

4GA/B

M4GA/B

MN4GA/B

4GA/B

(master)

4GB

With sensor

4GD/E

M4GD/E

MN4GD/E

4GA/B4

MN3E

MN4E

W4GA/B2

W4GB4

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B

(master)

4F

4F

(master)

PV5G

GMF

PV5

GMF

PV5S-0

3Q

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP

NVP

4G*0EJ

4F*0EX

4F*0E

HNV

HSV

2QV

3QV

SKH

Silencer

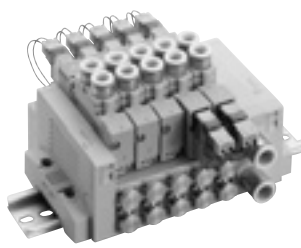
TotAirSys

(Total Air)

TotAirSys

(Gamma)

Ending



Individual wiring block manifold
Body piping

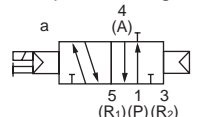
MN4GA1/2 Series

● Cylinder bore size: $\varnothing 20$ to $\varnothing 80$

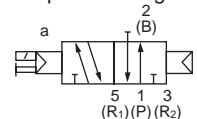


JIS symbol

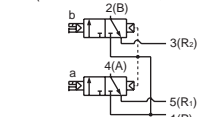
- 3-port valve
2-position single NC



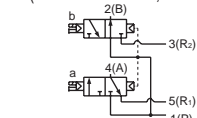
2-position single NO



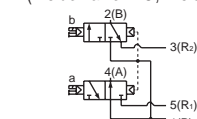
- Two 3-port valves integrated
(A side valve: NC, B side valve: NC)



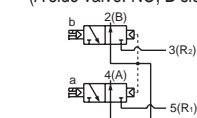
(A side valve: NC, B side valve: NO)



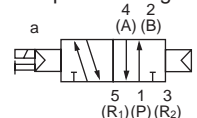
(A side valve: NO, B side valve: NC)



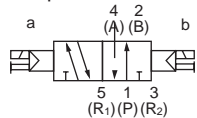
(A side valve: NO, B side valve: NO)



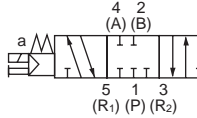
- 5-port valve
2-position single



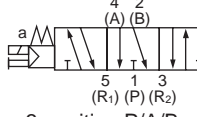
2-position double



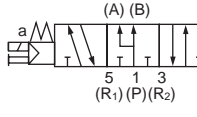
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



3-position P/A/B connection

Manifold common specifications

Item	Description
Manifold	Block manifold
Mounting method	DIN rail mount
Supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)
Piping direction	Valve top direction
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈ 100 psi, 7 bar)
Min. working pressure MPa	0.2 (≈ 29 psi, 2 bar) (*3)
Proof pressure MPa	1.05 (≈ 150 psi, 10.5 bar)
Ambient temperature $^{\circ}\text{C}$	-5 (23 $^{\circ}\text{F}$) to 55 (131 $^{\circ}\text{F}$) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41 $^{\circ}\text{F}$) to 55 (131 $^{\circ}\text{F}$)
Manual override	Non-locking/locking common type (standard)
Lubrication (*1)	Not required
Degree of protection (*2)	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environments

*1 Use turbine oil Class 1 ISO VG32 for lubrication.
Excessive or intermittent lubrication results in unstable operation.

*2 Avoid dripping water or oil, etc., during use.
IP65 (jet-proof) applies for DIN terminal box specifications. However, the specified outer diameter of the applicable cord and tightening torque must be used for fixing in place.

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

Electrical specifications

Item		Description						
Rated voltage		V	24 DC	12 DC	5 DC	3 DC	100 AC	200 AC
Voltage fluctuation range		±10%						
Holding current A (*4)	Standard	0.015 (0.017)	0.030 (0.034)	0.072 (0.082)	0.120 (0.136)	0.009 (0.009)	0.006 (0.006)	
	With low exoergic/energy circuit	0.005	0.010	-		-		
Power consumption W (*4)	Standard	0.35(0.40)			0.35(0.40)		-	
	With low exoergic/energy circuit	0.1			-		-	
Apparent power VA (*4)	Standard	-			-		0.93 (0.98)	1.20 (1.40)
Thermal class		B						
Surge suppressor		Option						
Indicator		Lamp (option)						

*4: Values in () apply when lamp is included. In addition, the type with low exoergic/energy circuit is only available with lamp.

Individual specifications

Item	MN3GA1/MN4GA1		MN3GA2/MN4GA2	
Max. station No.	24 stations		20 stations	
Port size	Metric fitting/ M5, Rc thread	A/B port	Barbed fitting $\varnothing 1.8$ Push-in fitting $\varnothing 1.8$, $\varnothing 4$, $\varnothing 6$ M5	Push-in fitting $\varnothing 4$, $\varnothing 6$, $\varnothing 8$ Rc1/8
		P/R port	Push-in fitting $\varnothing 6$, $\varnothing 8$	Push-in fitting $\varnothing 8$, $\varnothing 10$
	Inch fitting/ M5, NPT thread	A/B port	Push-in fitting $\varnothing 1/8$ ", $\varnothing 5/32$ " M5	Push-in fitting $\varnothing 1/4$ ", $\varnothing 5/16$ " NPT1/8
		P/R port	Push-in fitting $\varnothing 1/4$ ", $\varnothing 5/16$ "	Push-in fitting $\varnothing 5/16$ ", $\varnothing 3/8$ "
	Metric fitting, G thread	A/B port	-	G1/8
		P/R port	-	Push-in fitting $\varnothing 8$, $\varnothing 10$

· For DIN rail mounting, refer to "Mounting orientation" on page 855.

· For weight, refer to page 234.

Performance/characteristics by model

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

Values with lamp/surge suppressor are shown. The response time is the value with supply pressure of 0.5 MPa at 20°C and without lubrication. It depends on the pressure and the lubricant quality.

Flow characteristics

Model No.	Solenoid position		P→A/B		A/B→R1/R2	
			C[dm ³ /(s·bar)]	b	C[dm ³ /(s·bar)]	b
MN3GA1 MN4GA1	Two 3-port valves integrated		0.87	0.37	1.0 (0.68)	0.14 (0.22)
	2-position		0.98	0.33	1.2 (0.71)	0.11 (0.27)
	3-position	All ports closed	0.92	0.34	1.0 -	0.16 -
		ABR connection	0.92	0.29	1.1 (0.69)	0.13 (0.22)
		PAB connection	1.1	0.35	1.1 -	0.17 -
MN3GA2 MN4GA2	Two 3-port valves integrated		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 -

*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

*2: Values in () are with built-in exhaust check valve.

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item ⑤ option "A" on page 232.

Clean-room specifications

- Anti-dust generation structure for use in cleanrooms

** - Voltage - **P7***

Specifications for rechargeable battery (Catalog No. CC-1226A)

- For use in the rechargeable battery manufacturing process, materials used for air path and sliding section are limited

** - Voltage - **P4**

CE marking specifications

** - Voltage - **ST**

- Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

Individual wiring block manifold; body piping

How to order

Manifold model No.

3-port manifold model No.

Discrete valve block with solenoid valve

Discrete 3-port valve block with solenoid valve

Single solenoid valve

Discrete 3-port solenoid valve

Model No.

C Port size
(*1)

E Option

G Voltage

Precautions for model selection

is not available.

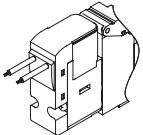
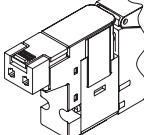
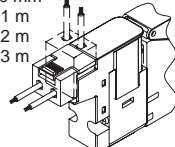
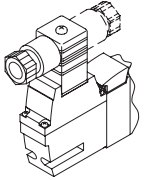
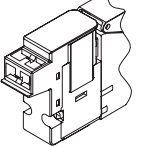
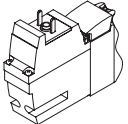
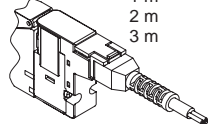
MN4GA1/2 Series

Individual wiring block manifold; body piping

[Electrical connection list]

			A Model No.							
			Manifold				Discrete valve black with solenoid valve/ Discrete solenoid valve			
			3-port valve		5-port valve					
			MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N)3GA1	(N)3GA2	(N)4GA1	(N)4GA2
D Electrical connections										
Blank	Grommet lead wire (300 mm) (*12)		●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7) With surge suppressor/lamp (*13) (*15)		●		●		●		●	
BN	DIN terminal box (Pg7) (Without terminal box) With surge suppressor (*13) (*15)		●		●		●		●	
E-connector (upward/lateral common)										
E0	Lead wire (300 mm) (*14)		●	●	●	●	●	●	●	●
E00	Lead wire (500 mm) (*14)		●	●	●	●	●	●	●	●
E01	Lead wire (1000 mm) (*14)		●	●	●	●	●	●	●	●
E02	Lead wire (2000 mm) (*14)		●	●	●	●	●	●	●	●
E03	Lead wire (3000 mm) (*14)		●	●	●	●	●	●	●	●
E0N	Without lead wire (without socket) (*14)		●	●	●	●	●	●	●	●
E1	Without lead wire (socket/terminal attached) (*14)		●	●	●	●	●	●	●	●
E2	Lead wire (300 mm), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
E20	Lead wire (500 mm), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
E21	Lead wire (1000 mm), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
E22	Lead wire (2000 mm), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
E23	Lead wire (3000 mm), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
E2N	No lead wire (without socket), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
E3	No lead wire (with socket/terminal) , surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
EJ type connector (socket with cover, upward/lateral common)										
E01J	Lead wire (1000 mm) (*14)		●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm) (*14)		●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm) (*14)		●	●	●	●	●	●	●	●
E21J	Lead wire (1000 mm), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
E22J	Lead wire (2000 mm), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●
E23J	Lead wire (3000 mm), surge suppressor/indicator lamp		●	●	●	●	●	●	●	●

- *12: The grommet lead wire specifications are compatible with DC voltage only.
 *13: AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.
 *14: AC voltage includes a rectifier circuit.
 *15: The terminal box conforms to EN175301-803 Type C (former DIN 43650-C).
 Refer to pages 856 and 857 for details.

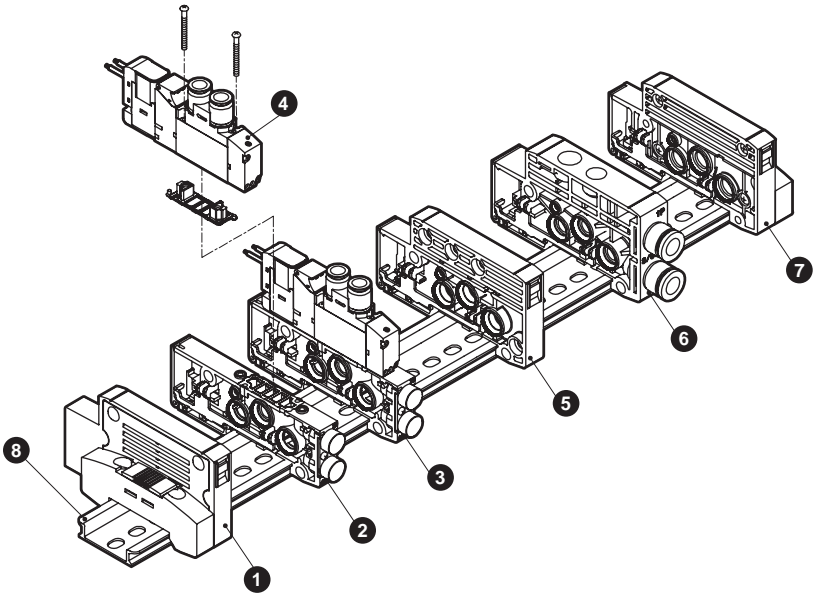
Electrical connections		4GA/B
Discrete valve/individual wiring manifold		M4GA/B
		MN4GA/B
Blank	Grommet lead wire	E1 E3 E-connector with socket/terminal
● Lead wire length 300 mm		
E0 E2	E-connector	B DIN terminal box
● Lead wire length 300 mm 500 mm 1 m 2 m 3 m		
E0N E2N	E-connector without socket	BN DIN terminal box without terminal box
		
E0*J E2*J	EJ type connector	
● Lead wire length 1 m 2 m 3 m		

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GA1/2 Series

Individual wiring block manifold; body piping

Manifold components explanation and parts list



List of main components (refer to pages 286 to 305 for details)

No.	Component name	Model No. (example)	No.	Component name	Model No. (example)
1	End block L	N4G1R-EL	5	Partition block	N4G1R-S
2	Discrete valve block	N4GA1R-V1	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GA110R-C6-H-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GA119R-C6-H-3	8	DIN rail	N4GR-BAA (Length)

A type individual wiring weight

4GA1

(g)

Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N3GA110R-C6-3	70	Supply and exhaust block	N4G1R-Q-8	58
	N3GA1110R-C6-3	70		N4G1R-QK-8	60
	N4GA110R-C6-3	70	End block	N4G1R-E*	60
	N4GA120R-C6-3	87		N4G1R-EX*	60
	N4GA1 ³ / ₅ 0R-C6-3	91	Partition block	N4G1R-S	45
	N3GA1660R-C6-3	87	Valve block	N4GA1R-V1	28
Valve block with masking plate	N4GA1R-MP	34	DIN rail	N4GR-BAA (Length)	0.19/mm

4GA2

(g)

Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N3GA210R-C8-3	129	Supply and exhaust block	N4G2R-Q-10	83
	N3GA2110R-C8-3	129		N4G2R-QK-10	85
	N4GA210R-C8-3	129	End block	N4G2R-E*	84
	N4GA220R-C8-3	147		N4G2R-EX*	85
	N4GA2 ³ / ₅ 0R-C8-3	159	Partition block	N4G2R-S	60
	N3GA2660R-C8-3	147	Valve block	N4GA2R-V1	53
Valve block with masking plate	N4GA2R-MP	66	DIN rail	N4GR-BAA (Length)	0.19/mm

Parts list

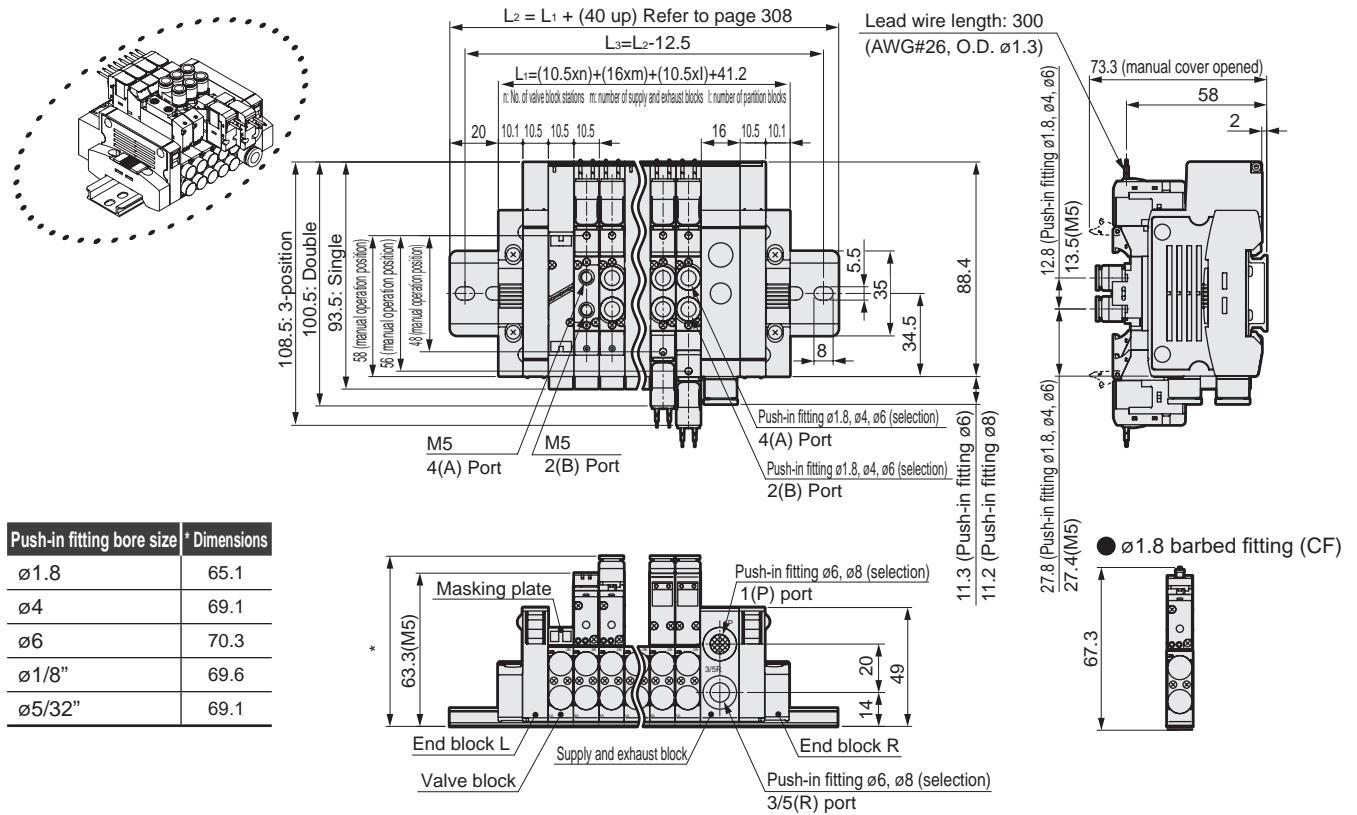
Applicable	Part name	Model No.	Applicable	Part name	Model No.
Valve 4G1	Cartridge fitting ø1.8 barbed	4G1R-JOINT-CF	Common	Coil assembly	4GR-[*1]-[*2]-COIL-[*3] *1: Electrical connections (blank, B, E0, ...), *3: Voltage (1, 2, 3, 4) *2: Ozone/coolant proof (blank, A) Surgeless (S) Low exoergic/energy circuit (E) External pilot (K)
	Cartridge fitting ø1.8 straight	4G1R-JOINT-C18			
	Cartridge fitting ø4 straight	4G1R-JOINT-C4		E-connector socket assembly	4GR-SOCKET-ASSY-[*1]-[*3] *1: Electrical connections (E0, E00...), *3: Voltage (1, 3, 4)
	Cartridge fitting ø6 straight	4G1R-JOINT-C6			
	Cartridge fitting ø1/8" straight	4G1R-JOINT-C3N		EJ type connector socket assembly	4GR-SOCKET-ASSY-[*1] *1: Electrical connections (E01J, E02J, ...)
	Cartridge fitting ø5/32" straight	4G1R-JOINT-C4N			
	Plug cartridge	4G1R-JOINT-CPG			
Valve 4G2	Cartridge fitting ø4 straight	4G2R-JOINT-C4	Valve 4G2	DIN terminal box assembly	4GR-TERMINAL-BOX-[*3] *3: Voltage (1, 2, 3, 4)
	Cartridge fitting ø6 straight	4G2R-JOINT-C6			
	Cartridge fitting ø8 straight	4G2R-JOINT-C8			
	Cartridge fitting ø1/4" straight	4G2R-JOINT-C6N			
	Cartridge fitting ø5/16" straight	4G2R-JOINT-C8N			
	Plug cartridge	4G2R-JOINT-CPG			

Dimensions

MN4GA1

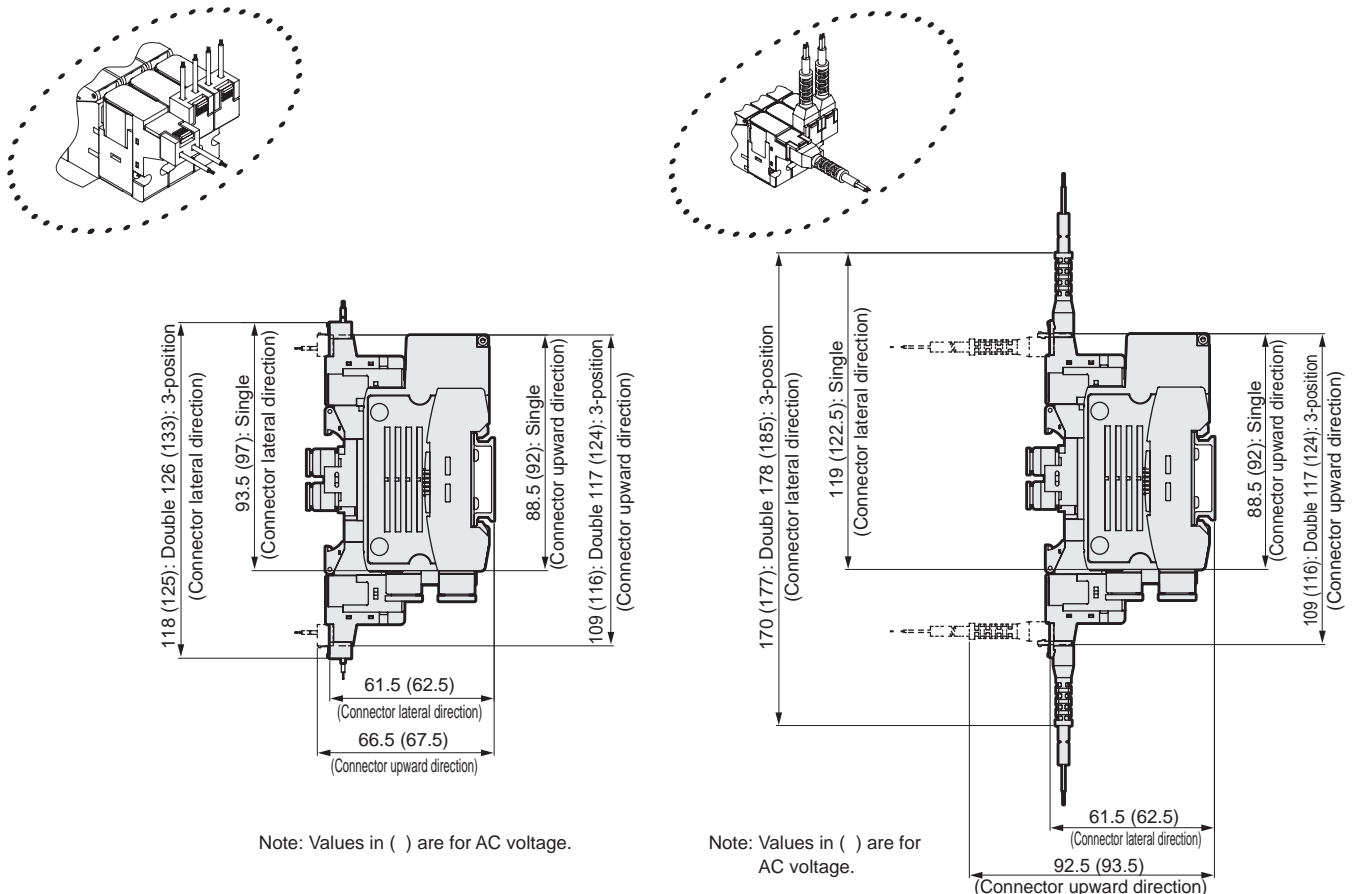
- Grommet lead wire (blank)

* For the 2-position single 3-port valve, either A port or B port is a plug.
In addition, the two 3-port valve integrated has the same dimensions as the double model.



- E-connector (E)

- EJ type connector (E**J)



* Refer to page 261 for dimensions of the supply and exhaust block push-in fitting.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GA2 Series

Individual wiring block manifold; body piping

Dimensions

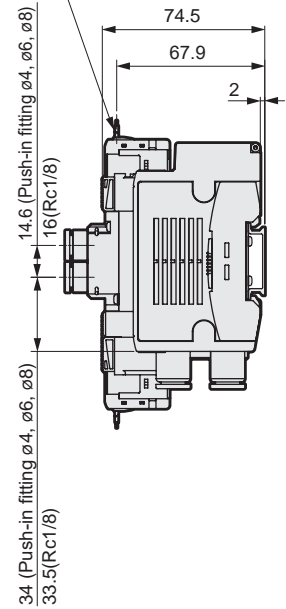
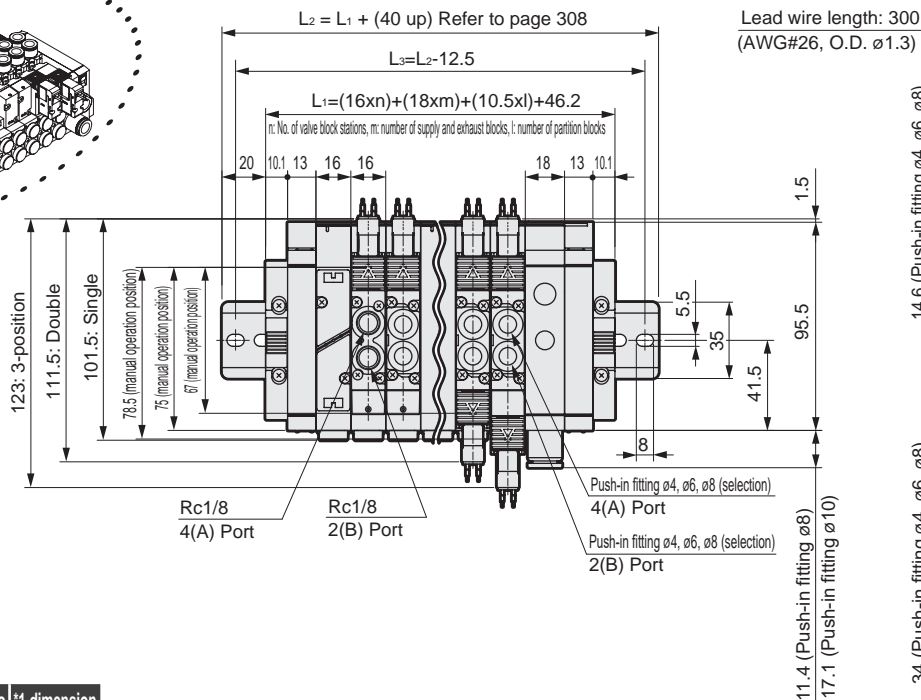
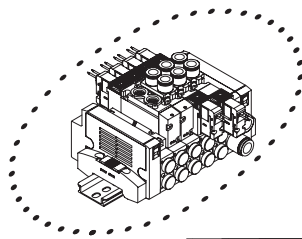


MN4GA2

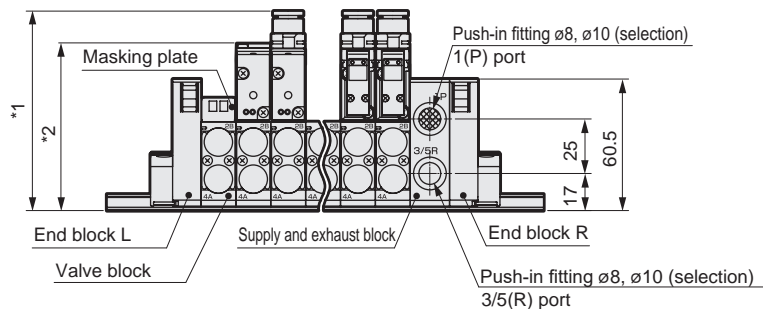
- Grommet lead wire (blank)

* For the 2-position single 3-port valve, either A port or B port is a plug.

In addition, the two 3-port valve integrated have the same dimensions as the double model.

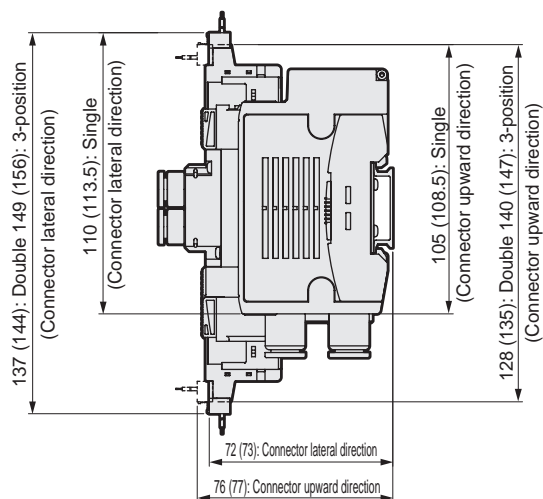
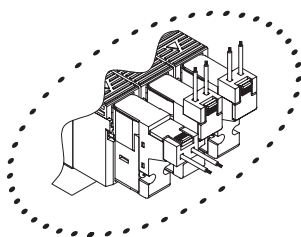


Push-in fitting bore size	*1 dimension
ø4	91.7
ø6	
ø8	
ø1/4"	92.6
ø5/16"	91.9
Female thread bore size	*2 dimension
Rc1/8	76.5
NPT1/8	77.8
G1/8	



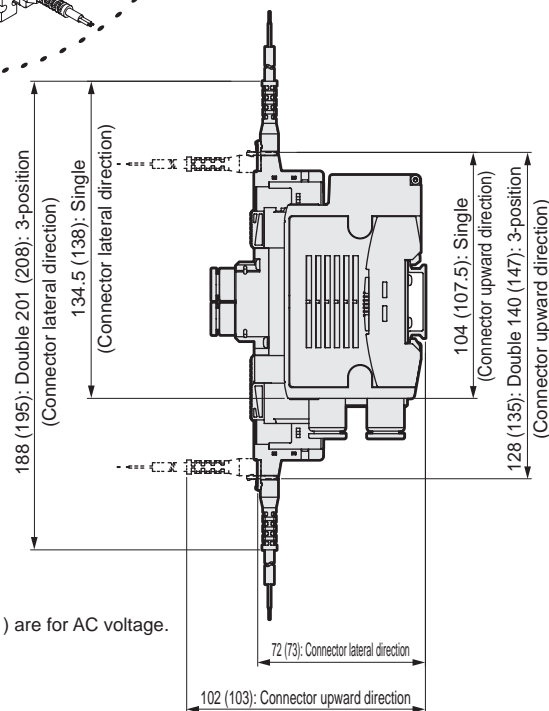
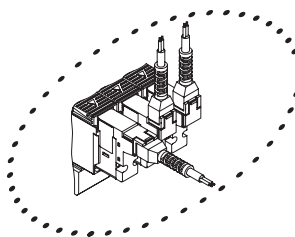
Dimensions

● E-connector (E)



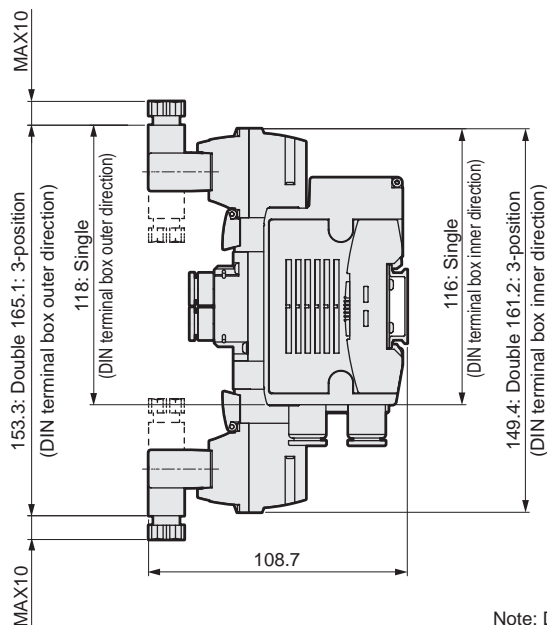
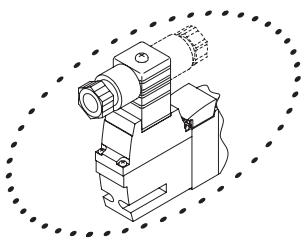
Note: Values in () are for AC voltage.

● EJ-connector (E**J)



Note: Values in () are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

* Refer to page 261 for dimensions of the supply and exhaust block push-in fitting.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B

M4GA/B

MN4GA/B

4GA/B

(master)

4GB

With sensor

4GD/E

M4GD/E

MN4GD/E

4GA/B4

MN3E

MN4E

W4GA/B2

W4GB4

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B

(master)

4F

4F

(master)

PV5G

GMF

PV5

GMF

PV5S-0

3Q

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP

NVP

4G*0EJ

4F*0EX

4F*0E

HNV

HSV

2QV

3QV

SKH

Silencer

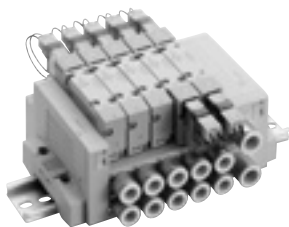
TotAirSys

(Total Air)

TotAirSys

(Gamma)

Ending



Individual wiring block manifold
Base piping

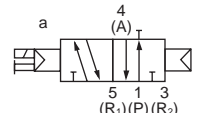
MN4GB1/2 Series

● Cylinder bore size: $\varnothing 20$ to $\varnothing 80$

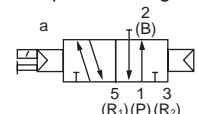


JIS symbol

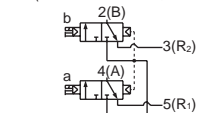
- 3-port valve
2-position single NC



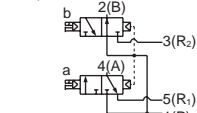
2-position single NO



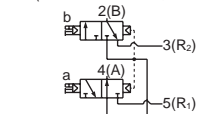
- Two 3-port valves integrated
(A side valve: NC, B side valve: NC)



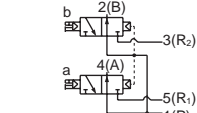
(A side valve: NC, B side valve: NO)



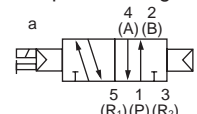
(A side valve: NO, B side valve: NC)



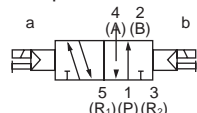
(A side valve: NO, B side valve: NO)



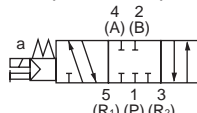
- 5-port valve
2-position single



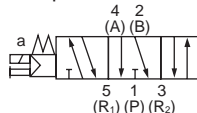
2-position double



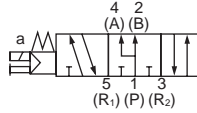
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item	Description
Manifold	Block manifold
Mounting method	DIN rail mount
Supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)
Piping direction	Lateral direction from base
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈ 100 psi, 7 bar)
Min. working pressure MPa	0.2 (≈ 29 psi, 2 bar) (*3)
Proof pressure MPa	1.05 (≈ 150 psi, 10.5 bar)
Ambient temperature $^{\circ}\text{C}$	-5 (23 $^{\circ}\text{F}$) to 55 (131 $^{\circ}\text{F}$) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41 $^{\circ}\text{F}$) to 55 (131 $^{\circ}\text{F}$)
Manual override	Non-locking/locking common type (standard)
Lubrication (*1)	Not required
Degree of protection (*2)	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environments

- *1 Use turbine oil Class 1 ISO VG32 for lubrication.
Excessive or intermittent lubrication results in unstable operation.
- *2 Avoid dripping water or oil, etc., during use.
IP65 (jet-proof) applies for DIN terminal box specifications. However, the specified outer diameter of the applicable cord and tightening torque must be used for fixing in place.
- *3 The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Electrical specifications

Item	Description
Rated voltage V	24 DC, 12 DC, 5 DC, 3 DC, 100 AC, 200 AC
Voltage fluctuation range	$\pm 10\%$
Holding current A (*4)	Standard: 0.015 (0.017), 0.030 (0.034), 0.072 (0.082), 0.120 (0.136), 0.009 (0.009), 0.006 (0.006)
Power consumption W (*4)	Standard: 0.35(0.40), 0.35(0.40), -
Apparent power VA (*4)	Standard: -
Thermal class	B
Surge suppressor	Option
Indicator	Lamp (option)

*4: Values in () apply when lamp is included. In addition, the type with low exoergic/energy circuit is only available with lamp.

Individual specifications

Descriptions	MN3GB1/MN4GB1	MN3GB2/MN4GB2
Max. station No.	24 stations	20 stations
Port size		
Metric fitting	A/B port: Barbed fitting $\varnothing 1.8$ Push-in fitting $\varnothing 1.8$, $\varnothing 4$, $\varnothing 6$	Push-in fitting $\varnothing 4$, $\varnothing 6$, $\varnothing 8$
Inch fitting	A/B port: Push-in fitting $\varnothing 6$, $\varnothing 8$ P/R-port: Push-in fitting $\varnothing 1/8$ ", $\varnothing 5/32$ "	Push-in fitting $\varnothing 8$, $\varnothing 10$ Push-in fitting $\varnothing 1/4$ ", $\varnothing 5/16$ "

- For DIN rail mounting, refer to "Mounting orientation" on page 855.
- For weight, refer to page 242.

Performance/characteristics by model

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

Values with lamp/surge suppressor are shown. The response times are values with supply pressure of 0.5 MPa at 20°C and without lubrication. They depend on the pressure and the lubricant quality.

Flow characteristics

Model No.	Solenoid position		P→A/B		A/B→R1/R2	
			C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b
MN3GB1 MN4GB1	Two 3-port valves integrated		0.86	0.35	1.0 (0.66)	0.15 (0.25)
	2-position		1.0	0.30	1.1 (0.72)	0.11 (0.26)
	3-position	All ports closed	0.96	0.32	1.0 -	0.14 -
		ABR connection	0.96	0.29	1.2 (0.71)	0.11 (0.30)
		PAB connection	1.1	0.31	1.0 -	0.15 -
MN3GB2 MN4GB2	Two 3-port valves integrated		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 -
		ABRConnection	2.2	0.38	2.5 (1.7)	0.18 (0.20)
		PAB connection	2.3	0.29	2.3 -	0.15 -

*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

*2: Values in () are with the exhaust check valve.

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item ⑤ option "A" on page 241.

Clean-room specifications

- Anti-dust generation structure for use in cleanrooms

** - Voltage - **P7***

Specifications for rechargeable battery (Catalog No. CC-1226A)

- For use in the rechargeable battery manufacturing process, materials used for air path and sliding section are limited

** - Voltage - **P4**

CE marking specifications

** - Voltage - **ST**

•Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB
With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
Silencer
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Ending

MN4GB1/2 Series

Individual wiring block manifold; base piping

How to order

Manifold model No.

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

3-port manifold model No.

MN3GB1 **66** **0** **R** - **C6** - **E2** **H** - **10** - **3**

Discrete valve block with solenoid valve

N4GB1 **1** **0** **R** - **C6** - **E2** **H** - **3**

Discrete 3-port valve block with solenoid valve

N3GB1 **66** **0** **R** - **C6** - **E2** **H** - **3**

Discrete solenoid valve

4GB1 **1** **9** **R** - **00** - **E2** **H** - **3**

Discrete 3-port solenoid valve

3GB1 **66** **9** **R** - **00** - **E2** **H** - **3**

A Model No.

B Solenoid position

D Electrical connections

F Station No.

C Port size
(*1) (*2)
(*3)

E Option

G Voltage

⚠ Precautions for model selection

- *1 A and B port plug specifications are available for the 2-position single only.
Specify the P/R-port bore size with the supply and exhaust block model No. in the manifold specifications sheet.
- *2 Ports A/B are the same size in the push-in L-fitting mix (CX).
- *3 For a discrete solenoid valve, select "00" for Port size.
- *4 Select MN4GB*80R when mixing with 4, 5-port valves.
Further, select MN3GB*80R when mixing with masking plate.
- *5 Not compatible with combination with external pilot (K).
Dimensions are the same as those of the respective 2-position double solenoid.
- *6 Simultaneously select option "L" for types other than single solenoid.
- *7 The push-in fitting cannot be mixed with the discrete valve's 4(A) or 2(B) port.

A Model No.									
Two 3-port valves integrated	5-port valve	Manifold		Discrete valve block with solenoid valve/discrete solenoid valve					
		MN3GB1	MN3GB2	MN4GB1	MN4GB2	(N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2

Code	Content		M	N	M	N	M	N	M	N	M	N
B Solenoid 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	Two 3-port valves integrated (*4) (*5)	A side valve: Normally closed	●	●				●	●			
		B side valve: Normally closed										
67		A side valve: Normally closed	●	●				●	●			
		B side valve: Normally open										
76		A side valve: Normally open	●	●					●	●		
		B side valve: Normally closed										
77		A side valve: Normally open	●	●				●	●			
		B side valve: Normally open										
8	Mix manifold (for multiple solenoid positions)		●	●	●	●	●	●	●	●	●	●
C Port size (A/B-port)												
Type	Metric fitting/Rc thread											
CF	ø1.8 barbed fitting (compatible tube UP-9102-**)		●			●			●			●
C18	ø1.8 push-in fitting (compatible tube UP-9402-**)		●			●			●			●
C4	ø4 push-in fitting											●
C6	ø6 push-in fitting											●
C8	ø8 push-in fitting											●
CL18	ø1.8 push-in L-fitting upward (compatible tube UP-9402-**) (*6)		●			●			●			●
CL4	ø4 push-in L-fitting (upward) (*6)		●			●			●			●
CL6	ø6 push-in L-fitting (upward) (*6)		●			●			●			●
CL8	ø8 push-in L-fitting (upward) (*6)											●
CD18	ø1.8 push-in L-fitting downward (compatible tube UP-9402-**)		●			●			●			●
CD4	ø4 push-in L-fitting (downward)											●
CD6	ø6 push-in L-fitting (downward)											●
CD8	ø8 push-in L-fitting (downward)											●
CX	Push-in fitting mix (*7)		●	●	●	●	●	●	●	●	●	●
Single, plug specs												
A port			B port									
CFNC	ø1.8 barbed fitting (compatible tube UP-9102-**)					●					●	
C18NC	ø1.8 push-in fitting (compatible tube UP-9402-**)											●
C4NC	ø4 push-in fitting											●
C6NC	ø6 push-in fitting											●
C8NC	ø8 push-in fitting											●
CFNO						●					●	
C18NO	Plug	ø1.8 barbed fitting (compatible tube UP-9102-**)				●					●	
C4NO		ø1.8 push-in fitting (compatible tube UP-9402-**)										●
C6NO		ø4 push-in fitting										●
C8NO		ø6 push-in fitting										●
CL18NC	ø1.8 push-in L-fitting upward (compatible tube UP-9402-**)											●
CL4NC	ø4 push-in L-fitting (upward)											●
CL6NC	ø6 push-in L-fitting (upward)											●
CL8NC	ø8 push-in L-fitting (upward)											●
CL18NO	ø1.8 push-in L-fitting upward (compatible tube UP-9402-**)											●
CL4NO	Plug	ø4 push-in L-fitting (upward)										●
CL6NO		ø6 push-in L-fitting (upward)										●
CL8NO		ø8 push-in L-fitting (upward)										●
CD18NC		ø1.8 push-in L-fitting downward (compatible tube UP-9402-**)										
CD4NC	ø4 push-in L-fitting (downward)											●
CD6NC	ø6 push-in L-fitting (downward)											●
CD8NC	ø8 push-in L-fitting (downward)											●
CD18NO	ø1.8 push-in L-fitting downward (compatible tube UP-9402-**)											●
CD4NO	Plug	ø4 push-in L-fitting (downward)										●
CD6NO		ø6 push-in L-fitting (downward)										●
CD8NO		ø8 push-in L-fitting (downward)										●
Type			Inch fitting/inch thread									
C3N	ø1/8" push-in fitting		●			●			●			●
C4N	ø5/32" push-in fitting		●						●			●
C6N	ø1/4" push-in fitting					●					●	●
C8N	ø5/16" push-in fitting											●
CL3N	ø1/8" push-in L-fitting (upward)		○			○			○			○
CL4N	ø5/32" push-in L-fitting (upward)		○									○
CL6N	ø1/4" push-in L-fitting (upward)					○						○
CL8N	ø5/16" push-in L-fitting (upward)								○			○
CXN	Push-in fitting mix (*7)		●	●	●	●	●	●	●	●	●	●
Single, plug specs												
A port			B port									
C3NCN	ø1/8" push-in fitting					●					●	
C4NCN	ø5/32" push-in fitting											●
C6NCN	ø1/4" push-in fitting											●
C8NCN	ø5/16" push-in fitting											●
C3NON	Plug	ø1/8" push-in fitting				●					●	
C4NON		ø5/32" push-in fitting										●
C6NON		ø1/4" push-in fitting										●
C8NON		ø5/16" push-in fitting										●
CL3NCN	ø1/8" push-in L-fitting (upward)											○
CL4NCN	ø5/32" push-in L-fitting (upward)											○
CL6NCN	ø1/4" push-in L-fitting (upward)											○
CL8NCN	ø5/16" push-in L-fitting (upward)											○
CL3NON	Plug	ø1/8" push-in L-fitting (upward)										○
CL4NON		ø5/32" push-in L-fitting (upward)										○
CL6NON		ø1/4" push-in L-fitting (upward)										○
CL8NON		ø5/16" push-in L-fitting (upward)										○
00	Discrete valve for mounting base										●	●

is not available.

O indicates a custom order.

MN4GB1/2 Series

Individual wiring block manifold; base piping

[Options, stations, voltage, electrical connection list]

[Options, stations, voltage, electrical connection list]			A Model No.							
			Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
			3-port valve Two valves integrated		5-port valve					
			MN3GB1	MN3GB2	MN4GB1	MN4GB2	(N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
Code	Description									
D Electrical connections										
Blank	Grommet lead wire (300 mm) (*15)		●	●	●	●	●	●	●	●
B	DIN terminal box (Pg 7)	Surge suppressor with / lamp (*16) (*19) (*21)		●		●		●		●
BN	DIN terminal box (Pg7) (without terminal box) with surge suppressor and indicator lamp(*16) (*19) (*21)			●		●		●		●
E-connector (upward/lateral direction common)										
E0	Lead wire (300 mm) (*17)		●	●	●	●	●	●	●	●
E00	Lead wire (500 mm) (*17)		●	●	●	●	●	●	●	●
E01	Lead wire (1000 mm) (*17)		●	●	●	●	●	●	●	●
E02	Lead wire (2000 mm) (*17)		●	●	●	●	●	●	●	●
E03	Lead wire (3000 mm) (*17)		●	●	●	●	●	●	●	●
E0N	Without lead wire (without socket) (*17)		●	●	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal) (*17)		●	●	●	●	●	●	●	●
E2	Lead wire (300 mm)	with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E20	Lead wire (500 mm)	with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E21	Lead wire (1000 mm)	with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E22	Lead wire (2000 mm)	with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E23	Lead wire (3000 mm)	with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E2N	Without lead wire (without socket) with surge suppressor and indicator lamp		●	●	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal)with surge suppressor and indicator lamp		●	●	●	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral direction common)										
E01J	Lead wire (1000 mm) (*17)		●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm) (*17)		●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm) (*17)		●	●	●	●	●	●	●	●
E21J	Lead wire (1000 mm)	with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E22J	Lead wire (2000 mm)	with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E23J	Lead wire (3000 mm)	with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E Option										
Blank	Manual override of non-locking/locking common		●	●	●	●	●	●	●	●
M	Manual override of non-locking		●	●	●	●	●	●	●	●
H	With exhaust check valve (*8)		●	●	●	●	●	●	●	●
K	External pilot (*9)				●	●			●	●
A	Ozone/coolant proof		●	●	●	●	●	●	●	●
S	Surgeless (*10)		●	●	●	●	●	●	●	●
E	Low exoergic/energy saving circuit (*10) (*11)		●	●	●	●	●	●	●	●
L	With pipe adaptor		●	●	●	●	●	●	●	●
F	Port A/B filter built in (*12)		●	●	●	●	●	●	●	●
X	Non-locking exhaust structure (*20)				●	●				
X1	Locking residual pressure dischargerconfiguration (*20)				●	●				
Z1	Air supply spacer (*13)		●	●	●	●				
Z2	In-stop valve spacer (*13) (*14)		●	●	●	●				
Z3	Exhaust spacer (*13)		●	●	●	●				
Z6	Spacer pilot check valve (*13) (*18)				●	●				
F Station No.										
1	One station		●	●	●	●				
to	to									
24	24 stations (max. station No. for MN4GB2 is 20)									
G Voltage										
1	100 VAC (rectifier integrated)		●	●	●	●	●	●	●	●
2	200 VAC (rectifier integrated)		●	●	●	●	●	●	●	●
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●
7	3 VDC		○	○	○	○	○	○	○	○
8	5 VDC		○	○	○	○	○	○	○	○

● is not available.

○ indicates made to order.

***8 3-position all ports closed and P A B connection are not provided with the exhaust check valve specifications (H). Refer to page 851 for details on the exhaust check valve.**

***9** Consult with CKD when using a vacuum with the external pilot (K).

***10** E2* and E2*J connectors and 12, 24 VDC only are supported. In addition, surgeless "S" and low exoergic/energy circuit "E" cannot be selected together.

***11** Surgeless specifications.

***12** A filter is built into port P as standard.

***13 Specify the spacer mounting position/ quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Only single solenoid can be selected together with radial push-in fitting (upward). Refer to pages 297 to 301 for details.**

***14** Not compatible with combination with external pilot (K).

***15** The grommet lead wire specifications are compatible with DC voltage only.

***16** AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.

***17** AC voltage is with a rectifier circuit.

***18** Combination with radial push-in fittings (upward) is not supported.

***19** The terminal box conforms to EN175301-803 Type C (former DIN 43650- C). Refer to pages 856 and 857 for details.

***20** Compatible only with MN4GB1 and MN4GB2 solenoid positions 3 and 4.

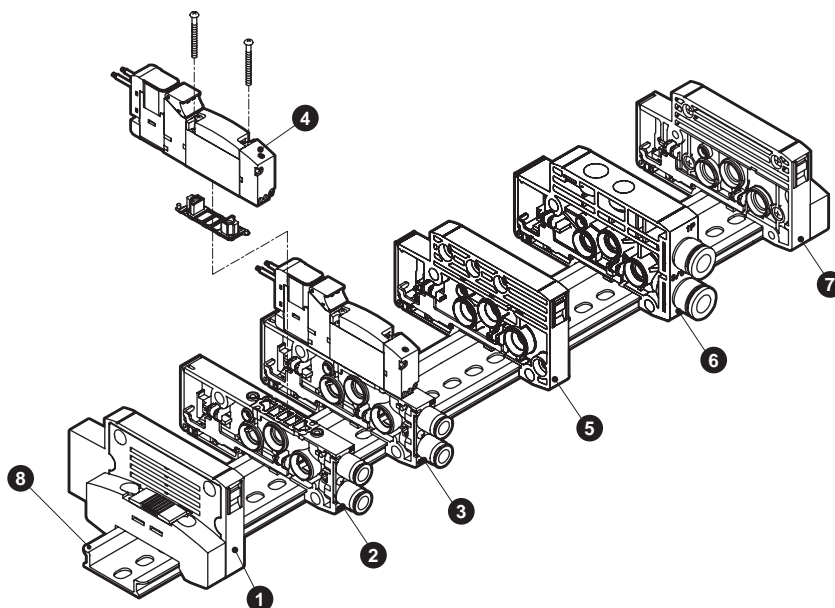
***21** 3-position all ports closed, ABR connection, PAB connection and Push-in L-fitting(facing upward) Combination with is not supported.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB1/2 Series

Individual wiring block manifold; base piping

Manifold components explanation and parts list



List of main components (refer to pages 286 to 305 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	N4GB110R-C6-H-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GB119R-00-H-3	8	DIN rail	N4GR-BAA (Length)

B type individual wiring weight

4GB1

Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N4GB110R-C6	67	Supply and exhaust block	N4G1R-Q-8	58
	N4GB120R-C6	84		N4G1R-QK-8	60
	N4GB1 3/8" OR-C6	85	End block	N4G1R-E*	60
	N3GB1660R-C6-3	84		N4G1R-EX*	60
	N4GB1R-MP-C6	37		N4G1R-S	45
Valve block with masking plate			Partition block	N4G1R-S	45
			Valve block	N4GB1R-V1-C*	33
			DIN rail	N4GR-BAA (Length)	0.19/mm

4GB2

Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N4GB210R-C8	128	Supply and exhaust block	N4G2R-Q-10	83
	N4GB220R-C8	145		N4G2R-QK-10	85
	N4GB2 3/8" OR-C8	156	End block	N4G2R-E*	84
	N3GB2660R-C8-3	145		N4G2R-EX*	85
	N4GB2R-MP-C8	69	Partition block	N4G2R-S	60
Valve block with masking plate			Valve block	N4GB2R-V1-C*	55
			DIN rail	N4GR-BAA (Length)	0.19/mm

Parts list

Applicable	Part name	Model No.	Applicable	Part name	Model No.
Valve 4G1	ø1.8 barbed	4G1R-JOINT-CF	Valve 4G2	ø1/4" elbow *1	4G2R-JOINT-CL6N
	ø1.8 straight	4G1R-JOINT-C18		ø5/16" elbow *1	4G2R-JOINT-CL8N
	ø4 straight	4G1R-JOINT-C4		Plug cartridge	4G2R-JOINT-CPG
	ø6 straight	4G1R-JOINT-C6	Common	Coil assembly	4GR-[*1]-[*2]-COIL-[*3] *1: Electrical connections (blank, B, E0, ...), *2: Ozone/coolant proof (blank, A) Surgeless (S) Low exoergic/energy circuit (E) External pilot (K) *3: Voltage (1, 2, 3, 4)
	ø1.8 elbow	4G1R-JOINT-CL18,CLL18			
	ø4 elbow	4G1R-JOINT-CL4,CLL4			
	ø6 elbow	4G1R-JOINT-CL6,CLL6			
	ø1/8" straight	4G1R-JOINT-C3N			
	ø5/32" straight	4G1R-JOINT-C4N			
	ø1/8" elbow *1	4G1R-JOINT-CL3N			
	ø5/32" elbow *1	4G1R-JOINT-CL4N			
	Plug cartridge	4G1R-JOINT-CPG			
Valve 4G2	ø4 straight	4G2R-JOINT-C4		Valve 4G2	E-connector socket assembly
	ø6 straight	4G2R-JOINT-C6	EJ-connector socket assembly		4GR-SOCKET-ASSY-[*1] *1: Electrical connections (E01J, E02J, ...)
	ø8 straight	4G2R-JOINT-C8			
	ø6 elbow	4G2R-JOINT-CL6,CLL6	DIN terminal box assembly	4GR-TERMINAL-BOX-[*3] *3: Voltage (1, 2, 3, 4)	
	ø8 elbow	4G2R-JOINT-CL8,CLL8			
	ø1/4" straight	4G2R-JOINT-C6N		*1: Available as custom order	
	ø5/16" straight	4G2R-JOINT-C8N			

*1: Available as custom order.

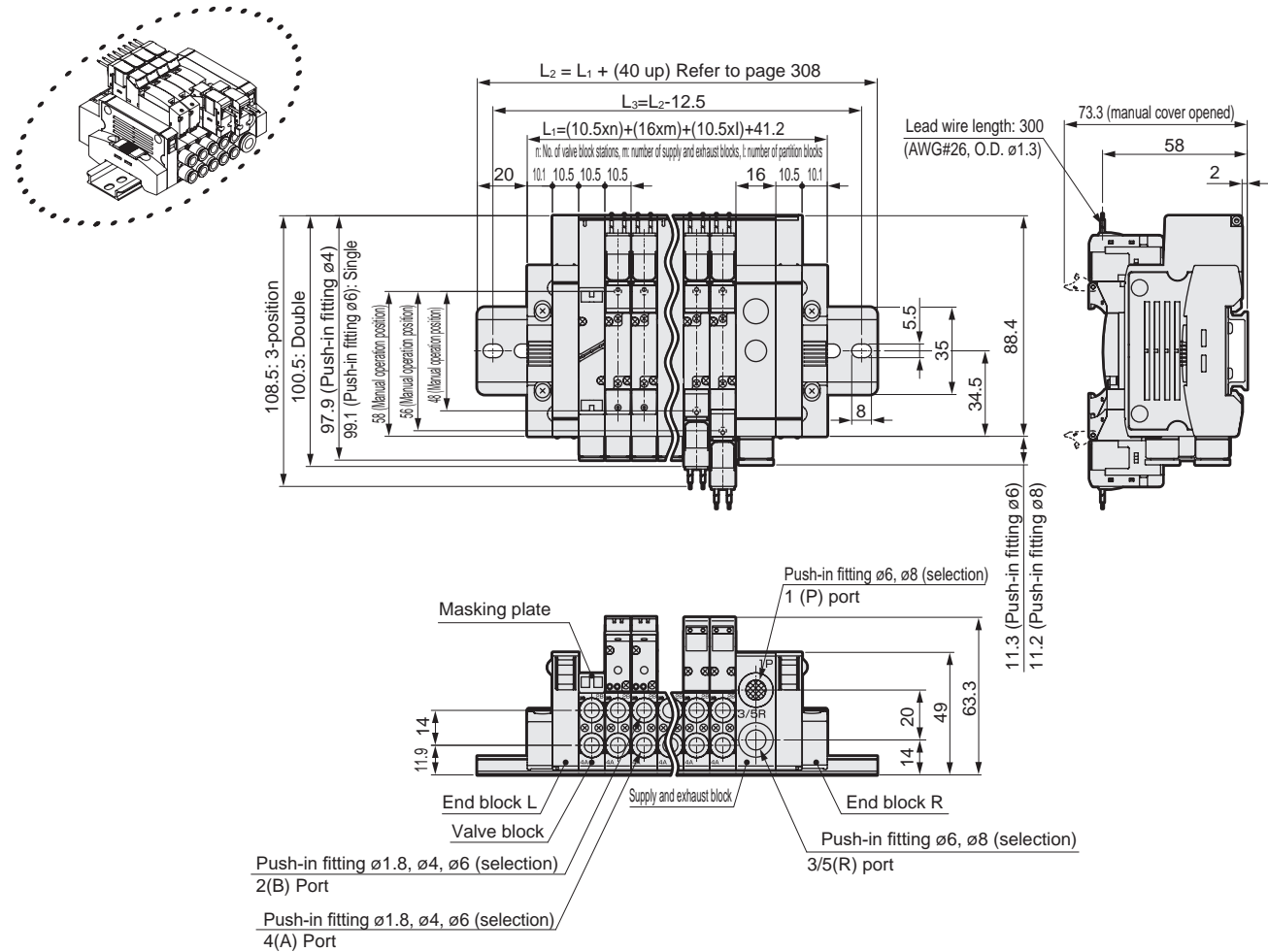
Dimensions



MN4GB1

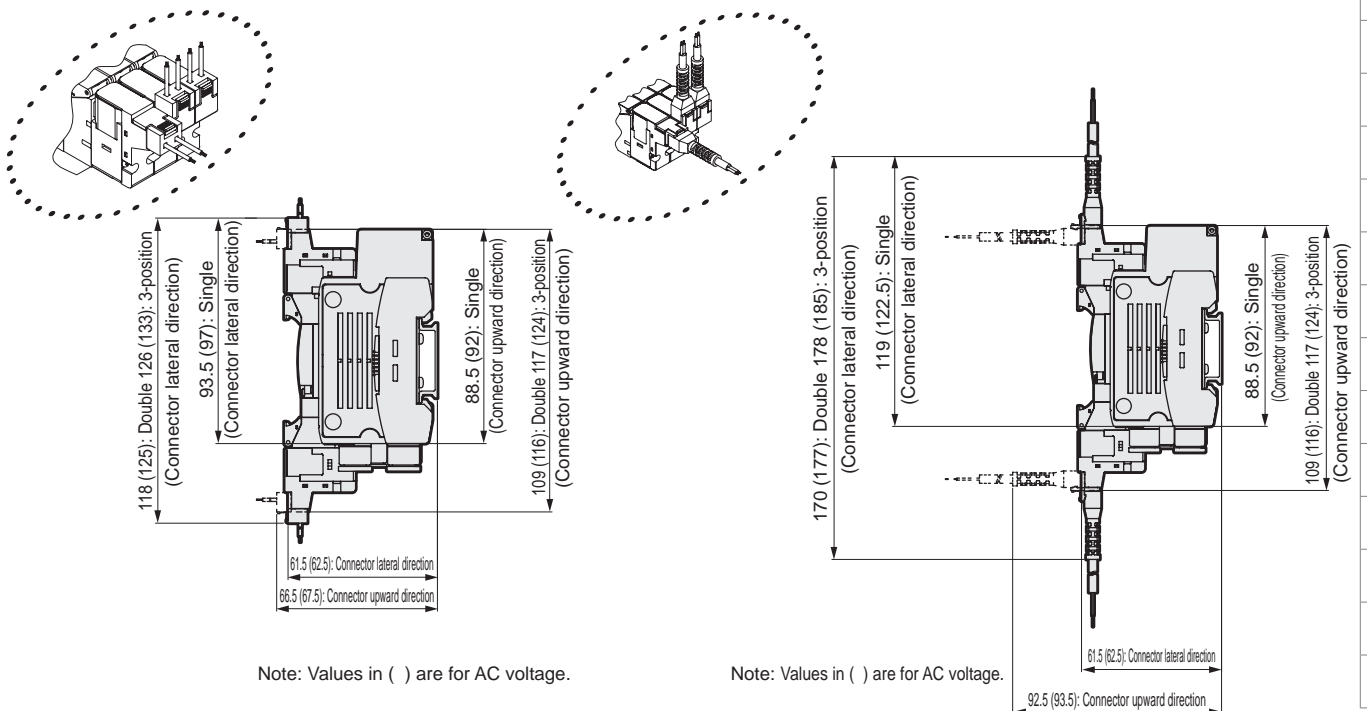
- Grommet lead wire (blank)

* For the 2-position single 3-port valve, either A port or B port is a plug.
In addition, the two 3-port valve integrated have the same dimensions as the double model.



- E-connector (E)

- EJ-connector (E**J)



* Refer to page 276 for dimensions of the valve block push-in fitting and supply and exhaust block push-in fitting.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB2 Series

Individual wiring block manifold; base piping

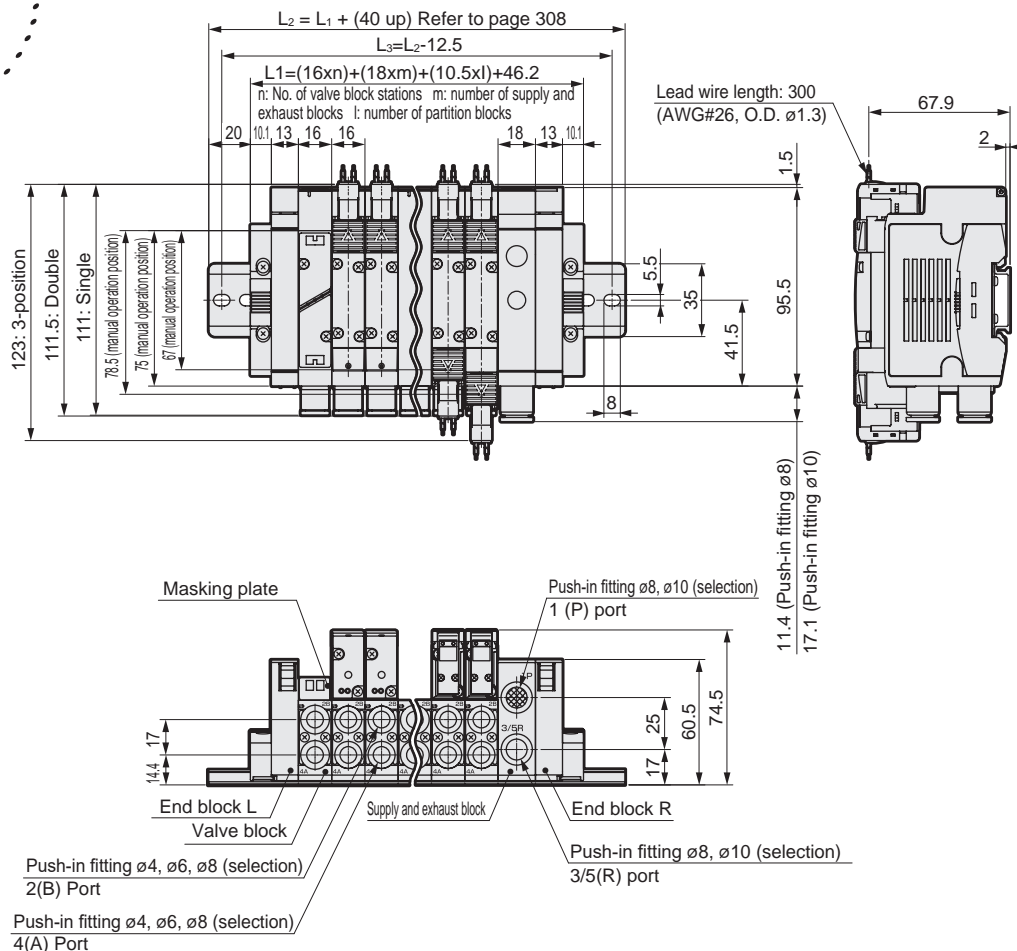
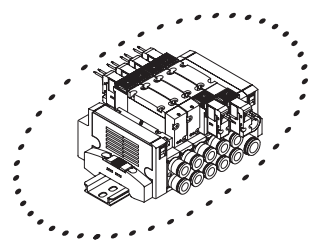
Dimensions



MN4GB2

- Grommet lead wire (blank)

* For the 2-position single 3-port valve, either A port or B port is a plug.
In addition, the two 3-port valve integrated have the same dimensions as the double model.

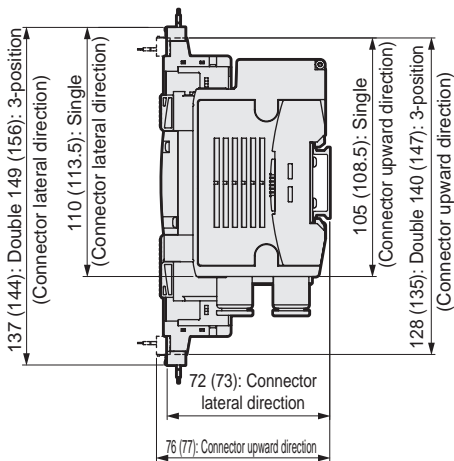
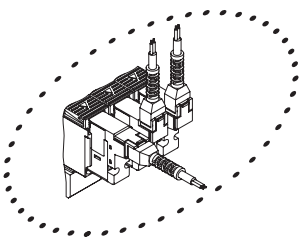
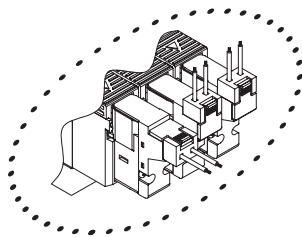


* Refer to page 278 for dimensions of the valve block push-in fitting and supply and exhaust block push-in fitting.

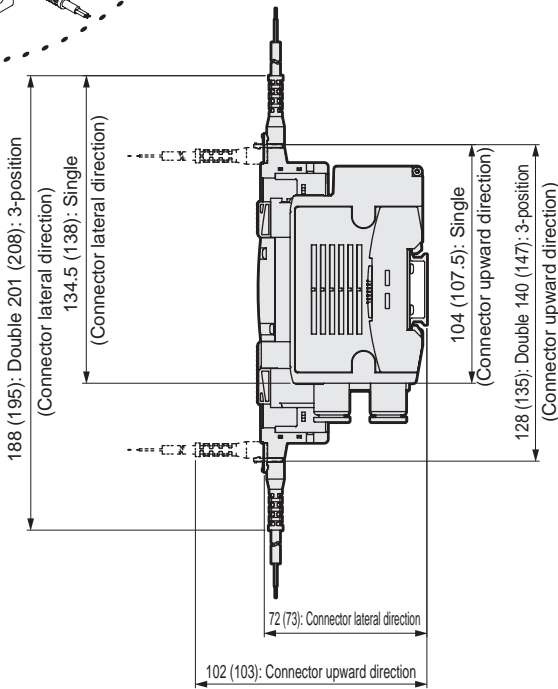
Dimensions

● E-connector (E)

● EJ-connector (E**J)

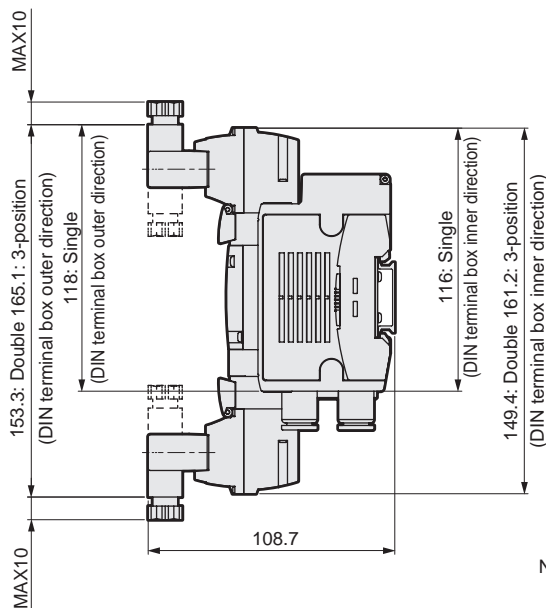
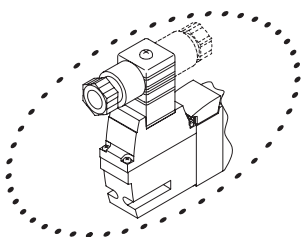


Note: Values in () are for AC voltage.



Note: Values in () are for AC voltage.

● DIN terminal box (B)



Note: DIN terminal box assembly is shipped facing inward.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B

M4GA/B

MN4GA/B

4GA/B

(master)

4GB

With sensor

4GD/E

M4GD/E

MN4GD/E

4GA/B4

MN3E

MN4E

W4GA/B2

W4GB4

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B

(master)

4F

4F

(master)

PV5G

GMF

PV5

GMF

PV5S-0

3Q

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP

NVP

4G*0EJ

4F*0EX

4F*0E

HNV

HSV

2QV

3QV

SKH

Silencer

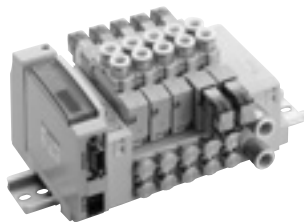
TotAirSys

(Total Air)

TotAirSys

(Gamma)

Ending



Reduced wiring block manifold
Body piping

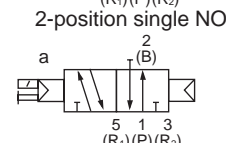
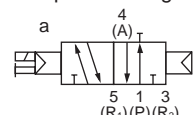
MN4GA1/2-T* Series

● Cylinder bore size: $\varnothing 20$ to $\varnothing 80$

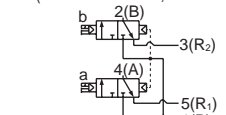


JIS symbol

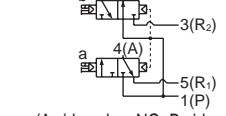
- 3-port valve
2-position single NC



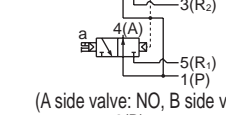
- Two 3-port valves integrated
(A side valve: NC, B side valve: NC)



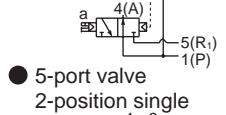
- Two 3-port valves integrated
(A side valve: NC, B side valve: NO)



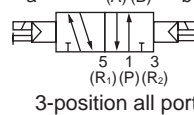
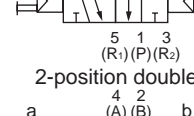
- Two 3-port valves integrated
(A side valve: NO, B side valve: NC)



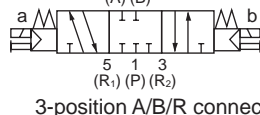
- Two 3-port valves integrated
(A side valve: NO, B side valve: NO)



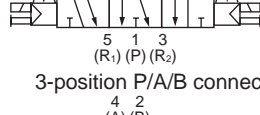
- 5-port valve
2-position single



- 3-position all ports closed



- 3-position A/B/R connection



- 3-position P/A/B connection



Manifold common specifications

Item	Description
Manifold	Block manifold
Mounting method	DIN rail mount
Supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)
Piping direction	Valve top direction
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈ 100 psi, 7 bar)
Min. working pressure MPa	0.2 (≈ 29 psi, 2 bar) (*3)
Proof pressure MPa	1.05 (≈ 150 psi, 10.5 bar)
Ambient temperature $^{\circ}\text{C}$	-5 (23°F) to 55 (131°F) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41°F) to 55 (131°F)
Manual override	Non-locking/locking common (standard)
Lubrication (*1)	Not required
Degree of protection (*2)	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environments

*1 Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.

*2 Dust-proof degree of protection. Not drip-proof. Avoid dripping water or oil, etc., during use.

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

Electrical specifications

Item	Description
Rated voltage	T1□, T30□, T5□, T6G1, T7□, T8□ 24 DC 12 DC 24 DC
Voltage fluctuation range (*4)	$\pm 10\%$ +10%, -5%
Holding current	Standard 0.017 0.034 0.017
With low exoergic/energy saving circuit	0.005 0.010 0.005
Power consumption	Standard 0.4
With low exoergic/energy saving circuit	0.1
Thermal class	B
Surge suppressor (*5)	Zener diode
Indicator	LED

*4 T6G1, T7 □ and T8 □ (serial transmission) may experience voltage drops due to internal circuitry, so care should be taken when regulating voltages.

*5 If low exoergic/energy circuit or surgeless types are selected then there will be a diode.

Individual specifications

Item		MN3GA1/MN4GA1									
		T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2
Max. station No.	Standard wiring	16 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	16 stations	8/16 stations	16/24 stations
	Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	8 stations	4/8 stations	8/16 stations
Max. number of solenoids		16 points	24 points	24 points	16 points	18 points	8 points	24 points	16 points	8/16 points	16/32 points
Port size	Metric fitting/M5, Rc thread	Barbed fitting $\varnothing 1.8$ push-in fitting $\varnothing 1.8, \varnothing 4, \varnothing 6, \text{M5}$									
	A/B port	Push-in fitting $\varnothing 6, \varnothing 8$									
	P/R-port	Push-in fitting $\varnothing 1/8", \varnothing 5/32", \text{M5}$									
	Inch fitting/M5, NPT thread	Push-in fitting $\varnothing 1/4", \varnothing 5/16"$									
	P/R-port	Push-in fitting $\varnothing 1/4", \varnothing 5/16"$									
Item		MN3GA2/MN4GA2									
		T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2
Max. station No.	Standard wiring	16 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	16 stations	8/16 stations	16/20 stations
	Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	8 stations	4/8 stations	8/16 stations
Max. number of solenoids		16 points	24 points	24 points	16 points	18 points	8 points	24 points	16 points	8/16 points	16/32 points
Port size	Metric fitting/M5, Rc thread	Push-in fitting $\varnothing 4, \varnothing 6, \varnothing 8, \text{Rc}1/8$									
	A/B port	Push-in fitting $\varnothing 8, \varnothing 10$									
	P/R-port	Push-in fitting $\varnothing 1/4", \varnothing 5/16", \text{NPT}1/8$									
	Inch fitting/M5, NPT thread	Push-in fitting $\varnothing 5/16", \varnothing 3/8"$									
	P/R-port	Push-in fitting $\varnothing 5/16", \varnothing 3/8"$									
Port size	Metric fitting, G thread	G1/8									
	A/B port	Push-in fitting $\varnothing 8, \varnothing 10$									
	P/R-port	Push-in fitting $\varnothing 8, \varnothing 10$									
	A/B port	Push-in fitting $\varnothing 8, \varnothing 10$									
	P/R-port	Push-in fitting $\varnothing 8, \varnothing 10$									

· For weight, refer to page 250.

Flow characteristics

Model No.	Solenoid position	P→A/B		A/B→R1/R2	
		C[dm ³ /(s·bar)]	b	C[dm ³ /(s·bar)]	b
MN3GA1 MN4GA1	Two 3-port valves integrated	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	1.0 -	0.16 -
		ABR connection	0.92	1.1 (0.69)	0.13 (0.22)
MN3GA2 MN4GA2	Two 3-port valves integrated	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	2.3 -	0.10 -
		ABR connection	2.0	2.5 (1.7)	0.18 (0.12)
	PAB connection	2.3	0.31	2.3 -	0.16 -

*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

*2: Values in () are with the exhaust check valve.

Reduced wiring specifications

Item	T10	T11	T30	T50	T51	T52	T53
Type	Common terminal block M3 thread	Common terminal block Clamping method	D-sub-connector	20P flat cable* ^p power supply terminal	20P flat cable connector, without power supply terminal	10P flat cable connector, without power supply terminal	26P flat cable connector, without power supply terminal
Connector	—	—	D-sub-connector 25-pin	MIL-C-83503 standard compliant pressure welding socket 20-pin	MIL-C-83503 standard compliant pressure welding socket 20-pin	MIL-C-83503 standard compliant pressure welding socket 10-pin	MIL-C-83503 standard compliant pressure welding socket 26-pin

Serial transmission device unit specifications

Download the communication setting file from the CKD website (<https://www.ckd.co.jp/en/>).

Item	T6G1
Network name	CC-Link ver. 1.10
Power supply voltage	Unit side 24 VDC ±10% Valve side 24 VDC 10%, -5%
Current consumption	Unit side 100 mA or less (when all output points are ON) Valve side 15 mA or less (when all output points are OFF)
No. of I/O points	16 points
Occupied number	1 station
Operation display	LED (power supply and communication status)
Output	NPN

Item		T7G1	T7L1 ¹	T7D1	T7S1	T7SP1
Network name		CC-Link ver. 1.10	SAVE NET	DeviceNet*2	CompoNet	
Power supply voltage	Unit side	24 VDC 10%, -5% Common power supply terminal				
	Valve side					
	Unit side	—	—	11 to 25 VDC *3	14.0 to 26.4 VDC	
Current consumption	Unit side	110 mA or less (when all output points are ON) Load current is not included			40 mA or less (when all output points are ON) Load current is not included	
	Valve side					
	Unit side	—	—	50 mA or less	65mA or less (all points ON: 24 VDC) 95 mA or less (all points ON: 14 VDC)	
No. of I/O points		16 points	16 points	16 points	16 points	
Occupied number		1 station	1 station	2 bytes	Word device 1 node (16 points)	
Operation display		LED (power supply and communication status)				
Output		NPN			NPN	PNP

Item		T8G1	T8GP1	T8P1	T8PP1	T8EC1	T8ECP1	T8EN1	T8ENP1	T8D1	T8DP1	T8EB1	T8EBP1	T8EP1	T8EPP1	
		T8G2	T8GP2	T8P2	T8PP2	T8EC2	T8ECP2	T8EN2	T8ENP2	T8D2	T8DP2	T8EB2	T8EBP2	T8EP2	T8EPP2	
Communication protocol		CC-Link ver. 1.10		PROFIBUS-DP (V0)		EtherCAT		EtherNet/IP		DeviceNet		CC-Link IEF Basic		PROFINET		
Power supply voltage	Unit side	24 VDC ±10%								11 to 25 VDC		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)		70 mA or less (when all output points are ON)		130 mA or less (when all output points are ON)		130 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								15 mA or less (When all output points are ON) Load current is not included						
No. of I/O points		T8 □ 1: 16 points T8 □ 2: 32 points														
Occupied number		1 station														
Operation display		LED (power supply and communication status)														
Output		NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	

*1 Transmission bit rate of 128 bits and half-duplex transmission method are supported. Contact CKD for other specifications.

*2 DeviceNet compliant networks (DLNK, etc.) are supported as well.

*3 Communication power supply (V+ and V- of DeviceNet cable) is isolated from power supply terminals (unit power supply/valve power supply).

MN4GA1/2-T* Series

Reduced wiring block manifold; body piping

How to order

Manifold model No.

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

3-port manifold model No.

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

Discrete valve block with solenoid valve

N4GA1 **1** **0** **R** - **C6** - **A2N** **1** **H** - **3**

Discrete 3-port valve block with solenoid valve

N3GA1 **1** **0** **R** - **C6** - **A2N** **1** **H** - **3**

* When a cable is required, refer to page 290 and specify the cable length for (*1). When not required, leave the space blank.

Discrete solenoid valve

4GA1 **1** **9** **R** - **C6** - **A2N** **H** - **3**

Discrete 3-port solenoid valve

3GA1 **1** **9** **R** - **C6** - **A2N** **H** - **3**

A Model No.

B Solenoid position

C Port size (*1)

⚠ Precautions for model selection

*1 : Specify the P/R port bore size with the supply and exhaust block model No. in the manifold specifications sheet.

*2 : Select MN4GA*80R when mixing with 4, 5-port valves. Further, select MN3GA*80R when mixing with masking plate.

*3 : Not compatible with combination with external pilot (K). Dimensions are the same as those of the respective 2-position double solenoid.

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

5 : Blank: The wiring will be based on the type of valve used. W: All wired for double solenoid valves regardless of the type of valve used.

*6 : Spare wiring (A type socket assembly) is included on the cap side for single types. A holder for retaining the socket assembly is included for single unit valves (A2N). Refer to page 304 for details.

*7 : 3-position all ports closed and PAB connection are not provided with the exhaust check valve (H). Refer to page 851 for details on the exhaust check valve.

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

*9 : Surgeless "S" and low exoergic/energy circuit "E" cannot be selected together.

*10: Surgeless specifications.

*11: A filter is built into the P port as standard.

*12: Specify the spacer mounting position and quantity in manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 297 to 301 for details.

*13: Not compatible with combination with external pilot (K).

D Reduced wiring connection, serial transmission

E Terminal/connector pin array

F Option

G Station No.

H Voltage

A Model No.

Manifold		Discrete valve block with solenoid valve/Discrete solenoid valve			
3-port valve	5-port valve				
MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N)3GA1	(N)3GA2
		(N)4GA1	(N)4GA2		

Code	Content		M	M	M	M	M	M	M	M
B Solenoid 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 (*2)		●	●				●	●	
11	2-position single normally open (*2)		●	●				●	●	
66	Two 3-port valves integrated (*2) (*3)	A side valve: Normally closed	●	●				●	●	
		B side valve: Normally closed	●	●				●	●	
67		A side valve: Normally closed	●	●				●	●	
		B side valve: Normally open								
76		A side valve: Normally open	●	●				●	●	
		B side valve: Normally closed								
77		A side valve: Normally open	●	●				●	●	
		B side valve: Normally open	●	●						
8	Mix manifold (for multiple solenoid positions)		●	●	●	●	●	●	●	●

C Port size (A/B-port)										
Code	Metric fitting/Rc thread									
CF	ø1.8 barbed fitting (compatible tube UP-9102-**)									
C18	ø1.8 push-in fitting (compatible tube UP-9402-**)									
C4	ø4 push-in fitting									
C6	ø6 push-in fitting									
C8	ø8 push-in fitting									
CX	Push-in fitting mix (*4)									
M5										
06	Rc1/8									
Code	Inch fitting/inch thread									
C3N	ø1/8" push-in fitting									
C4N	ø5/32" push-in fitting									
C6N	ø1/4" push-in fitting									
C8N	ø5/16" push-in fitting									
CXN	Push-in fitting mix (*4)									
06N	NPT1/8									
Code	G thread									
06G	G1/8									

D Reduced wiring connection, serial transmission

Refer to the next page for reduced wiring and serial transmission.

E Terminal/connector pin array										
Blank	Standard wiring (*5)									
W	Double wiring (*5)									
W1	Double wiring (with single spare wiring) (*5) (*6)									

F Option										
Blank	Non-locking/locking common manual override									
M	Non-locking manual override									
H	With exhaust check valve (*7)									
K	External pilot (*8)									
A	Ozone/coolant proof									
S	Surgeless (*9)									
E	Low exoergic/energy circuit (*9) (*10)									
Q	Reduced wiring duct									
F	A/B port filter built in (*11)									
Z1	Air supply spacer (*12)									
Z2	In-stop valve spacer (*12) (*13)									
Z3	Exhaust spacer (*12)									

G Station No.										
1	1 station									
to	to									
24	24 stations (Refer to page 246 for the max. station number per model)									

H Voltage										
3	24 VDC									
4	12 VDC									

is not available.

MN4GA1/2-T* Series

Reduced wiring block manifold; body piping

A Model No.							
Manifold				Discrete valve block with solenoid valve/Discrete solenoid valve			
3-port valve		5-port valve					
MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N)3GA1	(N)3GA2	(N)4GA1	(N)4GA2

D Reduced wiring (lamp and surge suppressor provided as standard) 12/24 VDC			
T10	Common terminal block (M3 thread)	Left-sided specifications	● ● ● ●
T10R		Right-sided specifications	● ● ● ●
T11	Common terminal block (clamping)	Left-sided specifications	● ● ● ●
T11R		Right-sided specifications	● ● ● ●
T30	D-sub-connector	Left-sided specifications	● ● ● ●
T30R		Right-sided specifications	● ● ● ●
T50	20-pin flat cable connector (with power supply terminal)	Left-sided specifications	● ● ● ●
T50R		Right-sided specifications	● ● ● ●
T51	20-pin flat cable connector (without power supply terminal)	Left-sided specifications	● ● ● ●
T51R		Right-sided specifications	● ● ● ●
T52	10-pin flat cable connector (without power supply terminal)	Left-sided specifications	● ● ● ●
T52R		Right-sided specifications	● ● ● ●
T53	26-pin flat cable connector (without power supply terminal)	Left-sided specifications	● ● ● ●
T53R		Right-sided specifications	● ● ● ●

D Serial transmission (lamp/surge suppressor provided as standard) 24 VDC			
T6G1	CC-Link	NPN 16 points	● ● ● ●
T7D1	DeviceNet	NPN 16 points	● ● ● ●
T7G1	CC-Link	NPN 16 points	● ● ● ●
T7L1	SAVE NET	NPN 16 points	● ● ● ●
T7S1	CompoNet	NPN 16 points	● ● ● ●
T7SP1		PNP 16 points	● ● ● ●
T8G1	CC-Link	NPN 16 points	● ● ● ●
T8G2		NPN 32 points	● ● ● ●
T8GP1		PNP 16 points	● ● ● ●
T8GP2		PNP 32 points	● ● ● ●
T8P1	PROFIBUS-DP	NPN 16 points	● ● ● ●
T8P2		NPN 32 points	● ● ● ●
T8PP1		PNP 16 points	● ● ● ●
T8PP2		PNP 32 points	● ● ● ●
T8EC1	EtherCAT	NPN 16 points	● ● ● ●
T8EC2		NPN 32 points	● ● ● ●
T8ECP1		PNP 16 points	● ● ● ●
T8ECP2		PNP 32 points	● ● ● ●
T8EN1	EtherNet/IP	NPN 16 points	● ● ● ●
T8EN2		NPN 32 points	● ● ● ●
T8ENP1		PNP 16 points	● ● ● ●
T8ENP2		PNP 32 points	● ● ● ●
T8D1	DeviceNet	NPN 16 points	● ● ● ●
T8D2		NPN 32 points	● ● ● ●
T8DP1		PNP 16 points	● ● ● ●
T8DP2		PNP 32 points	● ● ● ●
T8EB1	CC-Link IEF Basic	NPN 16 points	● ● ● ●
T8EB2		NPN 32 points	● ● ● ●
T8EBP1		PNP 16 points	● ● ● ●
T8EBP2		PNP 32 points	● ● ● ●
T8EP1	PROFINET	NPN 16 points	● ● ● ●
T8EP2		NPN 32 points	● ● ● ●
T8EPP1		PNP 16 points	● ● ● ●
T8EPP2		PNP 32 points	● ● ● ●
A2N	Without lead wire (without socket) with surge suppressor and indicator lamp		

Ozone-proof specifications

Coolant proof specifications

Can be selected with "How to order" Item (F) option "A" on page 248.

Clean-room specifications

● Clean room compatible specifications

** - Voltage - P7*

Specifications for rechargeable battery (Catalog No. CC-1226A)

● For use in the rechargeable battery manufacturing process, materials used for air path and sliding section are limited

** - Voltage - P4

CE marking specifications

** - Voltage - ST

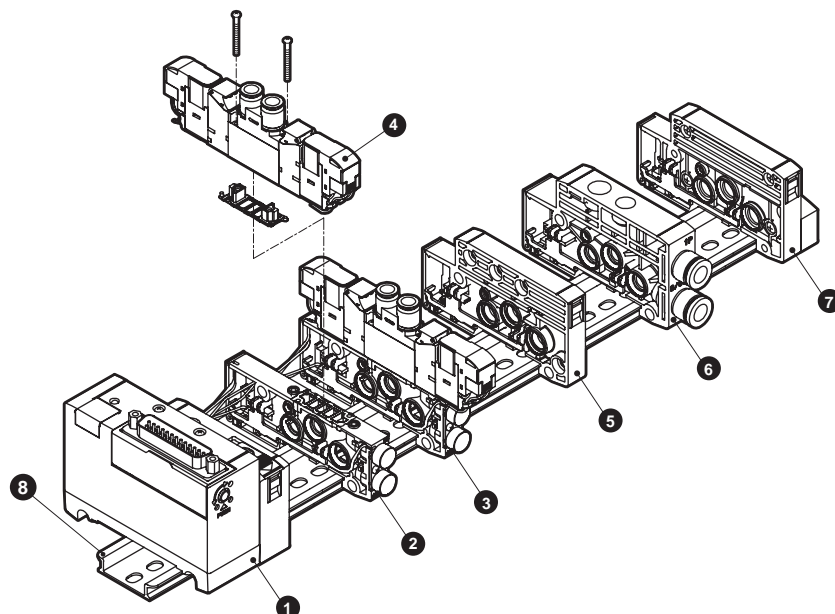
• Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GA1/2-T* Series

Reduced wiring block manifold; body piping

Manifold components explanation and parts list



List of main components (refer to pages 286 to 305 for details)

No.	Component name	Model No. (example)	No.	Component name	Model No. (example)
1	Wiring block (*)	N4G1R-T30	5	Partition block	N4G1R-S
2	Discrete valve block	N4GA1R-V2	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GA120R-C6-A2NH-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GA129R-C6-A2NH-3	8	DIN rail	N4GR-BAA (Length)

Note: Wiring block cannot be ordered as a single item.

A type reduced wiring weight

4GA1

Part name	Model No.	Weight	Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N3GA110R-C6-A2N-3	72	Supply and exhaust block	N4G1R-Q-8	58	Wiring block (*)	N4G1R-T10(R)	207
	N3GA1110R-C6-A2N-3	72		N4G1R-QK-8	60		N4G1R-T30(R)	165
	N4GA110R-C6-A2N-3	72	End block	N4G1R-E*	60		N4G1R-T50(R)	167
	N4GA120R-C6-A2N-3	91		N4G1R-EX*	60		N4G1R-T6G1	295
	N4GA1 $\frac{1}{2}$ 0R-C6-A2N-3	95	Partition block	N4G1R-S	45		N4G1R-T7*	203
Valve block with masking plate	N3GA1660R-C6-A2N-3	91		N4GA1R-V1	28	DIN rail	N4G1R-T8*	229
	N4GA1R-MP*-C6	34	Valve block	N4GA1R-V2	30		N4GR-BAA (Length)	0.19/mm

Note: Wiring block cannot be ordered as a single item.

4GA2

Part name	Model No.	Weight	Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N3GA210R-C8-A2N-3	131	Supply and exhaust block	N4G2R-Q-10	83	Wiring block (*)	N4G2R-T10(R)	223
	N3GA2110R-C8-A2N-3	131		N4G2R-QK-10	85		N4G2R-T30(R)	182
	N4GA210R-C8-A2N-3	131	End block	N4G2R-E*	84		N4G2R-T50(R)	184
	N4GA220R-C8-A2N-3	151		N4G2R-EX*	85		N4G2R-T6G1	312
	N4GA2 $\frac{3}{4}$ 0R-C8-A2N-3	163	Partition block	N4G2R-S	60		N4G2R-T7*	204
Valve block with masking plate	N3GA2660R-C8-A2N-3	151		N4GA2R-V1	53	DIN rail	N4G2R-T8*	242
	N4GA2R-MP*-C8	66	Valve block	N4GA2R-V2	55		N4GR-BAA (Length)	0.19/mm

Note: Wiring block cannot be ordered as a single item.

Parts list

Applicable	Part name	Model No.	Applicable	Part name	Model No.
Valve 4G1	Cartridge fitting ø1.8 barbed	4G1R-JOINT-CF	Common	Coil assembly	4GR-A2N-[*2]-COIL-[*3]
	Cartridge fitting ø1.8 straight	4G1R-JOINT-C18			*2: Ozone/coolant proof (blank, A)
	Cartridge fitting ø4 straight	4G1R-JOINT-C4			Surgeless (S)
	Cartridge fitting ø6 straight	4G1R-JOINT-C6			Low exoergic/energy circuit (E)
	Cartridge fitting ø1/8" straight	4G1R-JOINT-C3N	Manifold	Expansion socket assembly (Details on page 837)	*3: Voltage (3, 4)
	Cartridge fitting ø5/32" straight	4G1R-JOINT-C4N			For a side solenoid
	Plug cartridge	4G1R-JOINT-CPG			N4GR-SOCKET-ASSY-[selection No.]
Valve 4G2	Cartridge fitting ø4 straight	4G2R-JOINT-C4			For b side solenoid
	Cartridge fitting ø6 straight	4G2R-JOINT-C6			N4GR-RELAY-SOCKET-[selection No.]
	Cartridge fitting ø8 straight	4G2R-JOINT-C8			
	Cartridge fitting ø1/4" straight	4G2R-JOINT-C6N			
	Cartridge fitting ø5/16" straight	4G2R-JOINT-C8N			
	Plug cartridge	4G2R-JOINT-CPG			

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GA1/2-T10 Series

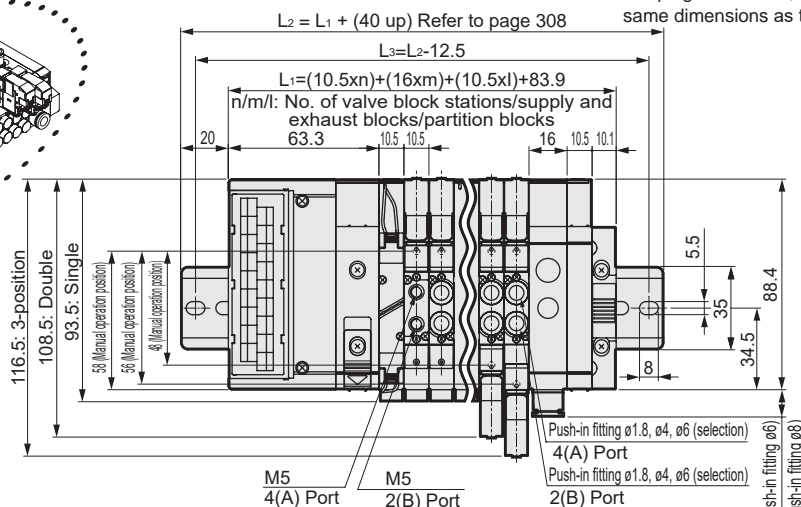
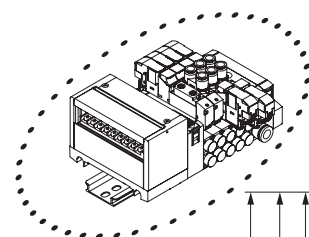
Reduced wiring block manifold; body piping

Dimensions



MN4GA1

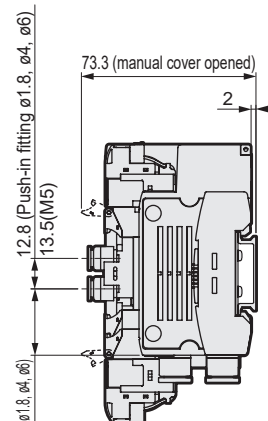
● Common terminal block (M3 thread) left side (T10)



*1: Clamping specification (T11) is also available.

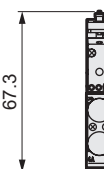
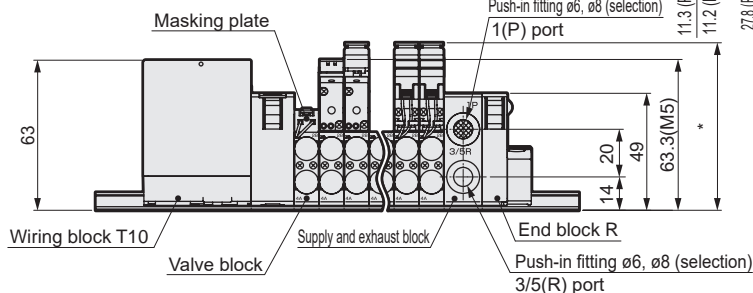
Dimensions are the same as T10.

*2: For the 2-position single 3-port valve, either A port or B port is a plug. In addition, the two 3-port valve integrated have the same dimensions as the double model.

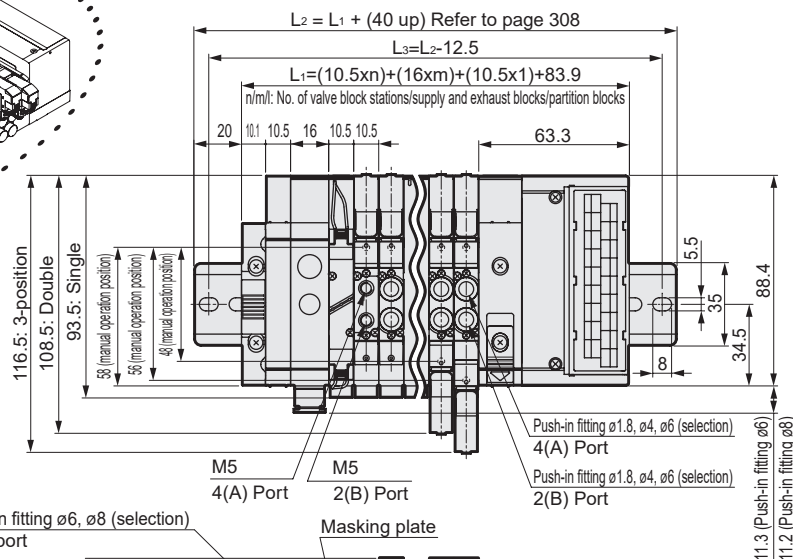
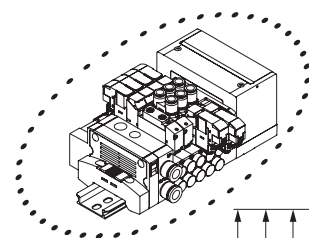


● $\phi 1.8$ barbed fitting (CF)

Push-in fitting bore size	* Dimensions
$\phi 1.8$	65.1
$\phi 4$	69.1
$\phi 6$	70.3
$\phi 1/8"$	69.6
$\phi 5/32"$	69.1



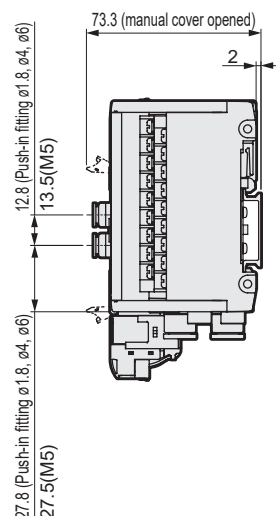
● Common terminal block (M3 thread) right side (T10R)



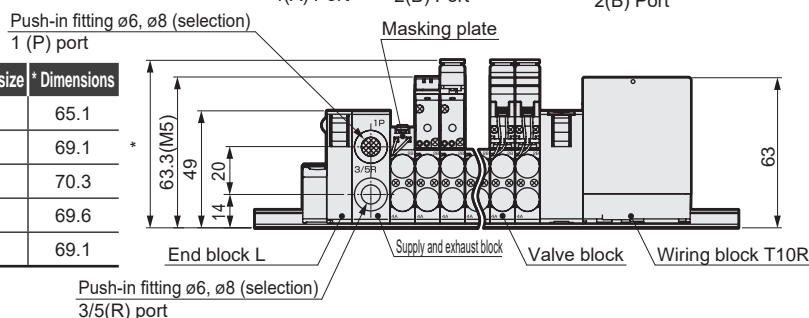
*1: Clamping specification (T11R) is also available.

Dimensions are the same as T10R.

*2: For the 2-position single 3-port valve, either A port or B port is a plug. In addition, the two 3-port valve integrated have the same dimensions as the double model.



Push-in fitting bore size	* Dimensions
$\phi 1.8$	65.1
$\phi 4$	69.1
$\phi 6$	70.3
$\phi 1/8"$	69.6
$\phi 5/32"$	69.1

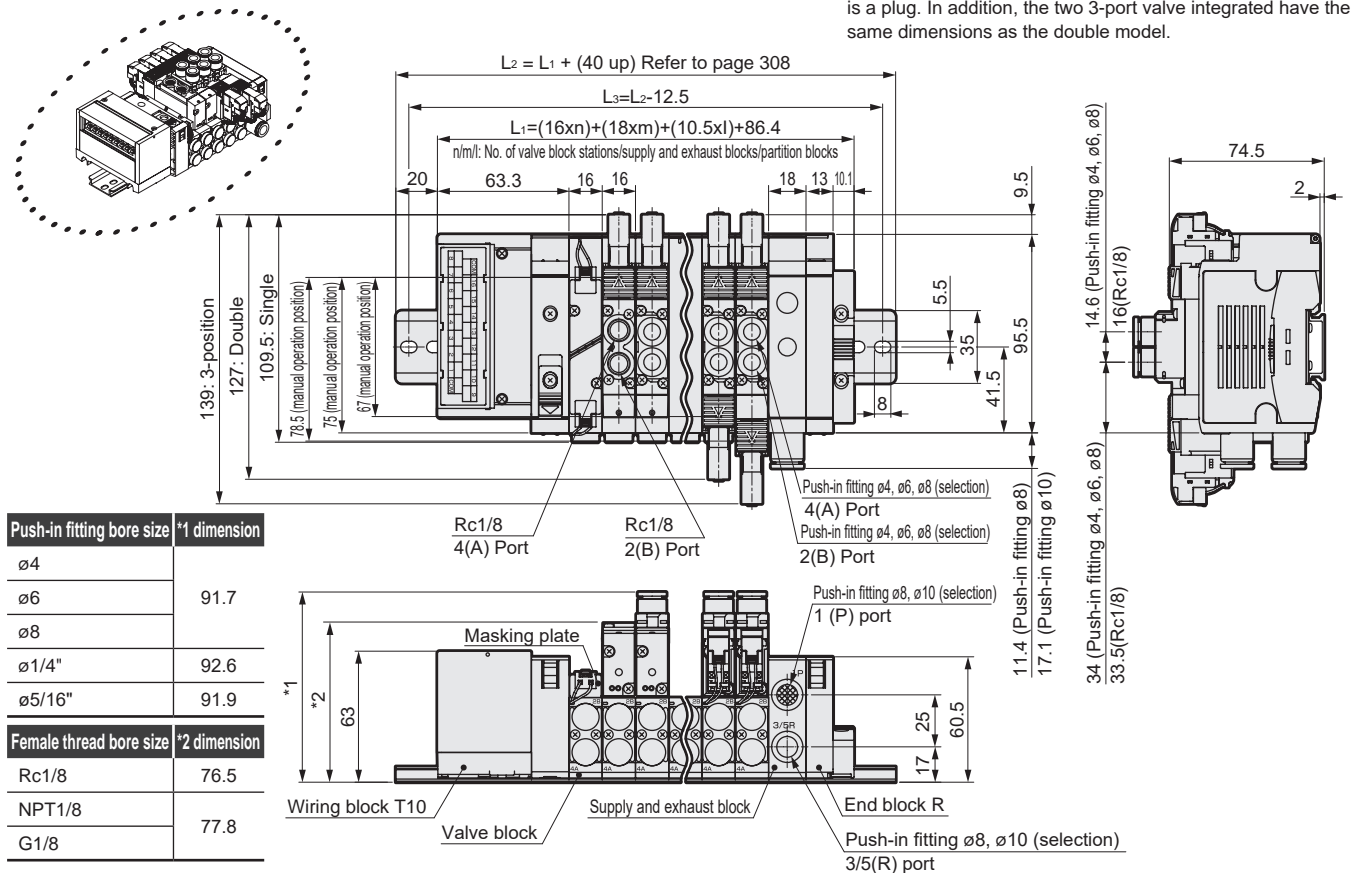


Dimensions

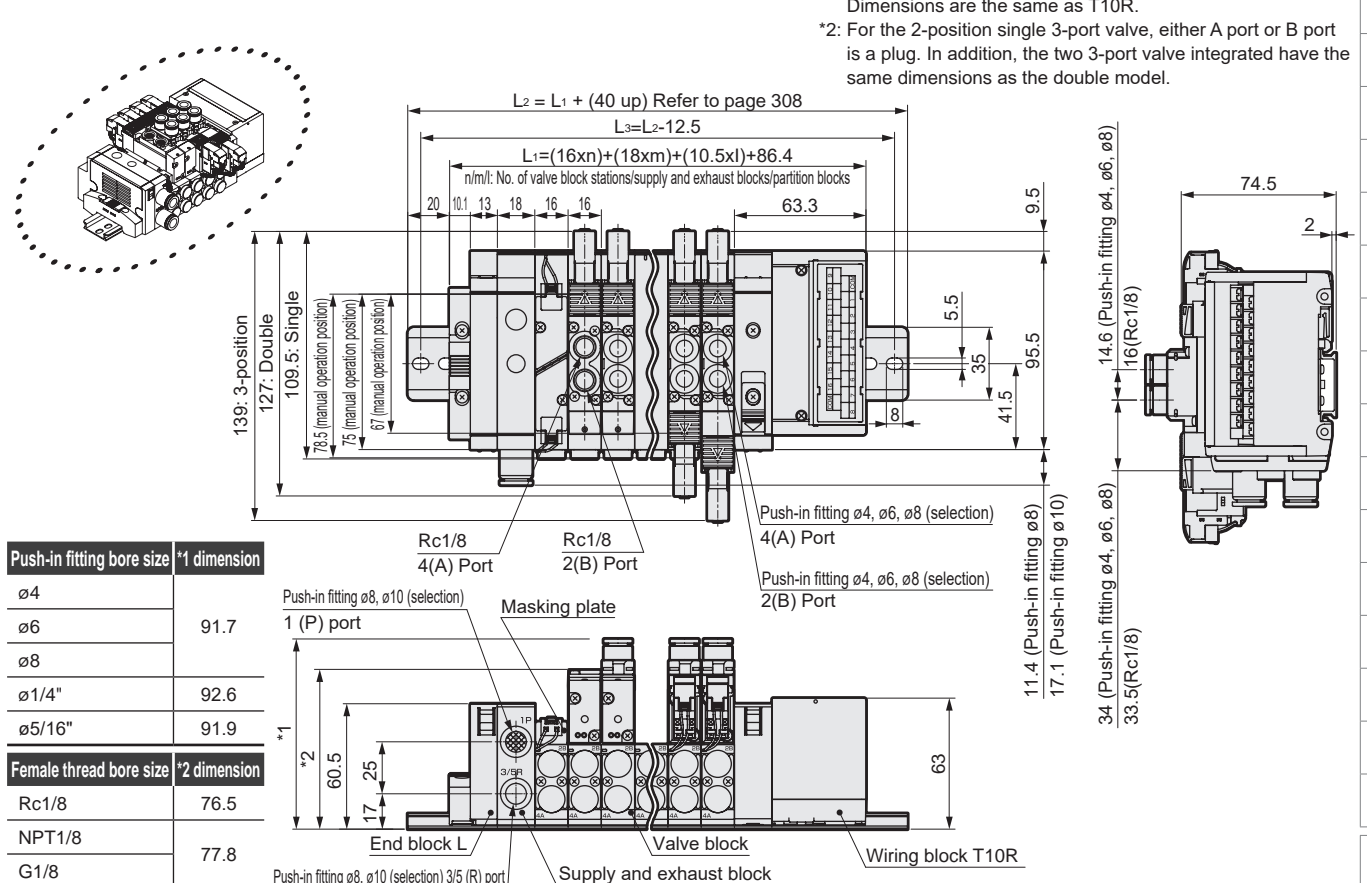


MN4GA2

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



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



*1: Clamping specification (T11) is also available. Dimensions are the same as T10.

*2: For the 2-position single 3-port valve, either A port or B port is a plug. In addition, the two 3-port valve integrated have the same dimensions as the double model.

*1: Clamping specification (T11R) is also available. Dimensions are the same as T10R.

*2: For the 2-position single 3-port valve, either A port or B port is a plug. In addition, the two 3-port valve integrated have the same dimensions as the double model.

MN4GA1/2-T30 Series

Reduced wiring block manifold; body piping

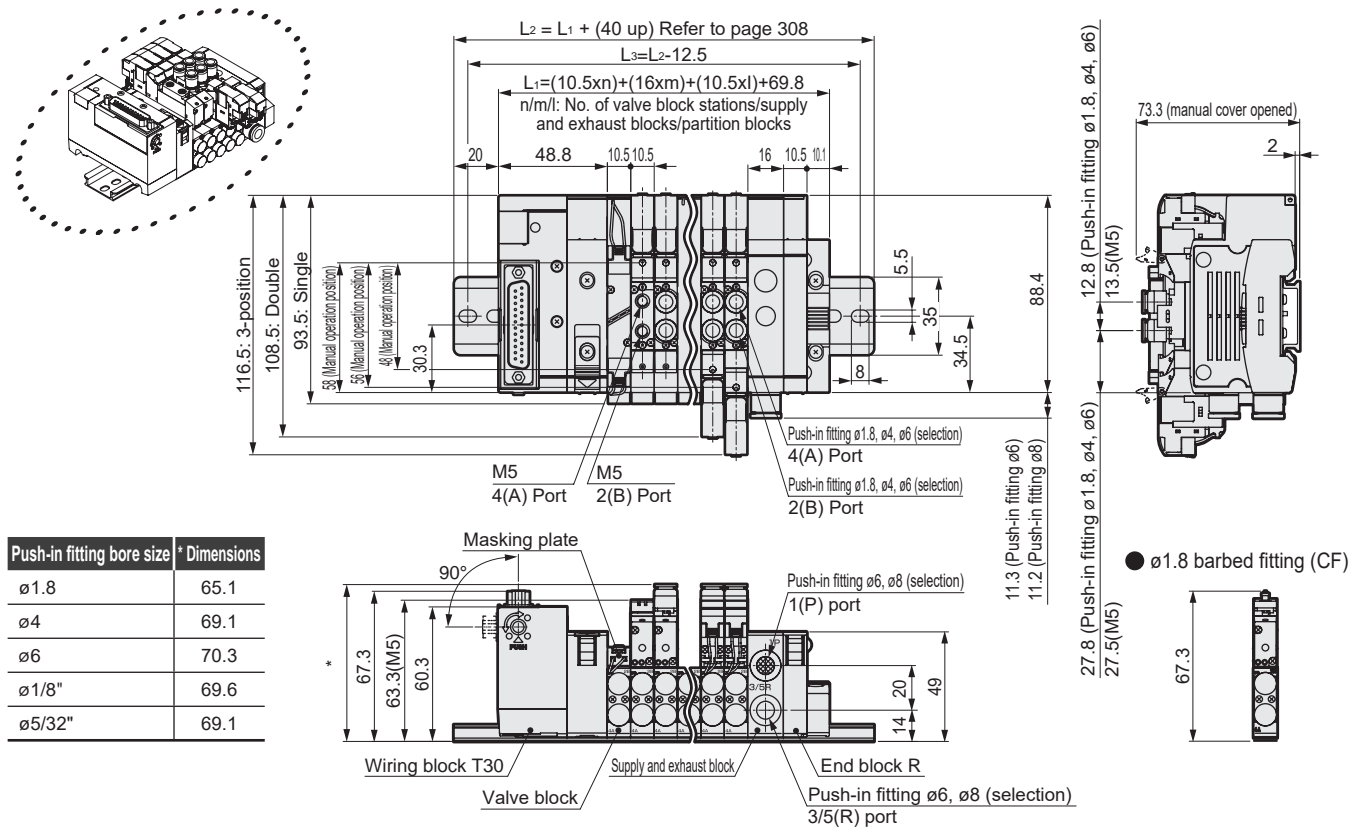
Dimensions



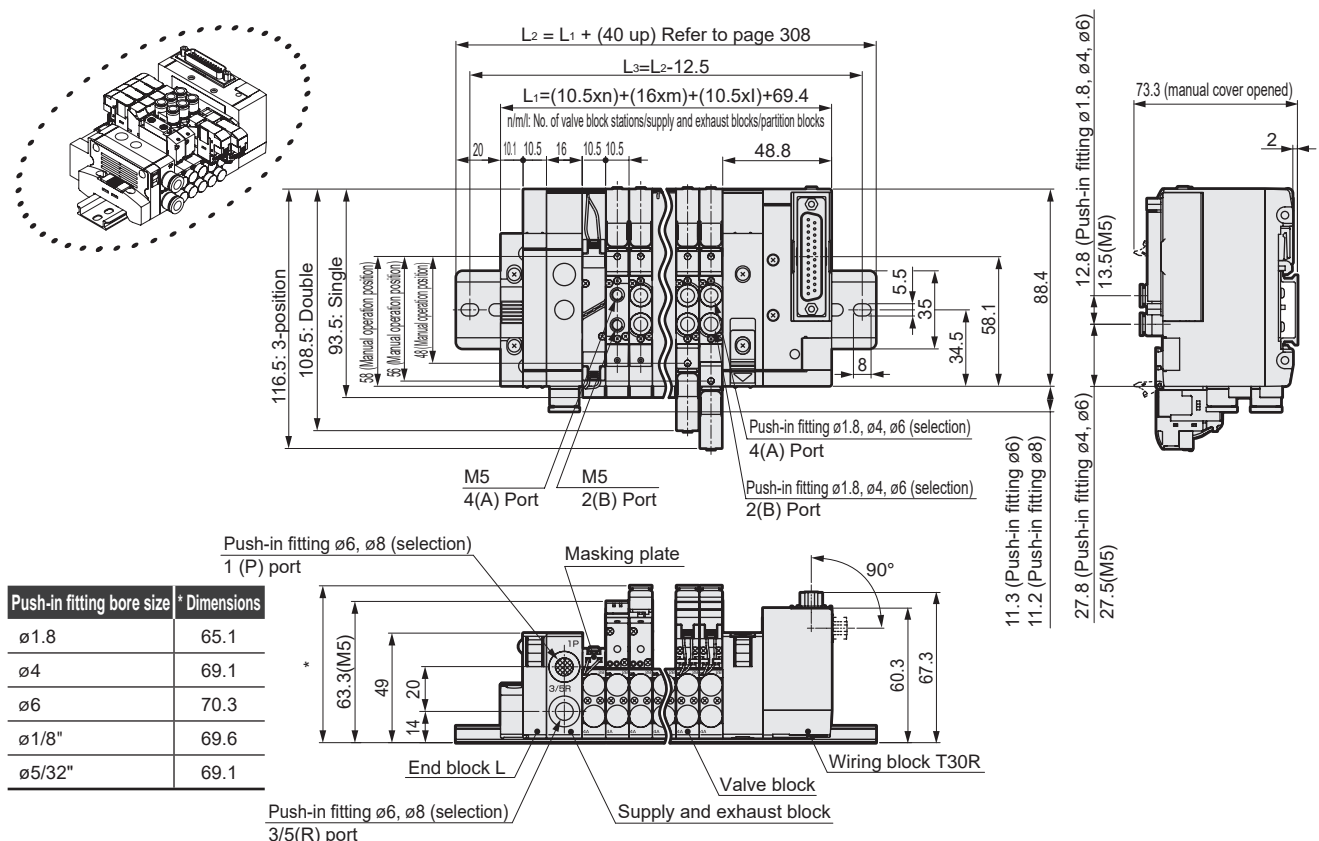
MN4GA1

● D sub-connector left side (T30)

Note: For the 2-position single 3-port valve, either A port or B port is a plug. In addition, the two 3-port valve integrated have the same dimensions as the double model.



● D sub-connector right side (T30R)



MN4GA1/2-T30 Series

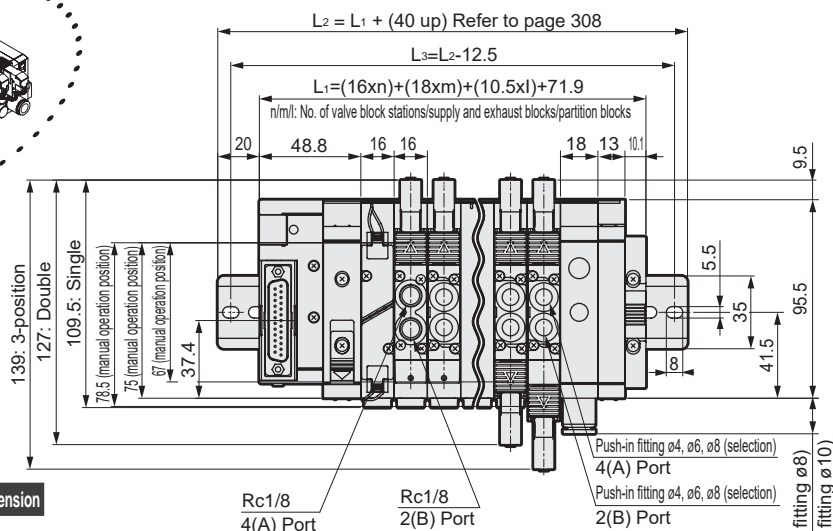
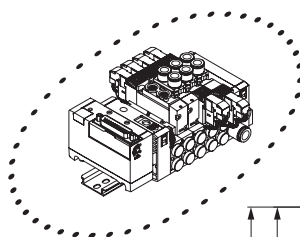
Reduced wiring block manifold; body piping

Dimensions



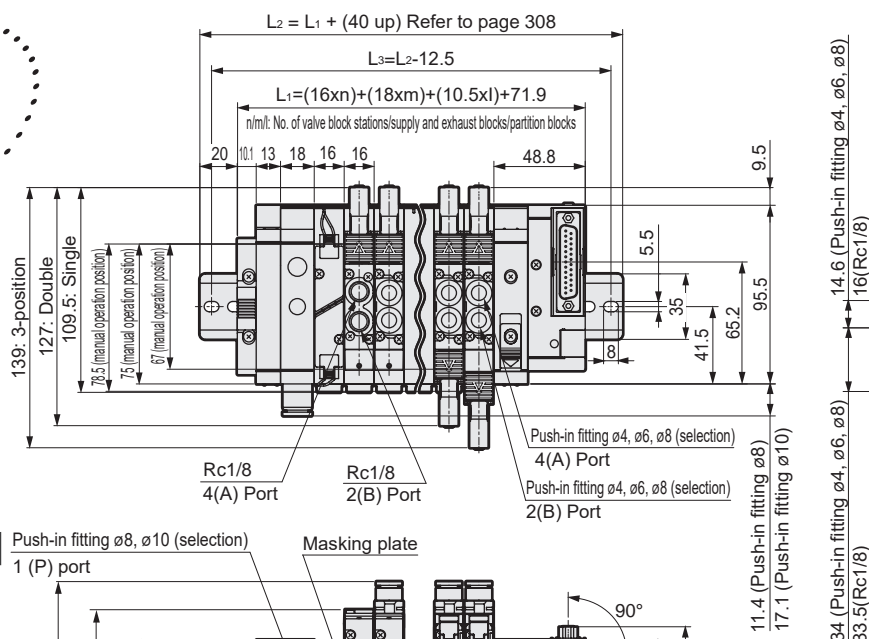
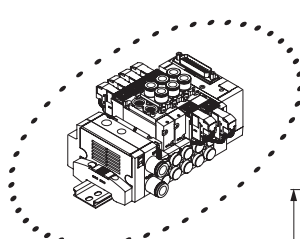
MN4GA2

● D sub-connector left side (T30)

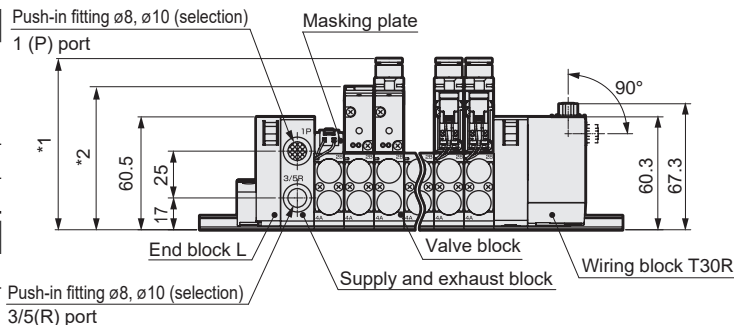


Push-in fitting bore size	*1 dimension
ø4	91.7
ø6	
ø8	
ø1/4"	92.6
ø5/16"	91.9
Female thread bore size	*2 dimension
Rc1/8	76.5
NPT1/8	77.8
G1/8	

● D sub-connector right side (T30R)



Push-in fitting bore size	*1 dimension
ø4	91.7
ø6	
ø8	
ø1/4"	92.6
ø5/16"	91.9
Female thread bore size	*2 dimension
Rc1/8	76.5
NPT1/8	77.8
G1/8	



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GA1/2-T50 Series

Reduced wiring block manifold; body piping

Dimensions

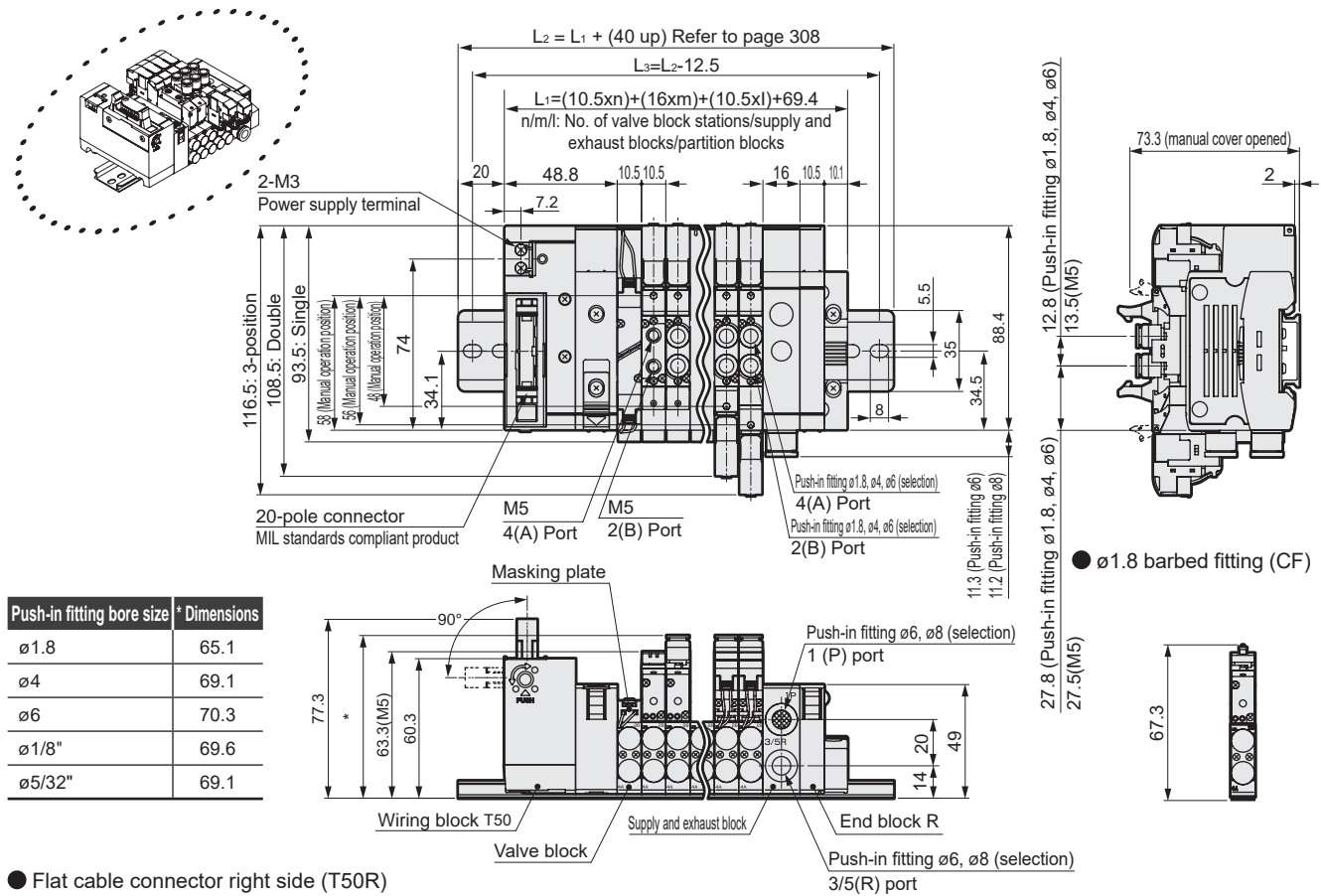


MN4GA1

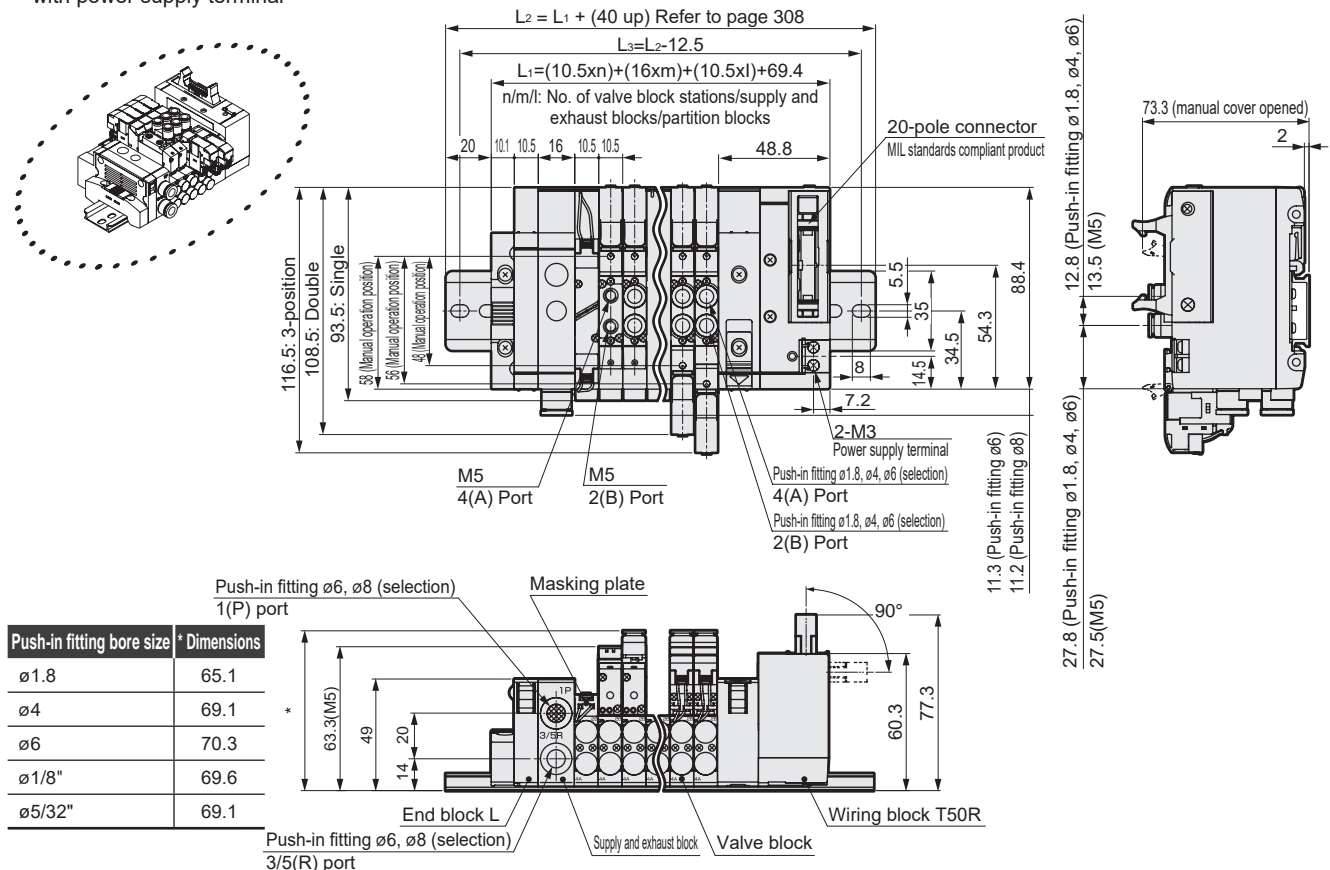
- Flat cable connector left side (T50) with power supply terminal

*1: T51, T52, and T53 are also available as flat cable connector. Dimensions are the same as T50.

*2: For the 2-position single 3-port valve, either A port or B port is a plug. In addition, the two 3-port valve integrated have the same dimensions as the double model.



- Flat cable connector right side (T50R) with power supply terminal



MN4GA1/2-T50 Series

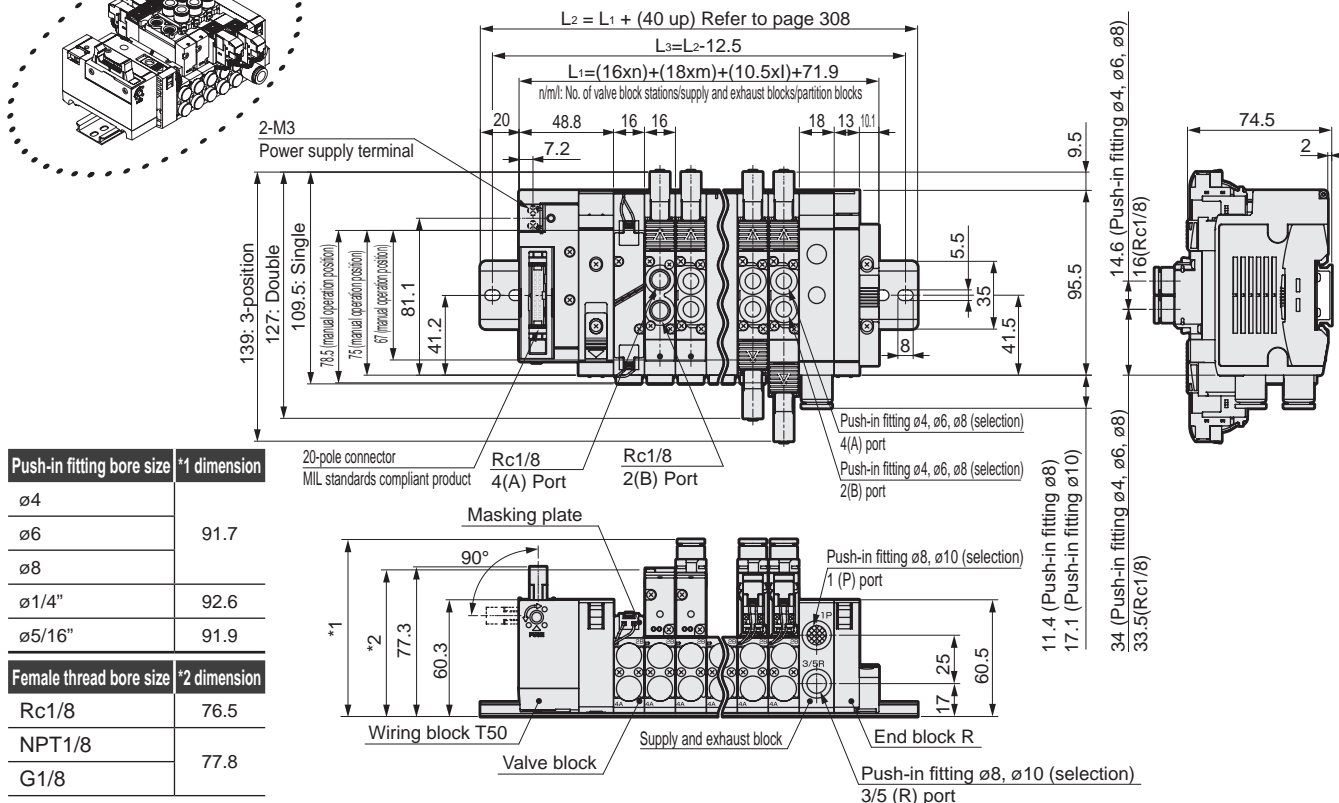
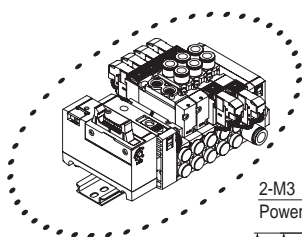
Reduced wiring block manifold; body piping

Dimensions

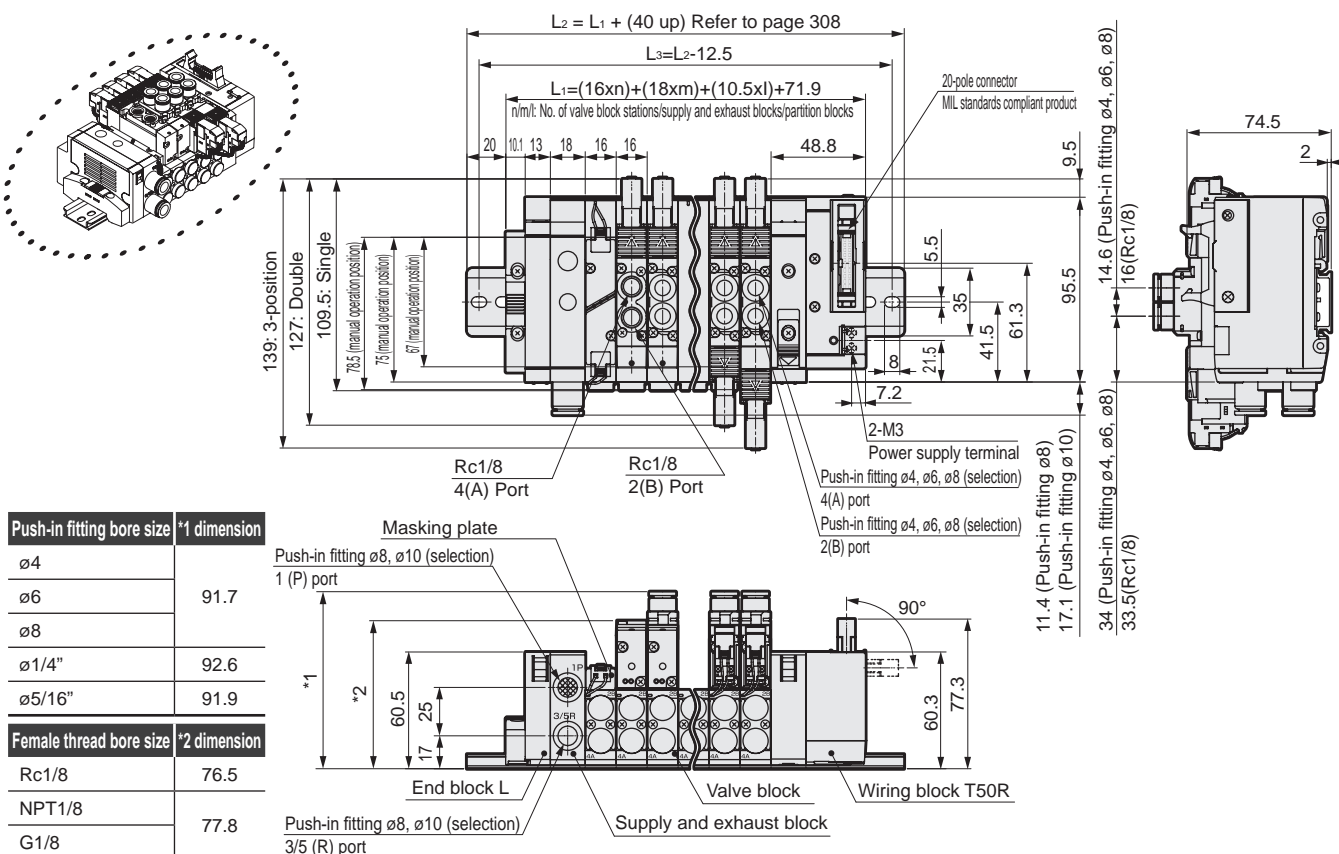
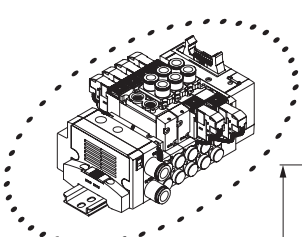


MN4GA2

- Flat cable connector left side (T50) with power supply terminal



- Flat cable connector right side (T50R) with power supply terminal



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP N/P
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GA1/2-T6G1 Series

Reduced wiring block manifold; body piping

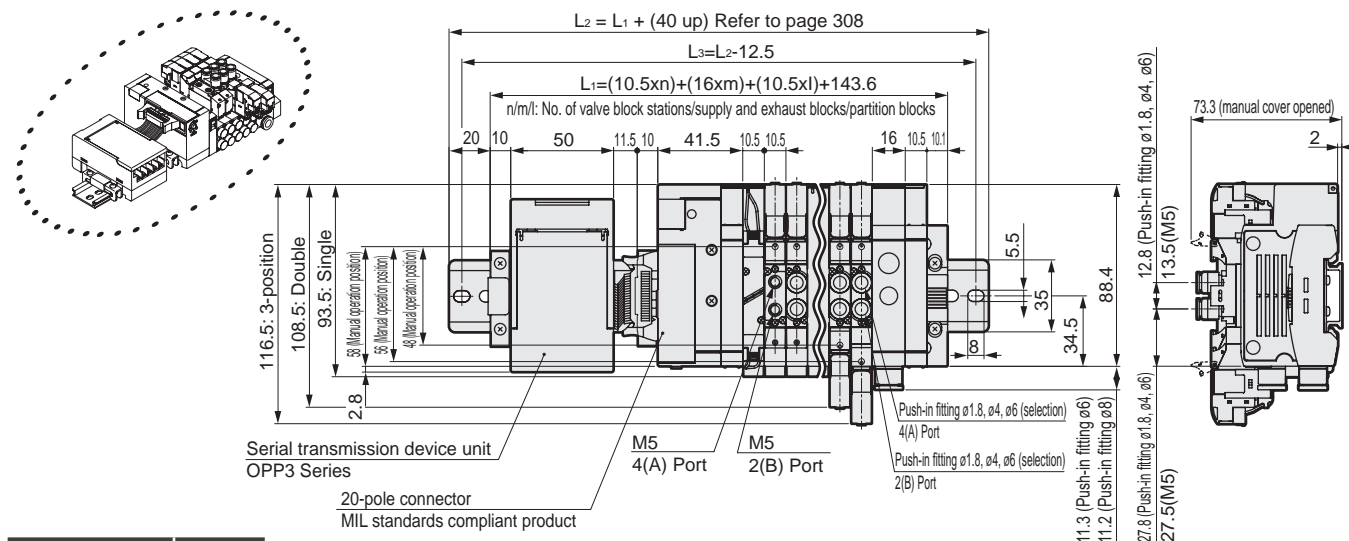
Dimensions



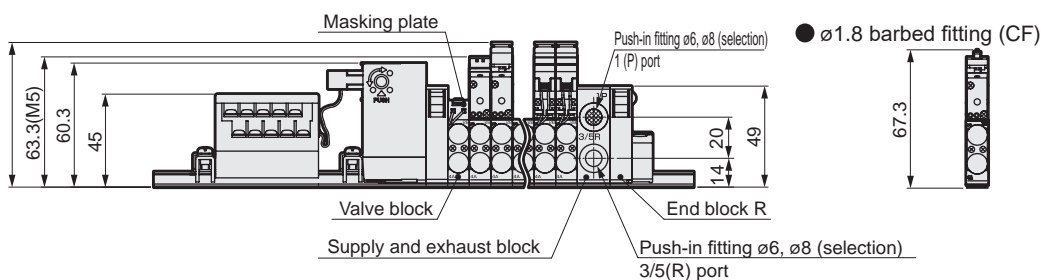
MN4GA1

● Serial transmission (T6G1)

Note: For the 2-position single 3-port valve, either A port or B port is a plug. In addition, the two 3-port valve integrated have the same dimensions as the double model.

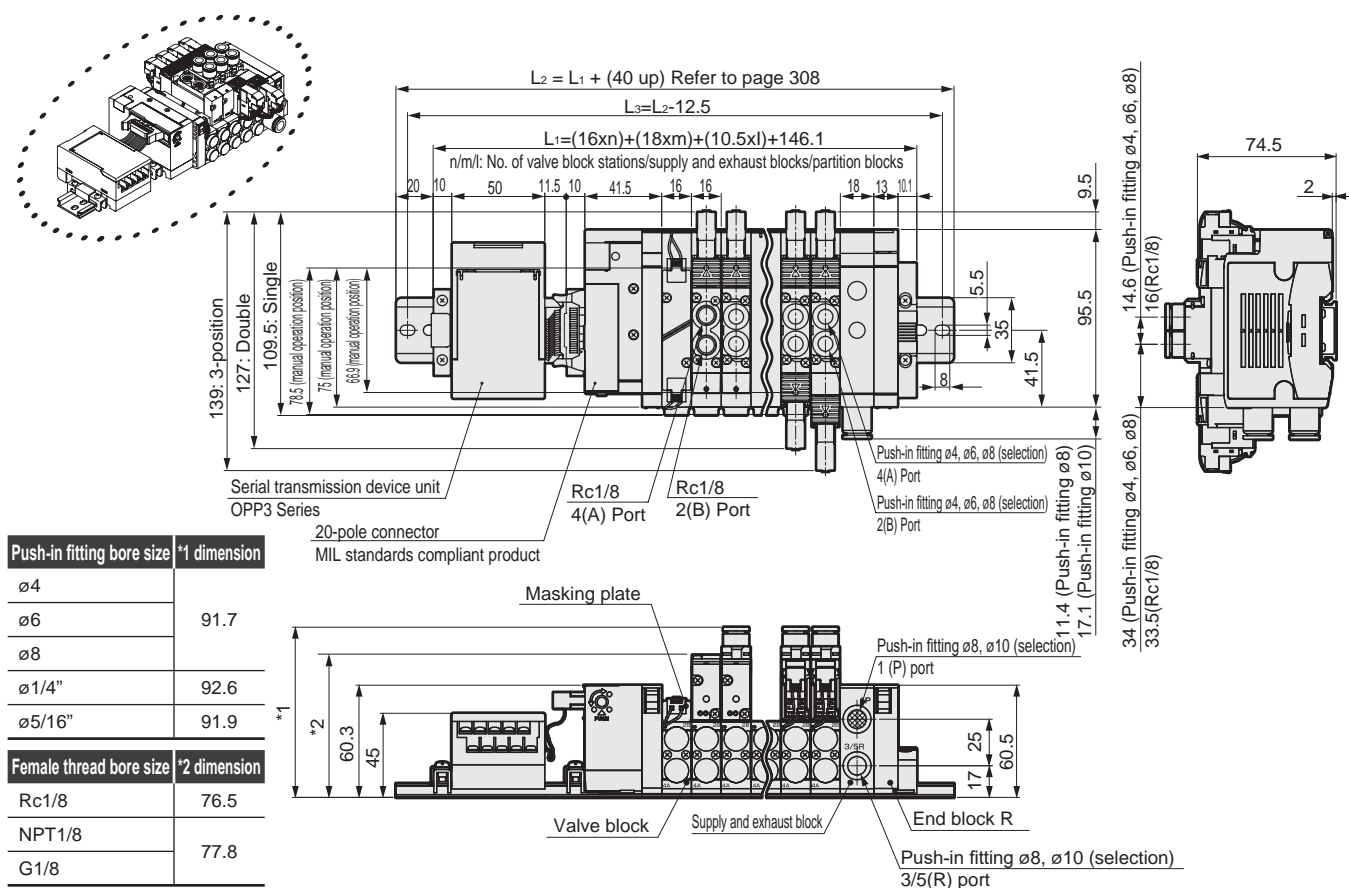


Push-in fitting bore size	* Dimensions
$\phi 1.8$	65.1
$\phi 4$	69.1
$\phi 6$	70.3
$\phi 1/8"$	69.6
$\phi 5/32"$	69.1



MN4GA2

● Serial transmission (T6G1)



Push-in fitting bore size	*1 dimension
$\phi 4$	91.7
$\phi 6$	
$\phi 8$	
$\phi 1/4"$	92.6
$\phi 5/16"$	91.9
Female thread bore size	*2 dimension
Rc1/8	76.5
NPT1/8	77.8
G1/8	

MN4GA1/2-T7* Series

Reduced wiring block manifold; body piping

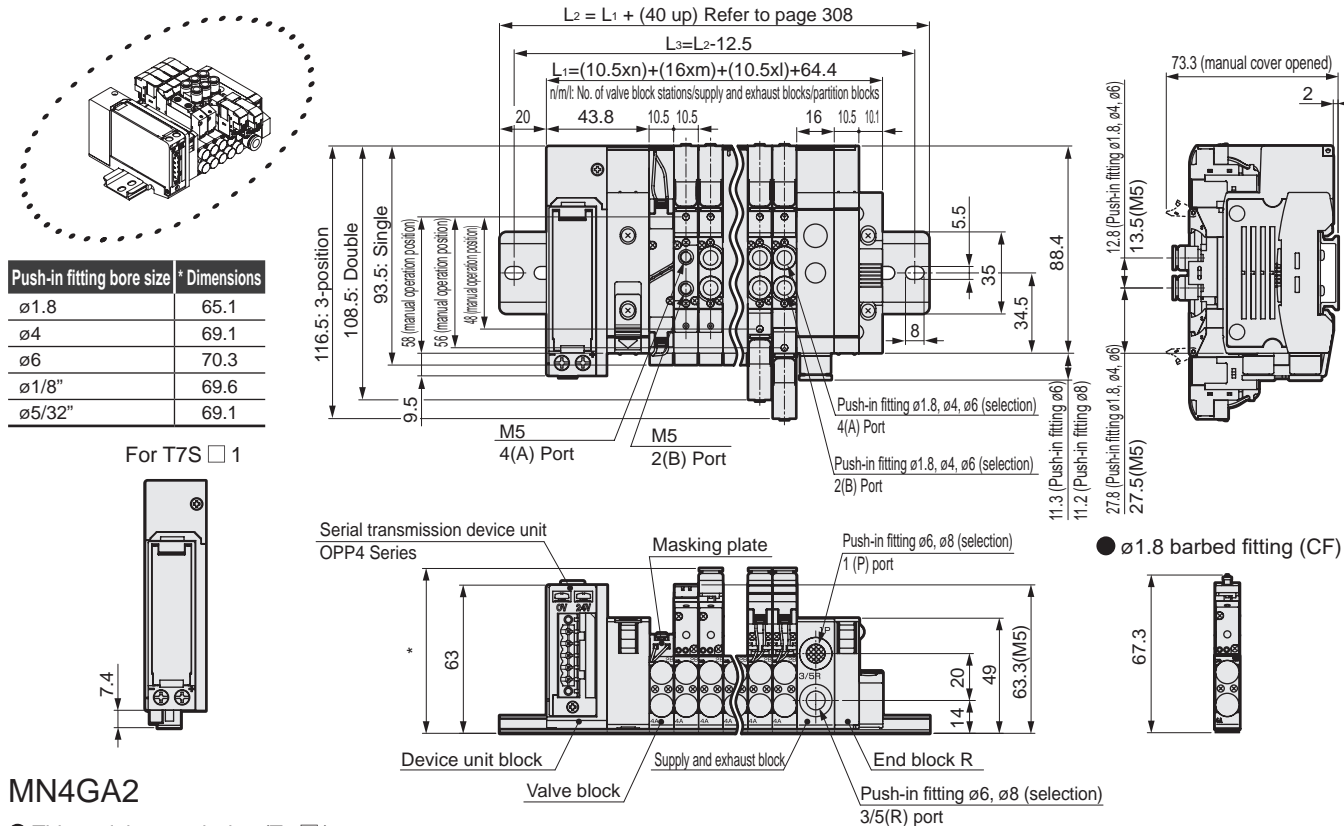
Dimensions



MN4GA1

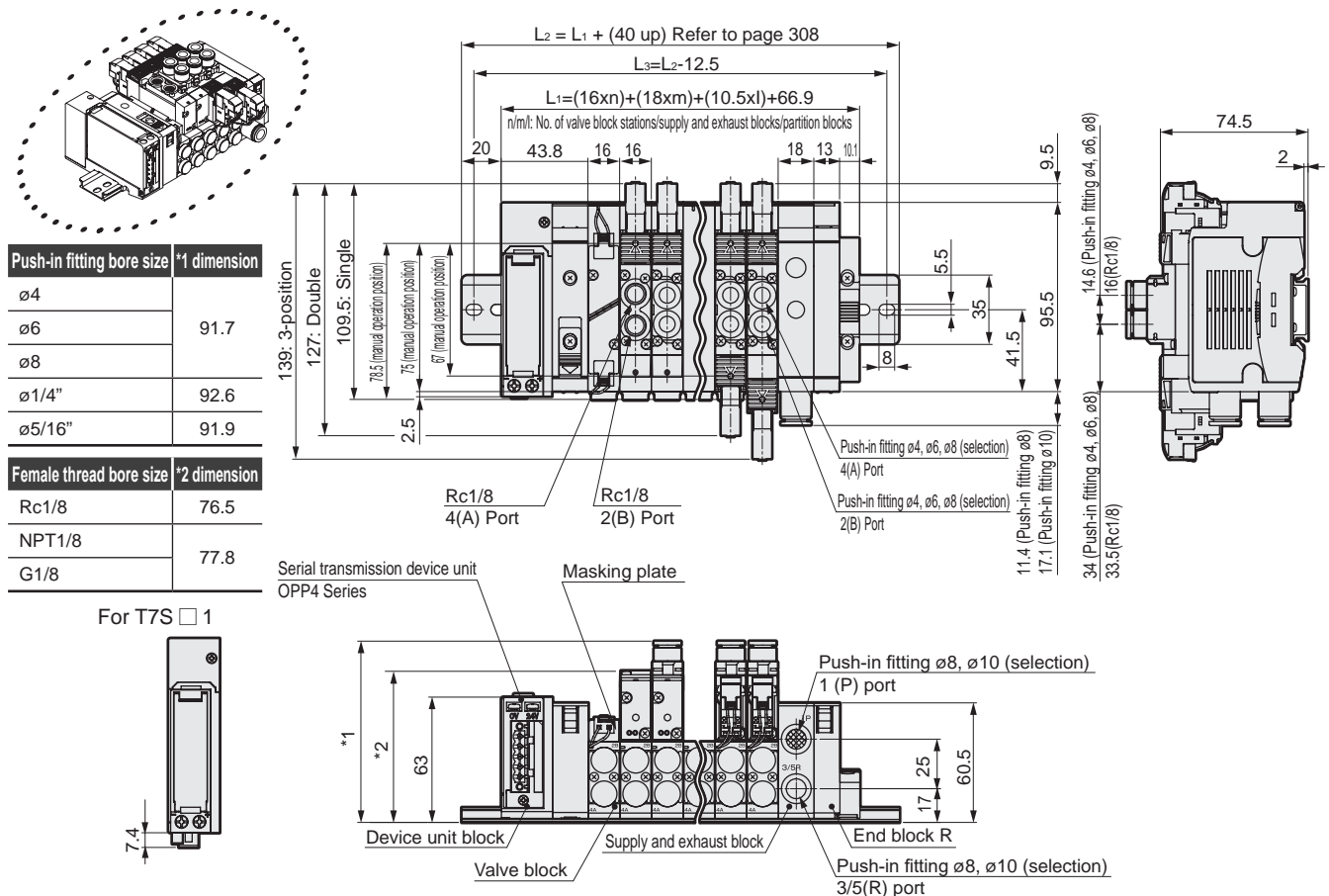
- Thin serial transmission (T7 □ 1)

Note: For the 2-position single 3-port valve, either A port or B port is a plug. In addition, the two 3-port valve integrated have the same dimensions as the double model.



MN4GA2

- Thin serial transmission (T7 □ 1)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GA1/2-T8* Series

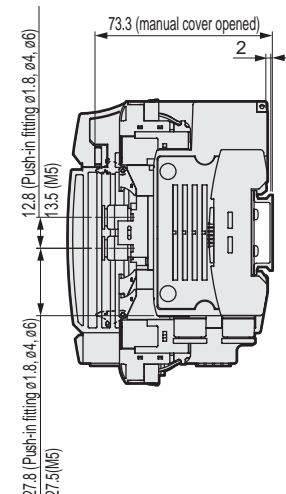
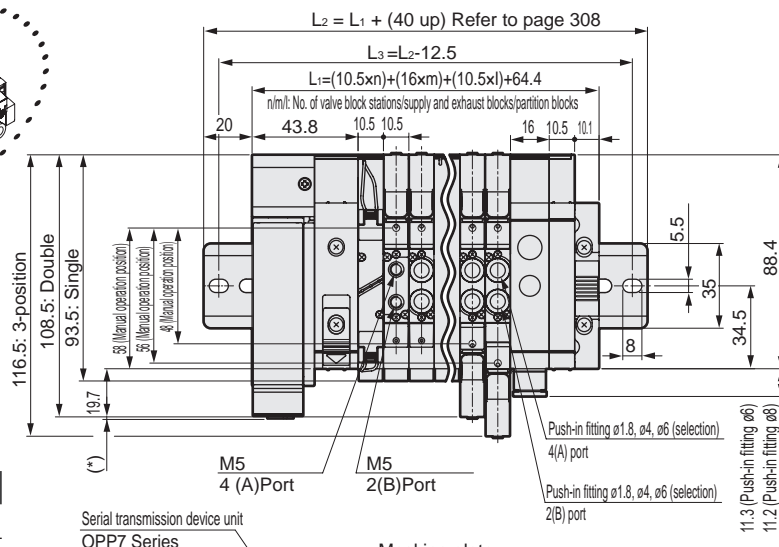
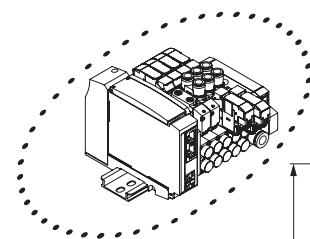
Reduced wiring block manifold: body piping

Dimensions

MN4GA1

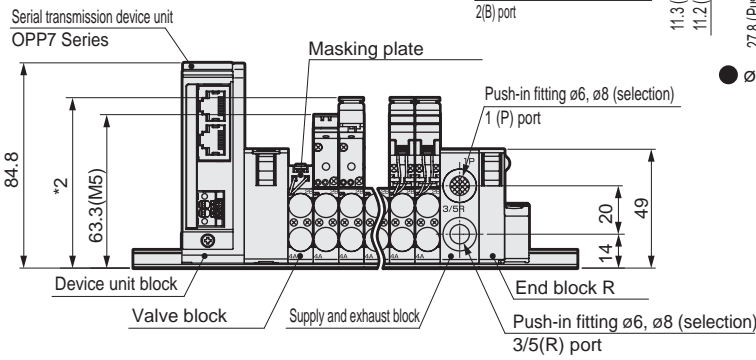
● Thin serial transmission (T8 □)

Note: For the 2-position single 3-port valve, either port A or port B is a plug. In addition, the two 3-port valve built-in type has the same dimensions as the double model.

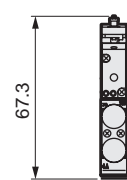


Serial transmission	*1 dimension
T8G □	1.0
T8P □	4.9
T8E □	1.5
T8D □	1.0

Push-in fitting bore size	*2 Dimensions
ø1.8	65.1
ø4	69.1
ø6	70.3
ø1/8"	69.6
ø5/32"	69.1

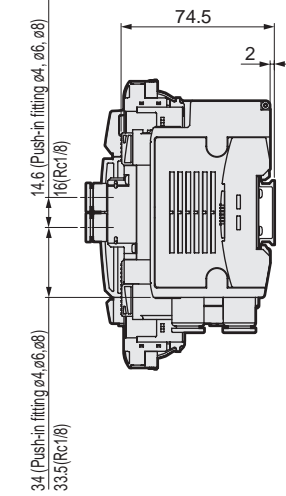
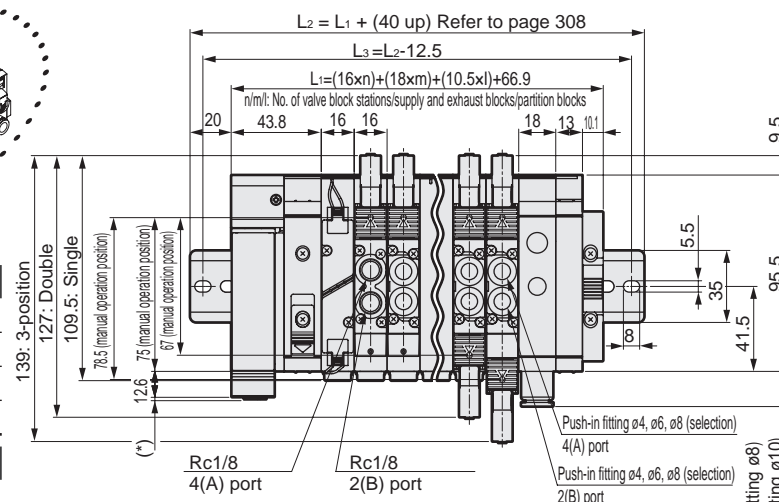
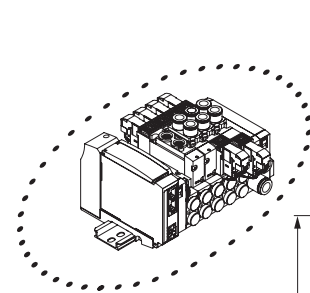


● ø1.8 barbed fitting (CF)



MN4GA2

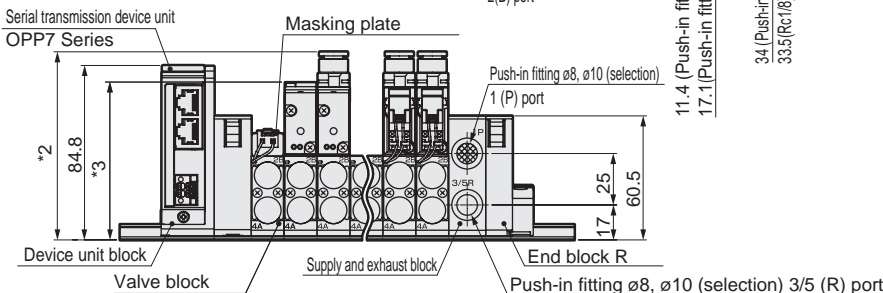
● Thin serial transmission (T8 □)



Serial transmission	*1 dimension
T8G □	1.0
T8P □	4.9
T8E □	1.5
T8D □	1.0

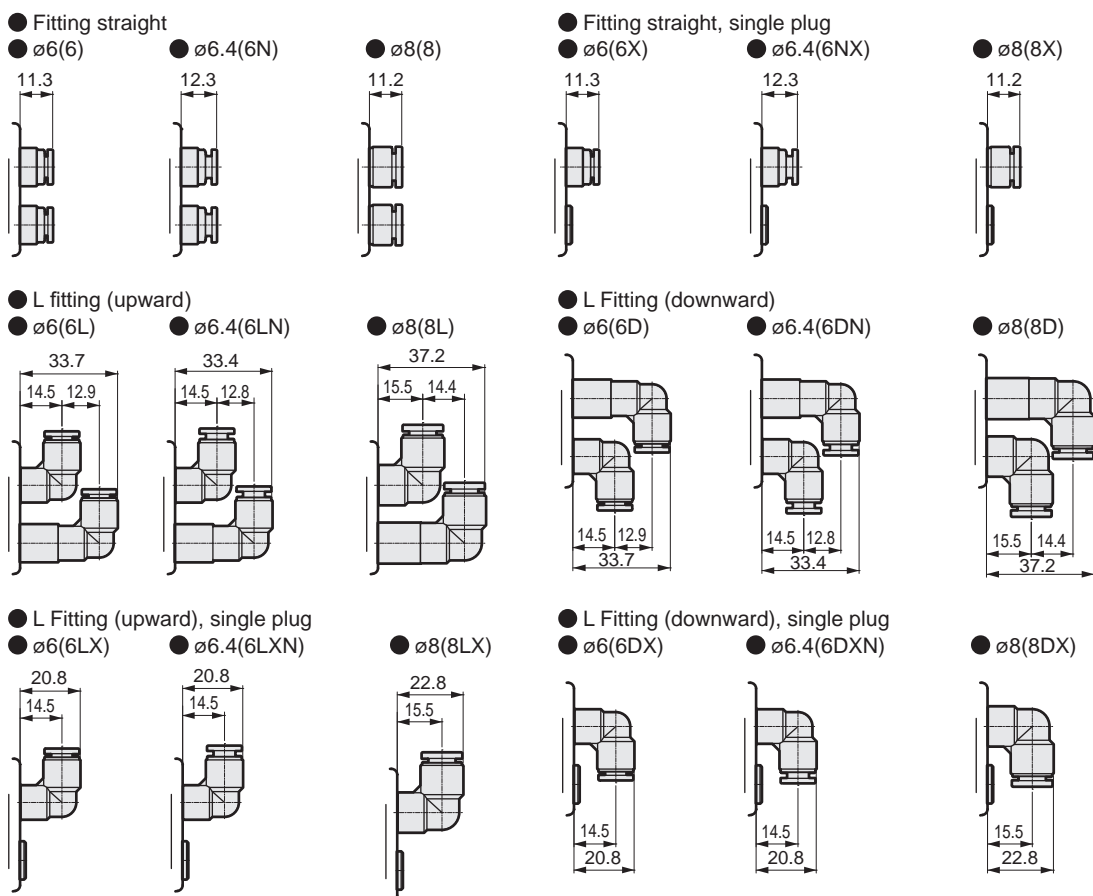
Push-in fitting bore size	*2 dimension
ø4	91.7
ø6	
ø8	
ø1/4"	92.6
ø5/16"	91.9

Female thread bore size	*3 dimension
Rc1/8	76.5
NPT1/8	77.8
G1/8	

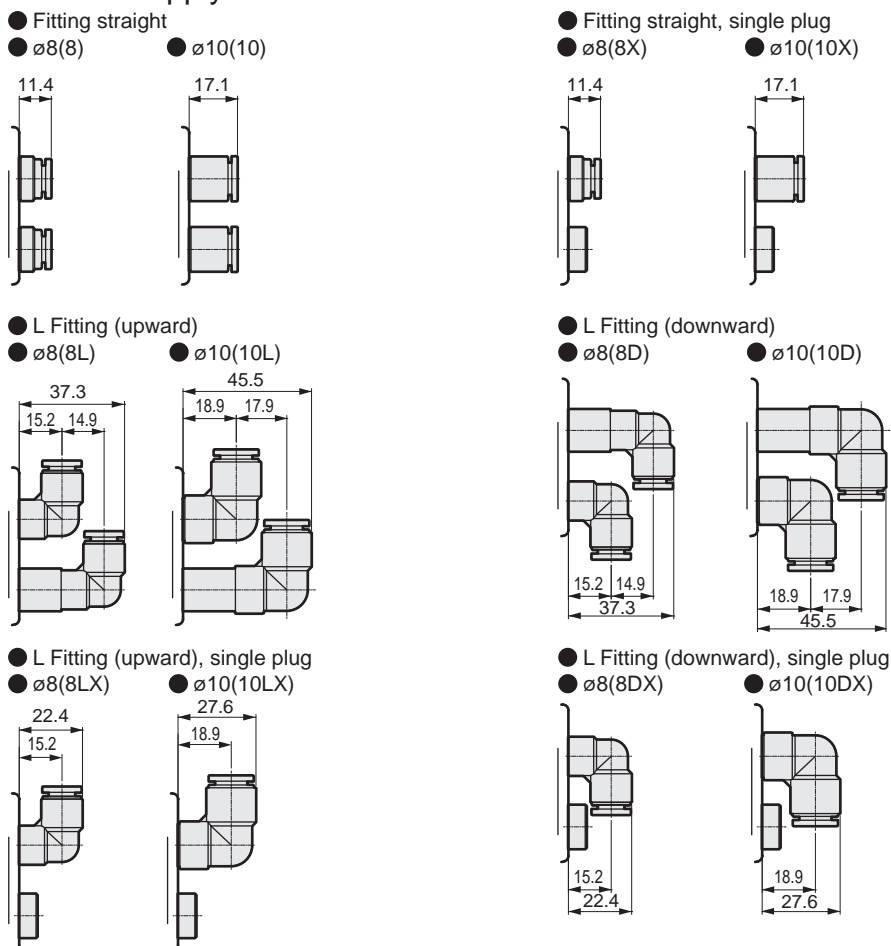


Dimensions

MN4G1 Supply and exhaust block



MN4G2 Supply and exhaust block



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B

M4GA/B

MN4GA/B

4GA/B

(master)

4GB

With sensor

4GD/E

M4GD/E

MN4GD/E

4GA/B4

MN3E

MN4E

W4GA/B2

W4GB4

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B

(master)

4F

4F

(master)

PV5G

GMF

PV5

GMF

PV5S-0

3Q

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP

N/P

4G*0EJ

4F*0EX

4F*0E

HNV

HSV

2QV

3QV

SKH

Silencer

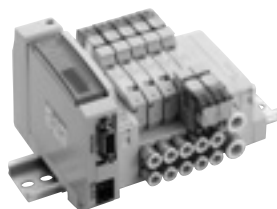
TotAirSys

(Total Air)

TotAirSys

(Gamma)

Ending



Reduced wiring block manifold
Base piping

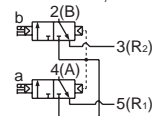
MN4GB1/2-T* Series

● Cylinder bore size: $\varnothing 20$ to $\varnothing 80$

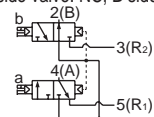


JIS symbol

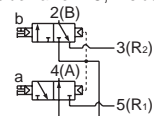
- Two 3-port valves integrated
(A side valve: NC, B side valve: NC)



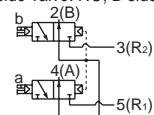
(A side valve: NC, B side valve: NO)



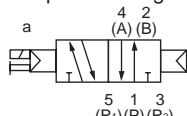
(A side valve: NO, B side valve: NC)



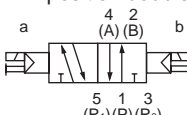
(A side valve: NO, B side valve: NO)



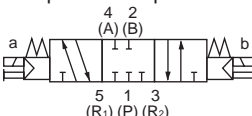
- 5-port valve
2-position single



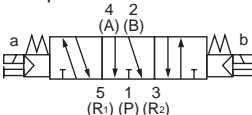
2-position double



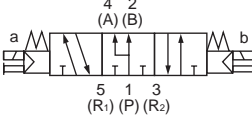
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item	Description
Manifold	Block manifold
Mounting method	DIN rail mount
Supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)
Piping direction	Lateral direction from base
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈ 100 psi, 7 bar)
Min. working pressure MPa	0.2 (≈ 29 psi, 2 bar) (*3)
Proof pressure MPa	1.05 (≈ 150 psi, 10.5 bar)
Ambient temperature $^{\circ}\text{C}$	-5 (23°F) to 55 (131°F) (no freezing)
Fluid temperature $^{\circ}\text{C}$	5 (41°F) to 55 (131°F)
Manual override	Non-locking/locking common type (standard)
Lubrication (*1)	Not required
Degree of protection (*2)	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environments

Electrical specifications

Item	Description
Rated voltage V	T1 <input type="checkbox"/> T30 <input type="checkbox"/> T5 <input type="checkbox"/> T6G1, T7 <input type="checkbox"/> T8 <input type="checkbox"/> 24 DC 12 DC 24 DC
Voltage fluctuation range (*4)	$\pm 10\%$ $+10\%$, -5%
Holding current A	Standard 0.017 0.034 0.017 With low exoergic/energy circuit 0.005 0.010 0.005
Power consumption W	Standard 0.4 With low exoergic/energy circuit 0.1
Thermal class	B
Surge suppressor (*5)	Zener diode
Indicator	LED

- *1 Use turbine oil Class 1 ISO VG32 for lubrication.
Excessive or intermittent lubrication results in unstable operation.
- *2 Dust-proof degree of protection. Not drip-proof. Avoid dripping water or oil, etc., during use.
- *3 The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.
- *4 T6G1, T7 ☐ and T8 ☐ (serial transmission) may experience voltage drops due to internal circuitry, so care should be taken when regulating voltages.
- *5 If low exoergic/energy circuit or surgeless types are selected then there will be a diode.

Individual specifications

Item		MN3GB1/MN4GB1									
		T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2
Max. station No.	Standard wiring	16 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	16 stations	8/16 stations	16/24 stations
	Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	8 stations	4/8 stations	8/16 stations
Max. number of solenoids		16 points	24 points	24 points	16 points	18 points	8 points	24 points	16 points	8/16 points	16/32 points
Port size	Metric fitting	Barbed fitting $\varnothing 1.8$ Push-in fitting $\varnothing 1.8$, $\varnothing 4$, $\varnothing 6$									
		Push-in fitting $\varnothing 6$, $\varnothing 8$									
	Inch fitting	Push-in fitting $\varnothing 1/8$ ", $\varnothing 5/32$ "									
		Push-in fitting $\varnothing 1/4$ ", $\varnothing 5/16$ "									

For weight, refer to page 266.

Item		MN3GB2/MN4GB2									
		T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2
Max. station No.	Standard wiring	16 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	16 stations	8/16 stations	16/20 stations
	Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	8 stations	4/8 stations	8/16 stations
Max. number of solenoids		16 points	24 points	24 points	16 points	18 points	8 points	24 points	16 points	8/16 points	16/32 points
Port size	Metric fitting	Push-in fitting $\varnothing 4$, $\varnothing 6$, $\varnothing 8$									
		Push-in fitting $\varnothing 8$, $\varnothing 10$									
	Inch fitting	Push-in fitting $\varnothing 1/4$ ", $\varnothing 5/16$ "									
		Push-in fitting $\varnothing 5/16$ ", $\varnothing 3/8$ "									

For weight, refer to page 266.

Flow characteristics

Model No.	Solenoid position	P \rightarrow A/B		A/B \rightarrow R1/R2	
		C [$\text{dm}^3/(\text{s} \cdot \text{bar})$]	b	C [$\text{dm}^3/(\text{s} \cdot \text{bar})$]	b
MN3GB1 MN4GB1	Two 3-port valves integrated	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 —
		ABR connection	0.96	0.29	1.2 (0.71)
MN3GB2 MN4GB2	PAB connection	1.1	0.31	1.0 —	0.15 —
	Two 3-port valves integrated	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 —
		ABR connection	2.2	0.38	2.5 (1.7)
	PAB connection	2.3	0.29	2.3 —	0.15 —

*1: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

*2: Values in () are with the exhaust check valve.

Reduced wiring specifications

Item	T10	T11	T30	T50	T51	T52	T53
Type	Common terminal block M3 thread	Common terminal block Clamping method	D-sub-connector	20P flat cable connector, without power supply terminal	20P flat cable connector, without power supply terminal	10P flat cable connector, without power supply terminal	26P flat cable connector, without power supply terminal
Connector	—	—	D-sub-connector 25-pin	MIL-C-83503 standard compliant Pressure welding socket 20-pin	MIL-C-83503 standard compliant Pressure welding socket 20-pin	MIL-C-83503 standard compliant Pressure welding socket 10-pin	MIL-C-83503 standard compliant Pressure welding socket 26-pin

Serial transmission device unit specifications

Download the communication setting file from the CKD website (<https://www.ckd.co.jp/en/>).

Item		T6G1
Network name		CC-Link ver. 1.10
Power supply voltage	Unit side	24 VDC ±10%
	Valve side	24 VDC 10%, -5%
Current consumption	Unit side	100 mA or less (when all output points are ON)
	Valve side	15 mA or less (when all output points are OFF)
No. of output points		16 points
Occupied number		1 station
Operation display		LED (power supply and communication status)
Output		NPN

Item		T7G1	T7L1-1	T7D1	T7S1	T7SP1
Network name		CC-Link ver. 1.10	SAVE NET	DeviceNet*2	CompoNet	
Power supply voltage	Unit side	24 VDC 10%, -5%				
	Valve side	Common power supply terminal				
	Communication side	—	—	11 to 25 VDC *3	14.0 VDC to 26.4 VDC	
Current consumption	Unit side	110 mA or less (when all output points are ON) Load current is not included			40 mA or less (when all output points are ON) Load current is not included	
	Valve side					
	Communication side	—	—	50 mA or less	65mA or less (all points ON: 24 VDC) 95 mA or less (all points ON: 14 VDC)	
No. of output points		16 points	16 points	16 points	16 points	
Occupied number		1 station	1 station	2 bytes	Word device 1 node (16 points)	
Operation display		LED (power supply and communication status)				
Output		NPN				PNP

Item		T8G1	T8GP1	T8P1	T8PP1	T8EC1	T8ECP1	T8EN1	T8ENP1	T8D1	T8DP1	T8EB1	T8EBP1	T8EP1	T8EPP1
		T8G2	T8GP2	T8P2	T8PP2	T8EC2	T8ECP2	T8EN2	T8ENP2	T8D2	T8DP2	T8EB2	T8EBP2	T8EP2	T8EPP2
Communication protocol		CC-Link ver. 1.10		PROFIBUS-DP (V0)		EtherCAT		EtherNet/IP		DeviceNet		CC-Link IEF Basic		PROFINET	
Power supply voltage	Unit side	24 VDC ±10%								11 to 25 VDC		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)		70 mA or less (when all output points are ON)		130 mA or less (when all output points are ON)		130 mA or less (when all output points are ON)	
	Valve side	T8□1: 15mA or less T8□2:20mA or less (when all output points are ON) Load current is not included								15 mA or less (When all output points are ON) Load current is not included					
No. of output points		T8□1: 16 points T8□2: 32 points													
Occupied number		1 station													
Operation display		LED(Power supply and communication status)													
Output		NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output

*1 Transmission bit rate of 128 bits and half-duplex transmission method are supported. Contact CKD for other specifications.

*2 Also compatible with DeviceNet compliant networks (DLNK, etc.)

*3 The communication power supply (V+, V- on the DeviceNet cable) is insulated from the power supply terminal (unit power supply/valve power supply).

MN4GB1/2-T* Series

Reduced wiring block manifold; base piping

How to order

● Manifold model No.

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

● 3-port manifold model No.

MN3GB1 **66** **0** **R** - **C6** - **T30** **W** **H** - **10** - **3**

● Discrete valve block with solenoid valve

N4GB1 **1** **0** **R** - **C6** - **A2N**^{*1} **H** - **3**

● Discrete 3-port valve block with solenoid valve

N3GB1 **66** **0** **R** - **C6** - **A2N**^{*1} **H** - **3**

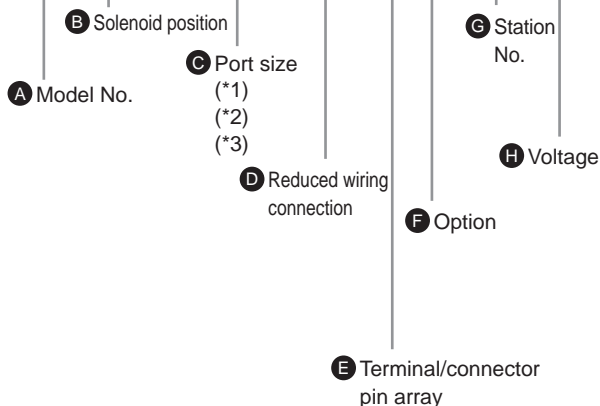
* When a cable is required, refer to page 290 and specify the cable length for ^{(*)1}. When not required, leave the space blank.

● Single solenoid valve

4GB1 **1** **9** **R** - **00** - **A2N** **H** - **3**

● Discrete 3-port solenoid valve

3GB1 **66** **9** **R** - **00** - **A2N** **H** - **3**



⚠ Precautions for model selection

- *1 : A and B port plug specifications are available for the 2-position single only.
Specify the P/R-port bore size with the supply and exhaust block model No. in the manifold specifications sheet.
- *2 : A and B ports are the same size for push-in L-fitting mix (CX).
- *3 : For a discrete solenoid valve, select 00 for Port size.
- *4 : Select MN4GB*80R when mixing with 4, 5-port valves.
Further, select MN3GB*80R when mixing with masking plate.
- *5 : Not compatible with combination with external pilot (K).
Dimensions are the same as those of the respective 2-position double solenoid.
- *6 : Simultaneously select option "L" for types other than single solenoid.
- *7 : The push-in fitting cannot be mixed with the discrete valve's 4(A) or 2(B) port.

		A Model No.							
		Manifold				Discrete valve block + solenoid valve			
		Two 3-port valves integrated		5-port valve		Discrete solenoid valve		Discrete solenoid valve	
		MN3GB1	MN3GB2	MN4GB1	MN4GB2	(N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
				●	●			●	●
				●	●			●	●
				●	●			●	●
				●	●			●	●
d		●							
d		●	●			●	●		
d		●	●						
d		●	●			●	●		
d		●	●						
d		●	●	●	●	●	●		
d		●	●	●	●	●	●		
		●		●		●		●	
		●		●		●		●	
		●	●						●
b)		●		●		●		●	
b)		●	●	●		●		●	
b)		●	●	●		●		●	
b)		●	●	●		●		●	
		●		●		●		●	
		●	●	●		●		●	
		●	●	●		●		●	
		●	●	●		●		●	
c)		●	●	●		●		●	
				●				●	
				●	●			●	●
				●	●			●	●
a)				●	●			●	●
a)				●	●			●	●
				●	●			●	●
				●	●			●	●
				●	●			●	●
				●	●			●	●
				●	●			●	●
				●	●			●	●
b)				●	●			●	●
				●	●			●	●
				●	●			●	●
a)				●	●			●	●
				●	●			●	●
		●		●		●		●	
		●		●		●		●	
			●				●		●
			●				●		●
		○		○		○		○	
		○		○		○		○	
		○		○		○		○	
b)		●	●	●				●	●
			●					●	
			●					●	
			●					●	
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			●					●	
			●					●	

○ is not available.

○ indicates a custom order.

MN4GB1/2-T* Series

Reduced wiring block manifold; base piping

[Port size/wiring method list]

			A Model No.							
			Manifold				P Valve block with solenoid valve Discrete			
			Two 3-port valves integrated		5-port valve		Single solenoid valve		Discrete valve	
Code	Description		MN3GB1	MN3GB2	MN4GB1	MN4GB2	(N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
D Reduced wiring (lamp and surge suppressor provided as standard) 12/24 VDC										
T10	Common terminal block (M3 thread)	Left-sided specifications	●	●	●	●				
T10R		Right-sided specifications	●	●	●	●				
T11	Common terminal block (clamping)	Left-sided specifications	●	●	●	●				
T11R		Right-sided specifications	●	●	●	●				
T30	D-sub-connector	Left-sided specifications	●	●	●	●				
T30R		Right-sided specifications	●	●	●	●				
T50	20-pin flat cable connector (with power supply terminal)	Left-sided specifications	●	●	●	●				
T50R		Right-sided specifications	●	●	●	●				
T51	20-pin flat cable connector (without power supply terminal)	Left-sided specifications	●	●	●	●				
T51R		Right-sided specifications	●	●	●	●				
T52	10-pin flat cable connector (without power supply terminal)	Left-sided specifications	●	●	●	●				
T52R		Right-sided specifications	●	●	●	●				
T53	26-pin flat cable connector (without power supply terminal)	Left-sided specifications	●	●	●	●				
T53R		Right-sided specifications	●	●	●	●				
E Serial transmission (lamp/surge suppressor provided as standard) 24 VDC										
T6G1	CC-Link	NPN 16 points	●	●	●	●				
T7D1	DeviceNet	NPN 16 points	●	●	●	●				
T7G1	CC-Link	NPN 16 points	●	●	●	●				
T7L1	SAVE NET	NPN 16 points	●	●	●	●				
T7S1	CompoNet	NPN 16 points	●	●	●	●				
T7SP1		PNP 16 points	●	●	●	●				
T8G1	CC-Link	NPN 16 points	●	●	●	●				
T8G2		NPN 32 points	●	●	●	●				
T8GP1		PNP 16 points	●	●	●	●				
T8GP2		PNP 32 points	●	●	●	●				
T8P1	PROFIBUS-DP	NPN 16 points	●	●	●	●				
T8P2		NPN 32 points	●	●	●	●				
T8PP1		PNP 16 points	●	●	●	●				
T8PP2		PNP 32 points	●	●	●	●				
T8EC1	EtherCAT	NPN 16 points	●	●	●	●				
T8EC2		NPN 32 points	●	●	●	●				
T8ECP1		PNP 16 points	●	●	●	●				
T8ECP2		PNP 32 points	●	●	●	●				
T8EN1	EtherNet/IP	NPN 16 points	●	●	●	●				
T8EN2		NPN 32 points	●	●	●	●				
T8ENP1		PNP 16 points	●	●	●	●				
T8ENP2		PNP 32 points	●	●	●	●				
T8D1	DeviceNet	NPN 16 points	●	●	●	●				
T8D2		NPN 32 points	●	●	●	●				
T8DP1		PNP 16 points	●	●	●	●				
T8DP2		PNP 32 points	●	●	●	●				
T8EB1	CC-Link IEF Basic	NPN 16 points	●	●	●	●				
T8EB2		NPN 32 points	●	●	●	●				
T8EBP1		PNP 16 points	●	●	●	●				
T8EBP2		PNP 32 points	●	●	●	●				
T8EP1	PROFINET	NPN 16 points	●	●	●	●				
T8EP2		NPN 32 points	●	●	●	●				
T8EPP1		PNP 16 points	●	●	●	●				
T8EPP2		PNP 32 points	●	●	●	●				
A2N	Without lead wire (without socket)	with surge suppressor and indicator lamp					●	●	●	●
F Terminal/connector pin array										
Blank	Standard wiring	(*8)	●	●	●	●	●	●	●	●
W	Double wiring	(*8)	●	●	●	●	●	●	●	●
W1	Double wiring (with single spare wiring)	(*8)(*9)	●	●	●	●	●	●	●	●
G Option										
Blank	Manual override of non-locking/locking common		●	●	●	●	●	●	●	●
M	Manual override of non-locking		●	●	●	●	●	●	●	●
H	With exhaust check valve	(*10)	●	●	●	●	●	●	●	●
K	External pilot	(*11)			●	●			●	●
A	Ozone/coolant proof		●	●	●	●	●	●	●	●
S	Surgeless	(*12)	●	●	●	●	●	●	●	●
E	Low exoergic/energy saving circuit	(*12)(*13)	●	●	●	●	●	●	●	●
L	With pipe adaptor		●	●	●	●	●	●	●	●
Q	Reduced wiring duct	(*17)	●	●	●	●	●	●	●	●
F	Port A/B filter built in	(*14)	●	●	●	●	●	●	●	●
X	Non-locking exhaust structure	(*18)			●	●				
X1	Locking exhaust structure	(*18)			●	●				
Z1	Air supply spacer	(*15)	●	●	●	●				
Z2	In-stop valve spacer	(*15)(*16)	●	●	●	●				
Z3	Exhaust spacer	(*15)	●	●	●	●				
Z6	Spacer pilot check valve	(*15)			●	●				
H Station No.										
1	1 stations		●	●	●	●				
to										
24	24 stations (Max. station number for MN4GB2 is 20.)									
I Voltage										
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item F option "A" above.

Clean-room specifications

● Clean room compatible specifications

** - Voltage - **P7***

Specifications for rechargeable battery (Catalog No. CC-1226A)

● For use in the rechargeable battery manufacturing process, materials used for air path and sliding section are limited

** - Voltage - **P4**

CE marking specifications

** - Voltage - **ST**

• Standard voltage of 24 VDC or less is CE marking-compatible even if the model No. is not indicated with "ST".

⚠ Precautions for model selection

*8: Blank: The wiring will be based on the type of valve used.

W*: All wired for double solenoid valves regardless of the type of valve used.

*9: Spare wiring (A type socket assembly) is included on the cap side for single types. A holder for retaining the socket assembly is included for single unit valves (A2N). For details, refer to page 304. Not compatible with combination with port size C*NC or C*NO.

*10: 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to page 851 for details on the exhaust check valve.

*11: Consult with CKD when using vacuum with external pilot (K).

*12: In addition, surgeless "S" and low exoergic/energy saving circuit "E" cannot be selected together.

*13: Surgeless specifications.

*14: A filter is built into port P as standard.

*15: Specify the spacer mounting position and quantity on the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Cannot be selected together with push-in L-fitting (upward). For details, refer to page 297 to page 301.

*16: Not compatible in combination with external pilot (K).

*17: When radial upward push-in fittings are selected, only 2-position single is supported.

*18: Compatible only with MN4GB1 and MN4GB2 solenoid positions 3 and 4.

4GA/B

M4GA/B

MN4GA/B

4GA/B (master)

4GB With sensor

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E

MN4E

W4GA/B2

W4GB4

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B (master)

4F

4F (master)

PV5G

GMF

PV5

GMF

PV5S-0

3Q

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP

NVP

4G*0EJ

4F*0EX

4F*0E

HMV

HSV

2QV

3QV

SKH

Silencer

TotAirSys (Total Air)

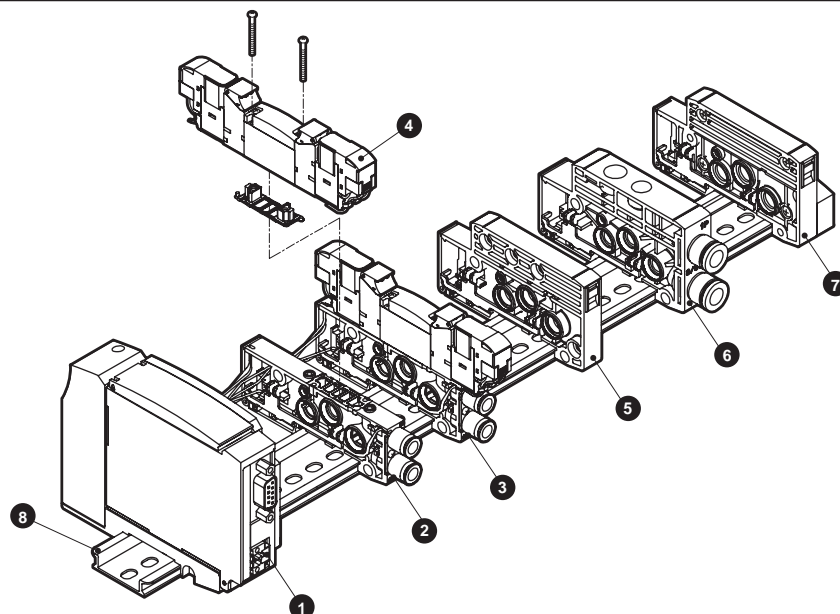
TotAirSys (Gamma)

Ending

MN4GB1/2-T* Series

Reduced wiring block manifold; base piping

Manifold components explanation and parts list



List of main components (refer to pages 286 to 305 for details)

No.	Component name	Model No. (example)	No.	Component name	Model No. (example)
1	Wiring block (*)	N4G1R-T8P1	5	Partition block	N4G1R-S
2	Discrete valve block	N4GB1R-V2-C6	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GB120R-C6-A2NH-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GB129R-00-A2NH-3	8	DIN rail	N4GR-BAA (Length)

Note: Wiring block cannot be ordered as a single item.

B type reduced wiring weight

4GB1

Part name	Model No.	Weight	Part name	Model No.	Weight	Part name	Model No.	Weight	
Valve block with solenoid valve	N4GB110R-C6-A2N-3	69	End block	N4G1R-E*	60	Wiring block	N4G1R-T10(R)	207	
	N4GB120R-C6-A2N-3	88		N4G1R-EX*	60		N4G1R-T30(R)	165	
	N4GB130R-C6-A2N-3	89		N4G1R-S	45		N4G1R-T50(R)	167	
	N3GB1660R-C6-A2N-3	88	Valve block	N4GB1R-V1-C*	33		N4G1R-T6G1	295	
Valve block with masking plate	N4GB1R-MP*-C6	37		N4GB1R-V2-C*	35		N4G1R-T7*	203	
	N4G1R-Q-8	58	DIN rail	N4GR-BAA (Length)	0.19/mm		N4G1R-T8*	229	
Supply and exhaust block	N4G1R-QK-8	60	Note: Wiring block cannot be ordered as a single item.						

Note: Wiring block cannot be ordered as a single item.

4GB2

Part name	Model No.	Weight	Part name	Model No.	Weight	Part name	Model No.	Weight	
Valve block with solenoid valve	N4GB210R-C8-A2N-3	130	End block	N4G2R-E*	84	Wiring block	N4G2R-T10(R)	223	
	N4GB220R-C8-A2N-3	149		N4G2R-EX*	85		N4G2R-T30(R)	182	
	N4GB230R-C8-A2N-3	160	Partition block	N4G2R-S	60		N4G2R-T50(R)	184	
	N3GB2660R-C8-A2N-3	149		N4GB2R-V1-C*	55		N4G2R-T6G1	312	
Valve block with masking plate	N4GB2R-MP*-C*	69	Valve block	N4GB2R-V2-C*	57		N4G2R-T7*	204	
	N4G2R-Q-10	83		DIN rail	N4GR-BAA (Length)		0.19/mm	N4G2R-T8*	242
Supply and exhaust block	N4G2R-QK-10	85	Note: Wiring block cannot be ordered as a single item.						

Note: Wiring block cannot be ordered as a single item.

Parts list

Applicable	Part name	Model No.	Applicable	Part name	Model No.
Valve 4G1	ø1.8 barbed	4G1R-JOINT-CF	Valve 4G2	ø1/4" elbow	*1 4G2R-JOINT-CL6N
	ø1.8 straight	4G1R-JOINT-C18		ø5/16" elbow	*1 4G2R-JOINT-CL8N
	ø4 straight	4G1R-JOINT-C4		Plug cartridge	4G2R-JOINT-CPG
	ø6 straight	4G1R-JOINT-C6	Common	Coil assembly	4GR-A2N-[*2]-COIL-[*3] *2: Ozone/coolant proof (blank, A) Surgeless (S) Low exoergic/energy circuit (E) *3: Voltage (1, 3, 4)
	ø1.8 elbow	4G1R-JOINT-CL18, CLL18			
	ø4 elbow	4G1R-JOINT-CL4, CLL4			
	ø6 elbow	4G1R-JOINT-CL6, CLL6			
	ø1/8" straight	4G1R-JOINT-C3N			
	ø5/32" straight	4G1R-JOINT-C4N			
	ø1/8" elbow	*1 4G1R-JOINT-CL3N			
	ø5/32" elbow	*1 4G1R-JOINT-CL4N			
	Plug cartridge	4G1R-JOINT-CPG	Manifold	Expansion socket assembly (Details on page 837)	For a side solenoid N4GR-SOCKET-ASSY-[selection No.] For b side solenoid N4GR-RELAY-SOCKET-[selection No.]
Valve 4G2	ø4 straight	4G2R-JOINT-C4			
	ø6 straight	4G2R-JOINT-C6			
	ø8 straight	4G2R-JOINT-C8			
	ø6 elbow	4G2R-JOINT-CL6, CLL6			
	ø8 elbow	4G2R-JOINT-CL8, CLL8			
	ø1/4" straight	4G2R-JOINT-C6N			
	ø5/16" straight	4G2R-JOINT-C8N			

*1: Available as custom order.

Dimensions

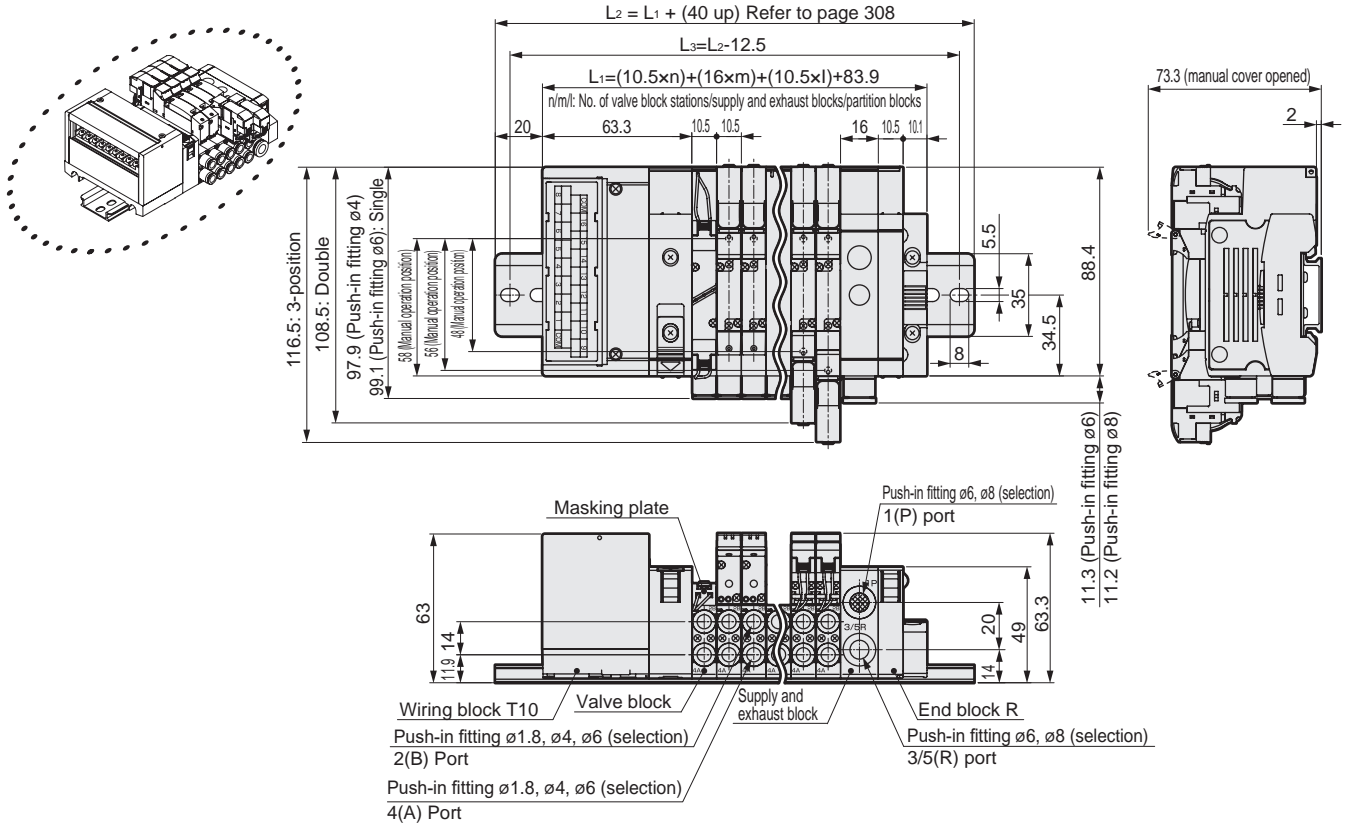


MN4GB1

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

Note: Clamping specification (T11) is also available.
Dimensions are the same as T10.

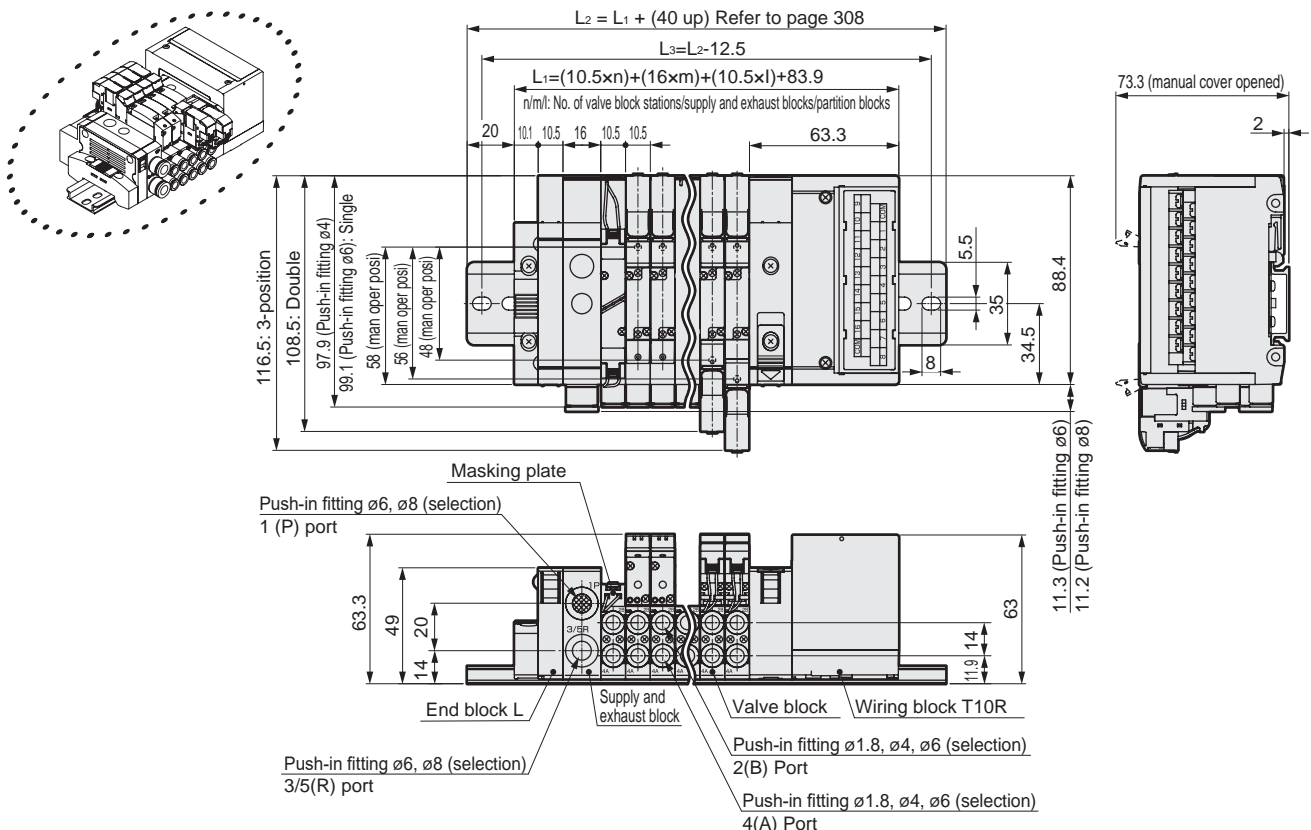
Note: The two 3-port valve integrated have the same dimensions as the double.



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

Note: Clamping specification (T11R) is also available.
Dimensions are the same as T10R.

Note: Refer to page 276 for dimensions of the push-in L-fitting.



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB2-T10 Series

Reduced wiring block manifold; base piping

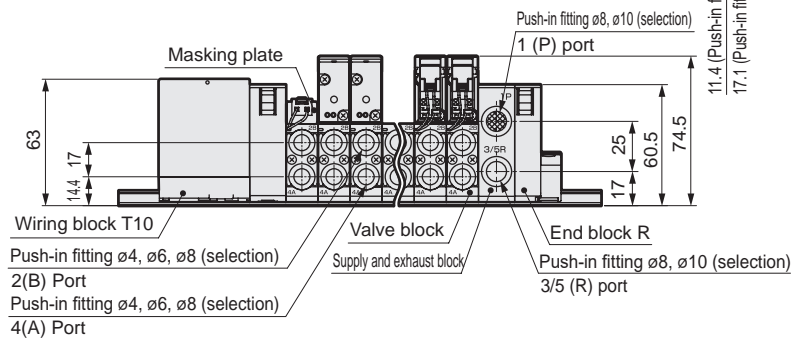
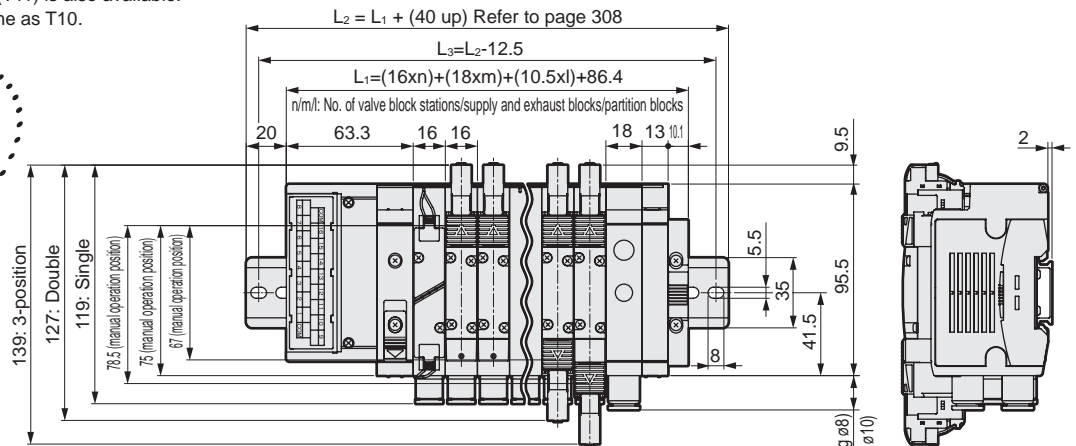
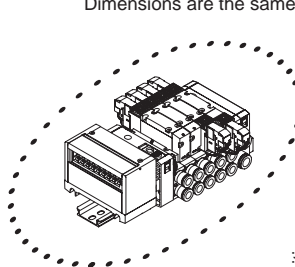
Dimensions



MN4GB2

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

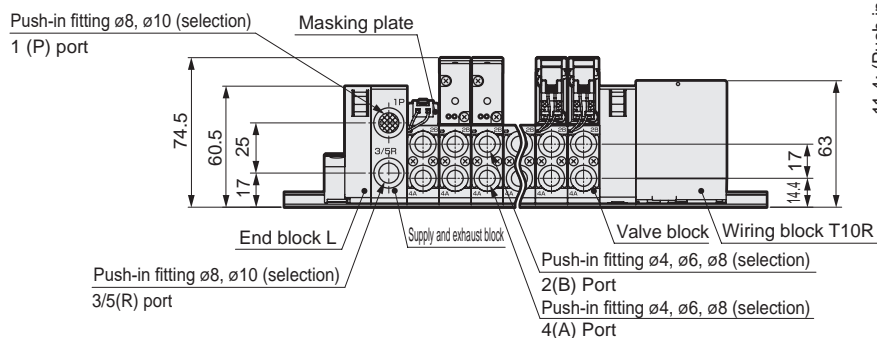
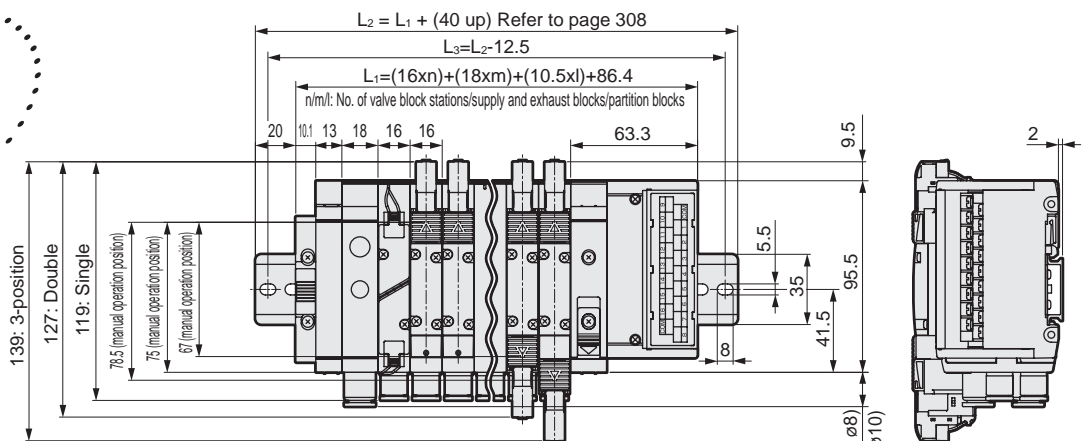
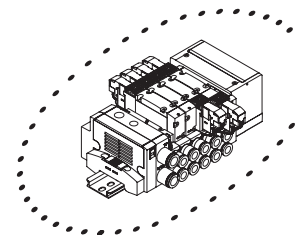
Note: Clamping specification (T11) is also available.
Dimensions are the same as T10.



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

Note: Clamping specification (T11R) is also available.
Dimensions are the same as T10R.

Note: Refer to page 278 for dimensions of the push-in L fitting.



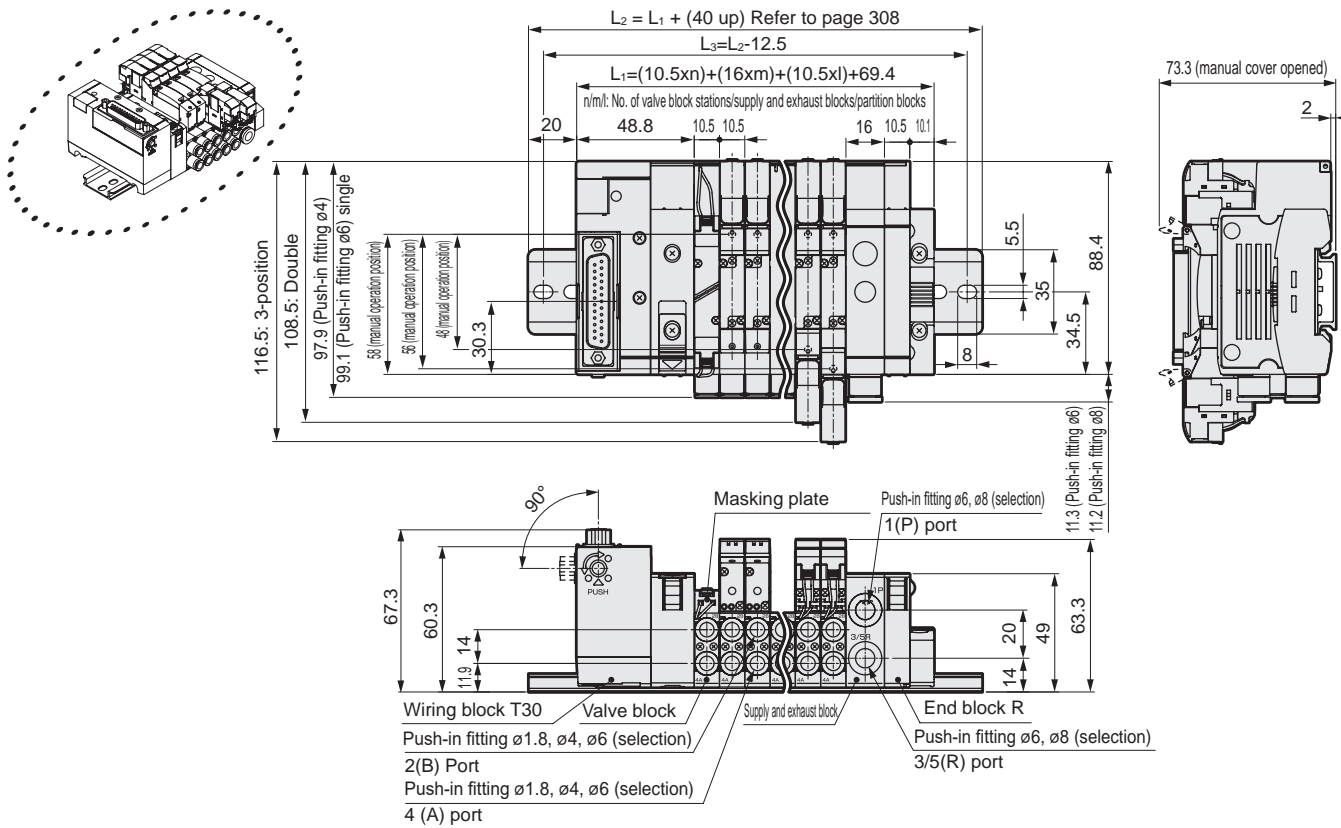
Dimensions



MN4GB1

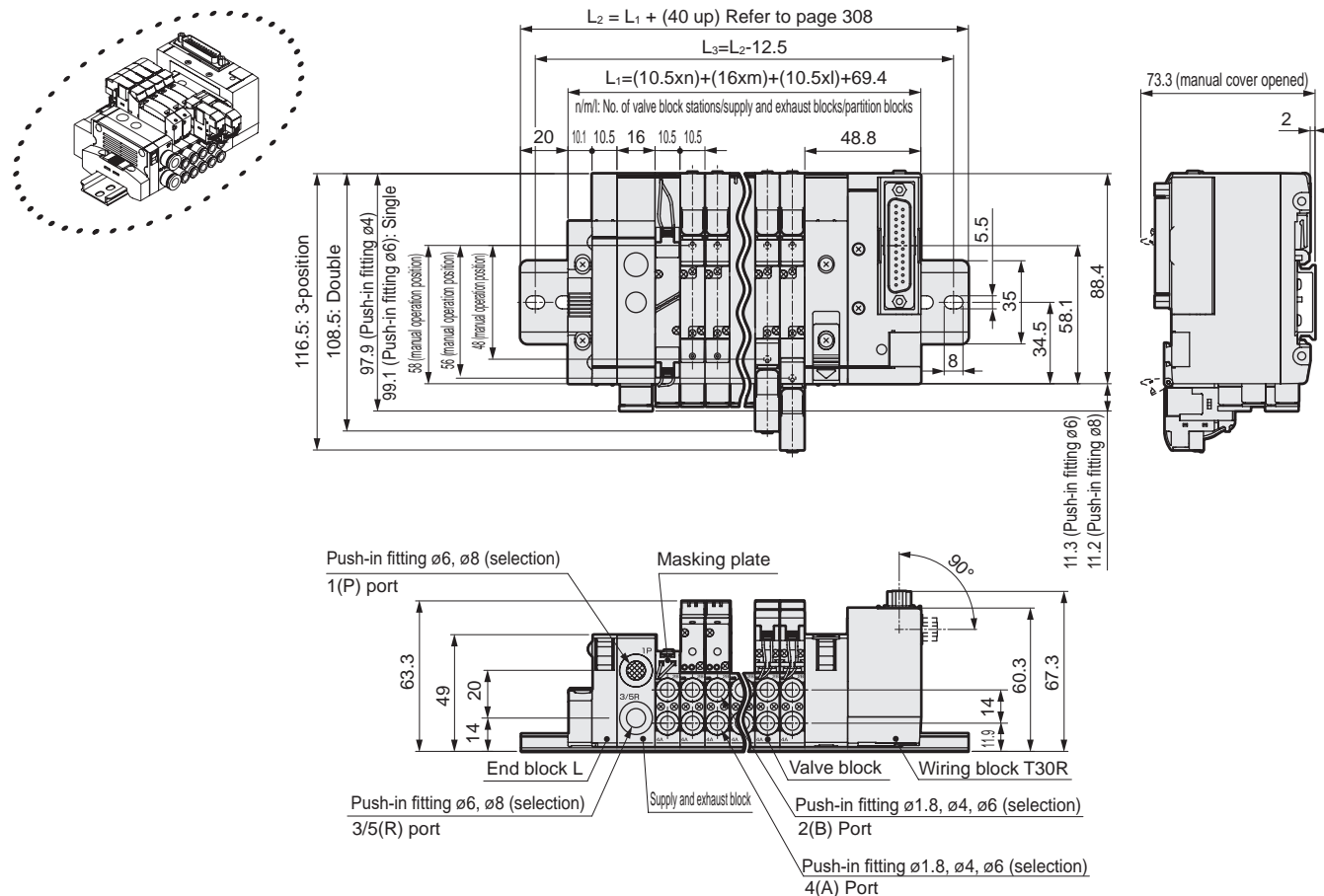
● D sub-connector left side (T30)

Note: The two 3-port valve integrated have the same dimensions as the double.



● D sub-connector right side (T30R)

Note: Refer to page 276 for dimensions of the push-in L fitting.



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB2-T30 Series

Reduced wiring block manifold; base piping

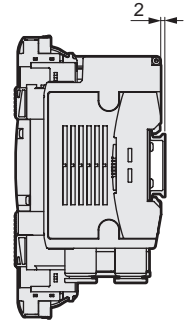
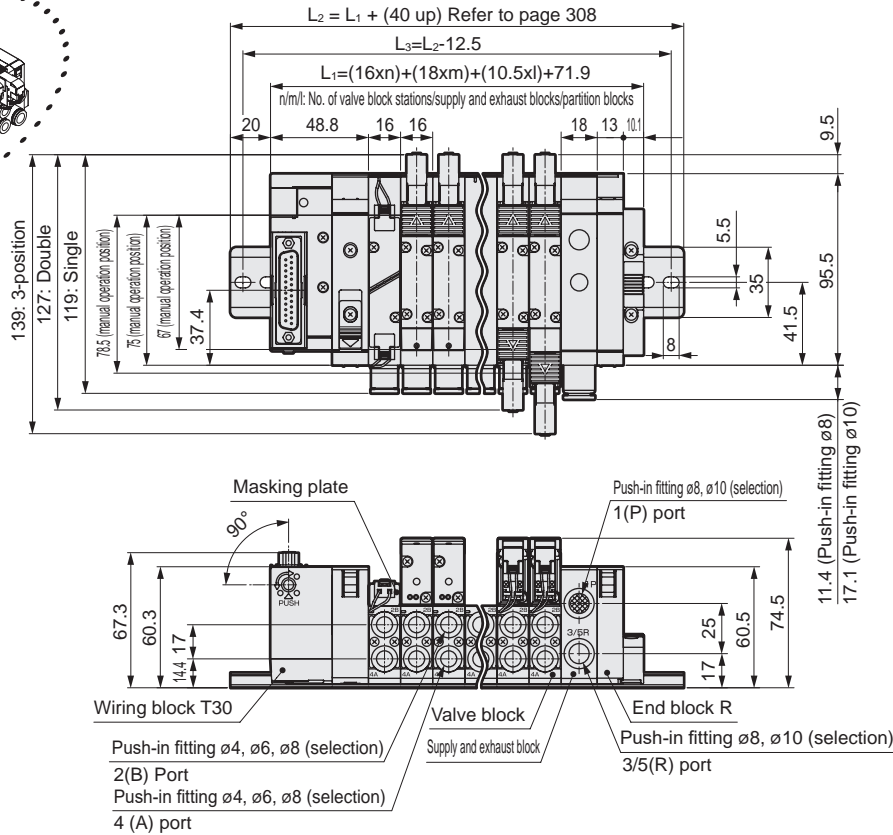
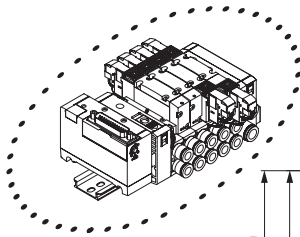
Dimensions



MN4GB2

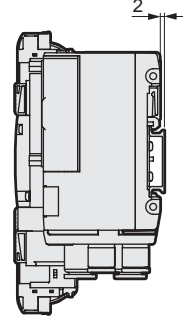
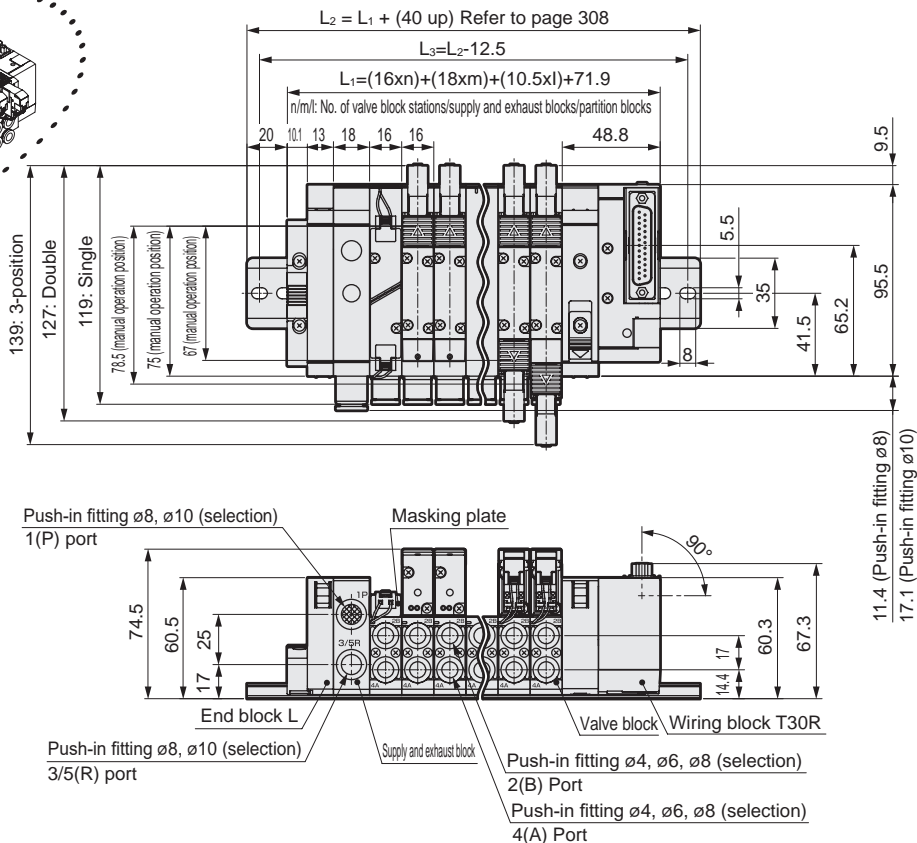
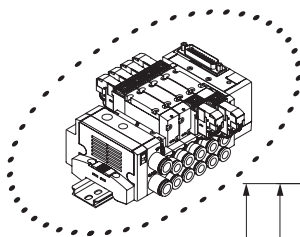
● D sub-connector left side (T30)

Note: The two 3-port valve integrated have the same dimensions as the double.



● D sub-connector right side (T30R)

Note: Refer to page 278 for dimensions of the push-in L fitting.

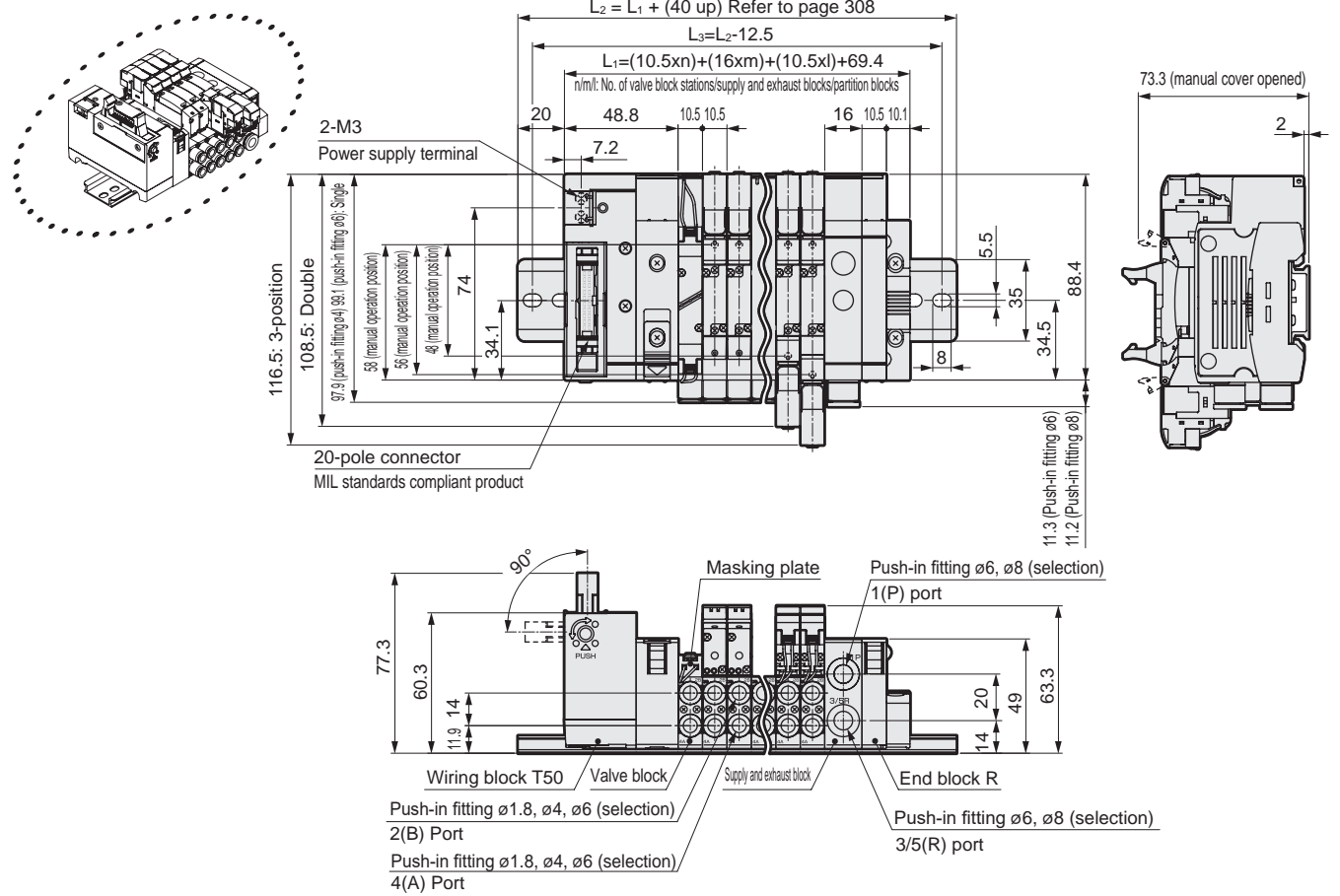


Dimensions



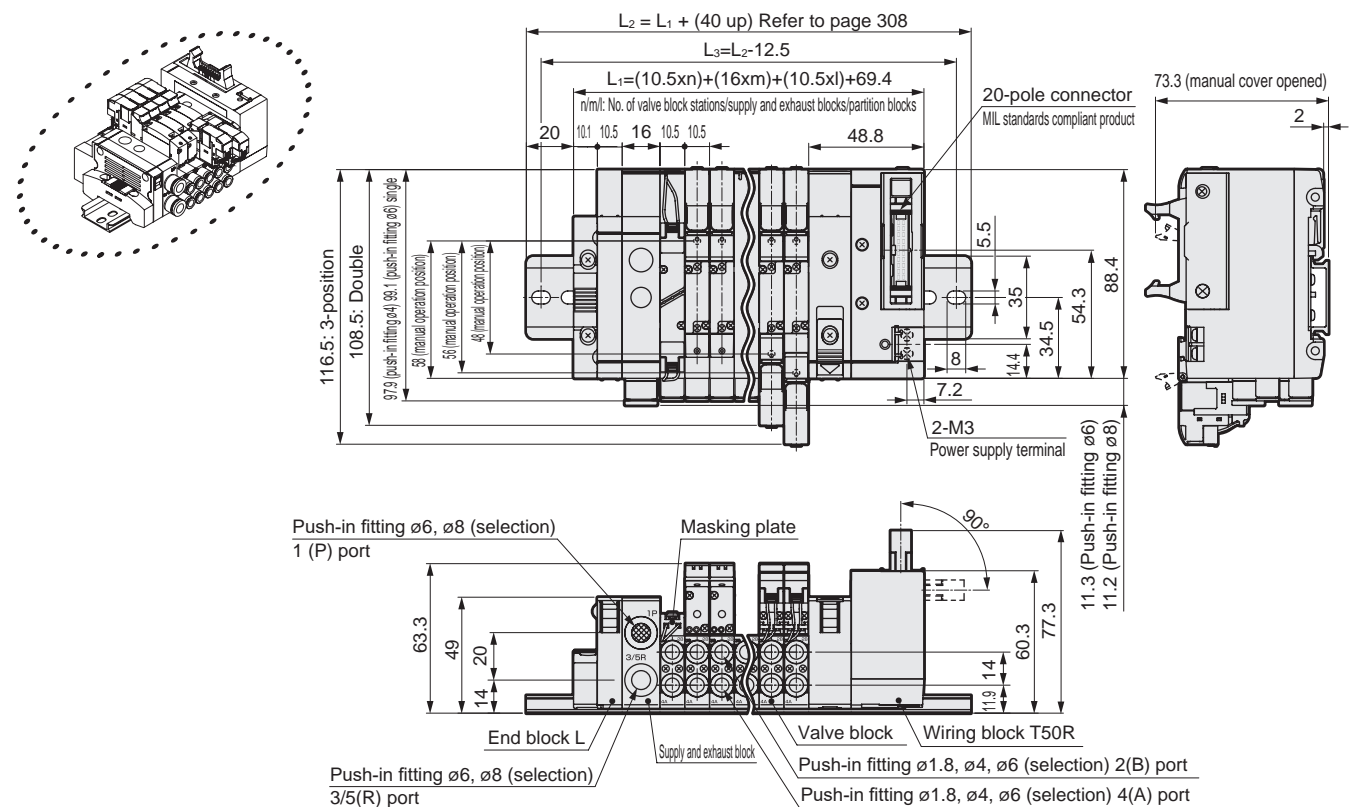
MN4GB1

- Flat cable connector left side (T50) with power supply terminal



- Flat cable connector right side (T50R) with power supply terminal

Note: Refer to page 276 for dimensions of the push-in L fitting.



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB2-T50 Series

Reduced wiring block manifold; base piping

Dimensions

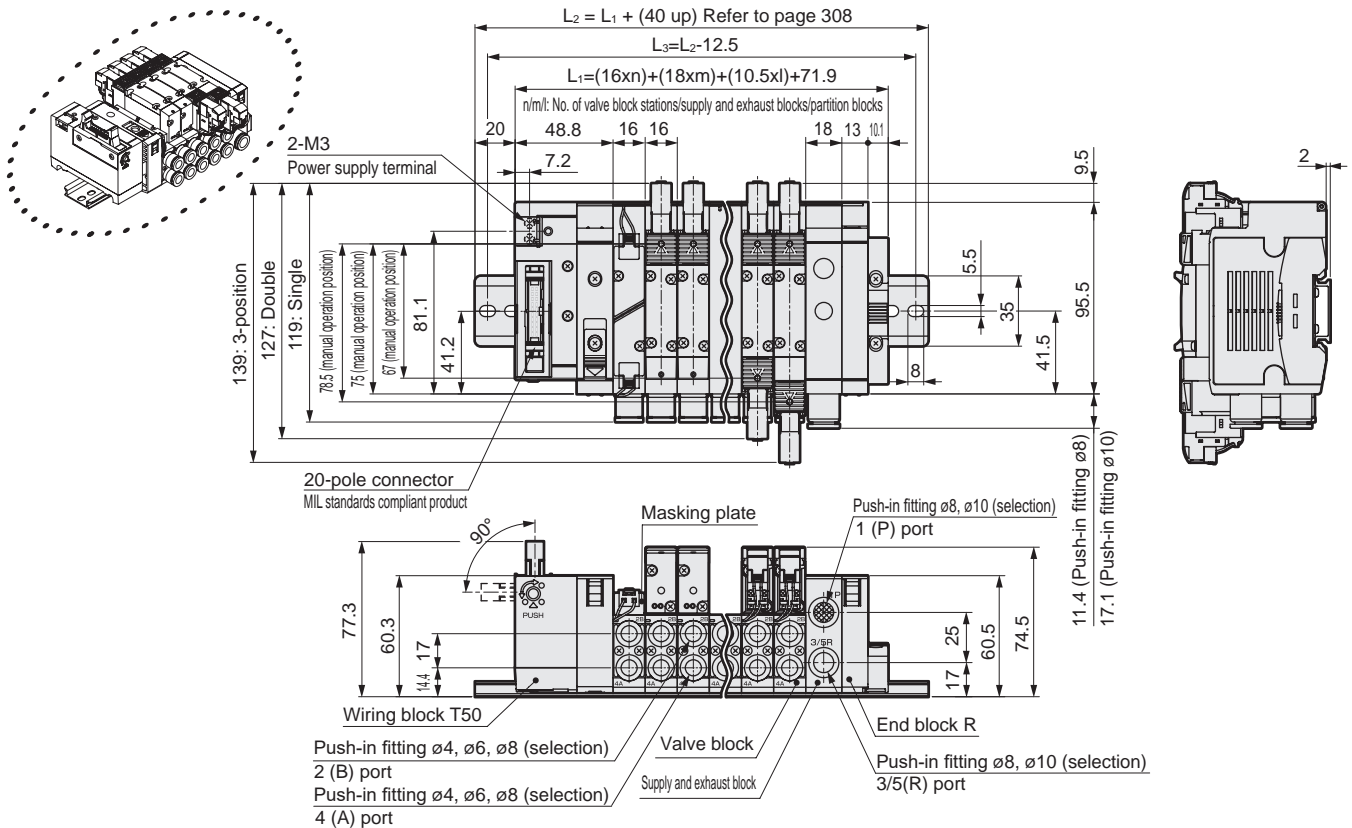


MN4GB2

- Flat cable connector left side with power supply terminal (T50)

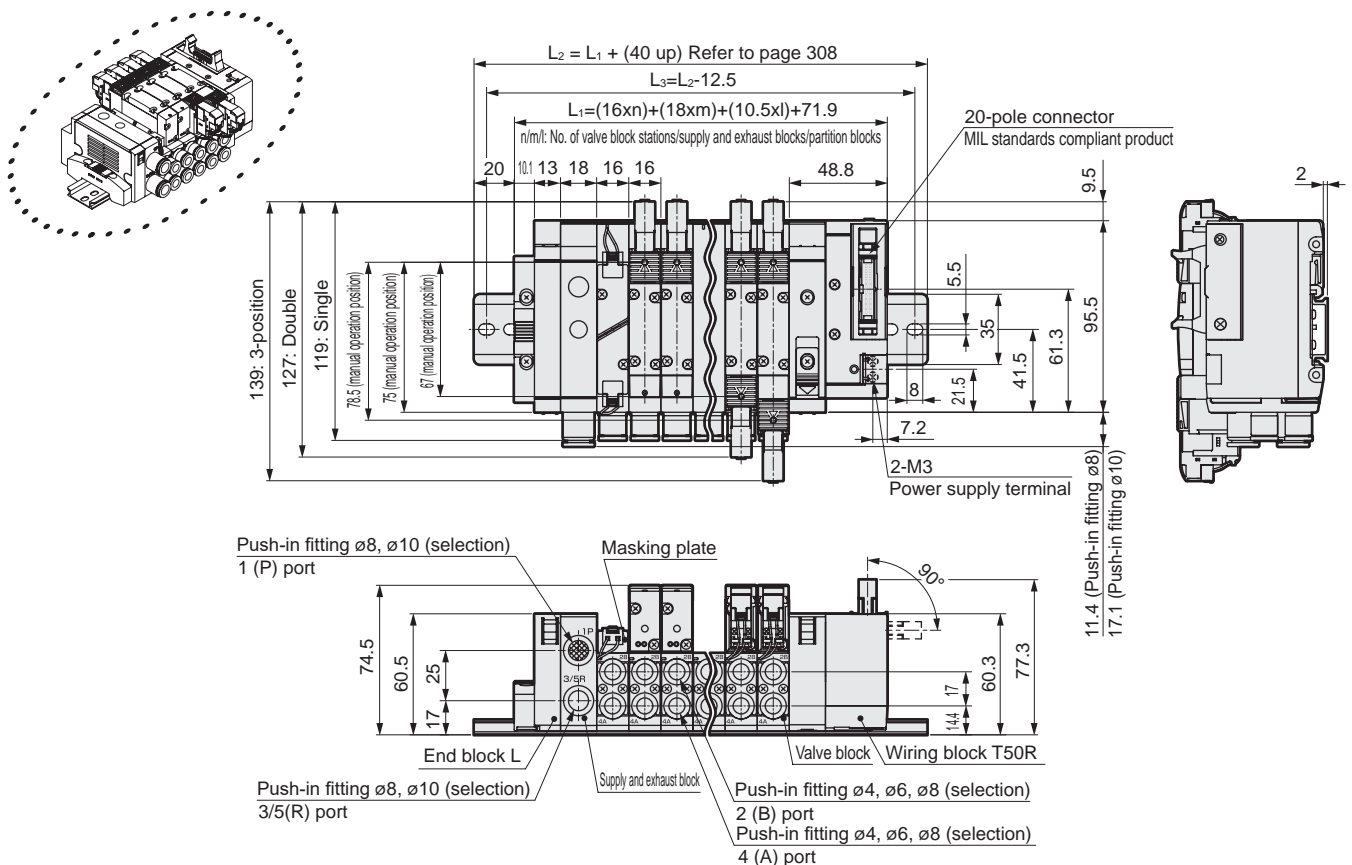
*1: T51, T52, and T53 are also available as flat cable connector. Dimensions are the same as T50.

*2: The two 3-port valve integrated have the same dimensions as the double.



- Flat cable connector right side with power supply terminal (T50R)

Note: Refer to page 278 for dimensions of the push-in L fitting.



MN4GB1/2-T6G1 Series

Reduced wiring block manifold; base piping

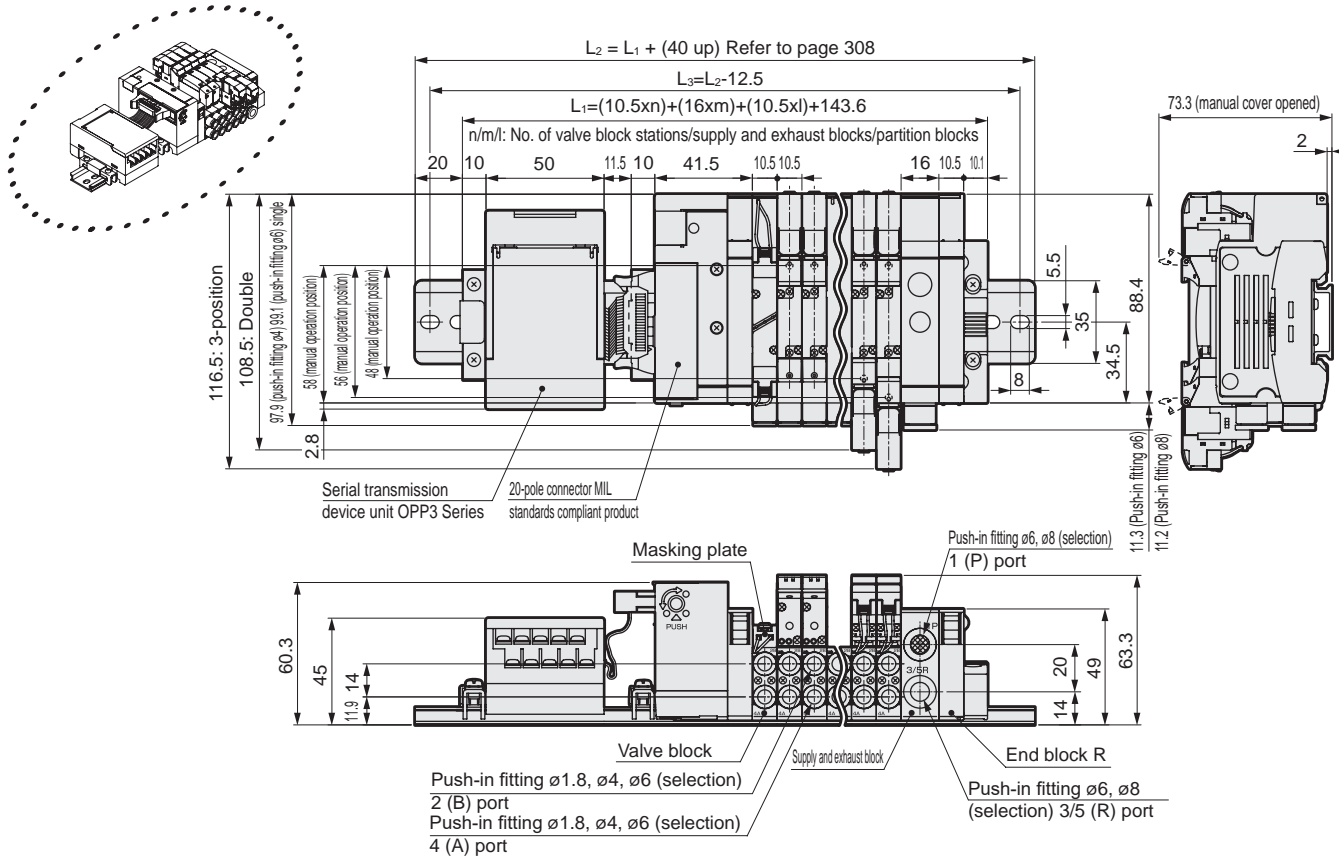
Dimensions



MN4GB1

- Serial transmission (T6G1)

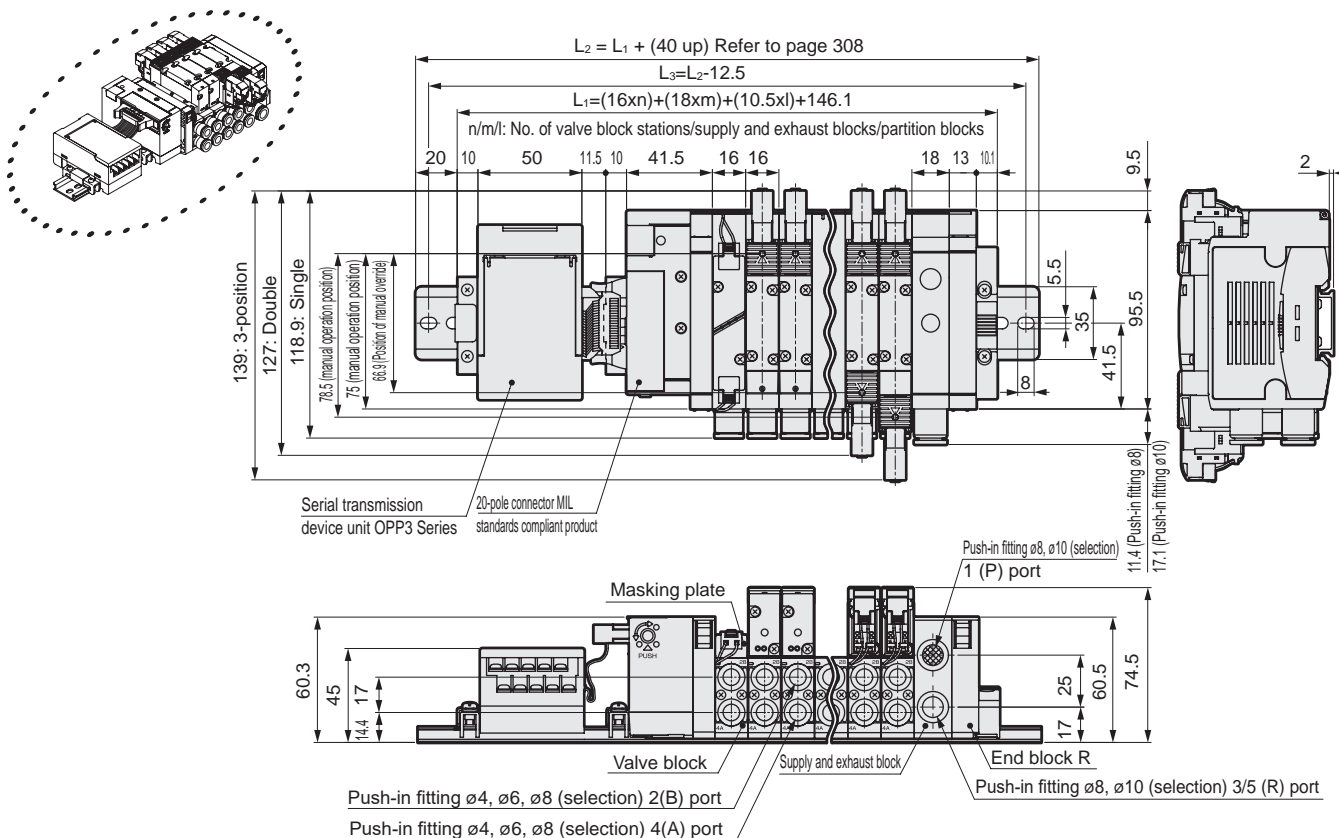
Note: The two 3-port valve integrated have the same dimensions as the double.



MN4GB2

- Serial transmission (T6G1)

Note: Refer to pages 276 and 278 for dimensions of the push-in L fitting.



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB1/2-T7* Series

Reduced wiring block manifold; base piping

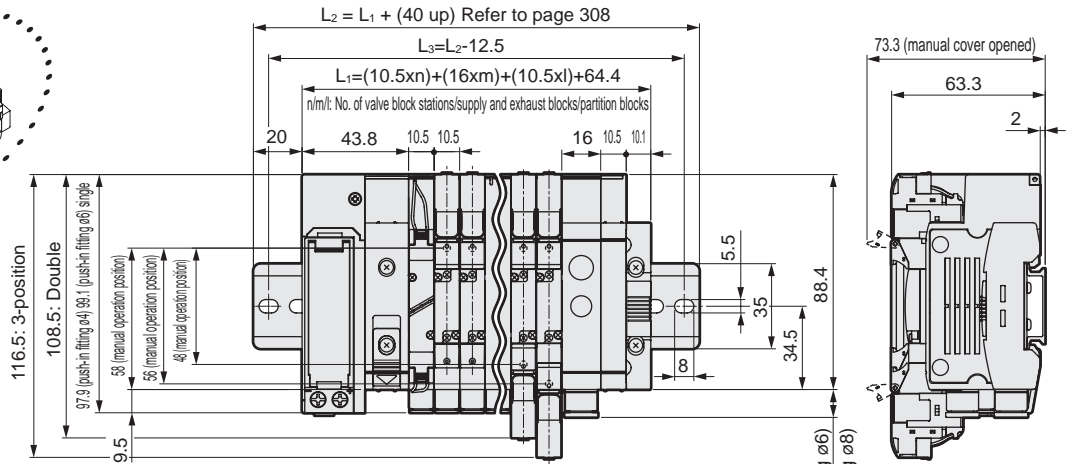
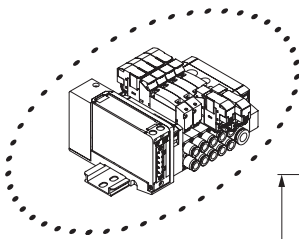
Dimensions



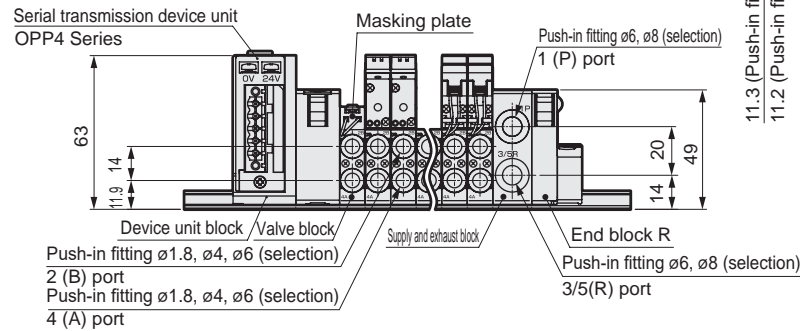
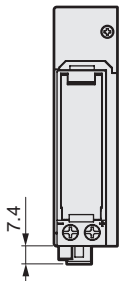
MN4GB1

Note: The two 3-port valve integrated have the same dimensions as the double.

● Thin serial transmission (T7 □)



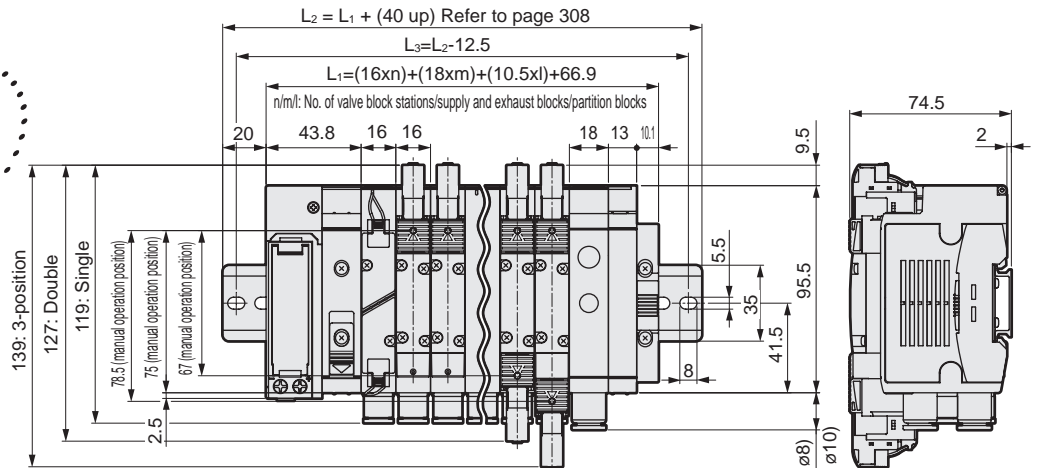
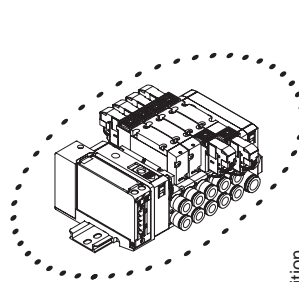
For T7S □1



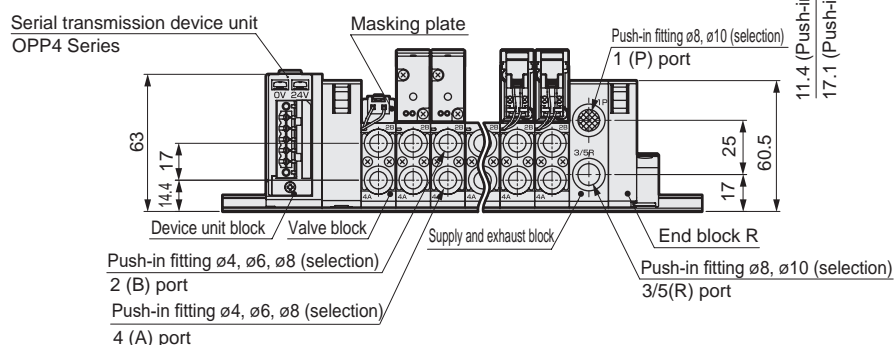
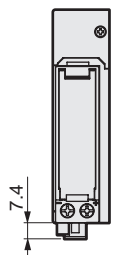
MN4GB2

Note: Refer to pages 276 and 278 for dimensions of the push-in L fitting.

● Thin serial transmission (T7 □)



For T7S □1



MN4GB1/2-T8* Series

Reduced wiring block manifold; base piping

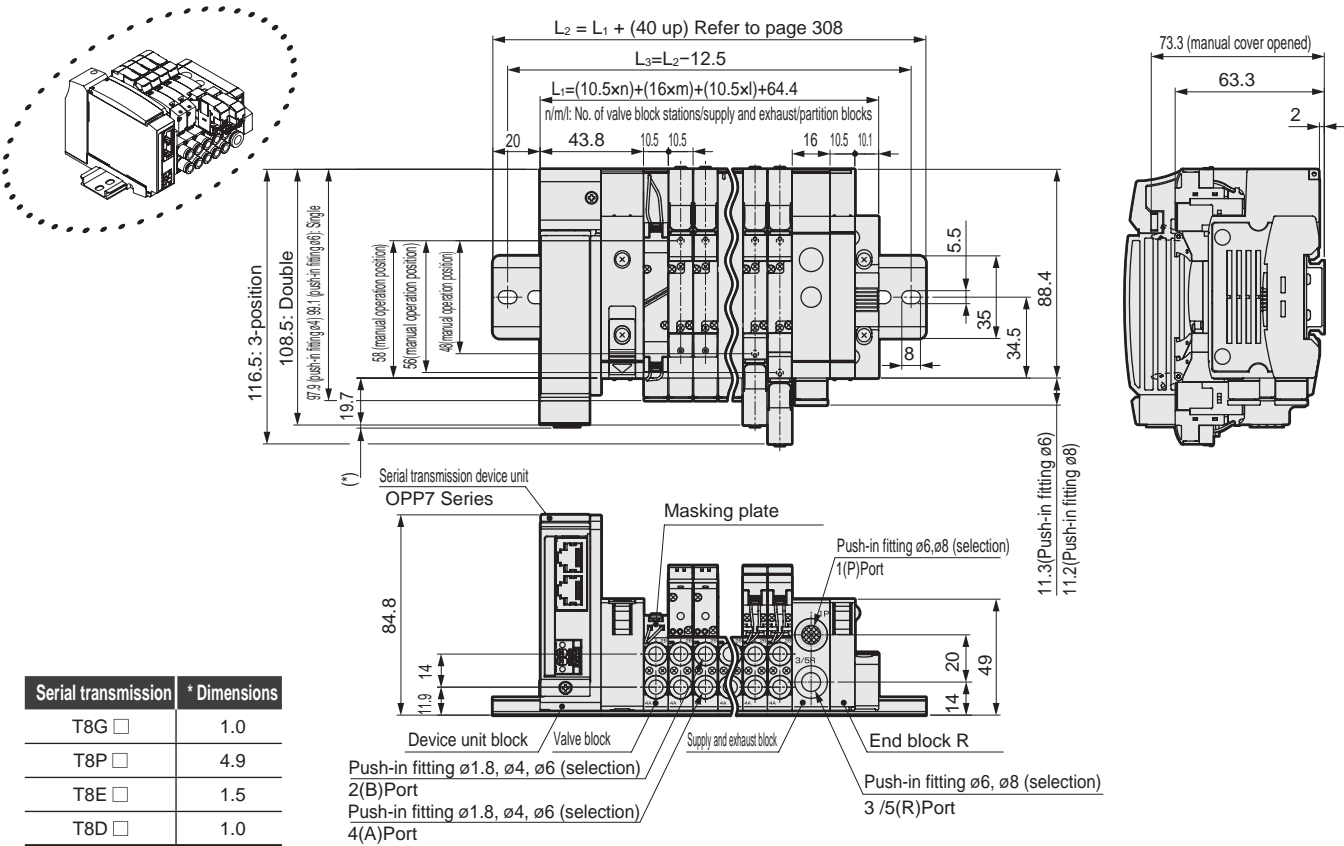
Dimensions



MN4GB1

● Thin serial transmission (T8*)

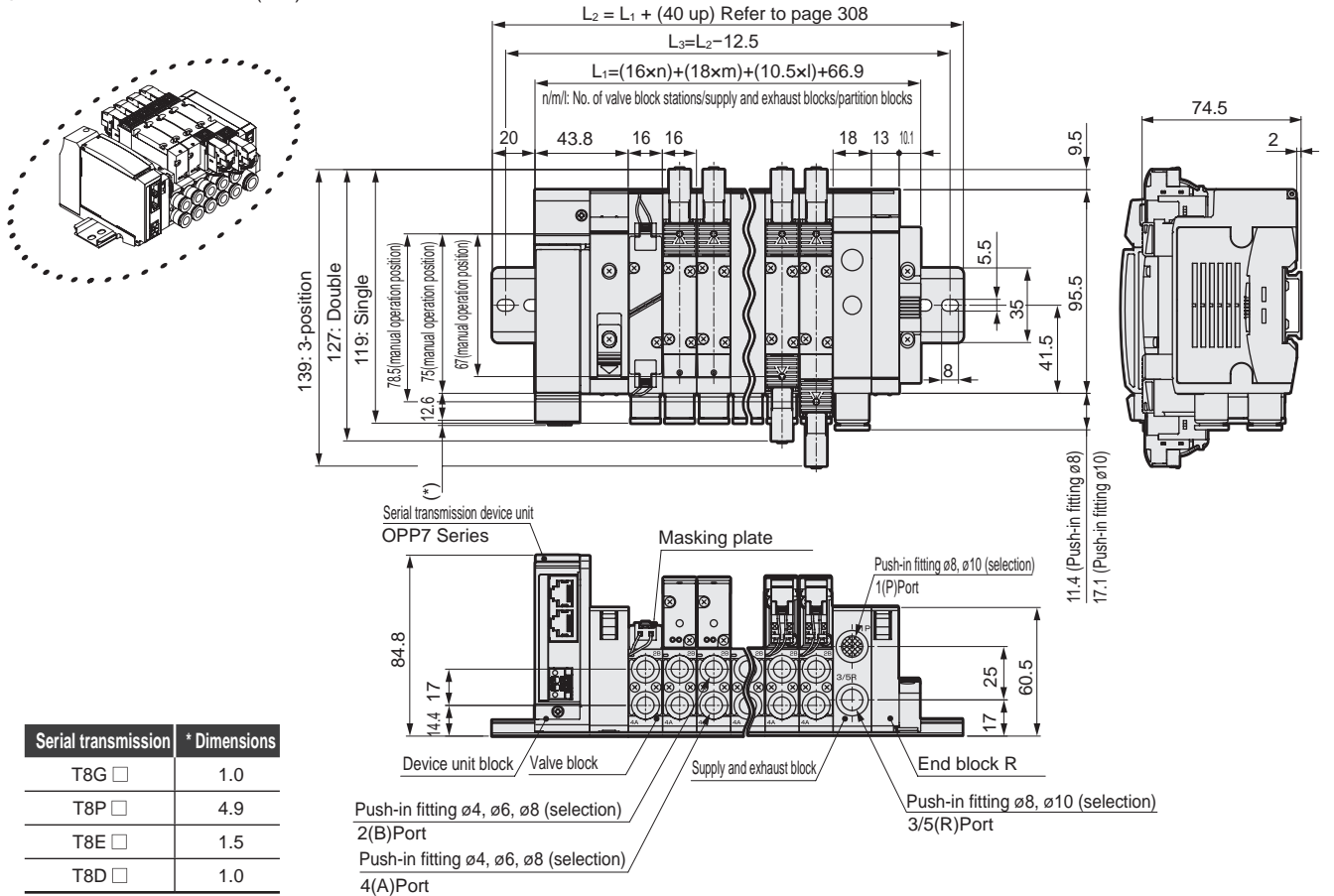
Note: The two 3-port valve built-in type has the same dimensions as the double model.



MN4GB2

● Thin serial transmission (T8*)

Note: Refer to pages 276 and 278 for dimensions of the push-in L fitting.



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB1/2-T* Series

Dimensions

MN4GB1 Valve block

● Fitting straight

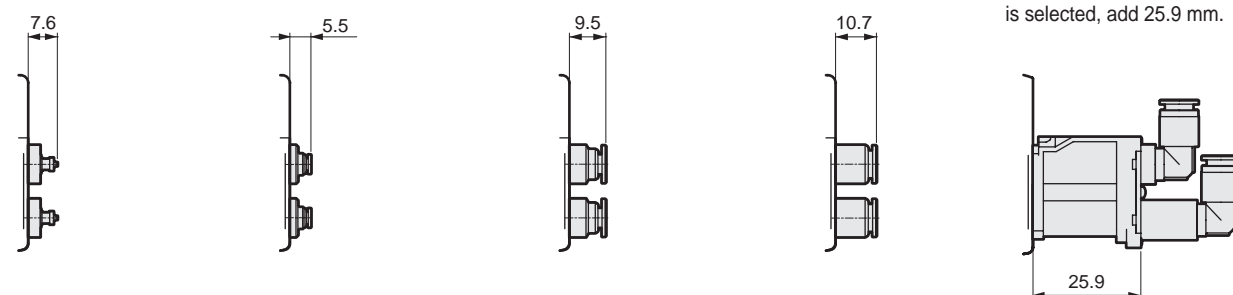
● $\varnothing 1.8$ (CF)

● $\varnothing 1.8$ (C18)

● $\varnothing 4$ (C4)

● $\varnothing 6$ (C6)

● When option L (with pipe adaptor) is selected, add 25.9 mm.



● Fitting straight, single plug

● $\varnothing 1.8$ (CFNC)

● $\varnothing 1.8$ (C18NC)

● $\varnothing 4$ (C4NC)

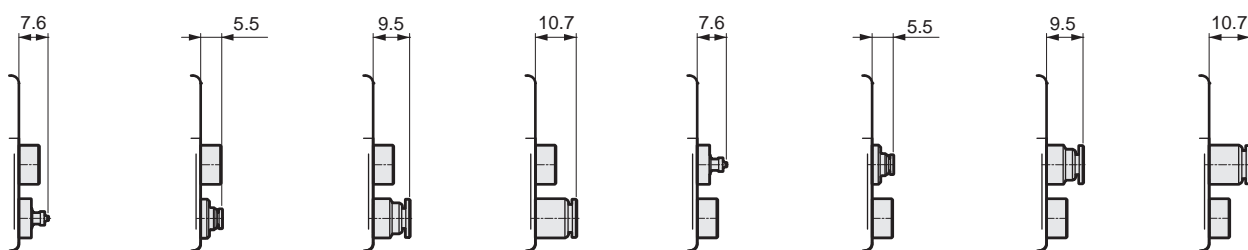
● $\varnothing 6$ (C6NC)

● $\varnothing 1.8$ (CFNO)

● $\varnothing 1.8$ (C18NO)

● $\varnothing 4$ (C4NO)

● $\varnothing 6$ (C6NO)



● L Fitting (upward)

● $\varnothing 1.8$ (CL18)

● $\varnothing 4$ (CL4)

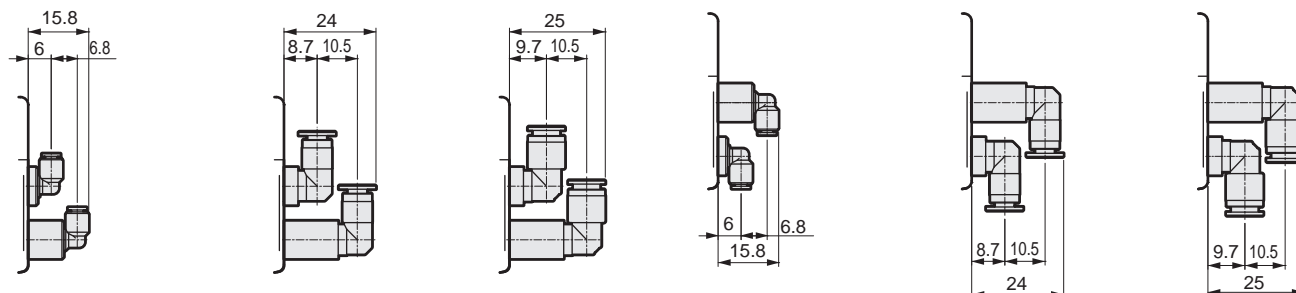
● $\varnothing 6$ (CL6)

● L Fitting (downward)

● $\varnothing 1.8$ (CL18)

● $\varnothing 4$ (CL4)

● $\varnothing 6$ (CL6)



● L Fitting (upward), single plug

● $\varnothing 1.8$ (CL18NC)

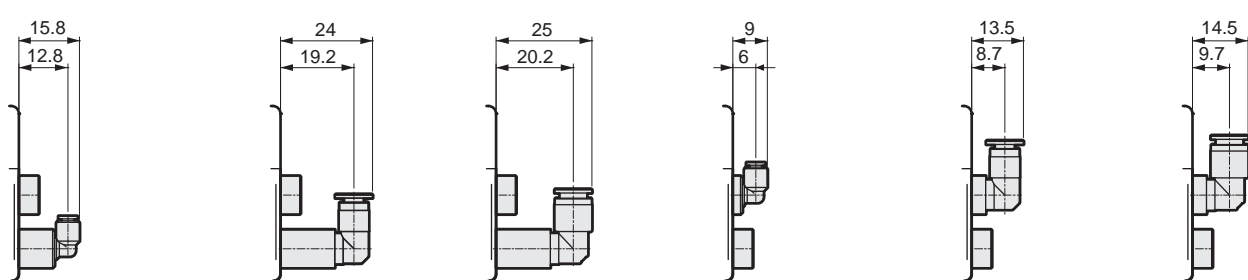
● $\varnothing 4$ (CL4NC)

● $\varnothing 6$ (CL6NC)

● $\varnothing 1.8$ (CL18NO)

● $\varnothing 4$ (CL4NO)

● $\varnothing 6$ (CL6NO)



● L Fitting (downward), single plug

● $\varnothing 1.8$ (CD18NC)

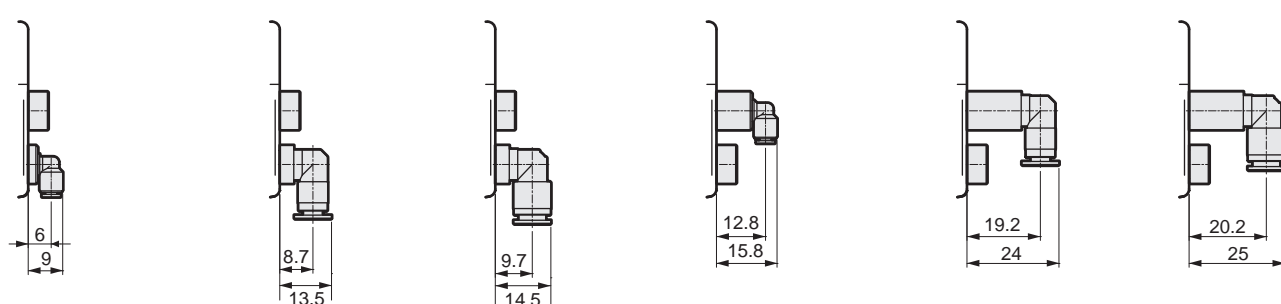
● $\varnothing 4$ (CD4NC)

● $\varnothing 6$ (CD6NC)

● $\varnothing 1.8$ (CD18NO)

● $\varnothing 4$ (CD4NO)

● $\varnothing 6$ (CD6NO)



Dimensions

MN4GB1 Valve block

- Fitting straight

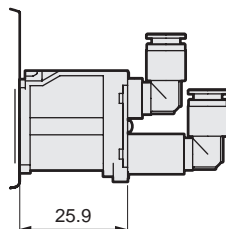
- $\varnothing 1/8"$ (C3N)



- $\varnothing 5/32"$ (C4N)

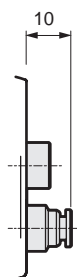


- When option L (with piping adapter) is selected, add 25.9 mm.

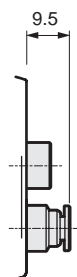


- Fitting straight, single plug

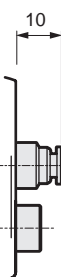
- $\varnothing 1/8"$ (C3NCN)



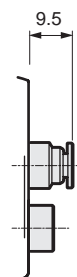
- $\varnothing 5/32"$ (C4NCN)



- $\varnothing 1/8"$ (C3NON)

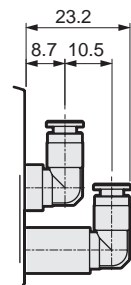


- $\varnothing 5/32"$ (C4NON)

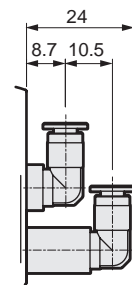


- L fitting (upward)

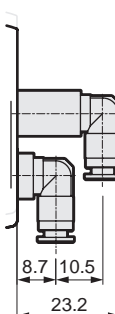
- $\varnothing 1/8"$ (CL3N)



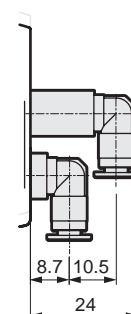
- $\varnothing 5/32"$ (CL4N)



- $\varnothing 1/8"$ (CD3N)

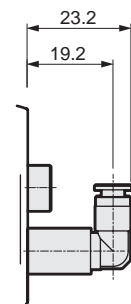


- $\varnothing 5/32"$ (CD4N)

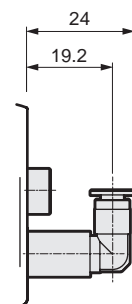


- L Fitting (upward), single plug

- $\varnothing 1/8"$ (CL3NCN)



- $\varnothing 5/32"$ (CL4NCN)



- $\varnothing 1/8"$ (CL3NON)



- $\varnothing 5/32"$ (CL4NON)



- L Fitting (downward), single plug

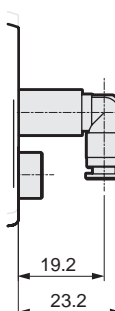
- $\varnothing 1/8"$ (CD3NCN)



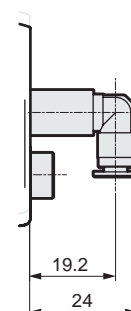
- $\varnothing 5/32"$ (CD4NCN)



- $\varnothing 1/8"$ (CD3NON)



- $\varnothing 5/32"$ (CD4NON)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB1/2-T* Series

Dimensions

MN4GB2 Valve block

● Fitting straight

● ø4(C4)

● ø6(C6)

● ø8(C8)

● When option L (with piping adapter) is selected, add 24.7 mm.

14.1

14

13.9

24.7

4GA/B (master)

4GB With sensor

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E

MN4E

W4GA/B2

W4GB4

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B (master)

4F

4F (master)

PV5G

GMF

PV5

GMF

PV5S-0

3Q

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP

NVP

4G*0EJ

4F*0EX

4F*0E

HMV

HSV

2QV

3QV

SKH

Silencer

TotAirSys (Total Air)

TotAirSys (Gamma)

Ending

17.2

12.9

36.4

18.2

14.4

39.9

17.2

12.9

36.4

18.2

14.4

39.9

23.5

17.2

25.5

18.2

23.5

25.5

17.2

23.5

18.2

25.1

17.2

23.5

18.2

25.1

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23.5

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17.2

23.5

18.2

25.1

17.2

23.5

18.2

Dimensions

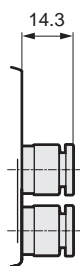
MN4GB2 Valve block

- Fitting straight

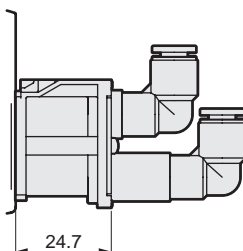
- $\varnothing 1/4"$ (C6N)



- $\varnothing 5/16"$ (C8N)

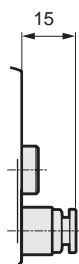


- When option L (with piping adapter) is selected, add 24.7 mm.

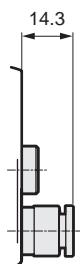


- Fitting straight, single plug

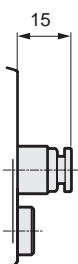
- $\varnothing 1/4"$ (C6NNC)



- $\varnothing 5/16"$ (C8NNC)



- $\varnothing 1/4"$ (C6NON)

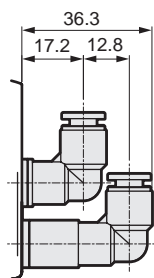


- $\varnothing 5/16"$ (C8NON)

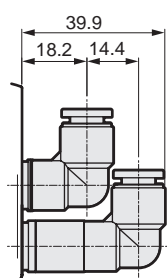


- L Fitting (upward)

- $\varnothing 1/4"$ (CL6N)

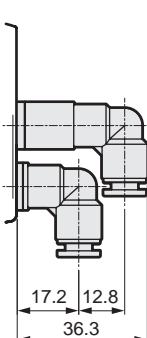


- $\varnothing 5/16"$ (CL8N)

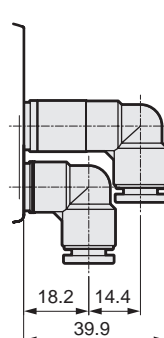


- L Fitting (downward)

- $\varnothing 1/8"$ (CD6N)

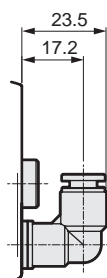


- $\varnothing 5/32"$ (CD8N)

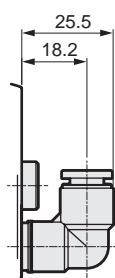


- L Fitting (upward), single plug

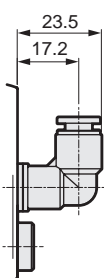
- $\varnothing 1/4"$ (CL6NNC)



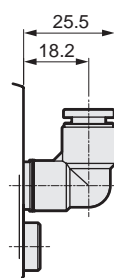
- $\varnothing 5/16"$ (CL8NNC)



- $\varnothing 1/4"$ (CL6NON)

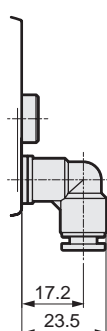


- $\varnothing 5/16"$ (CL8NON)

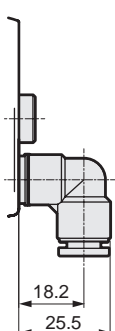


- L Fitting (downward), single plug

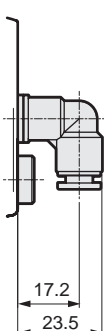
- $\varnothing 1/4"$ (CD6NNC)



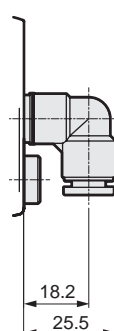
- $\varnothing 5/16"$ (CD8NNC)



- $\varnothing 1/4"$ (CD6NON)



- $\varnothing 5/16"$ (CD8NON)



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN3GA1/2 Series

4GA/B

M4GA/B

MN4GA/B

4GA/B

(master)

4GB

With sensor

4GD/E

M4GD/E

MN4GD/E

4GA4/B4

MN3E

MN4E

W4GA/B2

W4GB4

MN3S0

MN4S0

4SA/B0

4KA/B

4KA/B

(master)

4F

4F

(master)

PV5G

GMF

PV5

GMF

PV5S-0

3Q

MV3QR

3MA/B0

3PA/B

P/M/B

NP/NAP

NVP

4G*0EJ

4F*0EX

4F*0E

HMV

HSV

2QV

3QV

SKH

Silencer

TotAirSys

(Total Air)

TotAirSys

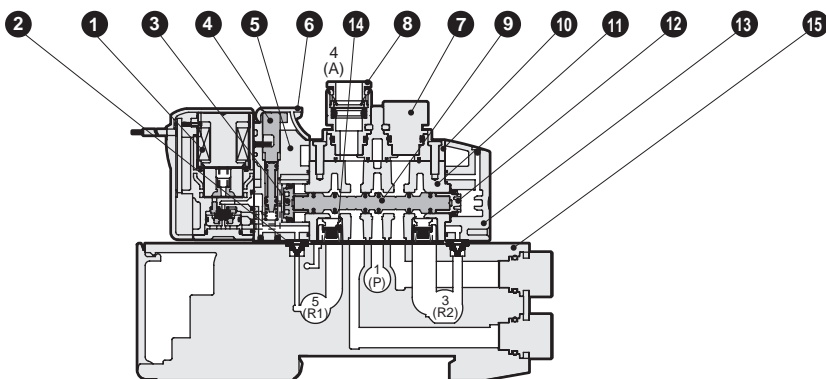
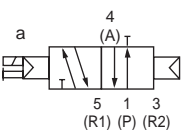
(Gamma)

Ending

Internal structure and parts list

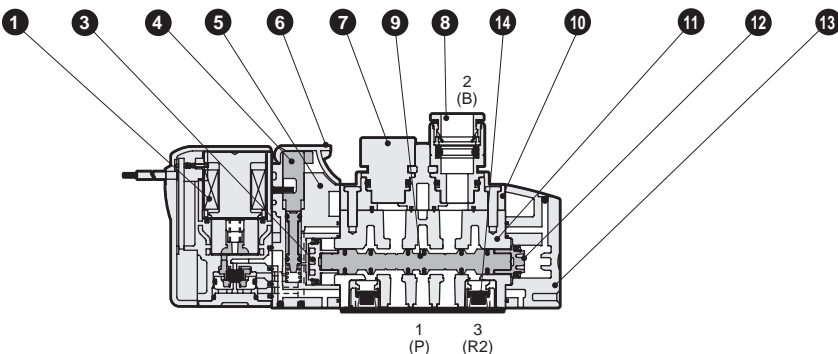
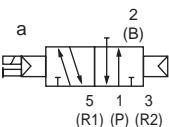
N3GA110R/N3GA210R

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



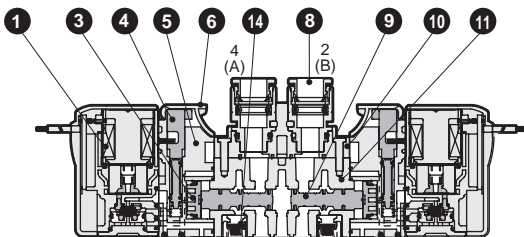
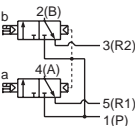
N3GA1110R/N3GA2110R

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



N3GA1660R/N3GA2660R

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



Main parts list

No.	Part name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber
3	Piston D assembly	-
4	Manual override	Resin
5	Piston chamber	Resin
6	Manual protection cover	Resin
7	Plug cartridge	Aluminum
8	Cartridge push-in fitting	-
9	Spool assembly	-
10	Fitting adapter	Resin
11	Body	Aluminum alloy die-casting
12	Piston S assembly	-
13	Cap	Resin
14	Check valve	-
15	Valve block	Resin

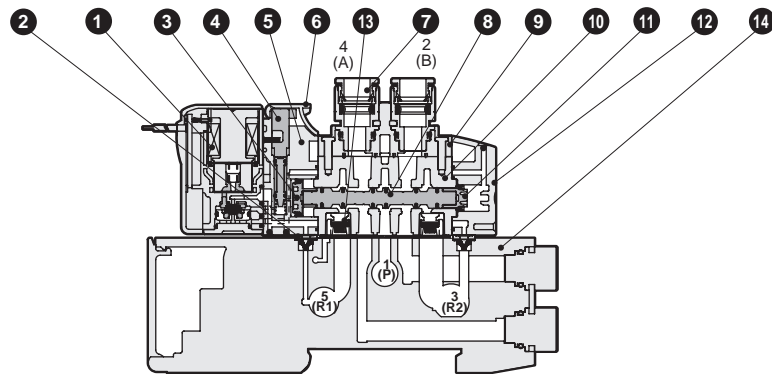
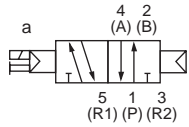
Parts list

No.	Part name	Model No.																																							
1	Coil assembly	4GR -electrical connections- - COIL - voltage Blank: Standard A: Ozone specs S: Surgeless E: Low exoergic/energy circuit K: External pilot																																							
8	Cartridge push-in fitting and related parts	<table><tr><td>3G1</td><td>ø1.8 barbed</td><td>4G1R-JOINT-CF</td></tr><tr><td>4G1</td><td>ø1.8 straight</td><td>4G1R-JOINT-C18</td></tr><tr><td></td><td>ø4 straight</td><td>4G1R-JOINT-C4</td></tr><tr><td></td><td>ø6 straight</td><td>4G1R-JOINT-C6</td></tr><tr><td></td><td>ø1/8" straight</td><td>4G1R-JOINT-C3N</td></tr><tr><td></td><td>ø5/32" straight</td><td>4G1R-JOINT-C4N</td></tr><tr><td></td><td>Plug cartridge</td><td>4G1R-JOINT-CPG</td></tr><tr><td>3G2</td><td>ø4 straight</td><td>4G2R-JOINT-C4</td></tr><tr><td>4G2</td><td>ø6 straight</td><td>4G2R-JOINT-C6</td></tr><tr><td></td><td>ø8 straight</td><td>4G2R-JOINT-C8</td></tr><tr><td></td><td>ø1/4" straight</td><td>4G2R-JOINT-C6N</td></tr><tr><td></td><td>ø5/16" straight</td><td>4G2R-JOINT-C8N</td></tr><tr><td></td><td>Plug cartridge</td><td>4G2R-JOINT-CPG</td></tr></table>	3G1	ø1.8 barbed	4G1R-JOINT-CF	4G1	ø1.8 straight	4G1R-JOINT-C18		ø4 straight	4G1R-JOINT-C4		ø6 straight	4G1R-JOINT-C6		ø1/8" straight	4G1R-JOINT-C3N		ø5/32" straight	4G1R-JOINT-C4N		Plug cartridge	4G1R-JOINT-CPG	3G2	ø4 straight	4G2R-JOINT-C4	4G2	ø6 straight	4G2R-JOINT-C6		ø8 straight	4G2R-JOINT-C8		ø1/4" straight	4G2R-JOINT-C6N		ø5/16" straight	4G2R-JOINT-C8N		Plug cartridge	4G2R-JOINT-CPG
3G1	ø1.8 barbed	4G1R-JOINT-CF																																							
4G1	ø1.8 straight	4G1R-JOINT-C18																																							
	ø4 straight	4G1R-JOINT-C4																																							
	ø6 straight	4G1R-JOINT-C6																																							
	ø1/8" straight	4G1R-JOINT-C3N																																							
	ø5/32" straight	4G1R-JOINT-C4N																																							
	Plug cartridge	4G1R-JOINT-CPG																																							
3G2	ø4 straight	4G2R-JOINT-C4																																							
4G2	ø6 straight	4G2R-JOINT-C6																																							
	ø8 straight	4G2R-JOINT-C8																																							
	ø1/4" straight	4G2R-JOINT-C6N																																							
	ø5/16" straight	4G2R-JOINT-C8N																																							
	Plug cartridge	4G2R-JOINT-CPG																																							
-	E-connector socket assembly	4GR-SOCKET-ASSY- -electrical connections- - voltage																																							
-	EJ type connector socket assembly	4GR - SOCKET - ASSY - -electrical connections																																							
-	DIN terminal box assembly (3GA2 only)	4GR-TERMINAL-BOX- -Voltage																																							

Internal structure and parts list

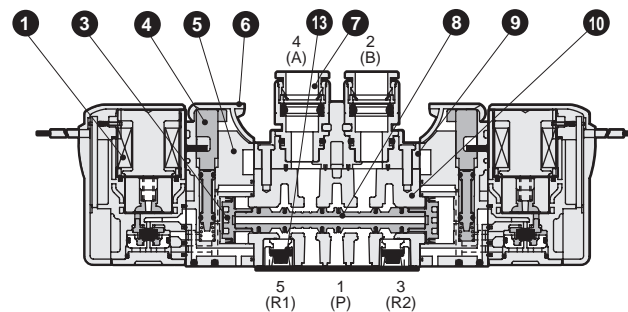
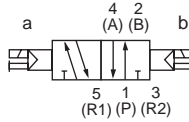
N4GA110R/N4GA210R

- 2-position single
Grommet lead wire (blank)



N4GA120R/N4GA220R

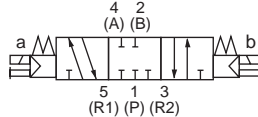
- 2-position double Grommet lead wire (blank)



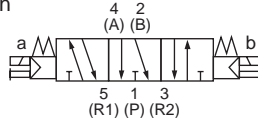
N4GA1 $\frac{3}{4}$ ₅ 0R/N4GA2 $\frac{3}{4}$ ₅ 0R

- 3-position
Grommet lead wire (blank)

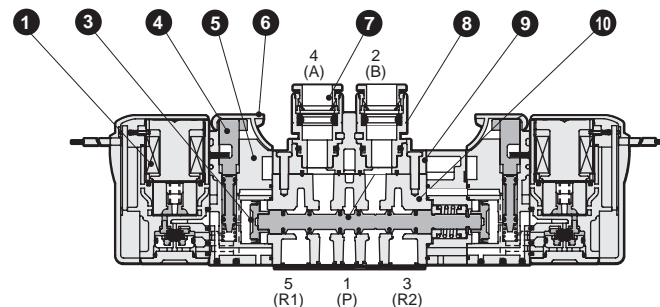
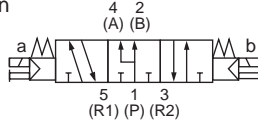
All ports closed



A/B/R connection



P/A/B connection



Main parts list

No.	Part name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber
3	Piston D assembly	-
4	Manual override	Resin
5	Piston chamber	Resin
6	Manual protection cover	Resin
7	Cartridge push-in fitting	-
8	Spool assembly	-
9	Fitting adapter	Resin
10	Body	Aluminum alloy die-casting
11	Piston S assembly	-
12	Cap	Resin
13	Check valve	-
14	Valve block	Resin

Parts list

No.	Part name			Model No.
1	Coil assembly			4GR - <u>electrical connections</u> - <input type="checkbox"/> - COIL - <u>voltage</u> Blank: Standard A: Ozone specs S: Surgeless E: Low exoergic/energy circuit K: External pilot
7	Cartridge push-in fitting and related parts	3G1 4G1	ø1.8 barbed	4G1R-JOINT-CF
			ø1.8 straight	4G1R-JOINT-C18
			ø4 straight	4G1R-JOINT-C4
			ø6 straight	4G1R-JOINT-C6
			ø1/8" straight	4G1R-JOINT-C3N
			ø5/32" straight	4G1R-JOINT-C4N
		3G2 4G2	Plug cartridge	4G1R-JOINT-CPG
			ø4 straight	4G2R-JOINT-C4
			ø6 straight	4G2R-JOINT-C6
			ø8 straight	4G2R-JOINT-C8
			ø1/4" straight	4G2R-JOINT-C6N
			ø5/16" straight	4G2R-JOINT-C8N
			Plug cartridge	4G2R-JOINT-CPG
-	E-connector socket assembly			4GR-SOCKET-ASSY- <u>electrical connections</u> - <u>voltage</u>
-	EJ type connector socket assembly			4GR - SOCKET - ASSY - <u>electrical connections</u>
-	DIN terminal box assembly (4GA2 only)			4GR-TERMINAL-BOX- <u>Voltage</u>

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

MN4GB1/2 Series

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

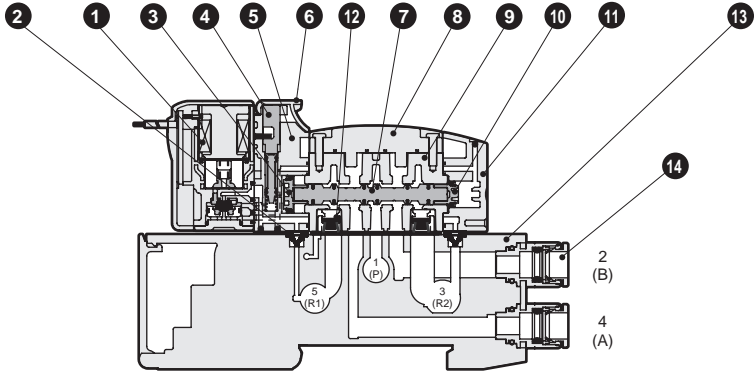
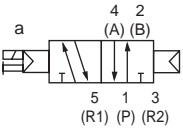
Internal structure and parts list

N3GB1660R/N3GB2660R

- Two 3-port valve integrated A side valve: Normally closed, B side valve: Normally closed
- Grommet lead wire (blank) Refer to page 283.

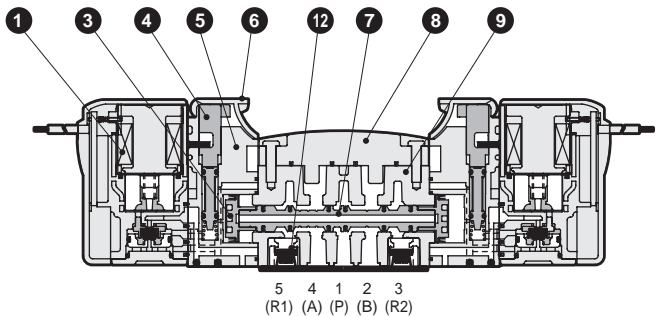
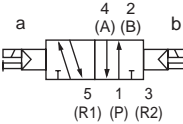
N4GB110R/N4GB210R

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



N4GB120R/N4GB220R

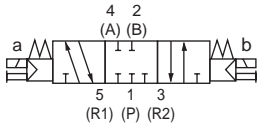
- 2-position double
- Grommet lead wire (blank)



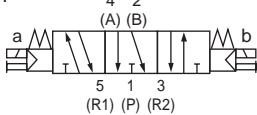
N4GB1340R/N4GB2340R

- 3-position
- Grommet lead wire (blank)

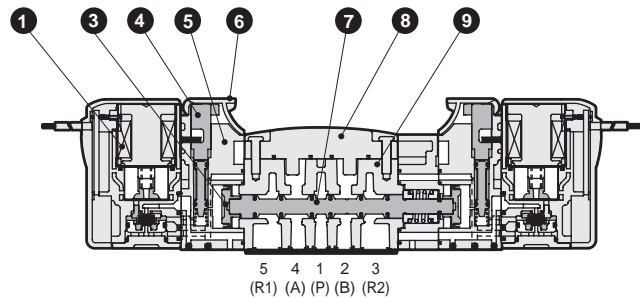
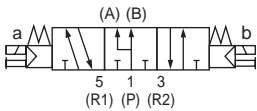
All ports closed



A/B/R connection



P/A/B connection



Main parts list

No.	Part name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber
3	Piston D assembly	-
4	Manual override	Resin
5	Piston chamber	Resin
6	Manual protection cover	Resin
7	Spool assembly	-
8	Plate	Resin
9	Body	Aluminum alloy die-casting
10	Piston S assembly	-
11	Cap	Resin
12	Check valve	-
13	Valve block	Resin
14	Cartridge push-in fitting	-

Parts list

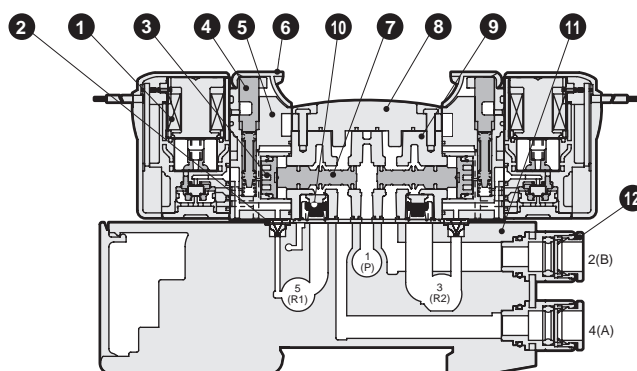
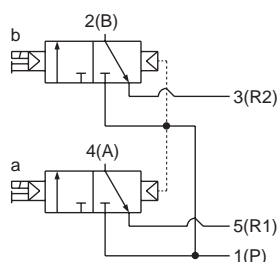
No.	Part name	Model No.
1	Coil assembly	4GR - [electrical connections] - [] - COIL - [voltage]
14	Cartridge push-in fitting and related parts	4G1R-JOINT-CF 4G1R-JOINT-C18 4G1R-JOINT-C4 4G1R-JOINT-C6 4G1R-JOINT-C3N 4G1R-JOINT-C4N 4G1R-JOINT-CPG 4G2R-JOINT-C4 4G2R-JOINT-C6 4G2R-JOINT-C8 4G2R-JOINT-C6N 4G2R-JOINT-C8N 4G2R-JOINT-CPG
-	E-connector socket assembly	4GR-SOCKET-ASSY - [electrical connections] - [voltage]
-	EJ type connector socket assembly	4GR - SOCKET - ASSY - [electrical connections]
-	DIN terminal box assembly (4GB2 only)	4GR-TERMINAL-BOX - [Voltage]

Blank: Standard
A: Ozone specs
S: Surgeless
E: Low exoergic/energy circuit
K: External pilot

Internal structure and parts list

N3GB1660R/N3GB2660R

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



Main parts list

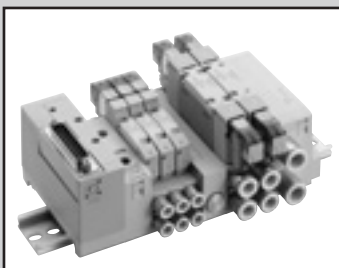
No.	Part name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber
3	Piston assembly	-
4	Manual override	Resin
5	Piston chamber	Resin
6	Manual protection cover	Resin
7	Spool assembly	-
8	Plate	Resin
9	Body	Aluminum alloy die-casting
10	Check valve	-
11	Valve block	Resin
12	Cartridge push-in fitting	-

Parts list

No.	Part name	Model No.																																							
1	Coil assembly	4GR - [electrical connections] - [] - COIL - [voltage]																																							
12	Cartridge push-in fitting and related parts	<div> Blank: Standard A: Ozone specs S: Surgeless E: Low exoergic/energy circuit K: External pilot </div>																																							
		<table> <tr> <td>3G1</td><td>ø1.8 barbed</td><td>4G1R-JOINT-CF</td></tr> <tr> <td>4G1</td><td>ø1.8 straight</td><td>4G1R-JOINT-C18</td></tr> <tr> <td></td><td>ø4 straight</td><td>4G1R-JOINT-C4</td></tr> <tr> <td></td><td>ø6 straight</td><td>4G1R-JOINT-C6</td></tr> <tr> <td></td><td>ø1/8" straight</td><td>4G1R-JOINT-C3N</td></tr> <tr> <td></td><td>ø5/32" straight</td><td>4G1R-JOINT-C4N</td></tr> <tr> <td></td><td>Plug cartridge</td><td>4G1R-JOINT-CPG</td></tr> <tr> <td></td><td>ø4 straight</td><td>4G2R-JOINT-C4</td></tr> <tr> <td></td><td>ø6 straight</td><td>4G2R-JOINT-C6</td></tr> <tr> <td>3G2</td><td>ø8 straight</td><td>4G2R-JOINT-C8</td></tr> <tr> <td>4G2</td><td>ø1/4" straight</td><td>4G2R-JOINT-C6N</td></tr> <tr> <td></td><td>ø5/16" straight</td><td>4G2R-JOINT-C8N</td></tr> <tr> <td></td><td>Plug cartridge</td><td>4G2R-JOINT-CPG</td></tr> </table>	3G1	ø1.8 barbed	4G1R-JOINT-CF	4G1	ø1.8 straight	4G1R-JOINT-C18		ø4 straight	4G1R-JOINT-C4		ø6 straight	4G1R-JOINT-C6		ø1/8" straight	4G1R-JOINT-C3N		ø5/32" straight	4G1R-JOINT-C4N		Plug cartridge	4G1R-JOINT-CPG		ø4 straight	4G2R-JOINT-C4		ø6 straight	4G2R-JOINT-C6	3G2	ø8 straight	4G2R-JOINT-C8	4G2	ø1/4" straight	4G2R-JOINT-C6N		ø5/16" straight	4G2R-JOINT-C8N		Plug cartridge	4G2R-JOINT-CPG
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-	E-connector socket assembly	4GR-SOCKET-ASSY- [electrical connections] - [voltage]																																							
-	EJ type connector socket assembly	4GR - SOCKET - ASSY - [electrical connections]																																							
-	DIN terminal box assembly (3GB2 only)	4GR-TERMINAL-BOX- [voltage]																																							

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HMV
HSV
2QV
3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

4GA/B
M4GA/B
MN4GA/B
4GA/B
(master)
4GB
With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E
MN4E
W4GA/B2
W4GB4
MN3S0
MN4S0
4SA/B0
4KA/B
4KA/B
(master)
4F
4F
(master)
PV5G
GMF
PV5
GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP
NVP
4G*0EJ
4F*0EX
4F*0E
HNV
HSV
2QV
3QV
SKH
Silencer
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Ending



4G1/2 mix manifold

MN3GAX12, MN4GAX12 MN4GBX12 Series

● Cylinder bore size: $\varnothing 20$ to $\varnothing 80$

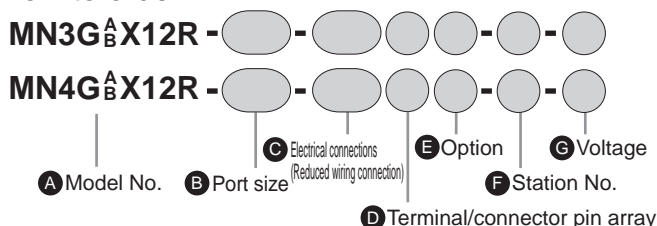


Specifications

Common with all series.

For individual wiring, refer to page 230 (body piping) or page 238 (base piping), and for reduced wiring, refer to page 246 (body piping) or page 262 (base piping).

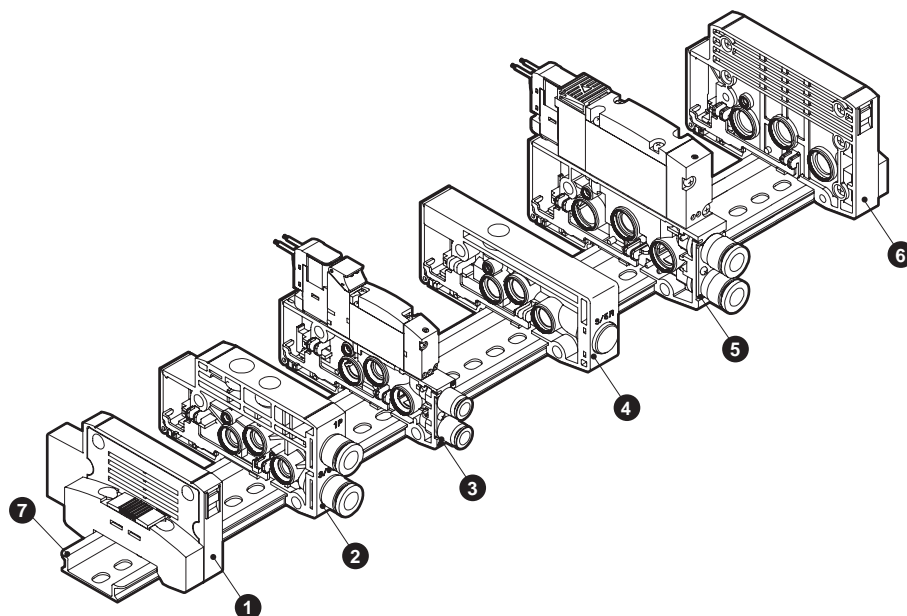
How to order



* 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 232 (body piping) or page 240 (base piping), and for reduced wiring, refer to page 248 (body piping) or page 264 (base piping).

Manifold components explanation and parts list



* Notes on 4G1/2 mix manifolds

With the fitting at the front, the left side of the mixed block is the 4G1 series and the right side the 4G2 series.
(Note that these position settings cannot be reversed.)

List of main components (refer to pages 286 to 305 for details)

No.	Component name	Model No. (example)
1	End block L	N4G1R-EL
2	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GB110R-C6-H-3
4	Mixed block	N4G12R-MIX
5	Discrete valve block with solenoid valve	N4GB210R-C8-H-3
6	End block R	N4G2R-ER
7	DIN rail	N4GR-BAA (Length)

Weight

N4G12R-MIX: 49 g

Refer to the specifications of each series for other components.

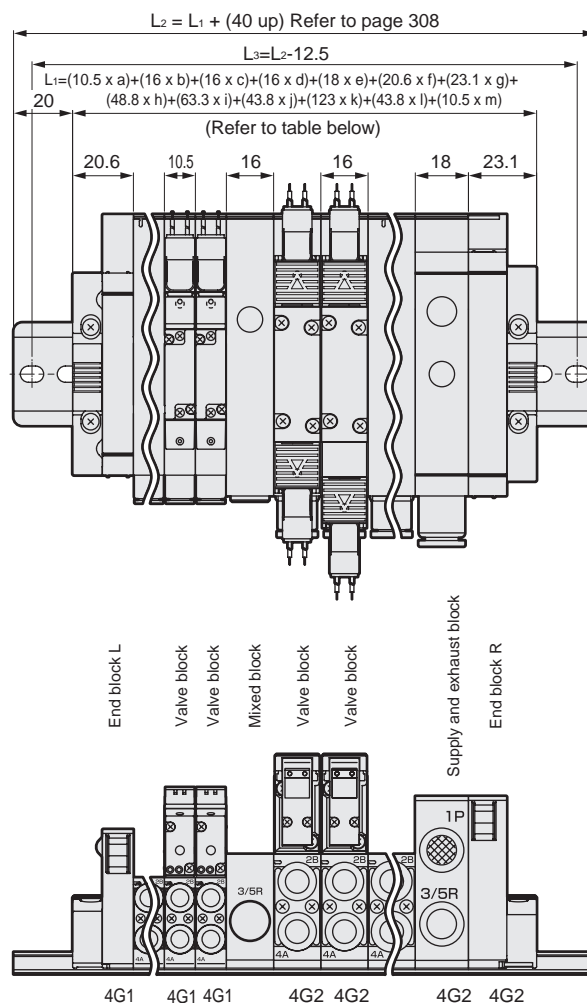
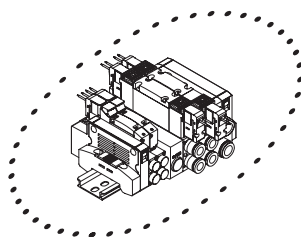
Mixed block: Dimensions

Unit mm

MN4GBX12R

Note: For details of the E-connector, EJ type connector, and DIN terminal box, refer to pages for each model (MN4GA: page 235 on, MN4GB: page 243 on).

Note: Refer to pages 276 to 279 for details of the push-in L fitting.



This diagram is one example of the many free combinations available for the mix manifold. With the dimensions listed below, configure combinations with reference to the previous page.

Part name	Dimensions
a : 4G1 number of valve blocks	10.5xa
b : 4G2 number of valve blocks	16xb
c : number of mix blocks	16xc
d : 4G1 number of supply and exhaust blocks	16xd
e : 4G2 number of supply and exhaust blocks	18xe
f : 4G1 number of L end blocks	20.6xf
g : 4G2 number of R end blocks	23.1xg
h : 4G1/2 number of reduced wiring T30/T5*	48.8xh
i : 4G1/2 number of reduced wiring T10/T11*	63.3xi
j : 4G1/2 number of reduced wiring T7*	43.8xj
k : 4G1/2 number of reduced wiring T6G1	123xK
l : 4G1/2 number of reduced wiring T8*	43.8xl
m : 4G1/2 number of partition blocks	10.5xm

*1: The mixed block must be placed between 4G1 and 4G2.

*2: The max. station No. is 20.

4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending