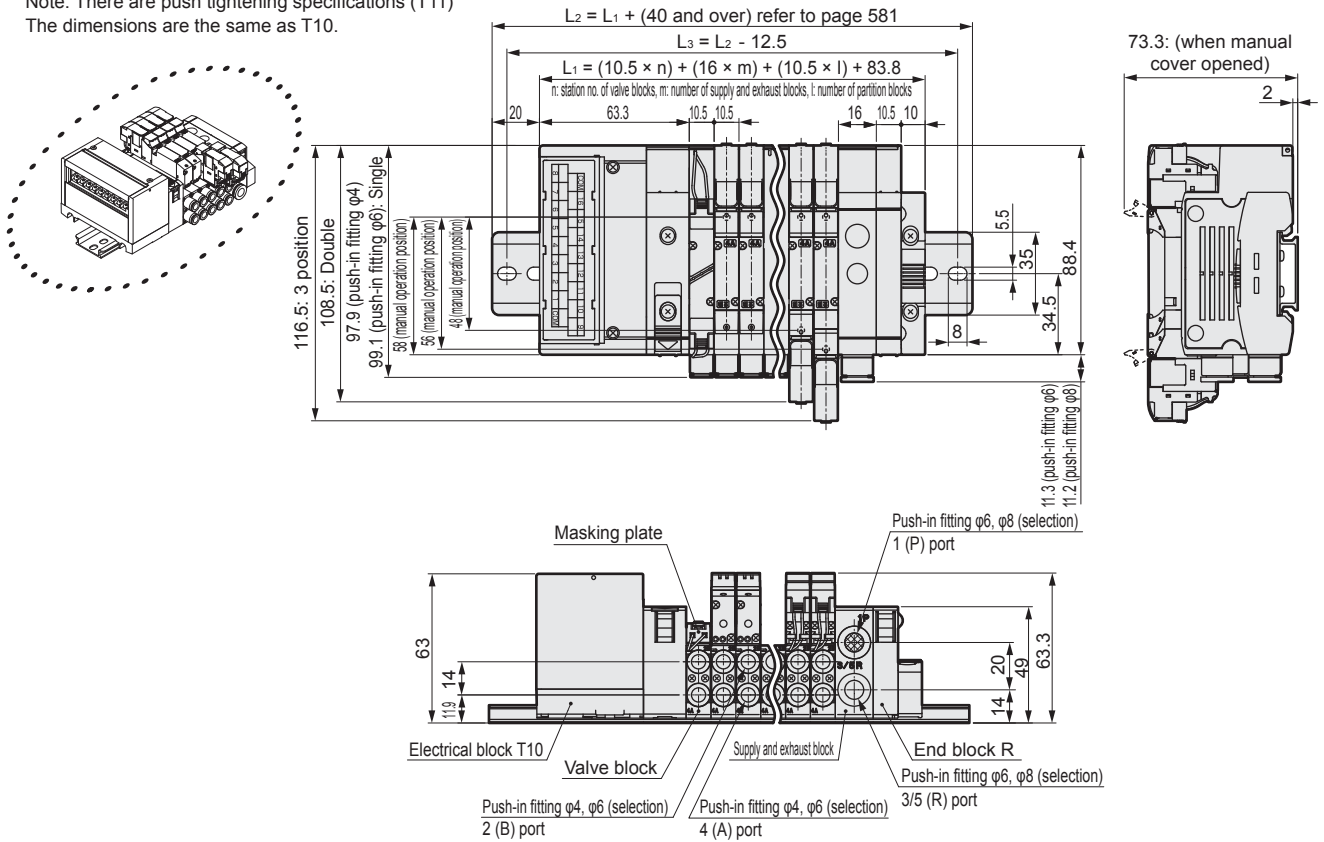


MN4GE1

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)

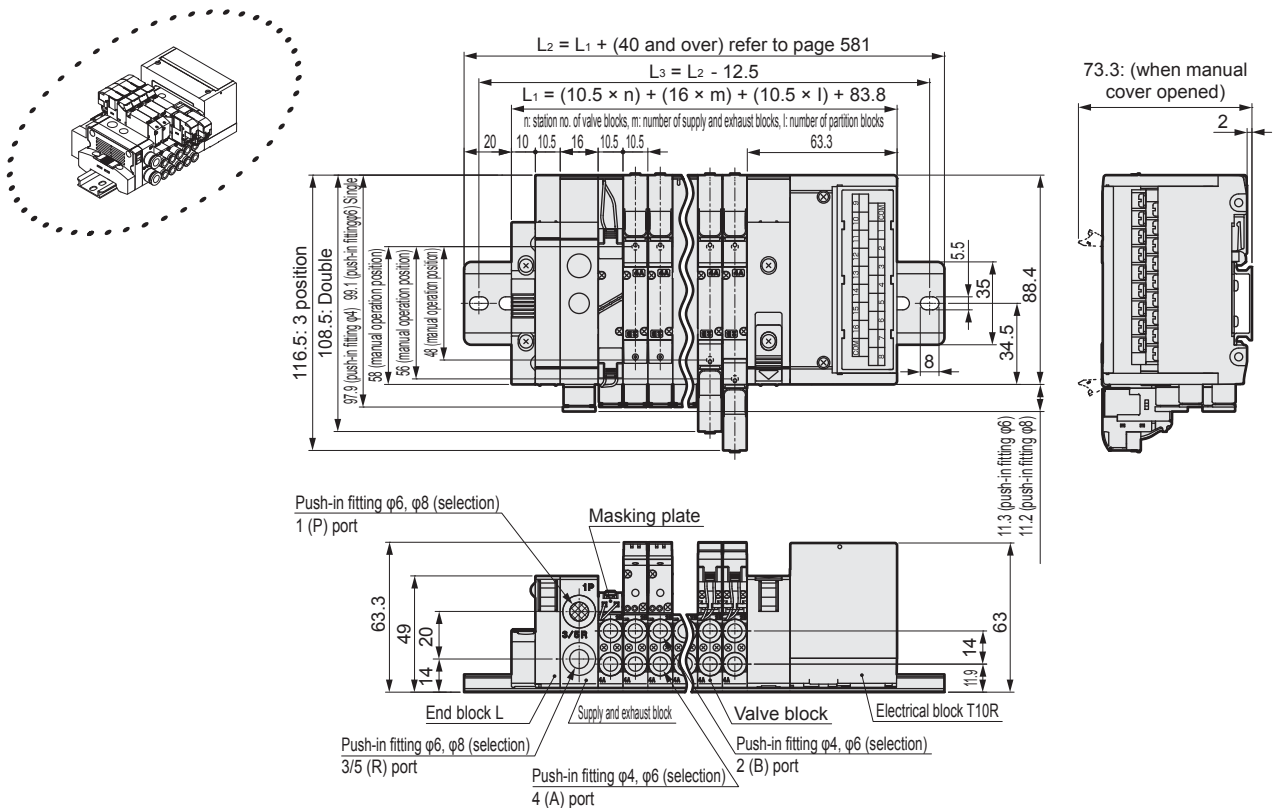
Note: There are push tightening specifications (T11)
The dimensions are the same as T10.



Note: Refer to 556 page for 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.



4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GE2-T10 Series

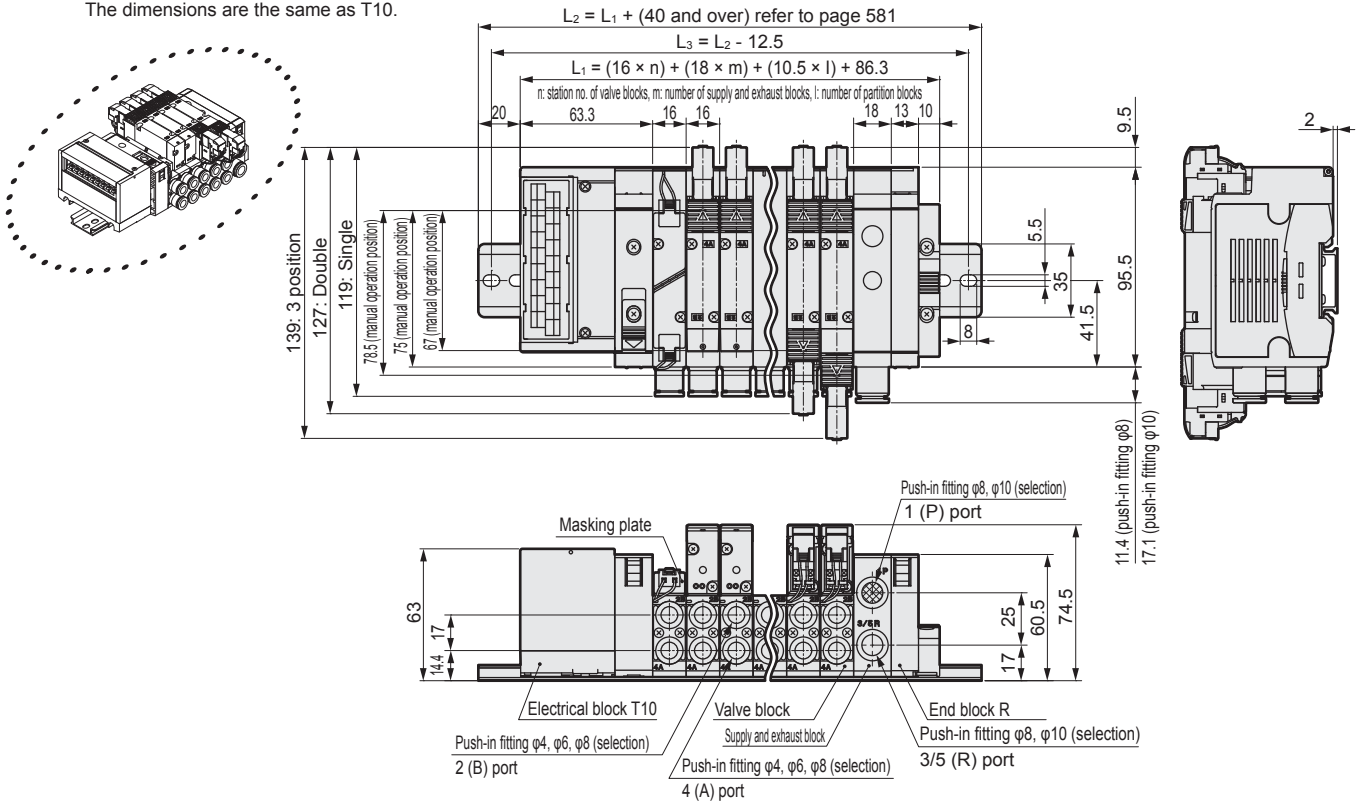
Reduced wiring block manifold; base piping

Dimensions

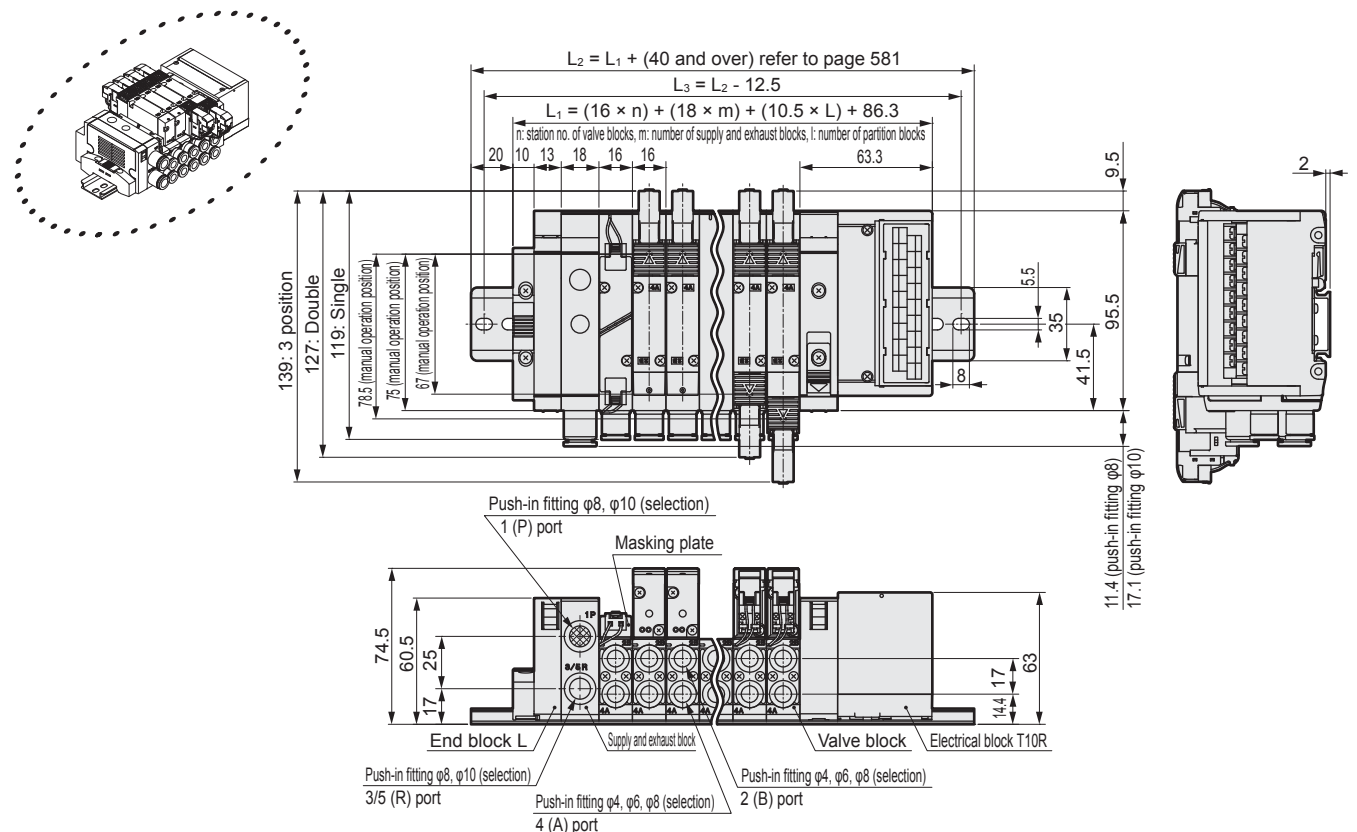
MN4GE2

- Common terminal block (M3 thread) Left side (T10)
Note: There are push tightening specifications (T11).
The dimensions are the same as T10.

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



- Common terminal block (M3 thread) Right side (T10R)
Note: Refer to 556 page for details on L type push-in fitting.
The dimensions are the same as T10R.



4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

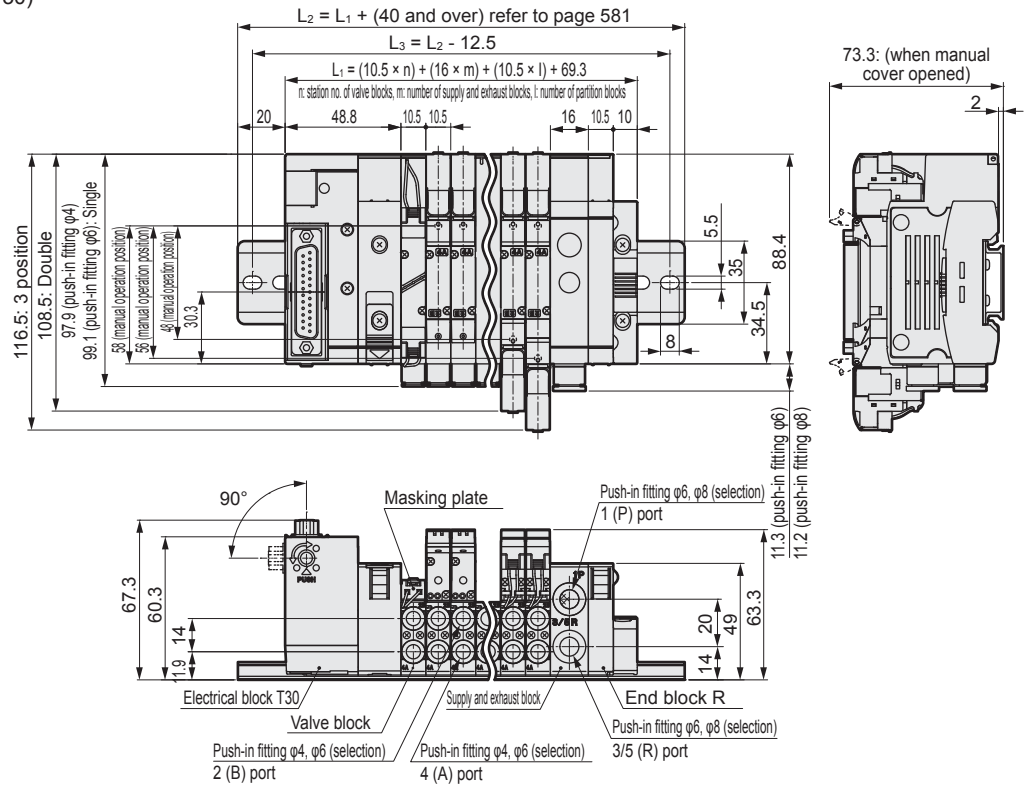
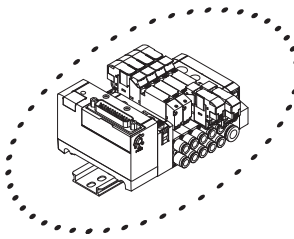
Dimensions



MN4GE1

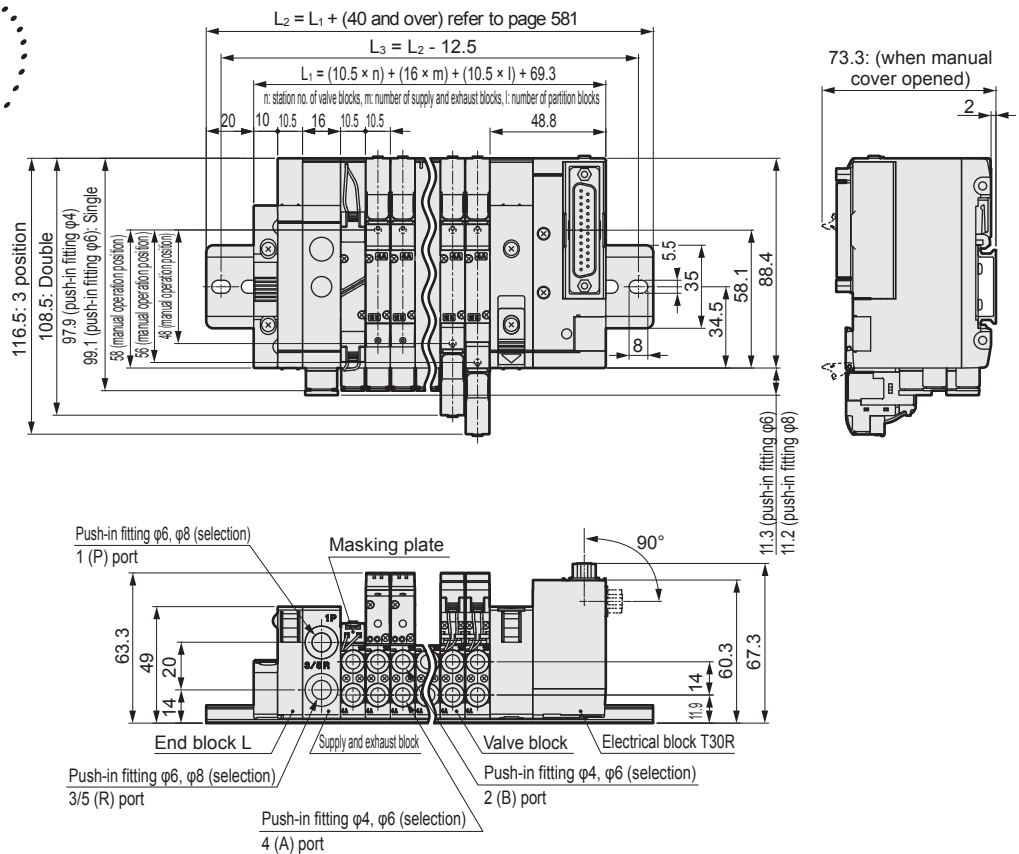
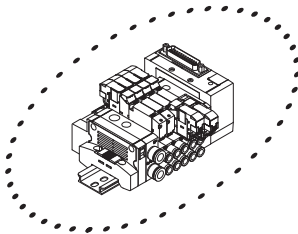
● D-sub connector Left side (T30)

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



● D-sub connector Right side (T30R)

Note: Refer to 556 page for details on L type push-in fitting.



4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GE2-T30 Series

Reduced wiring block manifold; base piping

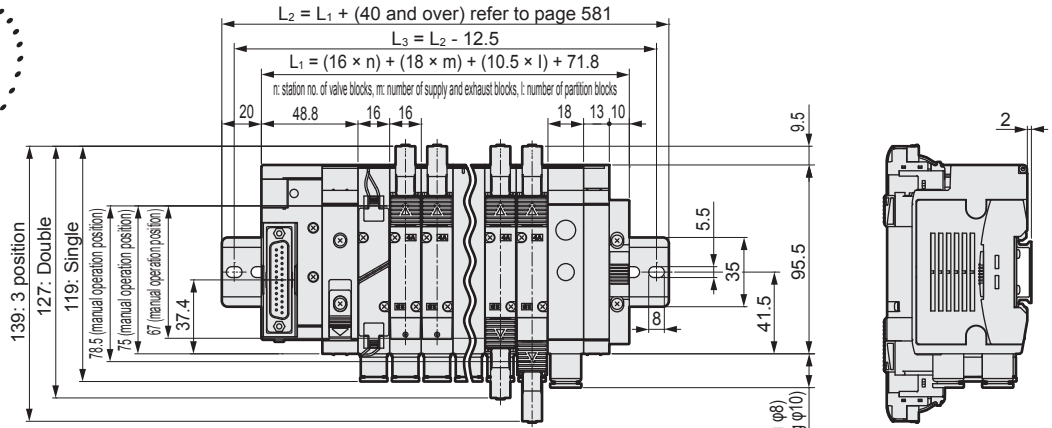
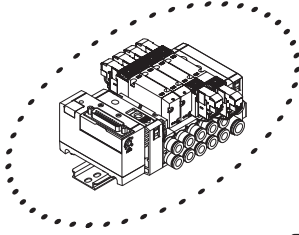
Dimensions



MN4GE2

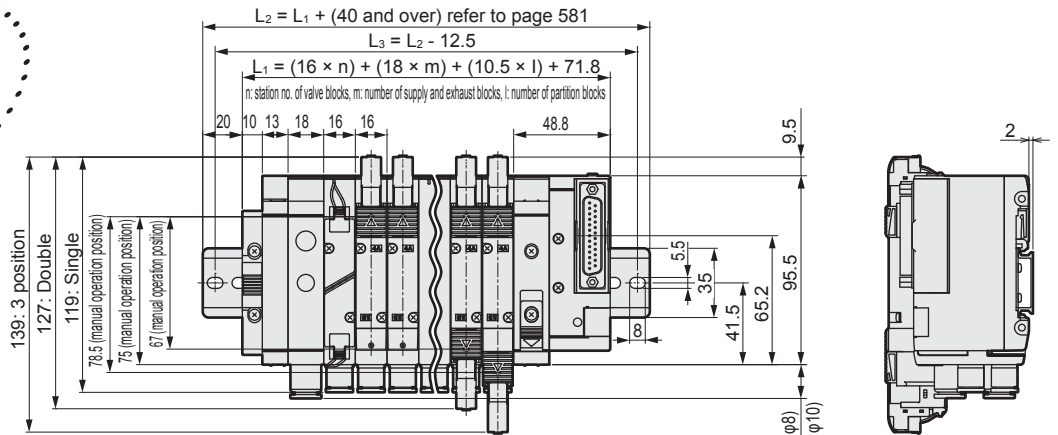
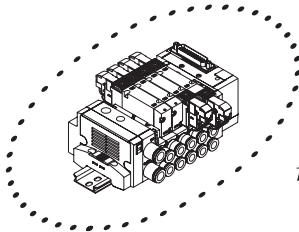
● D-sub connector Left side (T30)

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



● D-sub connector Right side (T30R)

Note: Refer to 556 page for details on L type push-in fitting.



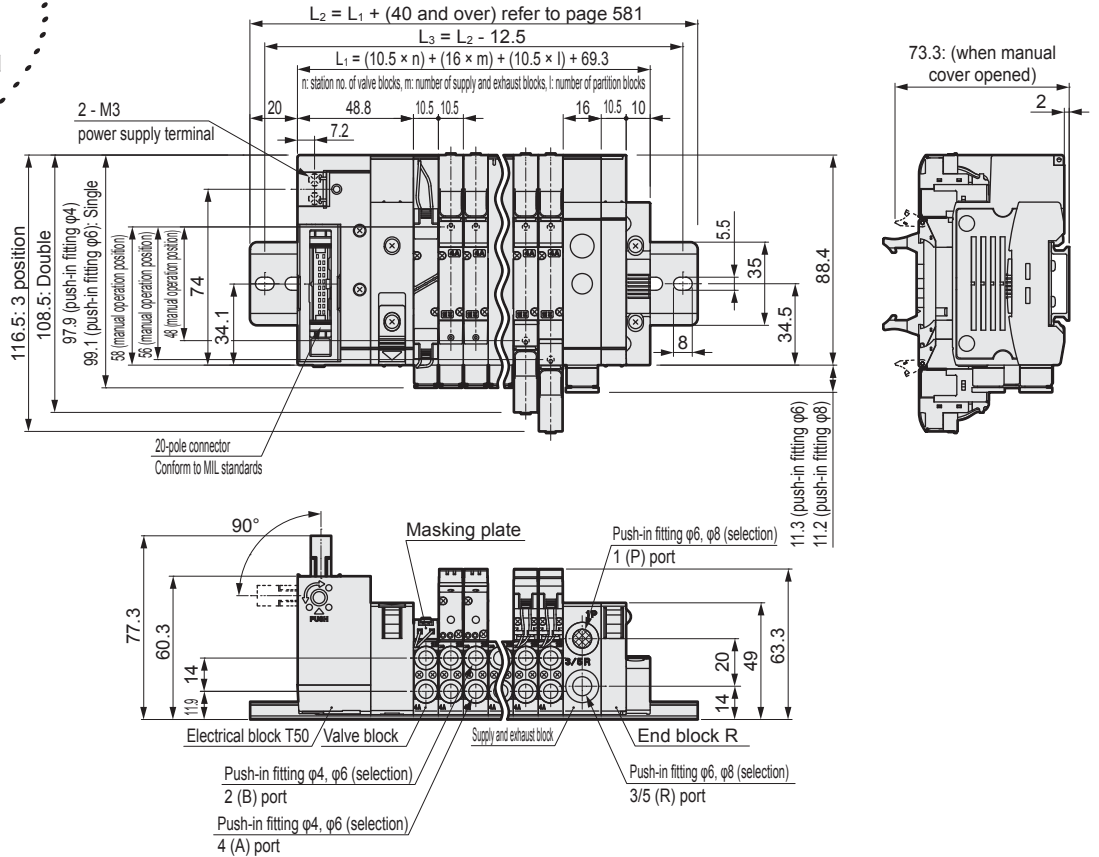
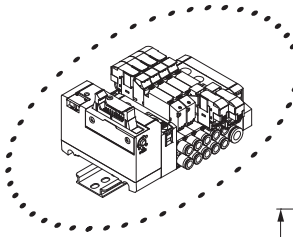
4GAB
 M4GAB
 MN4GAB
 Master valve
 4GAB
 4GD/E
 M4GD/E
 MN4GD/E
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 Safety precautions
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Dimensions



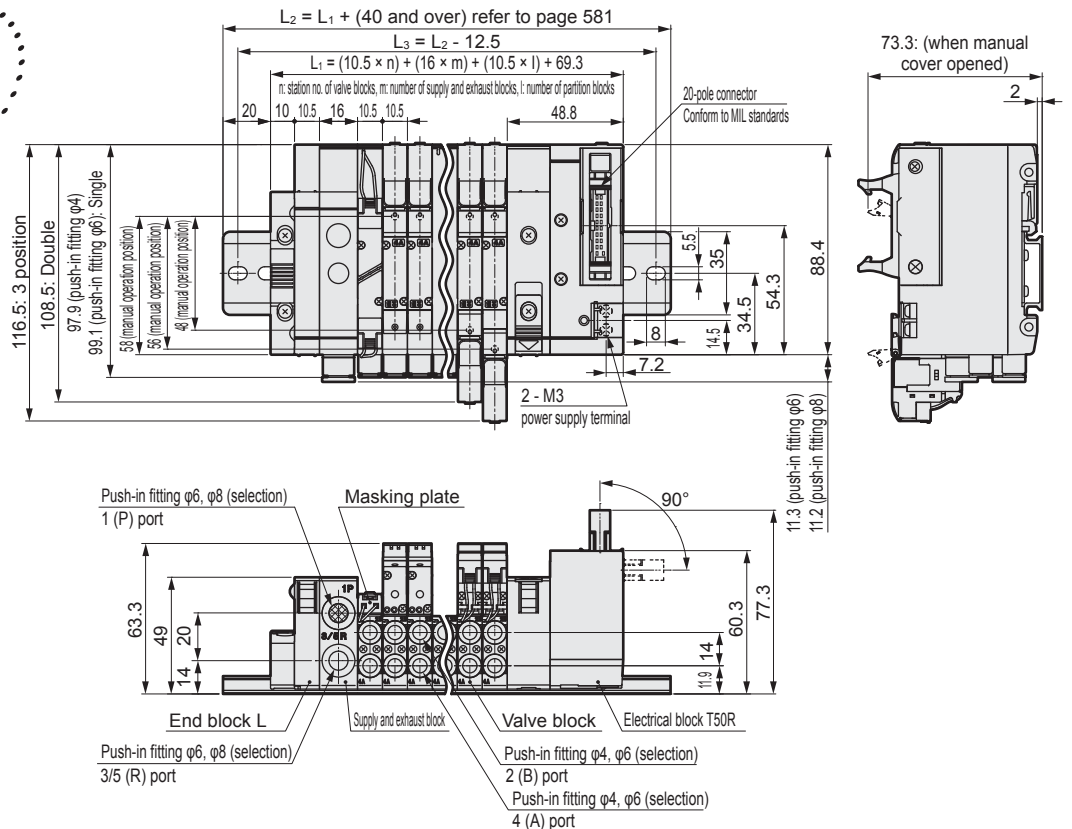
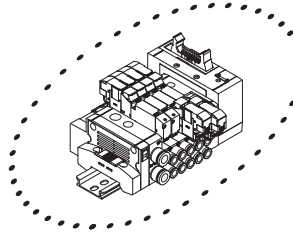
MN4GE1

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

- Flat cable connector Right type (T50R)
With power supply terminal



Note: Refer to 556 page for details on L type push-in fitting.

4GAB

M4GAB/B

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GE2-T50 Series

Reduced wiring block manifold; base piping

Dimensions

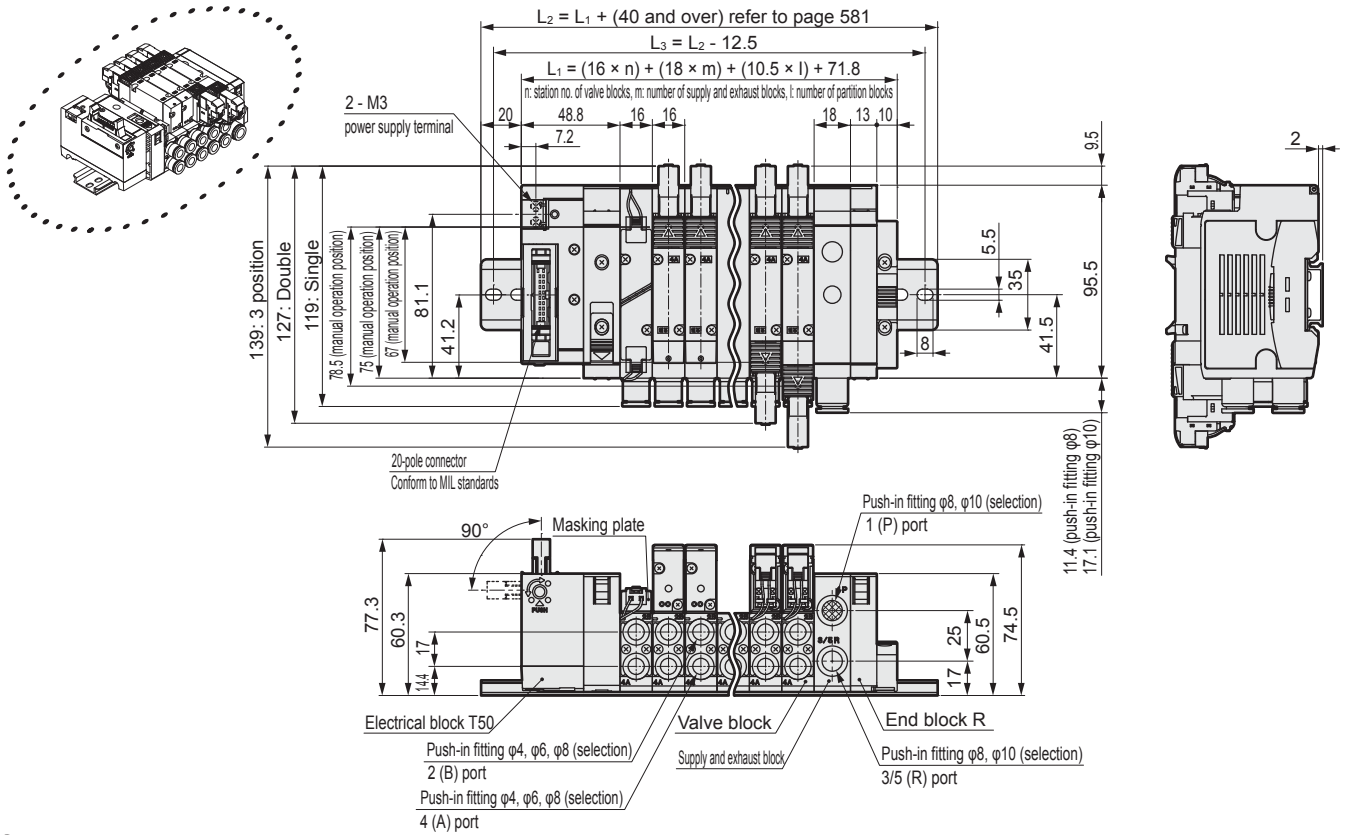


MN4GE2

- Flat cable connector Left side
With power supply terminal (T50)

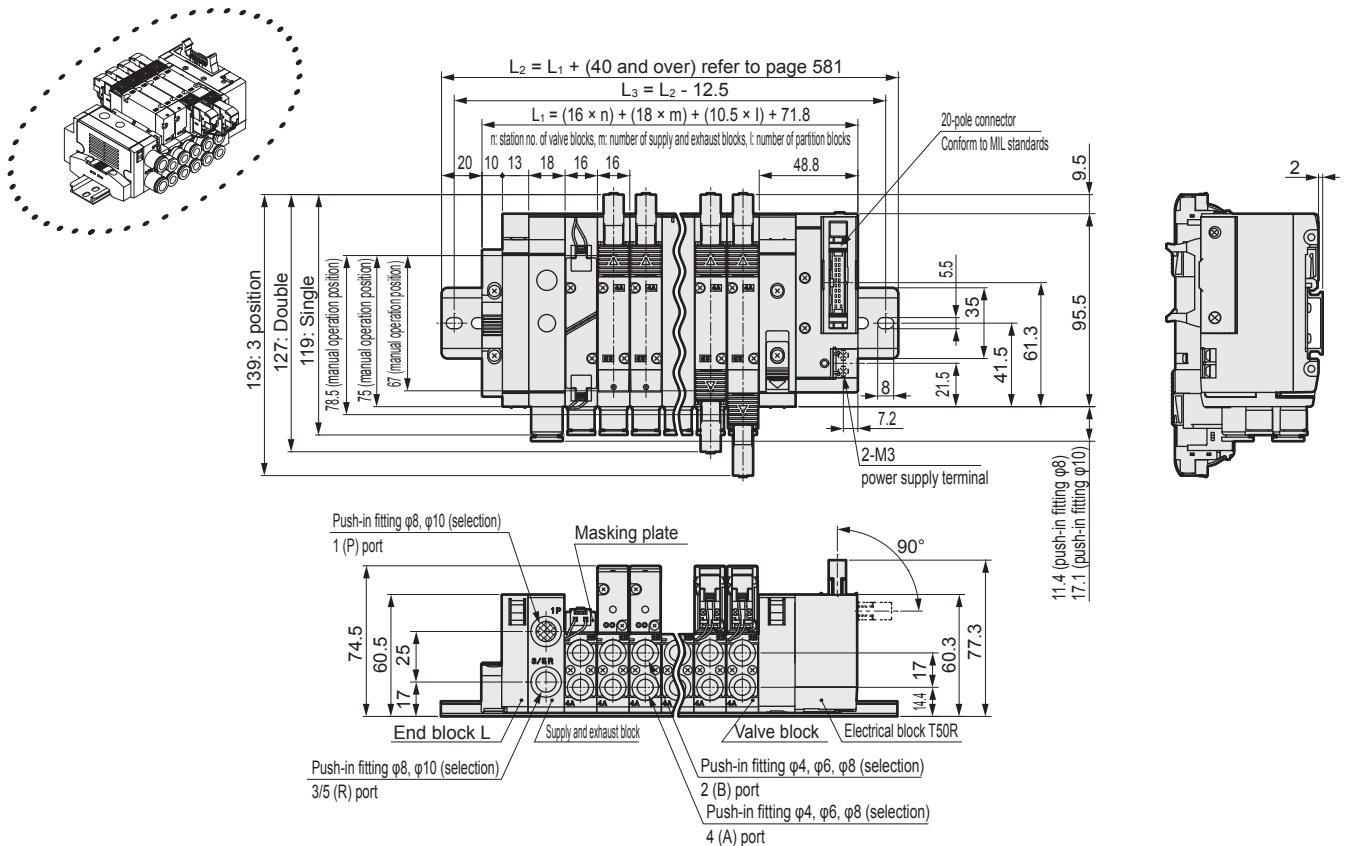
Note 1: T51, T52, and T53 flat cable connectors are also available. The dimensions are the same as T50.

Note 2: The dimension of dual 3 port valve integrated type is the same as that of the double type.



- Flat cable connector Right type
With power supply terminal (T50R)

Note: Refer to 556 page for details on L type push-in fitting.



MN4GE1/2-T6* Series

Reduced wiring block manifold; base piping

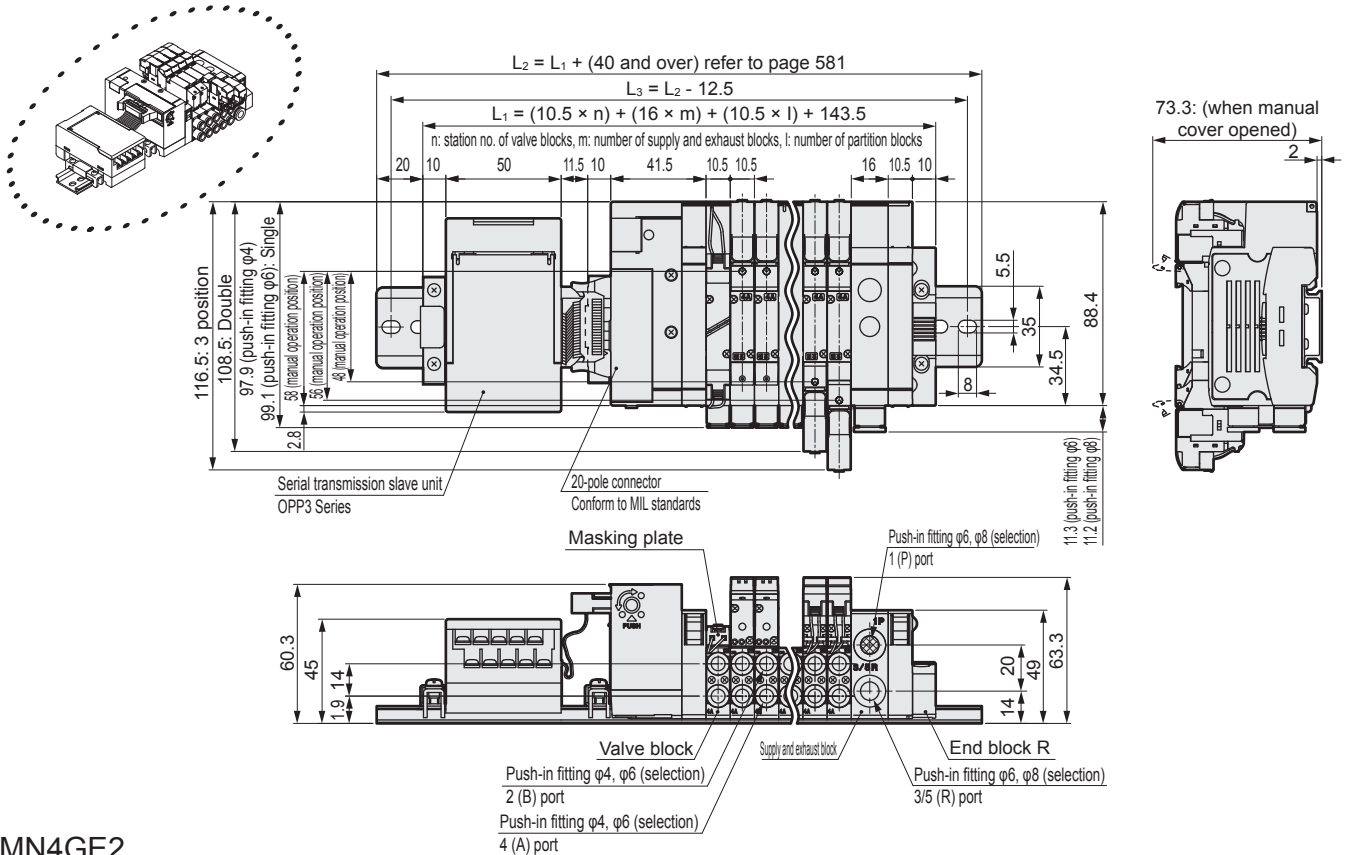
Dimensions



MN4GE1

- Serial transmission (T6*)

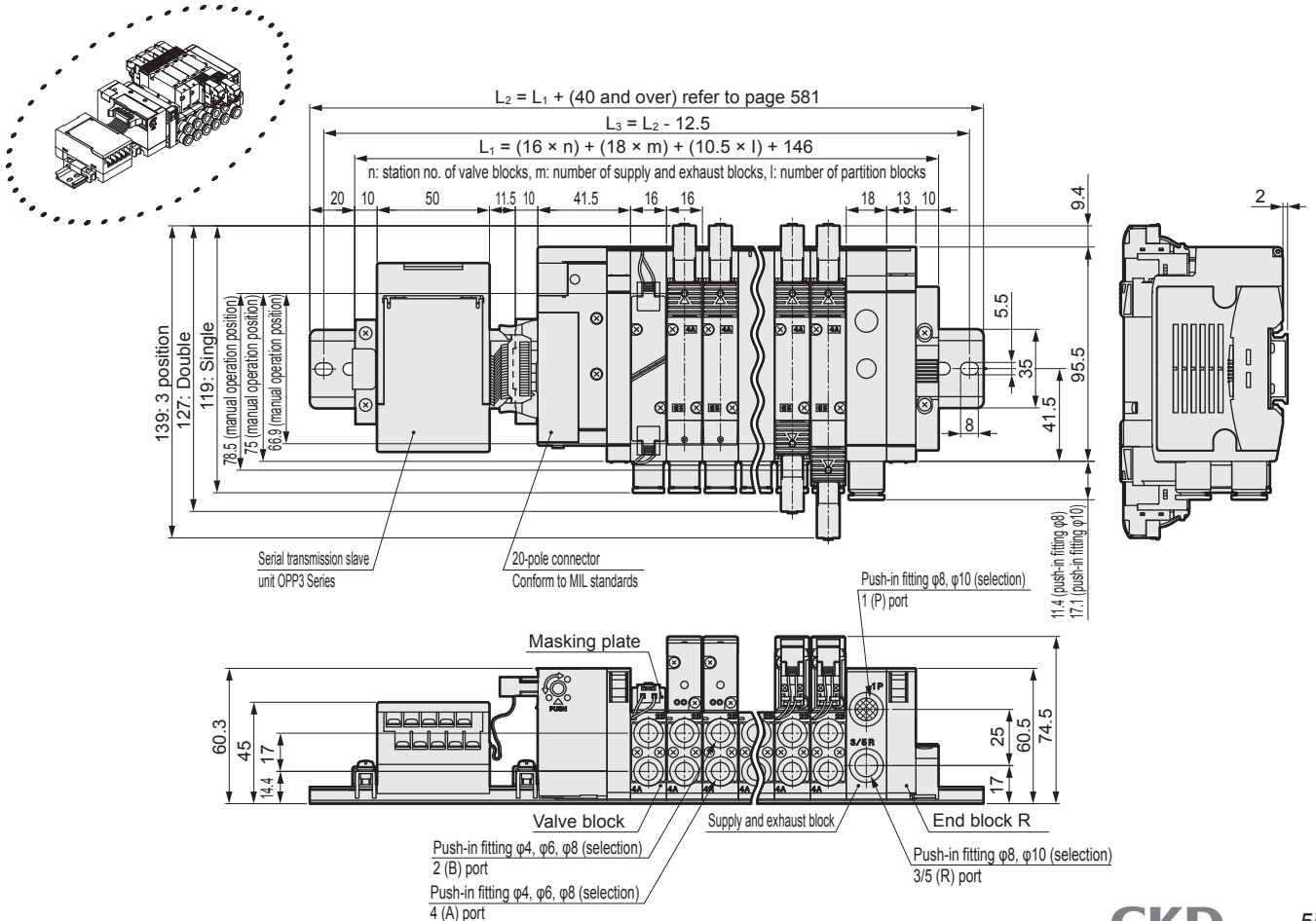
Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.



MN4GE2

- Serial transmission (T6*)

Note: Refer to 556 page for details on L type push-in fitting.



4GAB

M4GAB/B

MN4GAB

4GAB Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety precautions

Manifold Specifications

MN4GE1/2-T7* Series

Reduced wiring block manifold; base piping

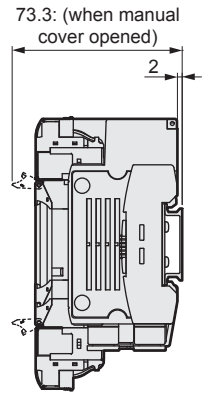
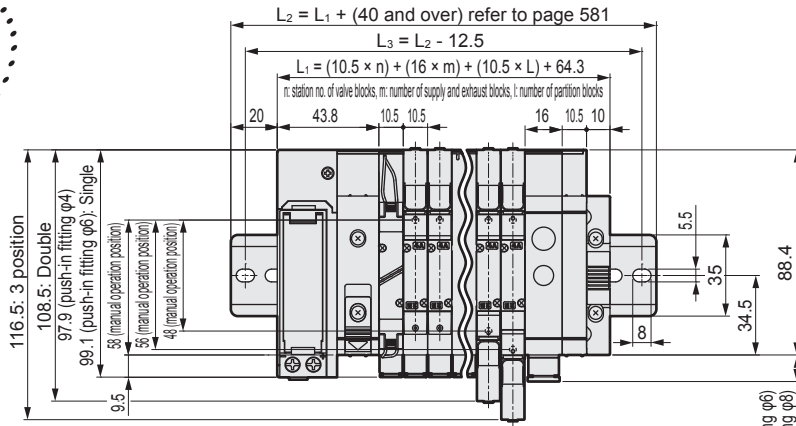
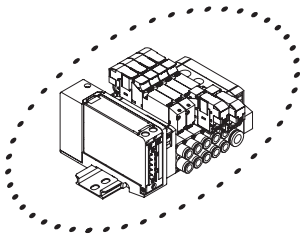
Dimensions



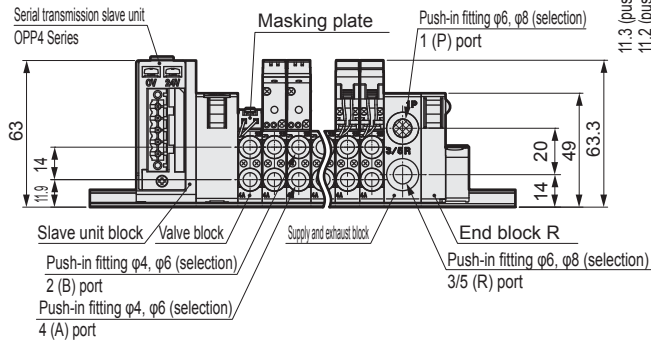
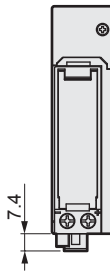
MN4GE1

- Thin serial transmission (T7*)

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



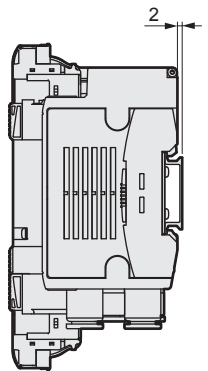
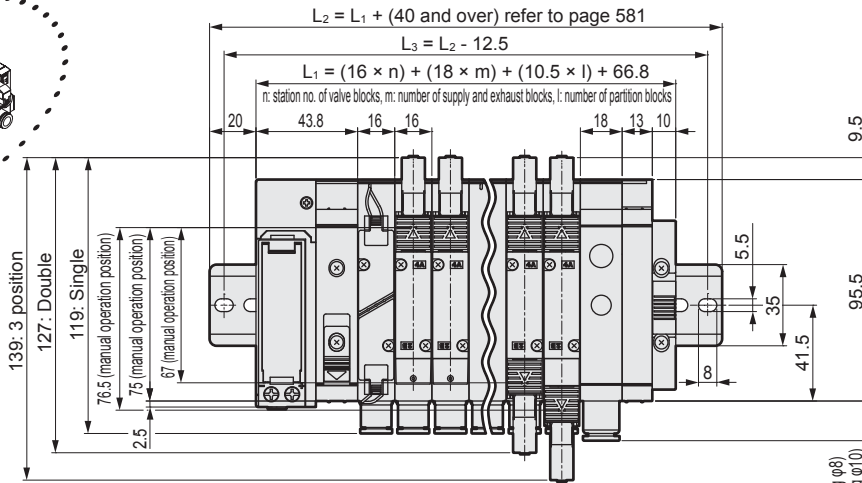
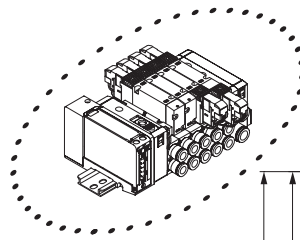
With T7S*1



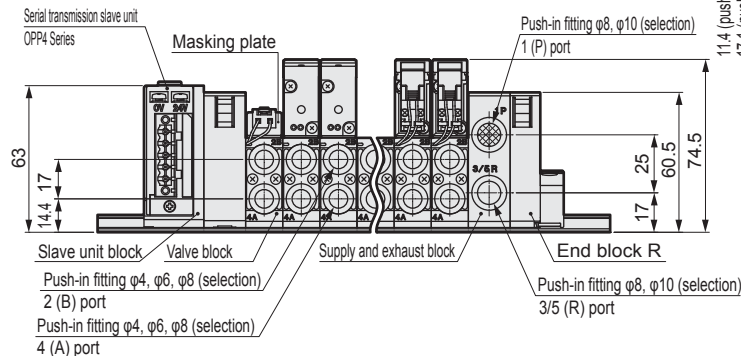
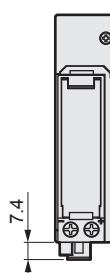
MN4GE2

- Thin serial transmission (T7*)

Note: Refer to 556 page for details on L type push-in fitting.



With T7S*1



MN4GE1/2-T8* Series

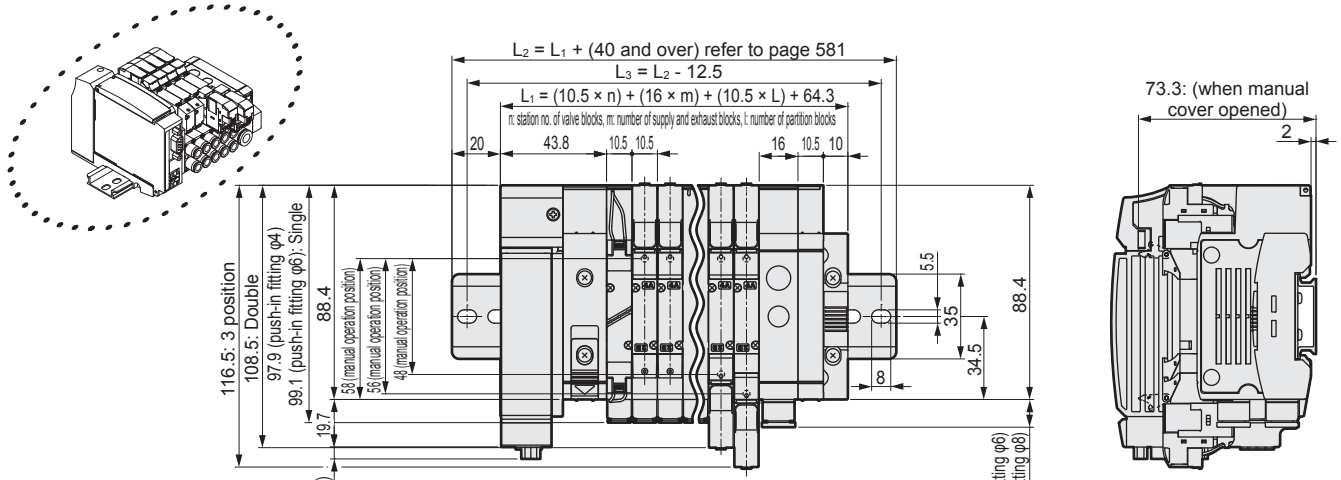
Reduced wiring block manifold; base piping

Dimensions

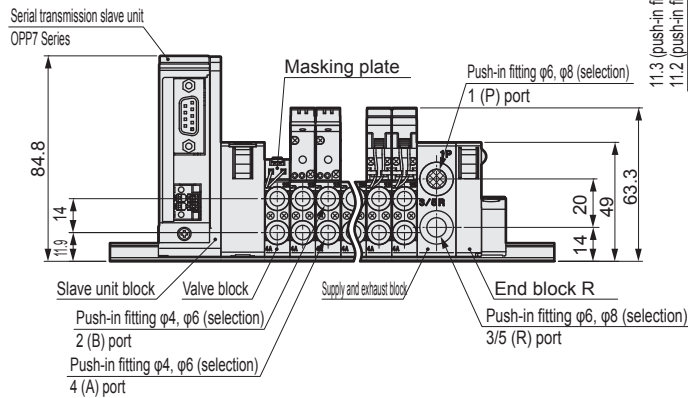
MN4GE1

- Thin serial transmission (T8*)

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

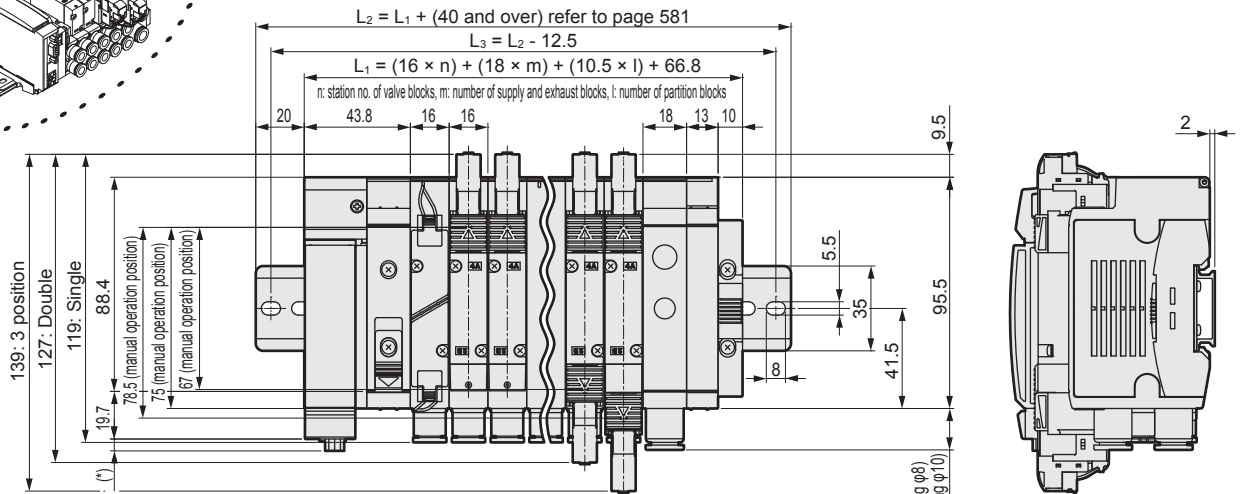
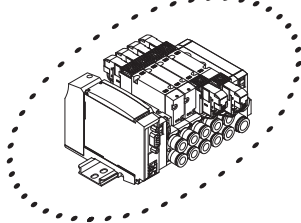


Serial transmission	*Dimensions
T8G*	1.0
T8P*	4.9
T8E*	3.0

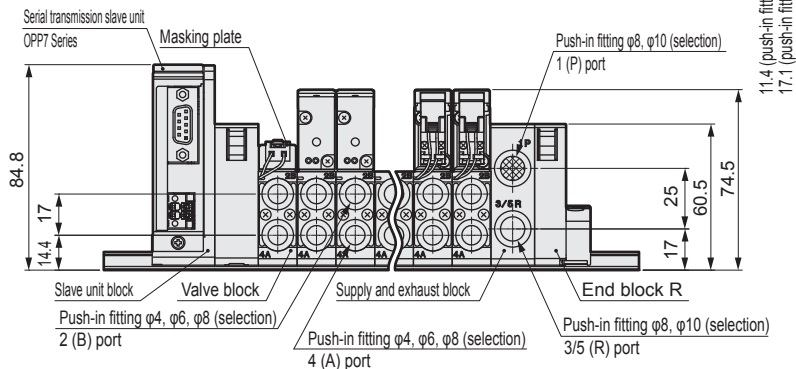


MN4GE2

- Thin serial transmission (T8*)



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



MN4GE1/2-T* Series

Reduced wiring block manifold; base piping

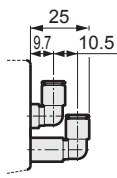
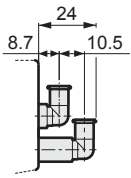
Dimensions

MN4GE1 Valve block

● L type push-in fitting (upward)

φ4 (CL4)

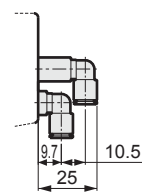
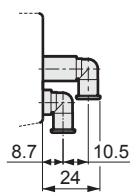
φ6 (CL6)



● L type push-in fitting (downward)

φ4 (CD4)

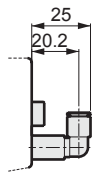
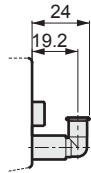
φ6 (CD6)



● L type push-in fitting (upward), Single side plug

φ4 (CL4NC)

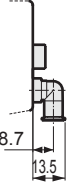
φ6 (CL6NC)



● L type push-in fitting (downward), single side plug

φ4 (CD4NC)

φ6 (CD6NC)

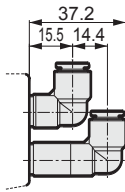
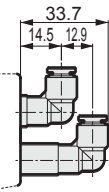


MN4G1 Supply/exhaust block

● L type push-in fitting (upward)

φ6 (6L)

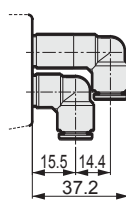
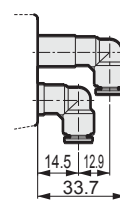
φ8 (8L)



● L type push-in fitting (downward)

φ6 (6D)

φ8 (8D)

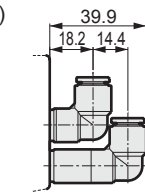
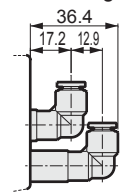


MN4GE2 Valve block

● L type push-in fitting (upward)

φ6 (CL6)

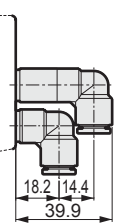
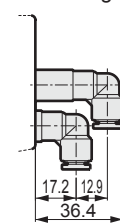
φ8 (CL8)



● L type push-in fitting (downward)

φ6 (CD6)

φ8 (CD8)



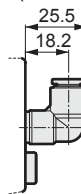
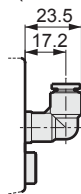
● L type push-in fitting (upward), single side plug

φ6 (CL6NC)

φ8 (CL8NC)

φ6 (CL6NO)

φ8 (CL8NO)



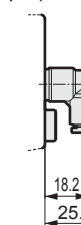
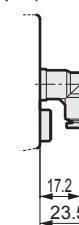
● L type push-in fitting (downward), single side plug

φ6 (CD6NC)

φ8 (CD8NC)

φ6 (CD6NO)

φ8 (CD8NO)

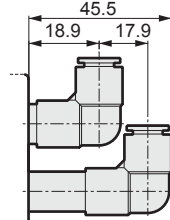
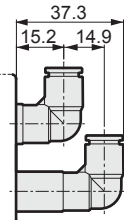


MN4G2 Supply/exhaust block

● L type push-in fitting (upward)

φ8 (8L)

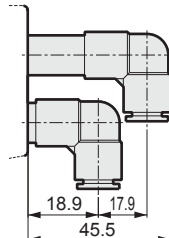
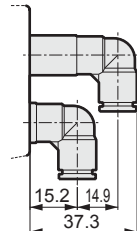
φ10 (10L)



● L type push-in fitting (downward)

φ8 (8D)

φ10 (10D)



MEMO

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

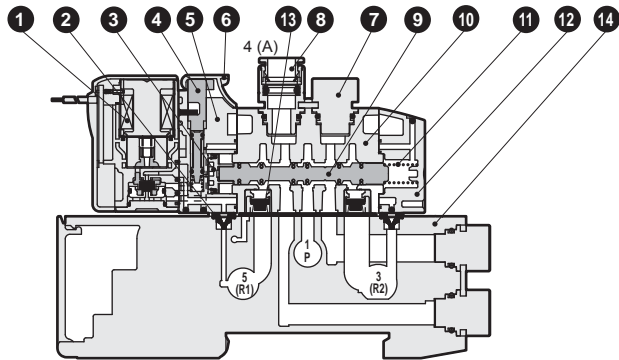
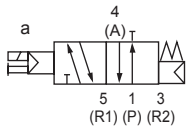
MN3GD1/2 Series

Internal structure and parts list

4GAB

N3GD110R/N3GD210R

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

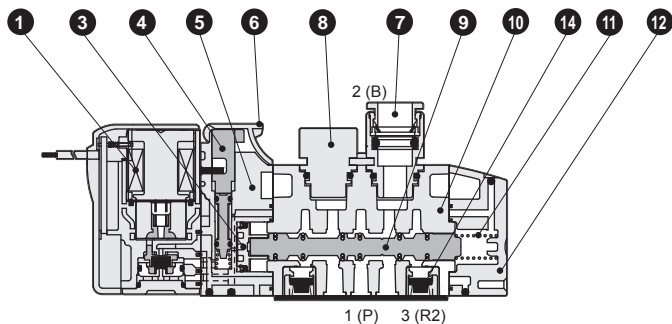
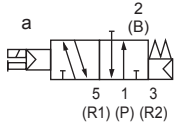


M4GAB

MN4GAB

N3GD1110R/N3GD2110R

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

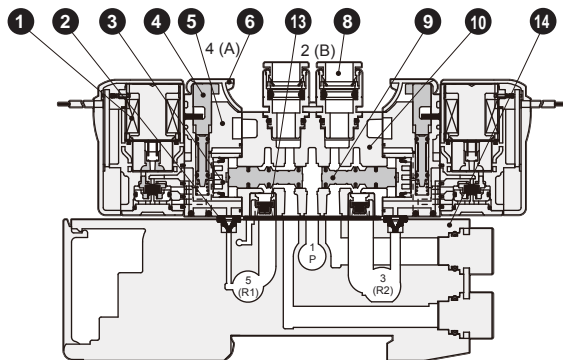
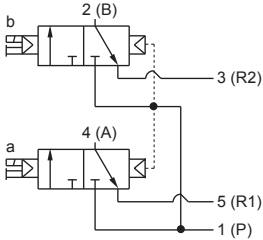


4GAB
Master valve

4GD/E

N3GD1660R/N3GD2660R

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



M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

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	Body	Aluminum alloy die-casting
11	Spool spring	-
12	Cap	Plastic
13	Malfunction prevention valve	-
14	Valve block	Plastic

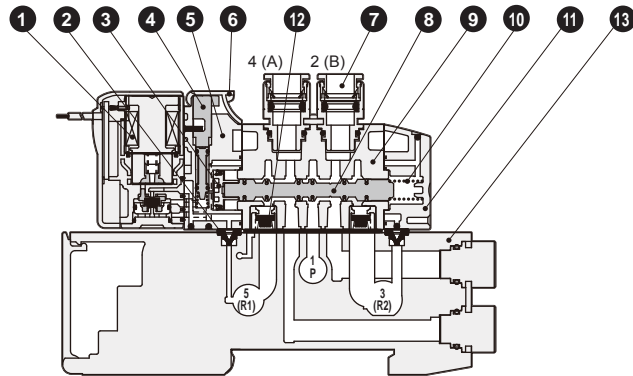
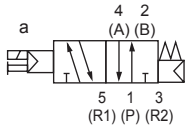
Parts list

No.	Parts name	Model no.																		
1	Coil assembly	4GR- <input type="text"/> Electrical connections <input type="text"/> *-COIL- <input type="text"/> Voltage <input type="text"/> Blank: standard A: Ozone specifications																		
8	Cartridge type Push-in fitting and related parts	<table border="1"> <tr> <td rowspan="2">3G1 4G1</td> <td>φ4 straight type</td> <td>4G1R-JOINT-C4</td> </tr> <tr> <td>φ6 straight type</td> <td>4G1R-JOINT-C6</td> </tr> <tr> <td rowspan="3">3G2 4G2</td> <td>Plug cartridge</td> <td>4G1R-JOINT-CPG</td> </tr> <tr> <td>φ4 straight type</td> <td>4G2R-JOINT-C4</td> </tr> <tr> <td>φ6 straight type</td> <td>4G2R-JOINT-C6</td> </tr> <tr> <td></td> <td>φ8 straight type</td> <td>4G2R-JOINT-C8</td> </tr> <tr> <td></td> <td>Plug cartridge</td> <td>4G2R-JOINT-CPG</td> </tr> </table>	3G1 4G1	φ4 straight type	4G1R-JOINT-C4	φ6 straight type	4G1R-JOINT-C6	3G2 4G2	Plug cartridge	4G1R-JOINT-CPG	φ4 straight type	4G2R-JOINT-C4	φ6 straight type	4G2R-JOINT-C6		φ8 straight type	4G2R-JOINT-C8		Plug cartridge	4G2R-JOINT-CPG
3G1 4G1	φ4 straight type	4G1R-JOINT-C4																		
	φ6 straight type	4G1R-JOINT-C6																		
3G2 4G2	Plug cartridge	4G1R-JOINT-CPG																		
	φ4 straight type	4G2R-JOINT-C4																		
	φ6 straight type	4G2R-JOINT-C6																		
	φ8 straight type	4G2R-JOINT-C8																		
	Plug cartridge	4G2R-JOINT-CPG																		
-	E type connector socket assembly	4GR-SOCKET-ASSY- <input type="text"/> Electrical connection <input type="text"/> Voltage																		
-	EJ type connector socket assembly	4GR-SOCKET-ASSY- <input type="text"/> Electrical connections																		
-	DIN terminal box assembly (only 3GD2)	4GR-TERMINAL-BOX- <input type="text"/> Voltage																		

Internal structure and parts list

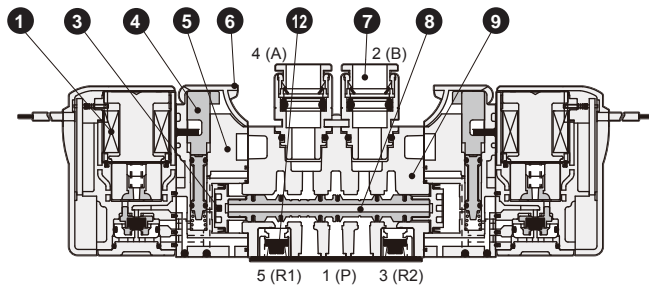
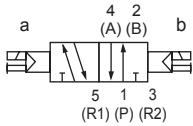
N4GD110R·N4GD210R

- 2-position single
- Grommet lead wire (blank)



N4GD120R/N4GD220R

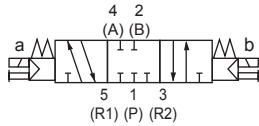
- 2-position double
- Grommet lead wire (blank)



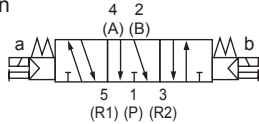
N4GD1³/₄0R/N4GD2³/₅0R

- 3-position
- Grommet lead wire (blank)

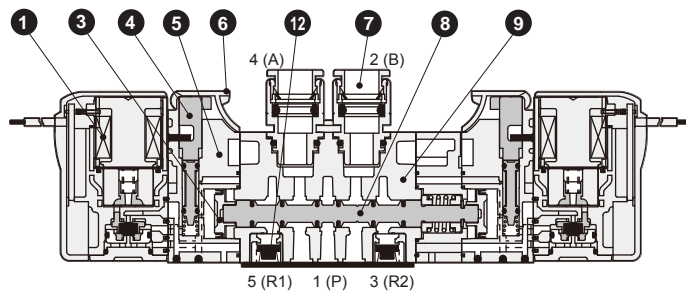
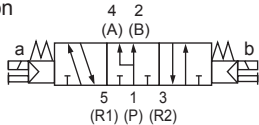
All ports closed



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	Body	Aluminum alloy die-casting
10	Spool spring	-
11	Cap	Plastic
12	Malfunction prevention valve	-
13	Valve block	Plastic

Parts list

No.	Parts name	Model no.	
1	Coil assembly	4GR- <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Electrical connections</td></tr></table> -*COIL- Voltage Blank: standard A: Ozone specifications	Electrical connections
Electrical connections			
7	Cartridge type Push-in fitting and related parts	3G1 4G1 φ4 straight type	
		φ6 straight type	
		Plug cartridge	
		3G2 4G2 φ4 straight type	
		φ6 straight type	
		φ8 straight type	
	Plug cartridge		
-	E type connector socket assembly	4GR-SOCKET-ASSY- <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Electrical connection</td></tr></table> -Voltage	Electrical connection
Electrical connection			
-	EJ type connector socket assembly	4GR-SOCKET-ASSY- <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Electrical connections</td></tr></table>	Electrical connections
Electrical connections			
-	DIN terminal box assembly (only 4GD2)	4GR-TERMINAL-BOX- <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Voltage</td></tr></table>	Voltage
Voltage			

MN4GE1/2 Series

Internal structure and parts list

4GAB

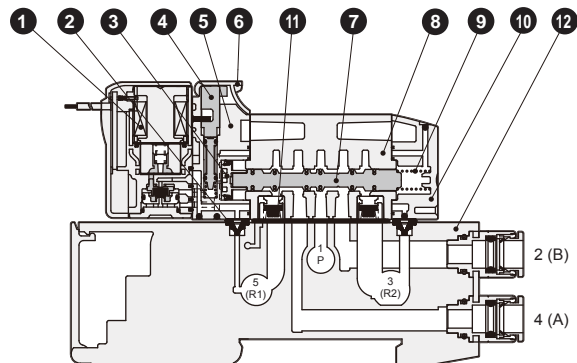
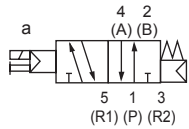
N3GE1660R/N3GE2660R

- Dual 3 port valve integrated type A side valve: Normally closed, B side valve: Normally closed
Grommet lead wire (Blank) Refer to Page 561.

M4GAB

N4GE110R·N4GE210R

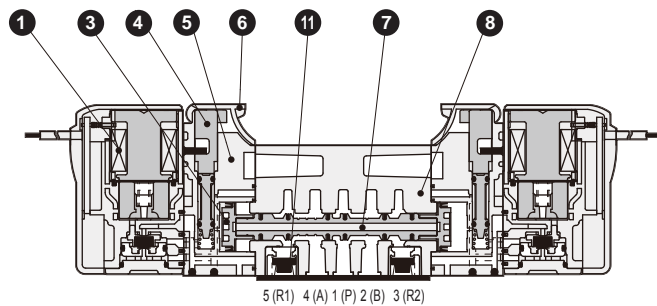
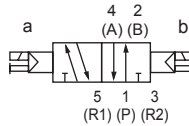
- 2-position single
Grommet lead wire (blank)



MN4GAB

N4GE120R/N4GE220R

- 2-position double
Grommet lead wire (blank)



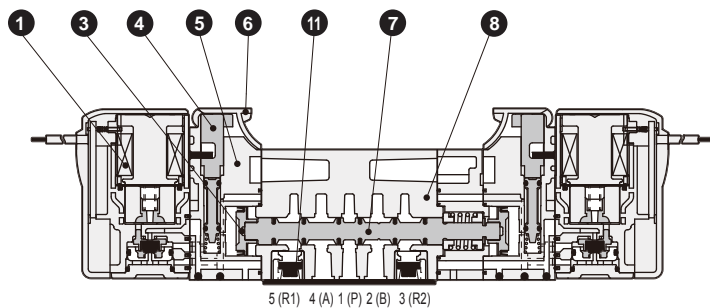
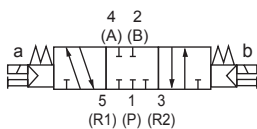
4GAB
Master valve

4GD/E

N4GE1³₄0R/N4GE2³₀0R

- 3-position
Grommet lead wire (blank)

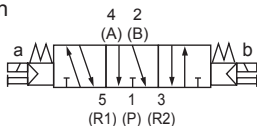
All ports closed



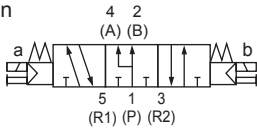
M4GD/E

MN4GD/E

A/B/R connection



P/A/B Connection



Technical data

Main parts list

Parts list

No.	Parts name	Material	No.	Parts name	Model no.		
1	Coil assembly	-	1	Coil assembly	4GR- <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Electrical connections</td></tr></table> ·*COIL- Voltage	Electrical connections	
Electrical connections							
2	Pilot exhaust check valve	Hydrogenated nitrile rubber, HNBR			Blank: standard A: Ozone specifications		
3	Piston D assembly	-					
4	Manual operating device	Plastic					
5	Piston room	Plastic					
6	Manual protection cover	Plastic					
7	Spool assembly	-	-	E type connector socket assembly	4GR-SOCKET-ASSY- <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Electrical connection</td></tr></table> - <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Voltage</td></tr></table>	Electrical connection	Voltage
Electrical connection							
Voltage							
8	Body	Aluminum alloy die-casting					
9	Spool spring	-	-	EJ type connector socket assembly	4GR-SOCKET-ASSY- <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Electrical connections</td></tr></table>	Electrical connections	
Electrical connections							
10	Cap	Plastic					
11	Malfunction prevention valve	-					
12	Valve block	Plastic	-	DIN terminal box assembly (only 4GE2)	4GR-TERMINAL-BOX- <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Voltage</td></tr></table>	Voltage	
Voltage							

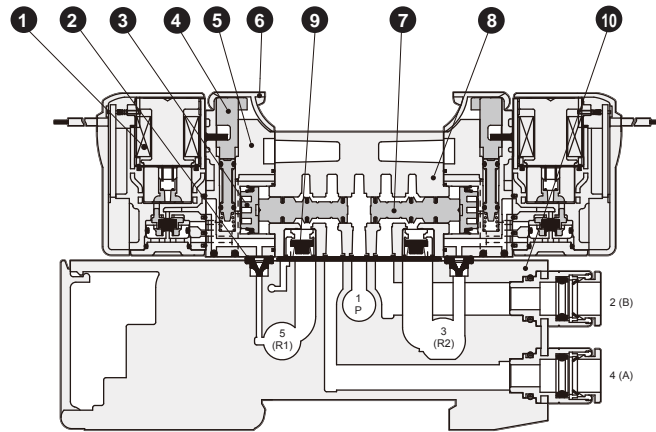
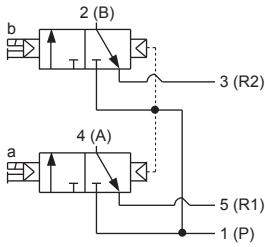
Safety
precautions

Manifold
Specifications

Internal structure and parts list

N3GE1660R/N3GE2660R

- 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	Body	Aluminum alloy die-casting
9	Malfunction prevention valve	-
10	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 3GE2)	4GR-TERMINAL-BOX- Voltage

4GAB

M4GAB

MN4GAB

4GAB
Master valve

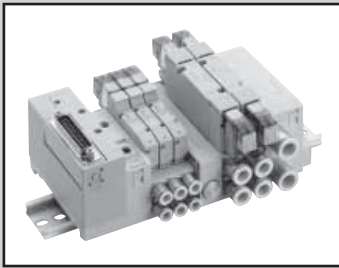
4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautionsManifold
Specifications



4G1/2 Mix manifold

MN3GDX12/MN4GDX12 MN4GEX12 Series

● Applicable cylinder bore size: $\phi 20$ to $\phi 80$

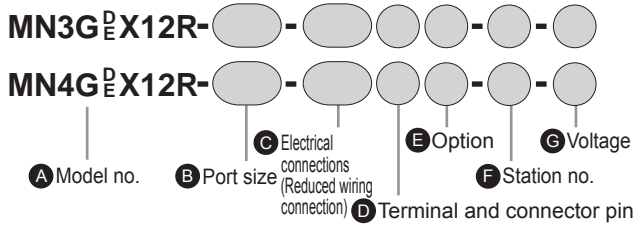


Specifications

Common to each series.

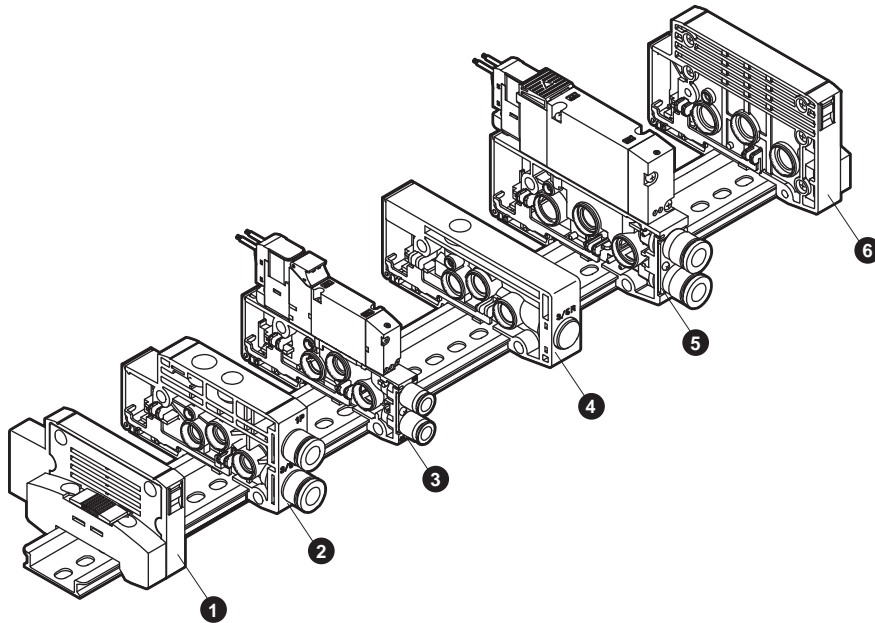
For individual wiring, refer to page 510 (body piping) or page 518 (base piping), and for reduced wiring, refer to page 526 (body piping) or page 542 (base piping).

How to order



* 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 512 (body piping) or page 520 (base piping), and for reduced wiring, refer to page 528 (body piping) or page 544 (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 564 to 578 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	N4GE110R-C6-H-3
4	Mix block	N4G12R-MIX
5	Discrete valve block with solenoid valve	N4GE210R-C8-H-3
6	End block R	N4G2R-ER

Weight

N4G12R-MIX: 49g

Refer to the specifications of each series for other components.

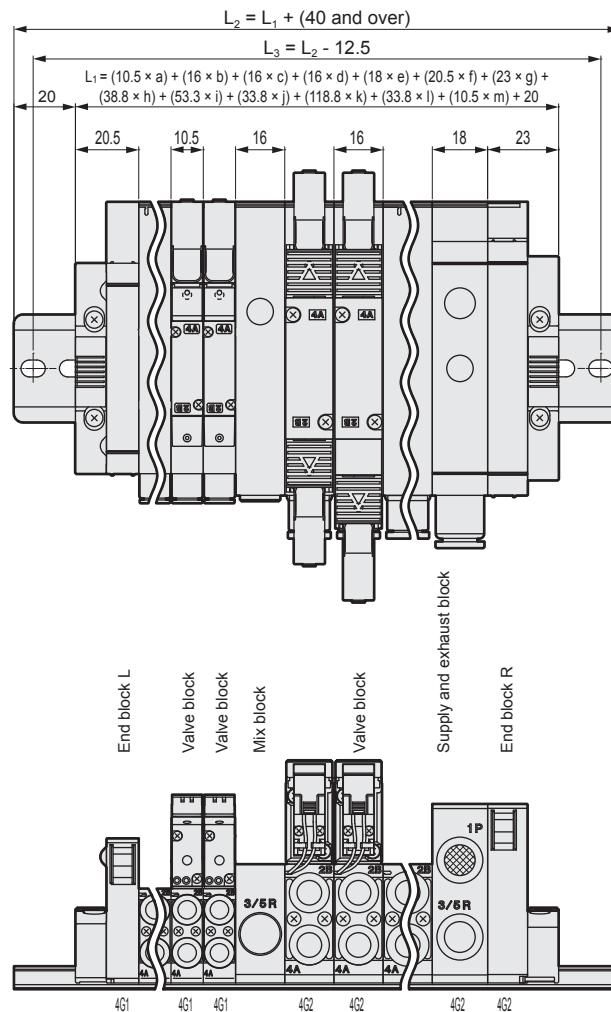
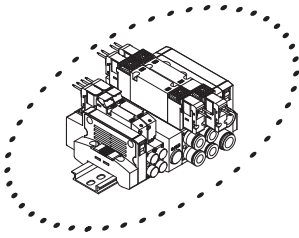
Mix block: Dimensions

Unit: mm

MN4GEX12

Note: For details regarding E type connector, EJ type connector, and DIN terminal box, refer to the pages of each model (MN4GD: from page 515,517, MN4GE: from page 523, 525).

Note: Refer to page 556 for details on 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.

4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD & 4GE Series

Block configurations

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 526, 542.)
- (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 number of these can be freely arranged at the connecting sections of each block.

● 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.

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD & 4GE Series

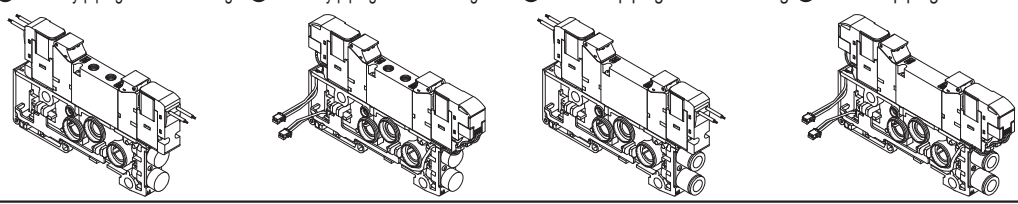
Block configurations

Block manifold configuration

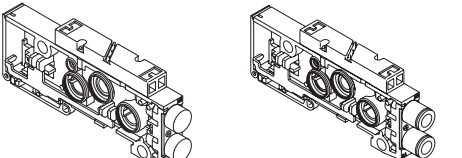
Piping section

Piping block

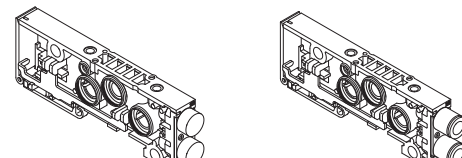
A Discrete valve block with solenoid valve
 ● For body piping individual wiring ● For body piping reduced wiring ● For base piping individual wiring ● For base piping reduced wiring



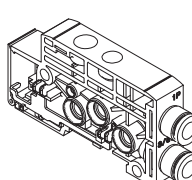
B Discrete valve block with masking plate
 ● Body piping ● Base piping



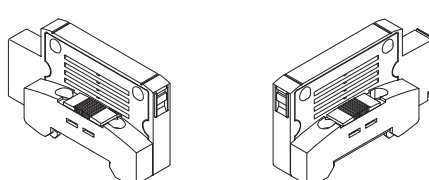
C Discrete valve block
 ● Body piping ● Base piping



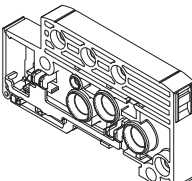
D Supply and exhaust block ● For internal pilot



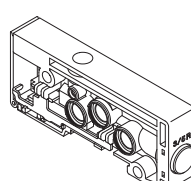
E End block ● For left ● For right



F Partition block



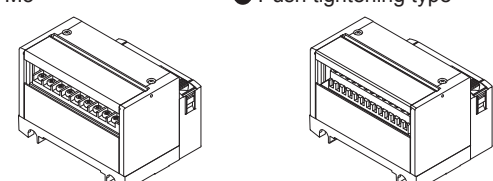
G Mix block



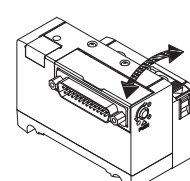
Wiring section

Wiring block

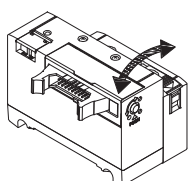
H Centralized terminal block
 ● M3 ● Push tightening type



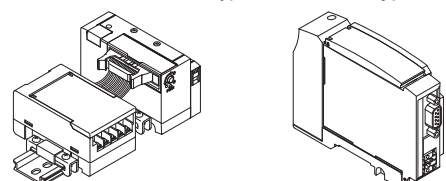
I D sub-connector block



J Flat cable connector block



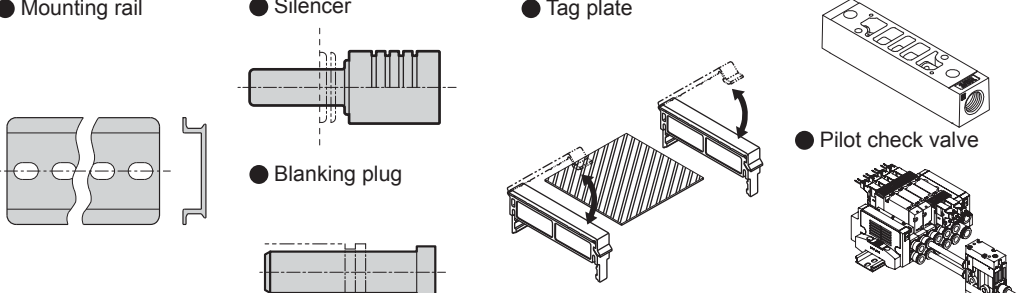
K Serial transmission block
 ● Connector connection type ● Thin slot type



Related products

Related products

L Related products
 ● Mounting rail ● Silencer ● Tag plate ● Supply spacer/exhaust spacer ● Blanking plug ● Pilot check valve



4GAB	4GAB Master valve	4GD/E	M4GD/E	MN4GD/E	Technical data	Safety precautions	Manifold Specifications
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MN4GD & 4GE Series

Block manifold: piping section

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 512, base piping individual wiring: page 520,
 body piping reduced wiring: page 528, base piping individual wiring: page 544

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

A Model no. **B** Type **C** Port size **E** Option
D Cable length *4

A Model no.	B Type	C Post size (it is necessary to configure this with base piping.)
N4GA1	MP For individual wiring	C4 φ4 push-in fitting
N4GA2	MPS For reduced wiring single	C6 φ6 push-in fitting
N4GB1	MPD For reduced wiring double/3-position	C8 φ8 push-in fitting *2
N4GB2		CL4 L type φ4 push-in fitting (upward) *1*3
		CL6 L type φ6 push-in fitting (upward) *3
		CL8 L type φ8 push-in fitting (upward) *2*3
		CD4 L type φ4 push-in fitting (downward) *1
		CD6 L type φ6 push-in fitting (downward)
		CD8 L type φ8 push-in fitting (downward) *2

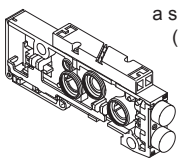
D Cable length *4	E Option
Blank For individual wiring	Blank No option
2 Select a cable length from page 567.	F A/B port filter integrated
6	
8	
10	

Single side plugged specifications	A Port	B Port
C4NC	φ4 push-in fitting	Plug
C6NC	φ6 push-in fitting	
C8NC	φ8 push-in fitting *2	
C4NO	Plug	φ4 push-in fitting
C6NO		φ6 push-in fitting
C8NO		φ8 push-in fitting *2
CL4NC	L type φ4 push-in fitting (upward) *1*3	Plug
CL6NC	L type φ6 push-in fitting (upward) *3	
CL8NC	L type φ8 push-in fitting (upward) *2*3	
CL4NO	Plug	L type φ4 push-in fitting (upward) *1*3
CL6NO		L type φ6 push-in fitting (upward) *3
CL8NO		L type φ8 push-in fitting (upward) *2*3
CD4NC	L type φ4 push-in fitting (downward) *1	Plug
CD6NC	L type φ6 push-in fitting (downward)	
CD8NC	L type φ8 push-in fitting (downward) *2	
CD4NO	Plug	
CD6NO		L type φ6 push-in fitting (downward)
CD8NO		L type φ8 push-in fitting (downward) *2

*4 When a purchase is made for the expansion of stations of reduced wiring, a socket assembly will be attached to the product.
 Select a cable length from the next **D** page and fill in the cable length. However, it will not be necessary to include the cable length when making arrangements with the manifold specifications.

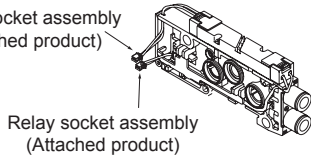
*1 Only 4GB1 are supported.
 *2 Only 4GB2 are supported.
 *3 The L type push-in fitting (upward) is available only for the single solenoid.

N4GA1R-MP



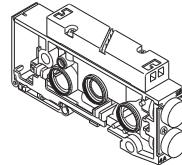
a side socket assembly (Attached product)

N4GB1R-MPD-C4-3



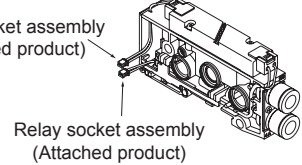
Relay socket assembly (Attached product)

N4GA2R-MP



a side socket assembly (Attached product)

N4GB2R-MPD-C6-5



Relay socket assembly (Attached product)

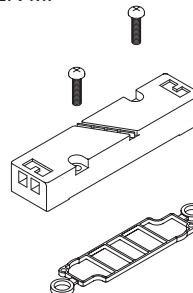
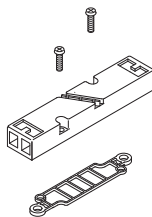
B-1. Masking plate

4G1 R - MP

4G1R-MP

4G2R-MP

A Model no.



MN4GD & 4GE 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.

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 requiring 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 size

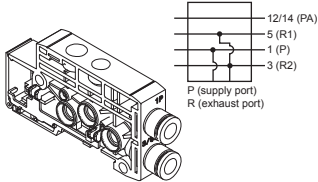
N4G2 R - Q - 10L X

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

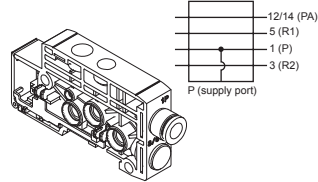
A Type		B Port size		C Exhaust	
Q	Internal pilot	6	φ6 push-in fitting	Blank	Common exhaust
		6L	φ6 push-in fitting upward	X	Atmospheric release
		6D	φ6 push-in fitting downward	(With X, configure atmosphere release for the end block.)	
		8	φ8 push-in fitting		
		8L	φ8 push-in fitting upward		
		8D	φ8 push-in fitting downward		

A Type		B Port size		C Exhaust	
Q	Internal pilot	8	φ8 push-in fitting	Blank	Common exhaust
		8L	φ8 push-in fitting upward	X	Atmospheric release
		8D	φ8 push-in fitting downward	(With X, configure atmosphere release for the end block.)	
		10	φ10 push-in fitting		
		10L	φ10 push-in fitting upward		
		10D	φ10 push-in fitting downward		

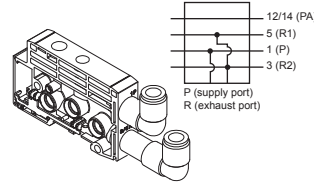
N4G1R-Q-8



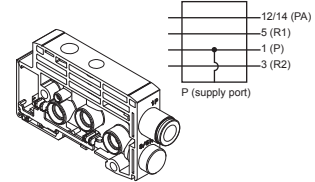
N4G1R-Q-8X



N4G2R-Q-10L



N4G2R-Q-10X

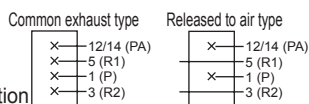


E. End block

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

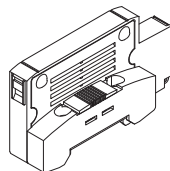
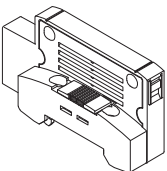
Model no. **A** Type **B** Installation position



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

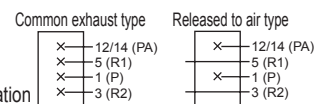
N4G1R - EL

N4G1R - ER



N4G2 R - EX L

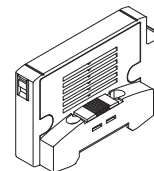
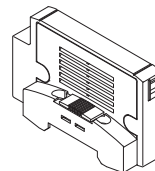
Model no. **A** Type **B** Installation position



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

N4G2R-EL

N4G2R-ER



Piping section

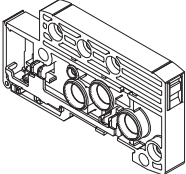
F. Partition block

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. **A** Type

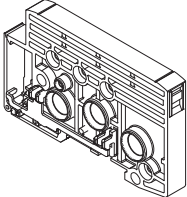
N4G1-S



N4G2 R - SA

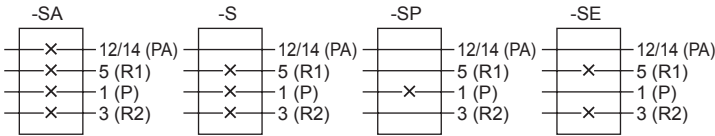
Model no. **A** Type

N4G2-S



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

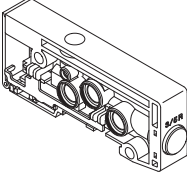
A Type	
SA	P/R/PA stop
S	P/R stop PA through
SP	P stop R/PA through
SE	R stop P/PA through

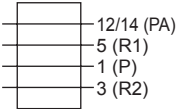


G. Mix block

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





4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

MN4GD & 4GE Series

Block manifold: wiring section

Wiring section

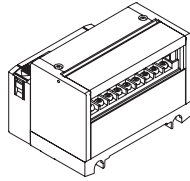
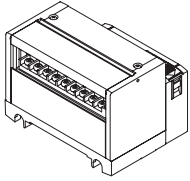
(Electrical block) * Orders cannot be placed for only an electrical block.

H. Centralized terminal block

M3 thread specifications

N4G1R-T10

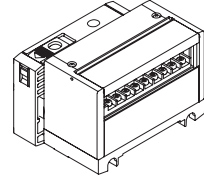
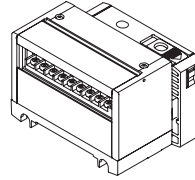
N4G1R-T10R



M3 thread specifications

N4G2R-T10

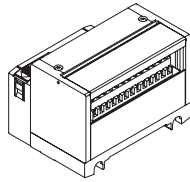
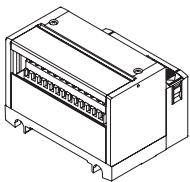
N4G2R-T10R



Push tightening specifications

N4G1R-T11

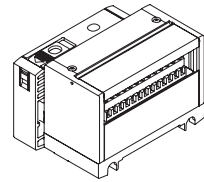
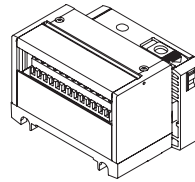
N4G1R-T11R



Push tightening specifications

N4G2R-T11

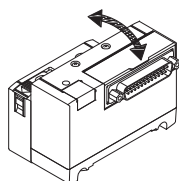
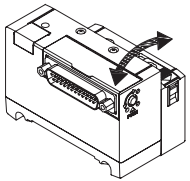
N4G2R-T11R



I. D sub-connector block

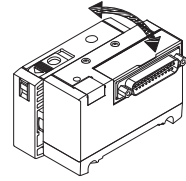
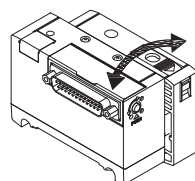
N4G1R-T30

N4G1R-T30R



N4G2R-T30

N4G2R-T30R



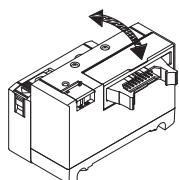
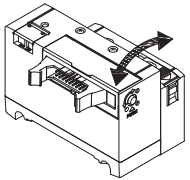
*Refer to page 597 for cable model no. with D-sub connector.

J. Flat cable connector block

● With power supply terminal

N4G1R-T50

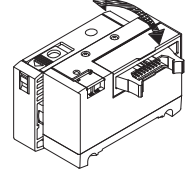
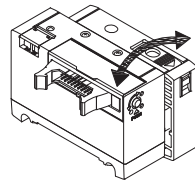
N4G1R-T50R



● With power supply terminal

N4G2R-T50

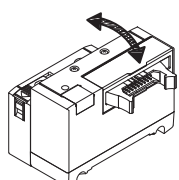
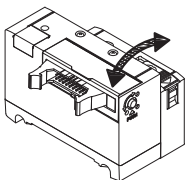
N4G2R-T50R



● Without power supply terminal

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

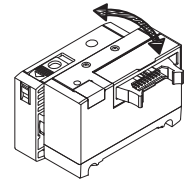
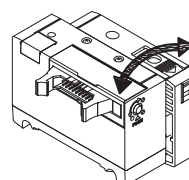
N4G1R-T51R (N4G1R-T52R)
(N4G1R-T53R)



● 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

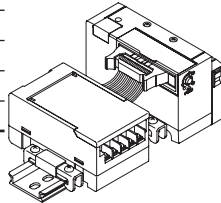
N4G1 R - **T6G1**

Model no.

A Type

A Type			
T6A0/1	UNIWIRESYSTEM	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	UNIWIRESYSTEM H		8 points/16 points

N4G1R-T6*



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

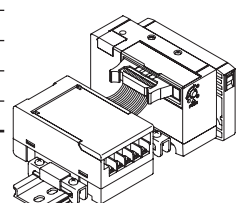
N4G2 R - **T6G1**

Model no.

A Type

A Type			
T6A0/1	UNIWIRESYSTEM	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	UNIWIRESYSTEM H		8 points/16 points

N4G2R-T6*



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

● Thin slot type

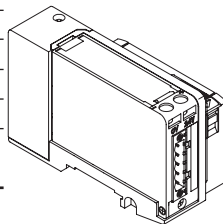
N4G1 R - **T7D1**

Model no.

A Type

A 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		PNP
T7SP1			

N4G1R-T7*



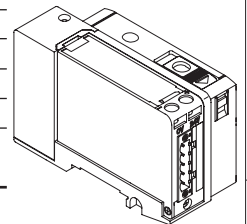
N4G2 R - **T7G1**

Model no.

A Type

A 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		PNP
T7SP1			

N4G2R-T7*



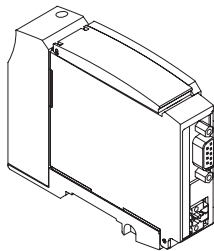
● Discrete serial transmission slave unit (Thin slot type)

N4G1 R - **T8G1**

A Wiring method

A Wiring method				
T8G1	CC-Link	NPN	16 points	
T8G2			32 points	
T8GP1	(Thin type)	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*

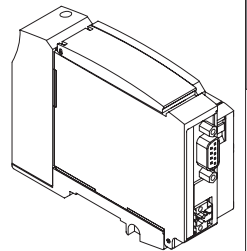


N4G2 R - **T8G1**

A Wiring method

A Wiring method				
T8G1	CC-Link	NPN	16 points	
T8G2			32 points	
T8GP1	(Thin type)	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*



4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD & 4GE Series

Block manifold: wiring section

Wiring section

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

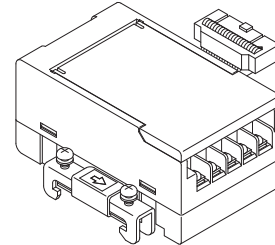
K. Serial transmission block

- Discrete serial transmission slave unit (connector connection type)

4GR - OPP3 - 0A

A Wiring method

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

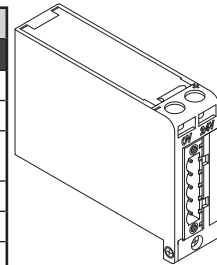


- Discrete serial transmission slave unit (Thin slot type)

4GR - OPP4 - 0CA

A Wiring method

Symbol	Descriptions			
A Wiring method				
0CA	T7C0	CompoBus/S (Thin type)	NPN	8 points
1CA	T7C1		16 points	
1D	T7D1	DeviceNet (Thin type)	NPN	16 points
0E	T7E0	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

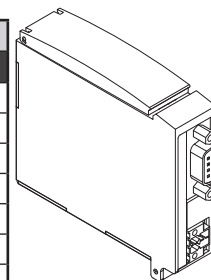


- Discrete serial transmission slave unit (Thin slot type)

4GR - OPP7 - 2G

A Wiring method

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



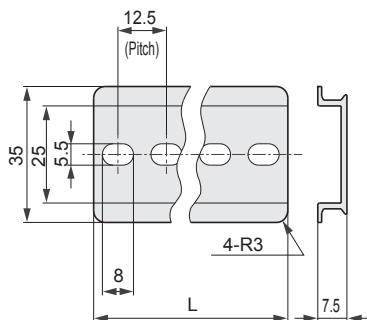
4GAB
M4GAB
MN4GAB
4GAB Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

Related products

Mounting rail, silencer, blank plug, tag plate

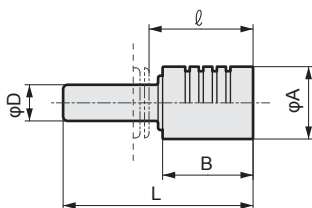
● Mounting rail

N4GR-BAA <length>



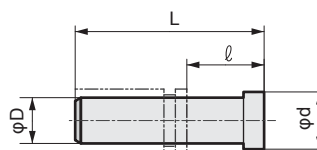
- The min. length is 87.5 mm.
- Select the length in pitches of 12.5 mm.
- Refer to page 581 for details.

● 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	11	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 583 to 586.

<Tag holder>

N4G1 R-TAG-HOLDER

A Model No.

N4G1

N4G2

(Available in sets of 2.)

<Tag plate>

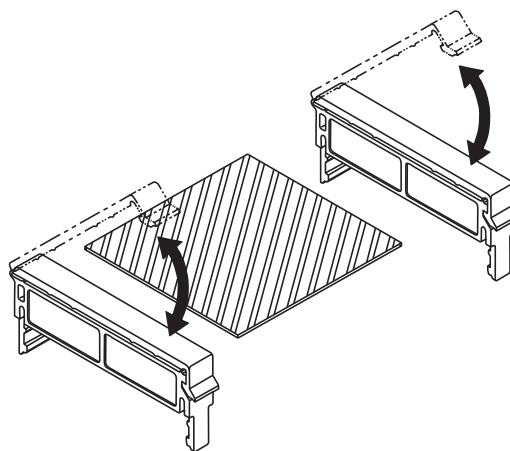
N4G1 R-TAG-PLATE - **A** - 200^{Note 1}

A Model no.	B Type	C Length (mm) ^{Note 1}
N4G1	A	MN4GA1/2 shared
	B1	Wide type for MN4GB1
	B2	Narrow type for MN4GB1 ^{Note 2}
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.



4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD & 4GE Series

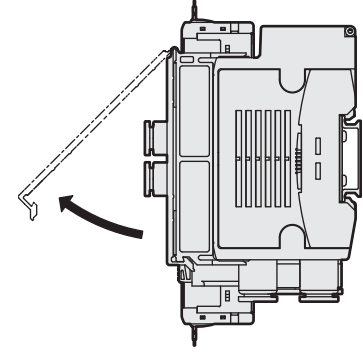
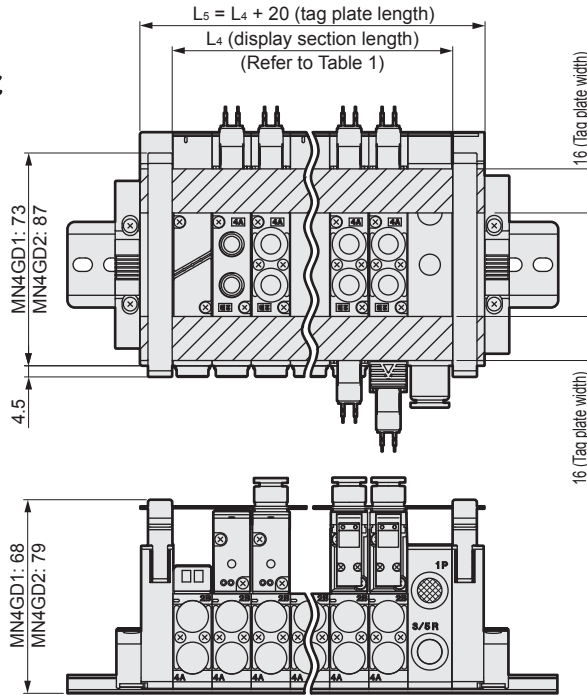
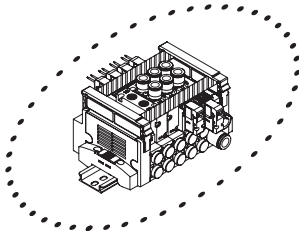
Block manifold; related products

Dimensions: Tag plate

4GAV/B
M4GAV/B
MN4GAV/B
4GAV/B Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

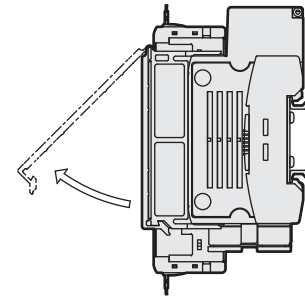
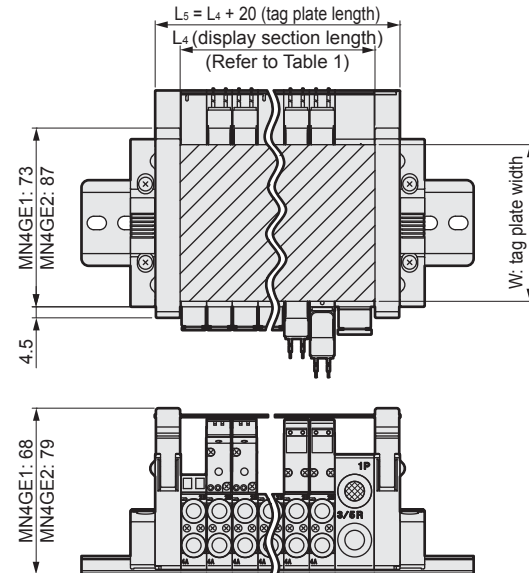
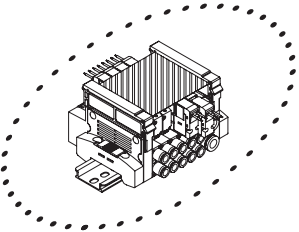
MN4GD1/2

● Tag plate



MN4GE1/2

● 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)

MN4GD		MN4GE	
MN4GD1	$L_5 = (10.5 \times n) + (16 \times m) + (10.5 \times l) + 20$	MN4GE1	$L_5 = (10.5 \times n) + (16 \times m) + (10.5 \times l) + 20$
MN4GD2	$L_5 = (16 \times n) + (18 \times m) + (10.5 \times l) + 20$	MN4GE2	$L_5 = (16 \times n) + (18 \times m) + (10.5 \times l) + 20$

n: number of valve blocks

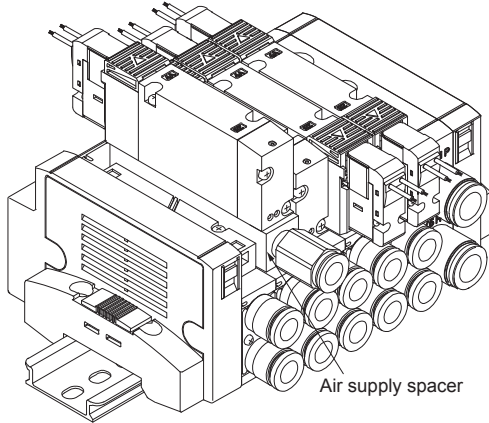
m: number of supply and exhaust blocks

l: number of partition blocks

Related products

Air supply spacer/pilot check valve

● Air supply spacer



Specifications

Model no.	P→A/B		A/B→R		Weight g
	C (dm ³ /(s·bar))	b	C (dm ³ /(s·bar))	b	
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 $S \approx 5.0 \times C$.

How to order discrete part

4G **2** **R** - **P** - **GWS6**

A Air supply spacer model no.

B Port size
Note 1

Symbol	Descriptions	Model no.			
		4GD1	4GE1	4GD2	4GE2
A Air supply 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			●	

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.

4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

MN4GD & 4GE Series

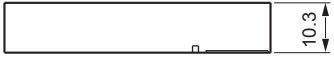
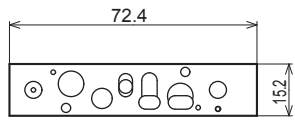
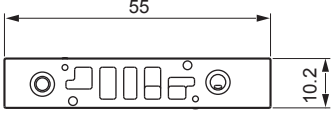
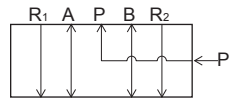
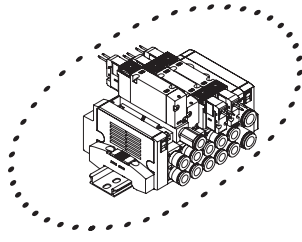
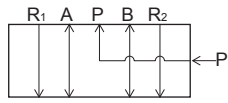
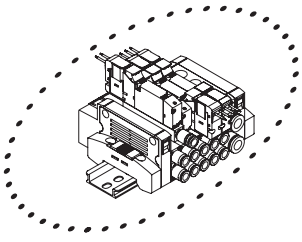
Block manifold; related products

Dimensions

● 4G1

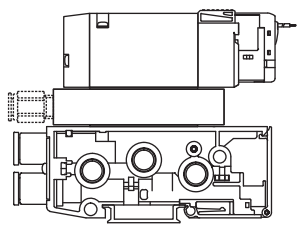
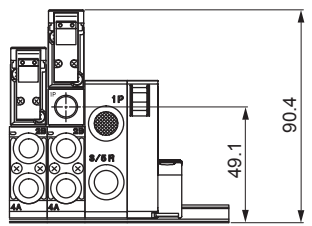
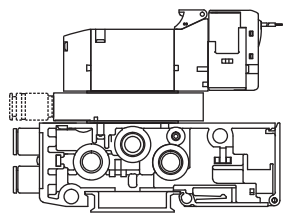
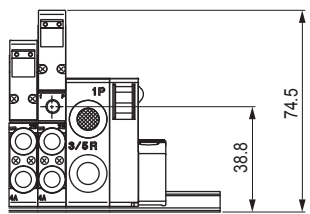
● 4G2

4GAV/B
M4GAV/B
MN4GAV/B
4GAV/B
Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications



Dimensions when mounted

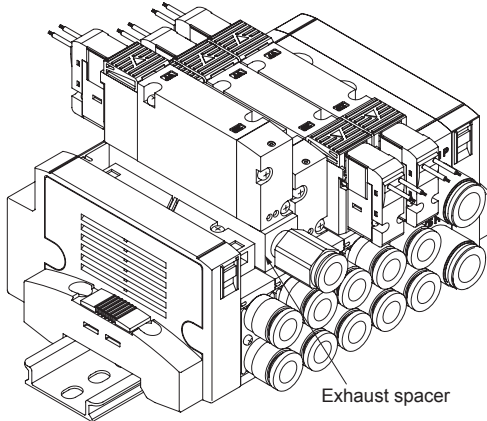
Dimensions when mounted



Related products

Exhaust spacer/pilot check valve

● Exhaust spacer



Specifications

Model no.	P→A/B		A/B→R		Weight g
	C (dm ³ /(s·bar))	b	C (dm ³ /(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 $S \approx 5.0 \times C$.

How to order discrete part

4G **2** **R-R** - **GWS6**

A Exhaust spacer model no.

B Port size
Note 1

Symbol	Descriptions	Model no.			
		4GD1	4GE1	4GD2	4GE2
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			●	

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 exhaust 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 exhaust spacer cannot be selected.
- Note 5 Combination with the masking plate is not available.

4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

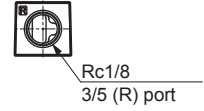
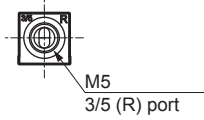
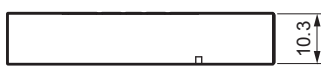
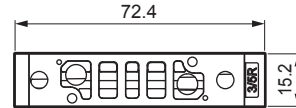
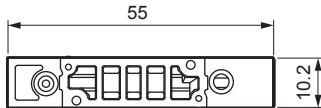
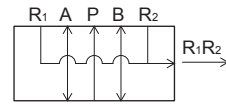
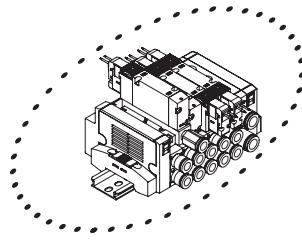
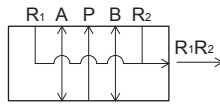
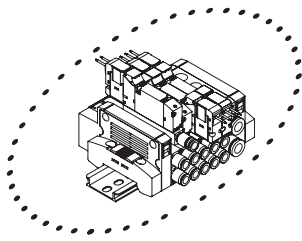
MN4GD & 4GE Series

Block manifold; related products

Dimensions

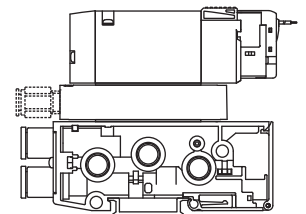
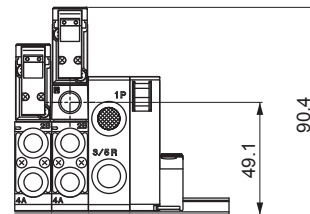
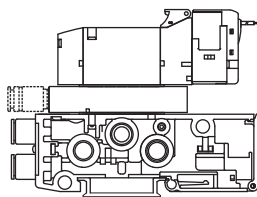
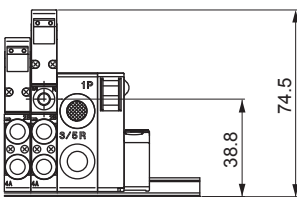
● 4G1

● 4G2

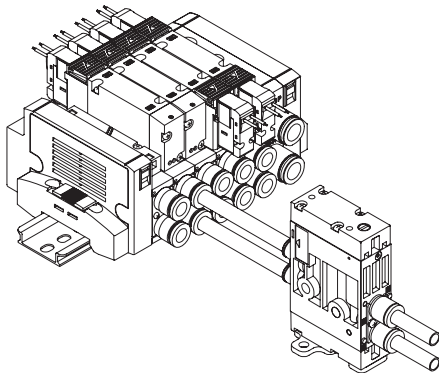


Dimensions when mounted

Dimensions when mounted



● Pilot check valve

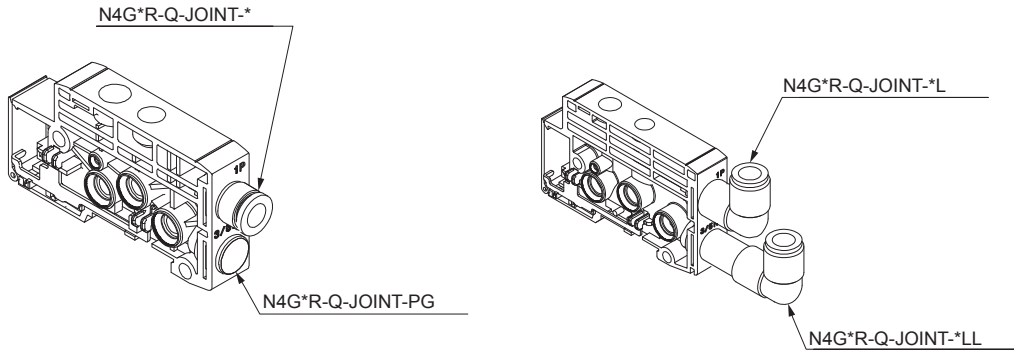


Refer to page 477 for details.

4GAV/B
M4GAV/B
MN4GAV/B
4GAV/B
Master valve
4GD/E
M4GD/E
MN4GD/E
Technical data
Safety precautions
Manifold Specifications

Related parts

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
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
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

4GAB

M4GA/B

MN4GA/B

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety
precautions

Manifold
Specifications

Mounting rail length (L2)

- Determine the rail length using the calculation method shown below. The obtained length is standard.
- 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

$$\text{Manifold length (L1)} = (\text{Valve Block Quantity} \times \text{A}) + (\text{Supply and exhaust Block Quantity} \times \text{B}) + (\text{Partition Block Quantity} \times \text{C}) + \text{D} + \text{E}$$

$$\text{Mounting rail length (L2)} = L2' \times 12.5$$

A, B, C, D, and E each indicate the length (width) of each block.

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

$$\text{Rail mounting pitch (L3)} = L2 - 12.5$$

Block length (width) dimensions table (mm)

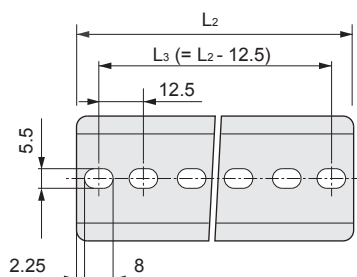
		MN4GD/E1	MN4GD/E2	MN4G1/2MIX		
				MN4GD/E1	MN4GD/E2	
A	Valve block	10.5	16	10.5	16	
B	Supply and exhaust block	16	18	16	18	
C	Partition block	10.5	10.5	10.5	10.5	
D	Individual wiring	41	46	44.5		
	Electrical block for reduced wiring	T10/T11	83.8	86.3	86.3	
		T10R/T11R	83.8	86.3	83.8	
		T30/T5*	69.3	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

L1: Manifold length	47.5 or less	47.5 or more 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
L2: 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 L3	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".



4GAB

M4GAB

MN4GAB

4GAB Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

Safety precautions

Manifold specifications

MN4GD & 4GE Series

Manifold specifications

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.

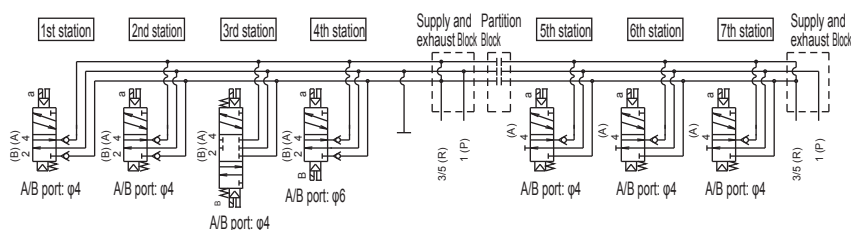
Connector pin no.				Valve No.																							
T50/T50R	T51/T51R	T52/T52R	T53/T53R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	1	1	1	a																							
	2	2	2		a																						
	3	3	3				a																				
	4	4	4				b																				
	5	5	5					a							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

* 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 598) 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 564 to 578) and the page for model no. of each of the specifications.

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

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)																									

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

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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																									
	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																									
T7S1: CompoNet 16 points (NPN)																											
T7SP1: CompoNet 16 points (PNP)																											

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				Connector Pin No.	Valve No.																							
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
T8G1	CC-Link	NPN	16 points	1																								
			32 points	2																								
PNP		16 points	3																									
		32 points	4																									
T8P1	PROFIBUS-DP	NPN	16 points	5																								
T8P2			32 points	6																								
T8PP1		PNP	16 points	7																								
			32 points	8																								
T8EC1	EtherCAT	NPN	16 points	9																								
T8EC2			32 points	10																								
T8ECP1		PNP	16 points	11																								
			32 points	12																								
T8EN1	EtherNet/IP	NPN	16 points	13																								
T8EN2			32 points	14																								
T8ENP1		PNP	16 points	15																								
			32 points	16																								
				17																								
				18																								
				19																								
				20																								
				21																								
				22																								
				23																								
				24																								
				25																								
				26																								
				27																								
				28																								
				29																								
				30																								
				31																								
				32																								

4GAB

M4GAB

MN4GAB

4GAB
Master valve

4GD/E

M4GD/E

MN4GD/E

Technical data

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