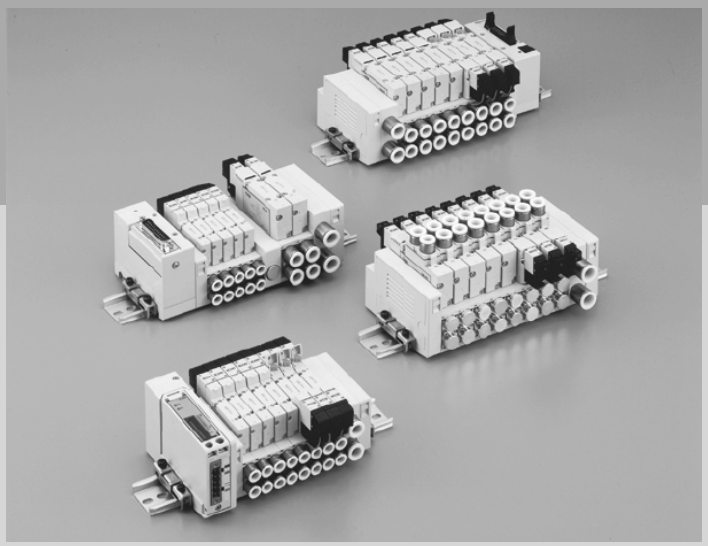
Discontinue

MN4GA/4GB

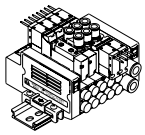
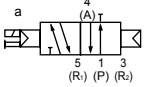
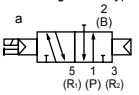
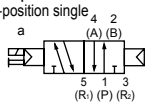
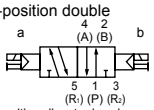
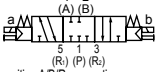
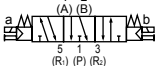
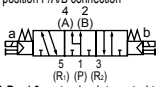
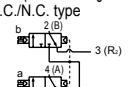
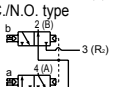
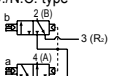
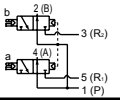
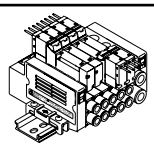
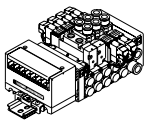
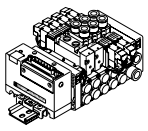
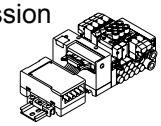
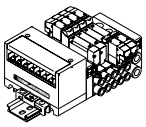
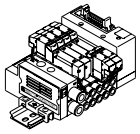
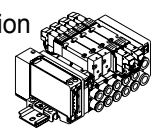
Block manifold

3, 5 port pilot operated valve



CONTENTS

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

		Appearance	Model no.	Electrical connections	Number of solenoid position JIS symbol	Valve performance: Flow characteristics C ($dm^3/(s/bar)$) Note 1	Valve performance: Applicable cylinder bore size	Voltage (V)	
Individual wiring manifold	Body piping	MN4GA180 	MN4GA1	Blank -E□	● 3 port valve 2-position single N.C. type  2-position single N.O. type  ● 5 port valve 2-position single  2-position double  3-position all ports closed  3-position A/B/R connection  3-position P/A/B connection  ● Dual 3 port valve integrated type N.C./N.C. type  N.C./N.O. type  N.O./N.C. type  N.O./N.O. type 	0.68 to 1.0	φ 20 to φ 40	AC100 Note 2 DC24 DC12 Note 2: The grommet lead wire specifications are only for 12 and 24 VDC.	
			MN4GA2	Blank -E□ -B		1.6 to 2.3	φ 40 to φ 80		
		MN4GB180 	MN4GB1	Blank -E□		0.66 to 1.0	φ 20 to φ 40		
			MN4GB2	Blank -E□ -B		1.6 to 2.2	φ 40 to φ 80		
Reduced wiring manifold	Body piping	Terminal type MN4GA280 	MN4GA1 (N3GA1) (N4GA1)	-T10 -T11 (-A2N)		0.68 to 1.0	φ 20 to φ 40	DC24 DC12	
			MN4GA2 (N3GA2) (N4GA2)	-T10 -T11 (-A2N)		1.6 to 2.3	φ 40 to φ 80		
		Connector type MN4GA280 	MN4GA1 (N3GA1) (N4GA1)	-T30 -T5□ (-A2N)		0.68 to 1.0	φ 20 to φ 40		
			MN4GA2 (N3GA2) (N4GA2)	-T30 -T5□ (-A2N)		1.6 to 2.3	φ 40 to φ 80		
		Serial transmission MN4GA180 	MN4GA1 (N3GA1) (N4GA1)	-T6□ -T7□ (-A2N)		0.68 to 1.0	φ 20 to φ 40	DC24	
			MN4GA2 (N3GA2) (N4GA2)	-T6□ -T7□ (-A2N)		1.6 to 2.3	φ 40 to φ 80		
	Base piping	Terminal type MN4GB180 	MN4GB1 (N4GB1)	-T10 -T11 (-A2N)		0.66 to 1.0	φ 20 to φ 40	DC24 DC12	
			MN4GB2 (N4GB2)	-T10 -T11 (-A2N)		1.6 to 2.2	φ 40 to φ 80		
		Connector type MN4GB180 	MN4GB1 (N4GB1)	-T30 -T5□ (-A2N)		0.66 to 1.0	φ 20 to φ 40		
			MN4GB2 (N4GB2)	-T30 -T5□ (-A2N)		1.6 to 2.2	φ 40 to φ 80		
		Serial transmission MN4GB280 	MN4GB1 (N4GB1)	-T6□ -T7□ (-A2N)		0.66 to 1.0	φ 20 to φ 40	DC24	
			MN4GB2 (N4GB2)	-T6□ -T7□ (-A2N)		1.6 to 2.2	φ 40 to φ 80		

Note 1: Effective cross-sectional area S and sonic conductance C are converted as S ≒ 5.0 × C.
Note 3: Compatible only with the base piping type 2-position single model.

Switching position									A/B piping connection port																	Electrical connections									Reference page
2-position		3-position							Push-in fitting				Push-in fitting L type (upward) Note 3				Push-in fitting L type (downward)				Barbed fitting	M5 female screw	Rc1/8	Grommet lead (DC only)	E type connector	EJ type connector	A type connector (DC only)	DIN terminal box	Common terminal block	D sub-connector	Flat cable with power supply terminal	Flat cable without power supply terminal	Serial transmission	
Normally closed	Normally open	Single	Double	All ports closed	ABR connection	PAB connection	Dual 3 port valve integrated type	Mix	φ 1.8	φ 4	φ 6	φ 8	φ 1.8	φ 4	φ 6	φ 8	φ 1.8	φ 4	φ 6	φ 8	φ 1.8													
C18	C4	C6	C8	CL18	CL4	CL6	CL8	CD18	CD4	CD6	CD8	CF	M5	06	Blank	E□	E□J	A2N	B	T1□	T30	T50	T5$^{1}_{3}$	T6□ T7□	
●	●	●	●	●	●	●	●	●	●	●	●											●	●		●	●	●							304
●	●	●	●	●	●	●	●	●		●	●	●												●	●	●	●							
		●	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●		●				●	●	●								312
		●	●	●	●	●	●	●		●	●	●			●	●			●	●					●	●	●	●							
●	●	●	●	●	●	●	●	●	●	●	●											●	●					●		●					320
●	●	●	●	●	●	●	●	●		●	●	●												●				●		●				
●	●	●	●	●	●	●	●	●	●	●	●											●	●					●			●	●	●	
●	●	●	●	●	●	●	●	●		●	●	●												●				●			●	●	●	
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●	●	●	●	●	●	●	●	●		●	●	●												●				●					●	
		●	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●		●						●		●						336
		●	●	●	●	●	●	●		●	●	●			●	●			●	●							●								
		●	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●		●						●			●	●	●			
		●	●	●	●	●	●	●		●	●	●			●	●			●	●							●			●	●	●			
		●	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●		●						●						●		
		●	●	●	●	●	●	●		●	●	●			●	●			●	●							●						●		

Discontinue

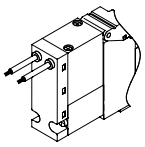
MN4GA/4GB Series

Electrical connections

Discrete valve/individual wiring manifold

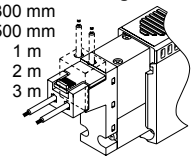
Blank Grommet lead wire Ⓦ

● **Lead wire length**
300 mm

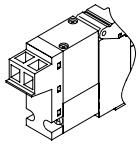


EO E type connector Ⓦ

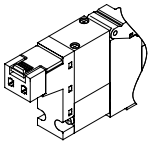
● **Lead wire length**
300 mm
500 mm
1 m
2 m
3 m



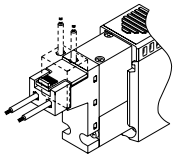
E0N E type connector without socket



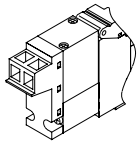
E1 E type connector with socket/terminal



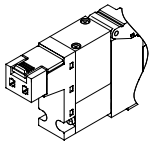
E2 E type connector ⓌⓈⓁ



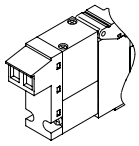
E2N E type connector without connector socket ⓈⓁ



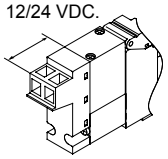
E3 E type connector socket terminal attachedⓈⓁ



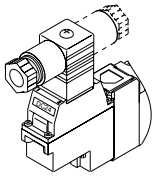
A2N A type connector downward without socket



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

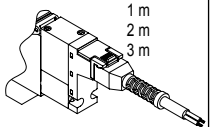


B DIN terminal box

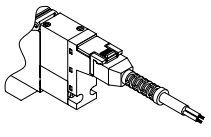


EO*J EJ type connector Ⓦ

● **lead wire length**
1 m
2 m
3 m

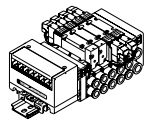


E2*J EJ type connector ⓌⓈⓁ

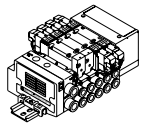


Reduced wiring manifold

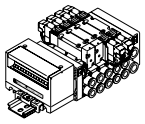
T10 Common terminal block type M3 screw specifications (left side)



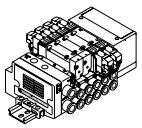
T10R Common terminal block type M3 screw specifications (right side)



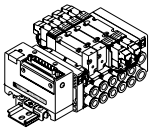
T11 Central terminal block type push tightening specifications (left side)



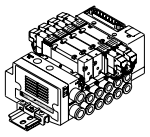
T11R Common terminal block type clamping specifications (right side)



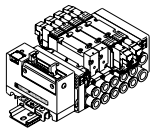
T30 D sub-connector type (left side)



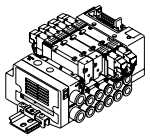
T30R D sub-connector type (right side)



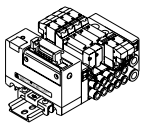
T50 Flat cable power supply with terminal (left side)



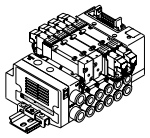
T50R Flat cable power supply with terminal (right side)



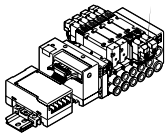
T5$^{1}_{3}$ Flat cable power supply without terminal (left side)



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

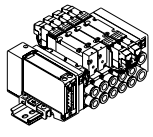


T6*0 T6*1 Serial transmission



T30R D sub-connector type (right side)

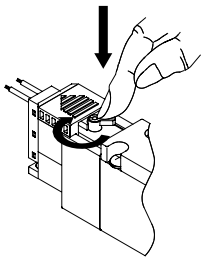
T7*0 T7*1 Serial transmission thin model slot type



Manual operating device

Blank Non-locking/locking common type

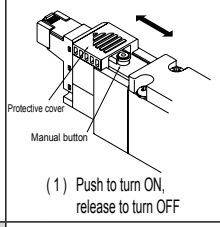
(standard)



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

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

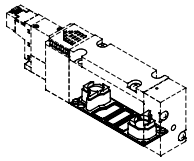
M Non-locking



(1) Push to turn ON, release to turn OFF

Other options

H With check valve



Provided as standard for pilot exhaust

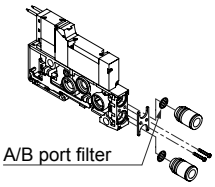
K External pilot

Main pressure and pilot pressure individual circuit specifications.

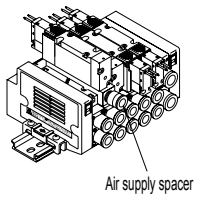
A Ozone/cutting water compatible product

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

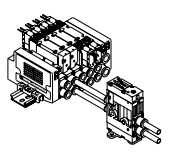
F A/B port filter integrated



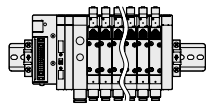
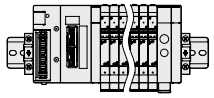
Z1 Air supply spacer



Pilot check valve (separate type)
* Refer to page 157

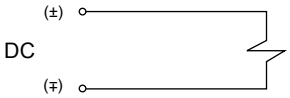


Electric connection circuit diagram

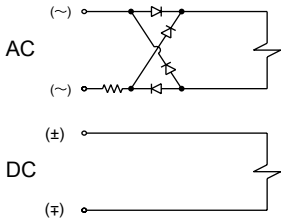
Other options	
Z4	Collective cutoff switch
	
Z5	Individual cutoff switch
	

Electrical connections (wiring method) Ⓑ: Without lead wire Ⓦ: With lead wire Ⓛ: With light Ⓢ: With surge suppressor Ⓝ: Without socket

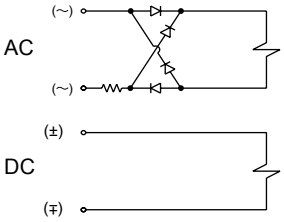
Blank — Grommet lead wire Ⓦ



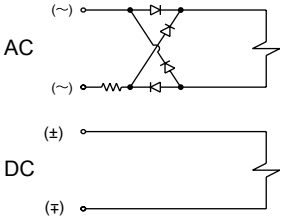
E0 / E0*J — E type connector/EJ type connector Ⓦ



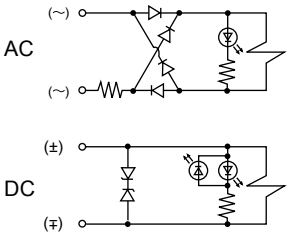
E0N — E type connector Ⓝ



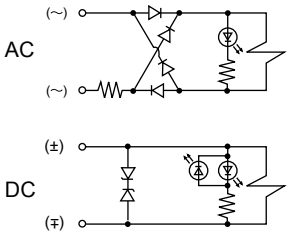
E1 — E type connector Ⓑ



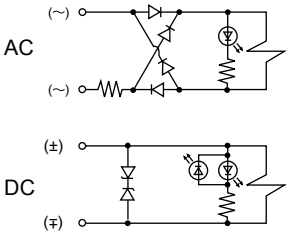
E2 / E2*J — E type connector/EJ type connector ⓌⓁⓈ



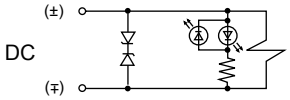
E2N — E type connector ⓁⓈⓃ



E3 — E type connector ⒷⓁⓈ

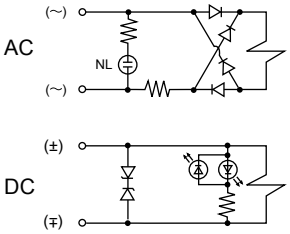


A2N — A type connector ⓁⓈⓃ

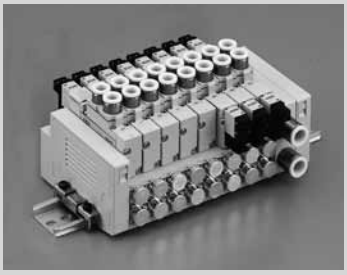


* Zener diode is used for the surge suppressor.

B — DIN terminal box ⓌⓁⓈ



Discontinue



Individual wiring block manifold
Body piping

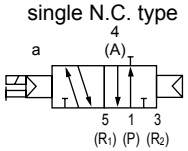
MN4GA1/2 Series

● Applicable cylinder bore size: φ 20 to φ 80

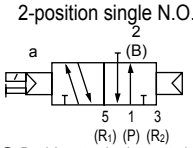
CE Refer to Ending for details. RoHS CAD

JIS symbol

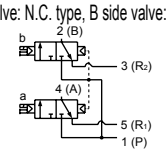
● 3 port valve 2-position single N.C. type



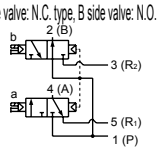
2-position single N.O. type



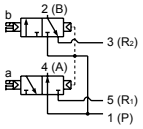
● Dual 3 port valve integrated type (A side valve: N.C. type, B side valve: N.C. type)



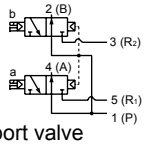
(A side valve: N.C. type, B side valve: N.O. type)



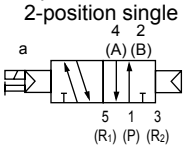
(A side valve: N.O. type, B side valve: N.C. type)



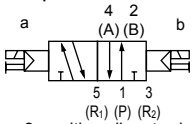
(A side valve: N.O. type, B side valve: N.O. type)



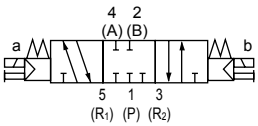
● 5 port valve 2-position single



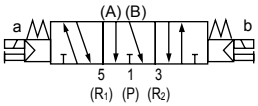
2-position double



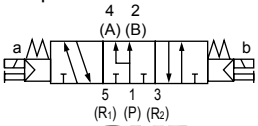
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

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

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated. Excessive or intermittent lubrication results in unstable operation.
Note 2 The degree of protection is dust proof. The unit is not water proof. Avoid water drops or oil, etc. during use.
Note 3 The working pressure range is 0 to 0.7 MPa when the external pilot (option symbol: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Electrical specification

Descriptions		
Rated voltage V	DC	12, 24
	AC	100
Voltage fluctuation range		±10%
Holding current Note 4 A	DC24	0.023 (0.025)
	DC12	0.046 (0.050)
	AC100	0.010 (0.012)
Power consumption Note 4 W	DC24	0.55 (0.6)
	DC12	0.55 (0.6)
Apparent power VA	AC100	1.0 (1.2)
Thermal class		B
Temperature rise °C		50
Surge suppressor		Option
Indicator		Light (option)

Note 4 Values in ( ) apply when a light is attached.

Individual specifications

Descriptions		MN3GA1/MN4GA1	MN3GA2/MN4GA2
Max. station no.		24 stations	20 stations
Port size	A/B port	Barbed fitting φ 1.8 Push-in fitting φ 1.8, φ 4, φ 6 M5	Push-in fitting φ 4, φ 6, φ 8 Rc1/8
	P/R port	Push-in fitting φ 6, φ 8, φ 6.4	Push-in fitting φ 8, φ 10

- For installation of the DIN rail, refer to "Mounting orientation" on page 443.
- For the weight, refer to page 308.
- G and NPT threads are available for piping port. Contact CKD for details.

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

Values including a light surge suppressor. The response times are values with a supply pressure of 0.5 MPa under 20°C and with no lubrication. It varies depending on the pressure and the lubricant quality.

Flow characteristics

Model no.	Solenoid position		P→A/B		A/B→R	
			C[dm³/ (s·bar)]	b	C[dm³/ (s·bar)]	b
MN3GA1 MN4GA1	Dual 3 port valve integrated type		0.87	0.37	0.68	0.22
	2-position		0.98	0.33	0.71	0.27
	3-position	All ports closed	0.92	0.34	0.95	0.20
		ABR connection	0.92	0.29	0.69	0.22
		PAB connection	1.1	0.35	1.0	0.26
MN3GA2 MN4GA2	Dual 3 port valve integrated type		1.7	0.37	1.6	0.21
	2-position		2.2	0.21	1.7	0.10
	3-position	All ports closed	2.0	0.25	2.2	0.15
		ABR connection	2.0	0.27	1.7	0.12
		PAB connection	2.3	0.31	2.3	0.23

Note 1: Effective cross-sectional area S and sonic conductance C are converted as S ≒ 5.0 x C.
Note 2: Values for 2-position, dual 3 port valve integrated type, and ABR connection are the values when check valve is integrated.

Ozone proof specifications / Cutting oil proof type specifications

Select the option "A" of Ⓔ in how to order on page 306.

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

● Particle generation preventing structure for use in clean rooms

** – Voltage – **P7***

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

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

** – Voltage – **P4**

Discontinue

MN4GA1/2 Series

Individual wiring block manifold body piping

How to order

Manifold model no.

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

3 port manifold model no.

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

Discrete valve block with solenoid valve

N4GA1 1 0- C6 - E2 H — 3

Discrete 3 port valve block with solenoid valve

N3GA1 1 0- C6 - E2 H — 3

Discrete solenoid valve

4GA1 1 9- C6 - E2 H — 3

Discrete 3 port solenoid valve

3GA1 1 9- C6 - E2 H — 3

- B Solenoid position
- A Model no.
- C Port size (Note 1)
- D Electrical connections
- E Option
- F Station no.
- G Voltage

* Always indicate "Manifold specifications" (pages 375, 377).

Symbol	Descriptions		A Model no.							
			Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
			3 port valve		5 port valve					
			MN3GA1	MN3GA2	MN4GA1	MN4GA2	N3GA1/3GA1	N3GA2/3GA2	N4GA1/4GA1	N4GA2/4GA2
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		●	●			●	●		
11	2-position single normally open		●	●			●	●		
66	Dual 3 port valve integrated type Note 2, 3	A side valve: Normally closed B side valve: Normally closed	●	●			●	●		
67	Dual 3 port valve integrated type Note 2, 3	A side valve: Normally closed B side valve: Normally open	●	●			●	●		
76	Dual 3 port valve integrated type Note 2, 3	A side valve: Normally open B side valve: Normally closed	●	●			●	●		
77	Dual 3 port valve integrated type Note 2, 3	A side valve: Normally open B side valve: Normally open	●	●			●	●		
8	Mix manifold (In case of multiple solenoid positions)		●	●	●	●				
C Port size (ports A & B)										
C18	φ 1.8 push-in fitting for fiber tubes (applicable tube UP-9402-**)		●		●		●		●	
C4	φ 4 push-in fitting		●	●	●	●	●	●	●	●
C6	φ 6 push-in fitting		●	●	●	●	●	●	●	●
C8	φ 8 push-in fitting			●		●		●		●
CF	φ 1.8 barbed fitting for fiber tubes (applicable tube UP-9102-**)		●		●		●		●	
CX	Push-in fitting mix	Note 4	●	●	●	●				
M5	M5 female thread		●		●		●		●	
06	Rc1/8			●		●		●		●
D Electrical connections										
Refer to the next page for electrical connections										
E Option										
Blank	Non-locking/locking common manual override		●	●	●	●	●	●	●	●
M	Non-locking manual override		●	●	●	●	●	●	●	●
H	With check valve	Note 5	●	●	●	●	●	●	●	●
K	External pilot	Note 6	●	●	●	●	●	●	●	●
A	Ozone/cutting oil proof		●	●	●	●	●	●	●	●
F	A/B port filter integrated (P port: standard)		●	●	●	●	●	●	●	●
Z1	Air supply spacer	Note 7	●	●	●	●				
F Station no.										
1	1 station									
to	to		●	●	●	●				
24	24 Stations (The max. station no. of MN3GA2/MN4GA2 is 20.)									
G Voltage										
1	100 VAC (rectifier integrated)		●	●	●	●	●	●	●	●
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●

is not available.

Note on selection guide

Note 1 Specify the port size of the P/R port with the supply and exhaust block model no. in the manifold specifications.

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

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

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

Note 5 3-position all ports closed and PAB connection are not provided with specifications (H) with check valve. Refer to page 439 for details on check valve.

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

Note 7 Specify the spacer mounting position and quantity in manifold specifications. Combination with the masking plate is not supported. Refer to page 368 for details.

(Electrical connection list)

Ⓓ Electrical connections		Ⓐ Model no.							
		Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
		3 port valve		5 port valve					
		MN3GA1	MN3GA2	MN4GA1	MN4GA2	N3GA1/3GA1	N3GA2/3GA2	N4GA1/4GA1	N4GA2/4GA2
Blank	Grommet lead wire (300 mm) Note 9	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7) with surge suppressor/light		●		●		●		●
E type connector (upward/lateral direction common)									
E0	Lead wire (300 mm)	●	●	●	●	●	●	●	●
E00	Lead wire (500 mm)	●	●	●	●	●	●	●	●
E01	Lead wire (1000 mm)	●	●	●	●	●	●	●	●
E02	Lead wire (2000 mm)	●	●	●	●	●	●	●	●
E03	Lead wire (3000 mm)	●	●	●	●	●	●	●	●
E2	Lead wire (300 mm) with surge suppressor/light	●	●	●	●	●	●	●	●
E20	Lead wire (500 mm) with surge suppressor/light	●	●	●	●	●	●	●	●
E21	Lead wire (1000 mm) with surge suppressor/light	●	●	●	●	●	●	●	●
E22	Lead wire (2000 mm) with surge suppressor/light	●	●	●	●	●	●	●	●
E23	Lead wire (3000 mm) with surge suppressor/light	●	●	●	●	●	●	●	●
E0N	Without lead wire (without socket)	●	●	●	●	●	●	●	●
E2N	Without lead wire (without socket) with surge suppressor/light	●	●	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal) with surge suppressor/light	●	●	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal)	●	●	●	●	●	●	●	●
EJ type connector (socket with cover, upward/lateral direction common)									
E01J	Lead wire (1000 mm)	●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm)	●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm)	●	●	●	●	●	●	●	●
E21J	Lead wire (1000 mm) with surge suppressor/light	●	●	●	●	●	●	●	●
E22J	Lead wire (2000 mm) with surge suppressor/light	●	●	●	●	●	●	●	●
E23J	Lead wire (3000 mm) with surge suppressor/light	●	●	●	●	●	●	●	●

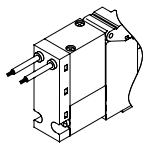
Note 9 Grommet lead wire specifications are available only for 24 and 12 VDC.

Electrical connections

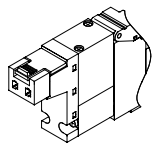
Discrete valve/individual wiring manifold

Blank Grommet lead wire

● **Lead wire length**
300 mm

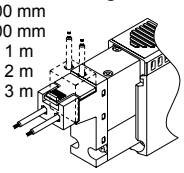


E1 E3 E type connector with socket/terminal

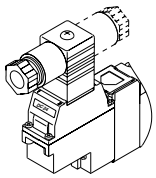


E0 E2 E type connector

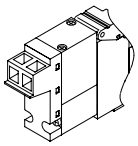
● **Lead wire length**
300 mm
500 mm
1 m
2 m
3 m



B DIN terminal box

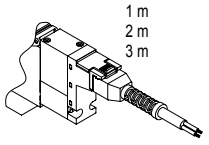


E0N E2N E type connector without socket



E0*J E2*J EJ type connector

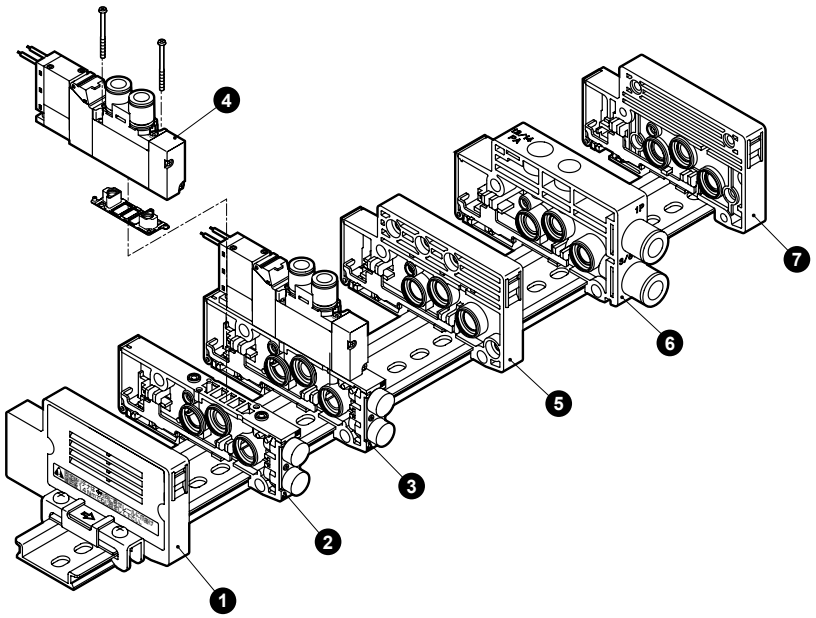
● **Lead wire length**
1 m
2 m
3 m



MN4GA1/2 Series

Individual wiring block manifold; body piping

Manifold components explanation and parts list



Main components list (refer to pages 358 to 369 for details)

No.	Component name	Model no. (example)	No.	Component name	Model no. (example)
1	End block L	N4G1-EL	5	Partition block	N4G1-S
2	Discrete valve block	N4GA1-V1	6	Supply and exhaust block	N4G1-Q-8
3	Discrete valve block with solenoid valve	N4GA110-C6-H-3	7	End block R	N4G1-ER
4	Solenoid valve body	4GA119-C6-H-3			

A type individual wiring weight

4GA1

(g)

Block type		Weight	Block type		Weight
Valve block with solenoid valve	N3GA110-C6-3	73	Valve block with masking plate	N4GA1-MP	34
	N3GA1110-C6-3	73	Supply and exhaust block	N4G1-Q-8	63
	N4GA110-C6-3	73		N4G1-QK-8	68
	N4GA120-C6-3	88	End block	N4G1-E*	57
	N4GA1 $^{3}_{4}$ $_{5}$0-C6-3	90		N4G1-EX*	57
	N3GA1660-C6-3	88	Partition block	N4G1-S	45

4GA2

(g)

Block type		Weight	Block type		Weight
Valve block with solenoid valve	N3GA210-C8-3	141	Valve block with masking plate	N4GA2-MP	66
	N3GA2110-C8-3	141	Supply and exhaust block	N4G2-Q-10	99
	N4GA210-C8-3	141		N4G2-QK-10	104
	N4GA220-C8-3	156	End block	N4G2-E*	83
	N4GA2 $^{3}_{4}$ $_{5}$0-C8-3	168		N4G2-EX*	84
	N4GA2660-C8-3	156	Partition block	N4G2-S	60

Parts list

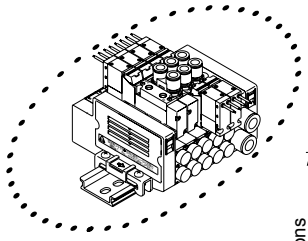
Applicable	Parts name	Model no.	Applicable	Parts name	Model no.
Valve 4G1	Cartridge fitting φ 1.8 straight type	4G1-JOINT-C18	Valve	Coil assembly	4G-[*1]-[*2]-COIL-[*3] *1: Electrical connections (blank, B, E0,…), *3: Voltage (1, 3, 4) *2: Ozone/cutting oil proof type (blank, A)
	Cartridge fitting φ 4 straight type	4G1-JOINT-C4			
	Cartridge fitting φ 6 straight type	4G1-JOINT-C6			
	Cartridge fitting φ 1.8 barbed type	4G1-JOINT-CF		E type connector socket assembly	4G-SOCKET-ASSY-[*1]-[*3] *1: Electrical connections (blank, B, E0,…), *3: Voltage (1, 3, 4)
	Plug cartridge	4G1-JOINT-CPG			
Valve 4G2	Cartridge fitting φ 4 straight type	4G2-JOINT-C4		EJ type connector socket assembly	4G-SOCKET-ASSY-[*1] *1: Electrical connections (E01J,E02J,…)
	Cartridge fitting φ 6 straight type	4G2-JOINT-C6			
	Cartridge fitting φ 8 straight type	4G2-JOINT-C8	Valve 4G2	DIN terminal box assembly	4G-TERMINAL-BOX-[*3] *3: Voltage (1,3,4)
	Plug cartridge	4G2-JOINT-CPG			

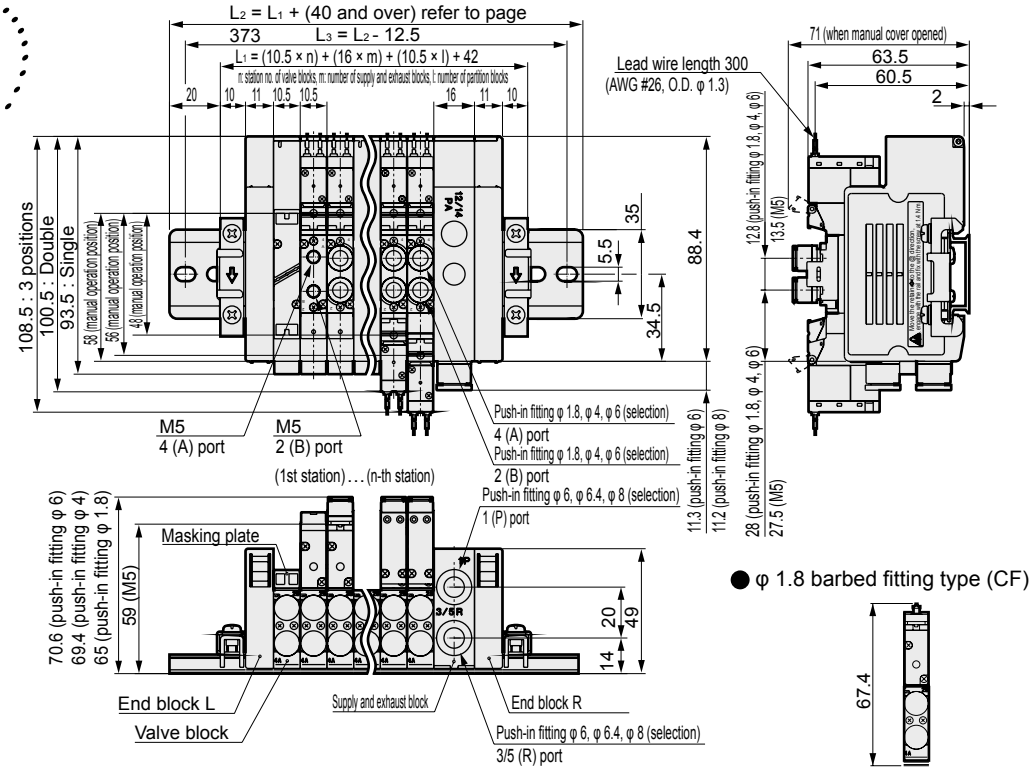
Dimensions CAD

MN4GA1

● Grommet lead wire (blank)

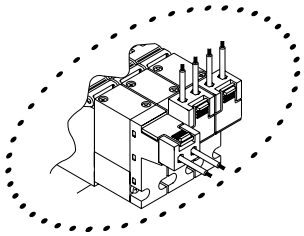
* For 2-position single 3 port valve, the port A or port B is a plug.
The dimension of dual 3 port valve integrated type is the same as that of the double type.

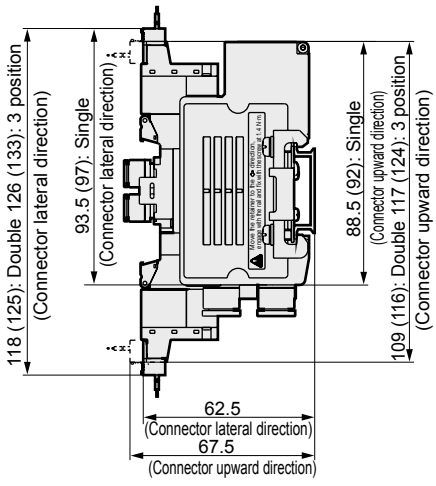




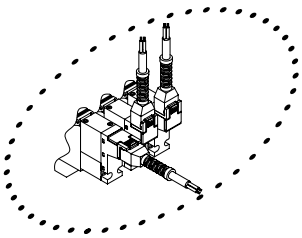
● φ 1.8 barbed fitting type (CF)

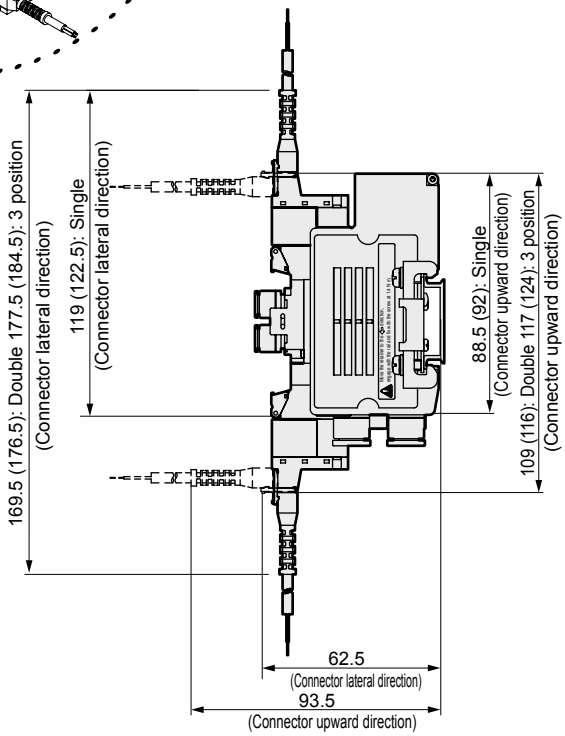
● E type connector type (E)





● EJ type connector type (E**J)





Note: Values in ( ) apply for 100 VAC.

* Refer to page 335 for dimensions of the supply and exhaust block push-in fitting.

MN4GA2 Series

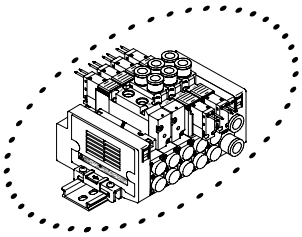
Individual wiring block manifold; body piping

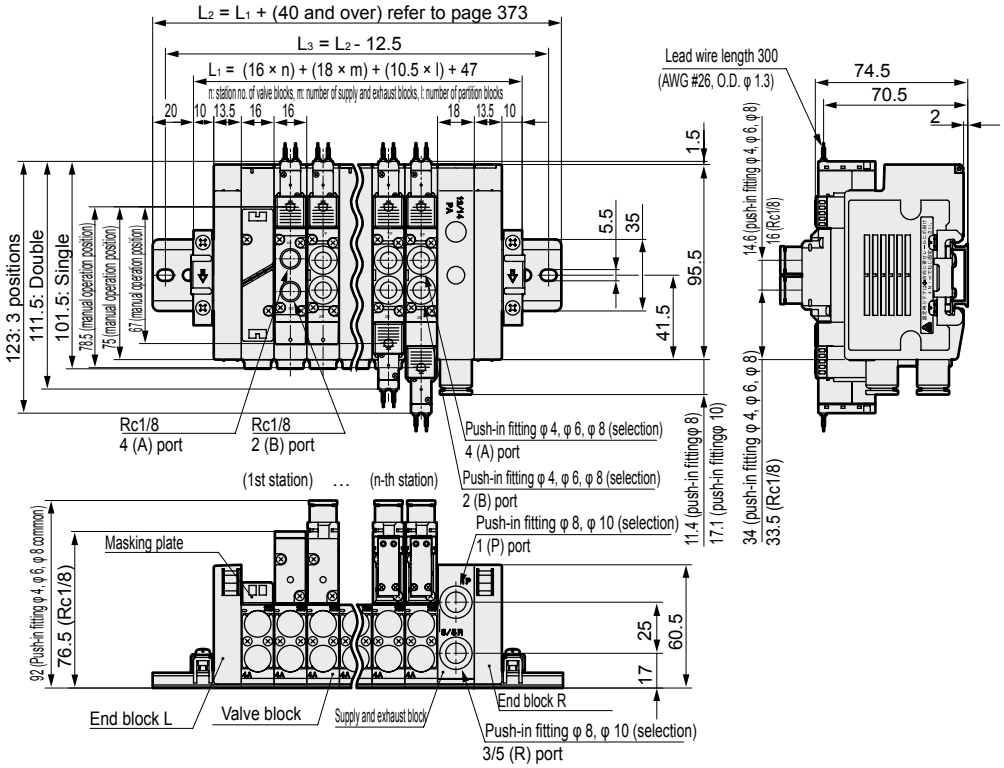
Dimensions CAD

MN4GA2

● Grommet lead wire (blank)

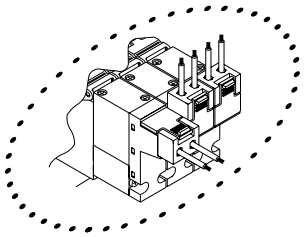
* For 2-position single 3 port valve, the port A or port B is a plug.
The dimension of dual 3 port valve integrated type is the same as that of the double type.

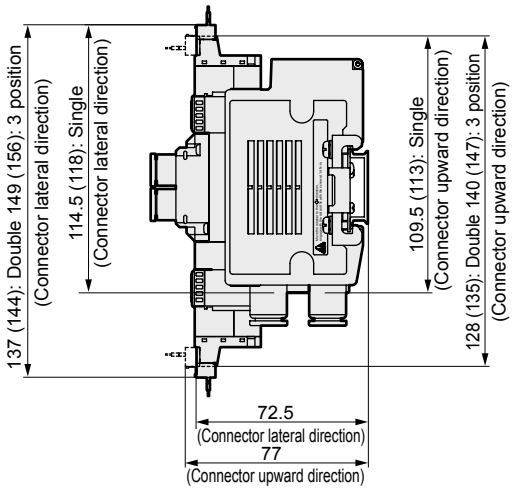




Dimensions

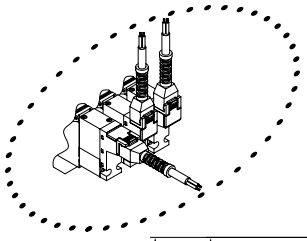
● E type connector type (E)

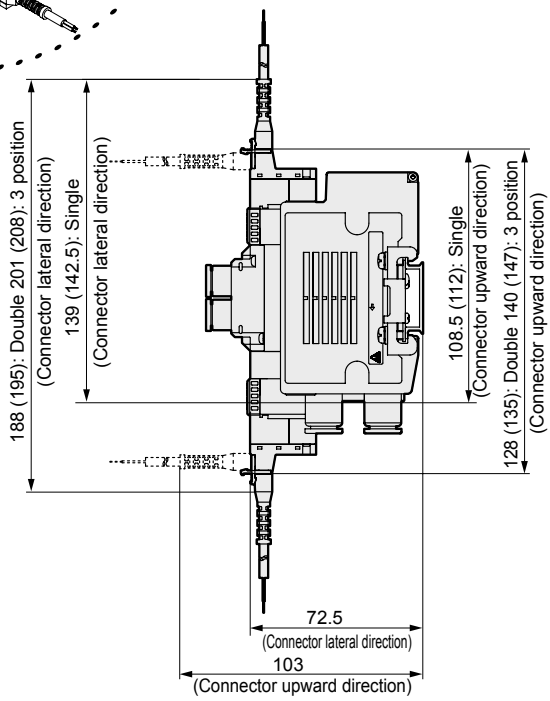




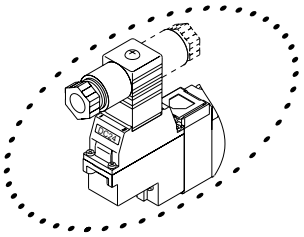
Note: Values in ( ) apply for 100 VAC.

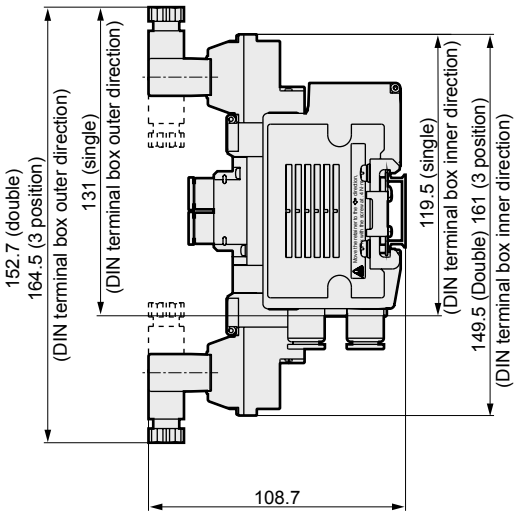
● EJ type connector type (E**J)





● DIN terminal box type (B)

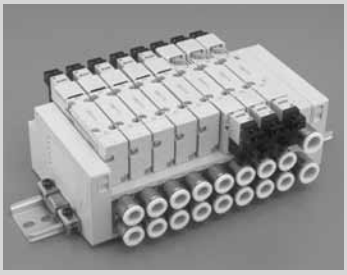




Note: The DIN terminal box assembly is shipped facing inwards.

* Refer to page 335 for dimensions of the supply and exhaust block push-in fitting.

Discontinue



Individual wiring block manifold
Base piping

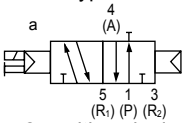
MN4GB1/2 Series

● Applicable cylinder bore size: φ 20 to φ 80

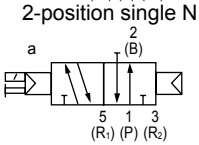
Refer to Ending for details.

JIS symbol

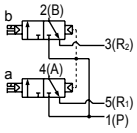
● 3 port valve 2-position single N.C. type



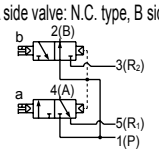
2-position single N.O. type



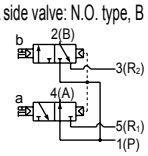
● Dual 3 port valve integrated type (A side valve: N.C. type, B side valve: N.C. type)



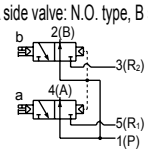
(A side valve: N.C. type, B side valve: N.O. type)



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

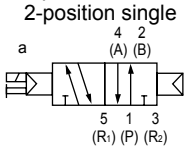


(A side valve: N.O. type, B side valve: N.O. type)

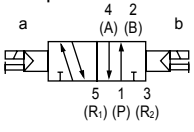


● 5 port valve

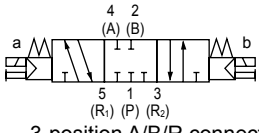
2-position single



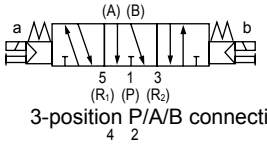
2-position double



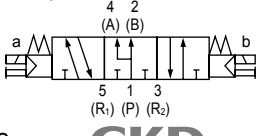
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

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

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

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

Note 3 The working pressure range when the external pilot (option symbol: K) has been selected is 0 to 0.7 MPa. In addition, use the external pilot with a pressure of 0.2 to 0.7 MPa.

Electrical specification

Descriptions		
Rated voltage V	DC	12, 24
	AC	100
Voltage fluctuation range		±10%
Holding current Note 4 A	DC24	0.023 (0.025)
	DC12	0.046 (0.050)
	AC100	0.010 (0.012)
Power consumption Note 4 W	DC24	0.55 (0.6)
	DC12	0.55 (0.6)
Apparent power VA	AC100	1.0 (1.2)
Thermal class		B
Temperature rise °C		50
Surge suppressor		Option
Indicator		Light (option)

Note 4 Values in ( ) apply when a light is attached.

Individual specifications

Descriptions		MN3GB1/MN4GB1	MN3GB2/MN4GB2
Max. station no.		24 stations	20 stations
Port size	A/B port	Barbed fitting φ 1.8 Push-in fitting φ 1.8, φ 4, φ 6	Push-in fitting φ 4, φ 6, φ 8
	P/R port	Push-in fitting φ 6, φ 8, φ 6.4	Push-in fitting φ 8, φ 10

• For installation of the DIN rail, refer to "Mounting orientation" on page 443.
• For the weight, refer to page 316.

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

Values including a light surge suppressor. The response times are values with a supply pressure of 0.5 MPa under 20°C and with no lubrication. It varies depending on the pressure and the lubricant quality.

Flow characteristics

Model no.	Solenoid position		P→A/B		A/B→R	
			C[dm³/ (s·bar)]	b	C[dm³/ (s·bar)]	b
MN3GB1 MN4GB1	Dual 3 port valve integrated type		0.86	0.35	0.66	0.25
	2-position		1.0	0.30	0.72	0.26
	3-position	All ports closed	0.96	0.32	1.0	0.23
		ABR connection	0.96	0.29	0.71	0.30
		PAB connection	1.1	0.31	1.0	0.22
MN3GB2 MN4GB2	Dual 3 port valve integrated type		1.7	0.42	1.6	0.19
	2-position		2.4	0.35	1.7	0.19
	3-position	All ports closed	2.2	0.38	2.2	0.24
		ABR connection	2.2	0.38	1.7	0.20
		PAB connection	2.3	0.29	2.2	0.24

Note 1: Effective cross-sectional area S and sonic conductance C are converted as S ≒ 5.0 × C.
Note 2: Values for 2-position, dual 3 port valve integrated type, and ABR connection are the values when check valve is integrated.

Ozone proof specifications / Cutting oil proof type specifications

Select the option "A" of Ⓔ in how to order on page 314.

Clean room specifications (Catalog no. CB-033S)

● Particle generation preventing structure for use in clean rooms

** – Voltage – **P7***

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

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

** – Voltage – **P4**

Discontinue

MN4GB1/2 Series

Individual wiring block manifold; base piping

How to order

Manifold model no.

MN4GB1 (A) 1 (B) 0 - C6 (C) - E2 (D) H (E) - 10 (F) - 3 (G)

3 port manifold model no.

MN3GB1 (A) 66 (B) 0 - C6 (C) - E2 (D) H (E) - 10 (F) - 3 (G)

Discrete valve block with solenoid valve

N4GB1 (A) 1 (B) 0 - C6 (C) - E2 (D) H (E) — 3 (G)

Discrete 3 port valve block with solenoid valve

N3GB1 (A) 66 (B) 0 - C6 (C) - E2 (D) H (E) — 3 (G)

Discrete solenoid valve

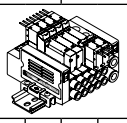
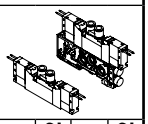
4GB1 (A) 1 (B) 9 — 00 (C) — E2 (D) H (E) — 3 (G)

Discrete 3 port solenoid valve

3GB1 (A) 66 (B) 9 — 00 (C) — E2 (D) H (E) — 3 (G)

(A) Model no.
(B) Solenoid position
(C) Port size
Note 1
Note 2
Note 3
Note 4
(D) Electrical connections
(E) Option
(F) Station no.
(G) Voltage

* Always indicate "Manifold specifications" (pages 376/378).

(A) Model no.	Manifold		Discrete valve block with solenoid valve/discrete solenoid valve				
	Dual 3 port valve integrated type	5 port valve					
							
Symbol / Descriptions	MN3GB1	MN3GB2	MN4GB1	MN4GB2	N3GB1/3GB1	N3GB2/3GB2	N4GB1/4GB1	N4GB2/4GB2
(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 P/A/B connection			●	●			●	●
66 Dual 3 port valve integrated type Note 5, 6 — A side valve: Normally closed / B side valve: Normally closed	●	●			●	●		
67 Dual 3 port valve integrated type Note 5, 6 — A side valve: Normally closed / B side valve: Normally open	●	●			●	●		
76 Dual 3 port valve integrated type Note 5, 6 — A side valve: Normally open / B side valve: Normally closed	●	●			●	●		
77 Dual 3 port valve integrated type Note 5, 6 — A side valve: Normally open / B side valve: Normally open	●	●			●	●		
8 Mix manifold (In case of multiple solenoid positions)	●	●	●	●				
(C) Port size (ports A & B)	Refer to the next page for the port size.							
(D) Electrical connections	Refer to the next page for electrical connections.							
(E) Option								
Blank Non-locking/locking common manual override	●	●	●	●	●	●	●	●
M Non-locking manual override	●	●	●	●	●	●	●	●
H With check valve Note 7	●	●	●	●	●	●	●	●
K External pilot Note 8			●	●			●	●
A Ozone/cutting oil proof	●	●	●	●	●	●	●	●
F A/B port filter integrated (P port: standard)	●	●	●	●	●	●	●	●
Z1 Air supply spacer Note 9	●	●	●	●				
(F) Station no.								
1 1 station	●	●	●	●				
to to								
24 24 stations (The max. station no. of MN4GB2 is 20.)								
(G) Voltage								
1 100 VAC (rectifier integrated)	●	●	●	●	●	●	●	●
3 24 VDC	●	●	●	●	●	●	●	●
4 12 VDC	●	●	●	●	●	●	●	●

is not available.

Note on selection guide

Note 1 The plug specifications of port A or B are configurations for 2-position single only. Specify the port size of the P/R port with the supply and exhaust block model no.

Note 2 CL* push-in fitting L type (upward) is available only for the single solenoid manifold. The port A is a long elbow and the port B is short elbow.

Note 3 A/B port sizes do not differ for the mix (CX) of push-in fitting L type (upward).

Note 4 In the case of a discrete solenoid valve, set the port size of (C) to 00.

Note 5 Select MN4GB*80 when mixing with 4, 5 port valves.
Select MN3GB*80 when mixing with the masking plate.

Note 6 Combination with the external pilot (K) is not available.
Dimensions are the same as the respective 2-position double.

Note 7 For 2-position single 3 port valve, the port A or port B is a plug.
The dimension of dual 3 port valve integrated type is the same as that of the double type.
Refer to page 439 for details on check valve.

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

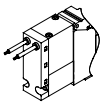
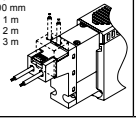
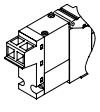
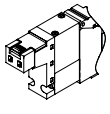
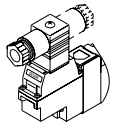
Note 9 Specify the spacer mounting position and quantity in manifold specifications.
Combination with the masking plate is not supported.
Refer to page 368 for details.

Note 10 The grommet lead wire specifications are compatible only with 24 VDC and 12 VDC.

Note 11 The compatible tube for the φ 1.8 barbed fitting for fiber tube is UP-9102-**.
The compatible tube for the φ 1.8 push-in fitting for fiber tube is UP-9402-**.

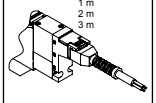
Electrical connections

Discrete valve/individual wiring manifold

Blank Grommet lead wire	E0 E2 E type connector	E0N E2N E type connector without socket	E1 E3 E type connector with socket/terminal	B DIN terminal box
● Lead wire length 300 mm 	● Lead wire length 300 mm 500 mm 1 m 2 m 3 m 			

EO*J E2*J EJ type connector

● Lead wire length 1 m 2 m 3 m



(Port size and electrical connection list)

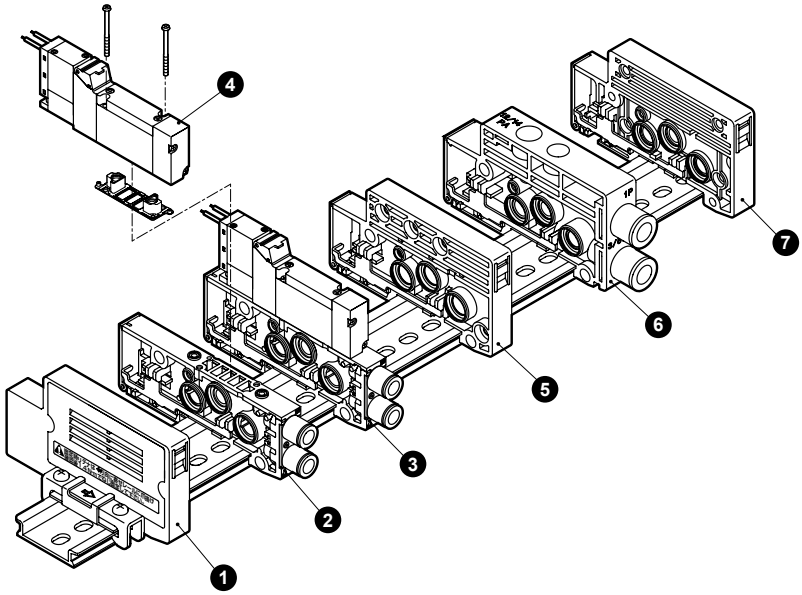
			Ⓐ Model no.							
			Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
			Dual 3 port valve integrated type		5 port valve					
			MN3GB1	MN3GB2	MN4GB1	MN4GB2	N3GB1/3GB1	N3GB2/3GB2	N4GB1/4GB1	N4GB2/4GB2
Ⓒ Port size (ports A & B)										
CF	φ 1.8 barbed fitting for fiber tube		●		●		●		●	
C18	φ 1.8 push-in fitting for fiber tube		●		●		●		●	
C4	φ 4 push-in fitting		●	●	●	●	●	●	●	●
C6	φ 6 push-in fitting		●	●	●	●	●	●	●	●
C8	φ 8 push-in fitting			●		●		●		●
CL18	φ 1.8 push-in fitting for fiber tube L type (upward)				●		●		●	
CL4	L type φ 4 push-in fitting (upward)				●		●		●	
CL6	L type φ 6 push-in fitting (upward)				●	●	●	●	●	●
CL8	L type φ 8 push-in fitting (upward)					●		●		●
CD18	φ 1.8 push-in fitting for fiber tube L type (downward)		●		●		●		●	
CD4	L type φ 4 push-in fitting (downward)		●		●		●		●	
CD6	L type φ 6 push-in fitting (downward)		●	●	●	●	●	●	●	●
CD8	L type φ 8 push-in fitting (downward)			●		●		●		●
CX	Push-in fitting mix		●	●	●	●				
Single side plugged specifications	A port	B port								
CFNC	φ 1.8 barbed fitting for fiber tube	Plug			●				●	
C18NC	φ 1.8 push-in fitting for fiber tube	Plug			●				●	
C4NC	φ 4 push-in fitting	Plug			●	●			●	●
C6NC	φ 6 push-in fitting	Plug			●	●			●	●
C8NC	φ 8 push-in fitting	Plug				●				●
CFNO	Plug	φ 1.8 barbed fitting for fiber tube			●				●	
C18NO	Plug	φ 1.8 push-in fitting for fiber tube			●				●	
C4NO	Plug	φ 4 push-in fitting			●	●			●	●
C6NO	Plug	φ 6 push-in fitting			●	●			●	●
C8NO	Plug	φ 8 push-in fitting				●				●
CL18NC	φ 1.8 push-in fitting for fiber tube (upward)	Plug			●				●	
CL4NC	L type φ 4 push-in fitting (upward)	Plug			●				●	
CL6NC	L type φ 6 push-in fitting (upward)	Plug			●	●			●	●
CL8NC	L type φ 8 push-in fitting (upward)	Plug				●				●
CL18NO	Plug	φ 1.8 push-in fitting for fiber tube (upward)			●				●	
CL4NO	Plug	L type φ 4 push-in fitting (upward)			●				●	
CL6NO	Plug	L type φ 6 push-in fitting (upward)			●	●			●	●
CL8NO	Plug	L type φ 8 push-in fitting (upward)				●				●
CD18NC	φ 1.8 push-in fitting for fiber tube (downward)	Plug			●				●	
CD4NC	L type φ 4 push-in fitting (downward)	Plug			●				●	
CD6NC	L type φ 6 push-in fitting (downward)	Plug			●	●			●	●
CD8NC	L type φ 8 push-in fitting (downward)	Plug				●				●
CD18NO	Plug	φ 1.8 push-in fitting for fiber tube (downward)			●				●	
CD4NO	Plug	L type φ 4 push-in fitting (downward)			●				●	
CD6NO	Plug	L type φ 6 push-in fitting (downward)			●	●			●	●
CD8NO	Plug	L type φ 8 push-in fitting (downward)				●				●
Ⓓ Electrical connections										
Blank	Gro mmet lead wire (300 mm)	Note 10	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7)	with surge suppressor/light		●		●		●		●
E type connector (upward/lateral direction common)										
E0	Lead wire (300 mm)		●	●	●	●	●	●	●	●
E00	Lead wire (500 mm)		●	●	●	●	●	●	●	●
E01	Lead wire (1000 mm)		●	●	●	●	●	●	●	●
E02	Lead wire (2000 mm)		●	●	●	●	●	●	●	●
E03	Lead wire (3000 mm)		●	●	●	●	●	●	●	●
E2	Lead wire (300 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E20	Lead wire (500 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E21	Lead wire (1000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E22	Lead wire (2000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E23	Lead wire (3000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E0N	Without lead wire (without socket)		●	●	●	●	●	●	●	●
E2N	Without lead wire (without socket)	with surge suppressor/light	●	●	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal)	with surge suppressor/light	●	●	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal)		●	●	●	●	●	●	●	●
EJ type connector (socket with cover, upward/lateral direction common)										
E01J	Lead wire (1000 mm)		●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm)		●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm)		●	●	●	●	●	●	●	●
E21J	Lead wire (1000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E22J	Lead wire (2000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●
E23J	Lead wire (3000 mm)	with surge suppressor/light	●	●	●	●	●	●	●	●

Discontinue

MN4GB1/2 Series

Individual wiring block manifold; base piping

Manifold components explanation and parts list



Main components list (refer to pages 358 to 369 for details)

No.	Component name	Model no. (example)	No.	Component name	Model no. (example)
1	End block L	N4G1-EL	5	Partition block	N4G1-S
2	Discrete valve block	N4GB1-V1-C6	6	Supply and exhaust block	N4G1-Q-8
3	Discrete valve block with solenoid valve	N4GB110-C6-H-3	7	End block R	N4G1-ER
4	Solenoid valve body	4GB119-00-H-3			

B type individual wiring weight

4GB1

(g)

Block type		Weight	Block type		Weight
Valve block with solenoid valve	N4GB110-C6	69	Supply and exhaust block	N4G1-Q-8	63
	N4GB120-C6	84		N4G1-QK-8	68
	N4GB1$\frac{3}{5}$0-C6	85	End block	N4G1-E*	57
	N3GB1660-C6-3	84		N4G1-EX*	57
Valve block with masking plate	N4GB1-MP-C6	37	Partition block	N4G1-S	45

4GB2

(g)

Block type		Weight	Block type		Weight
Valve block with solenoid valve	N4GB210-C8	133	Supply and exhaust block	N4G2-Q-10	99
	N4GB220-C8	148		N4G2-QK-10	104
	N4GB2$\frac{3}{5}$0-C8	159	End block	N4G2-E*	83
	N4GB2660-C8-3	148		N4G2-EX*	84
Valve block with masking plate	N4GB2-MP-C8	76	Partition block	N4G2-S	60

Parts list

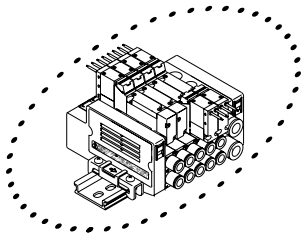
Applicable	Parts name	Model no.
Valve 4G1	Cartridge fitting φ 1.8 straight type	4G1-JOINT-C18
	Cartridge fitting φ 4 straight type	4G1-JOINT-C4
	Cartridge fitting φ 6 straight type	4G1-JOINT-C6
	Cartridge fitting φ 1.8 (short) elbow type	4G1-JOINT-CL18
	Cartridge fitting φ 1.8 long elbow type	4G1-JOINT-CLL18
	Cartridge fitting φ 4 (short) elbow type	4G4-JOINT-CL4
	Cartridge fitting φ 4 long elbow type	4G1-JOINT-CLL4
	Cartridge fitting φ 6 (short) elbow type	4G1-JOINT-CL6
	Cartridge fitting φ 6 long elbow type	4G1-JOINT-CLL6
	Cartridge fitting φ 1.8 barbed type	4G1-JOINT-CF
	Plug cartridge	4G1-JOINT-CPG
Valve 4G2	Cartridge fitting φ 4 straight type	4G2-JOINT-C4
	Cartridge fitting φ 6 straight type	4G2-JOINT-C6
	Cartridge fitting φ 8 straight type	4G2-JOINT-C8
	Cartridge fitting φ 6 (short) elbow type	4G2-JOINT-CL6
	Cartridge fitting φ 6 long elbow type	4G2-JOINT-CLL6
	Cartridge fitting φ 8 (short) elbow type	4G2-JOINT-CL8
	Cartridge fitting φ 8 long elbow type	4G2-JOINT-CLL8
	Plug cartridge	4G2-JOINT-CPG

Applicable	Parts name	Model no.
Valve	Coil assembly	4G-[*1]-[*2]-COIL-[*3] *1: Electrical connections (blank, B, E0,…), *3: Voltage (1, 3, 4) *2: Compatible with ozone/coolant (blank, A)
	E type connector socket assembly	4G-SOCKET-ASSY-[*1]-[*3] *1: Electrical connections (blank, B, E0,…), *3: Voltage (1, 3, 4)
	EJ type connector socket assembly	4G-SOCKET-ASSY-[*1] *1: Electrical connections (E01J,E02J,…)
Valve 4G2	DIN terminal box assembly	4G-TERMINAL-BOX-[*3] *3: Voltage (1,3,4)

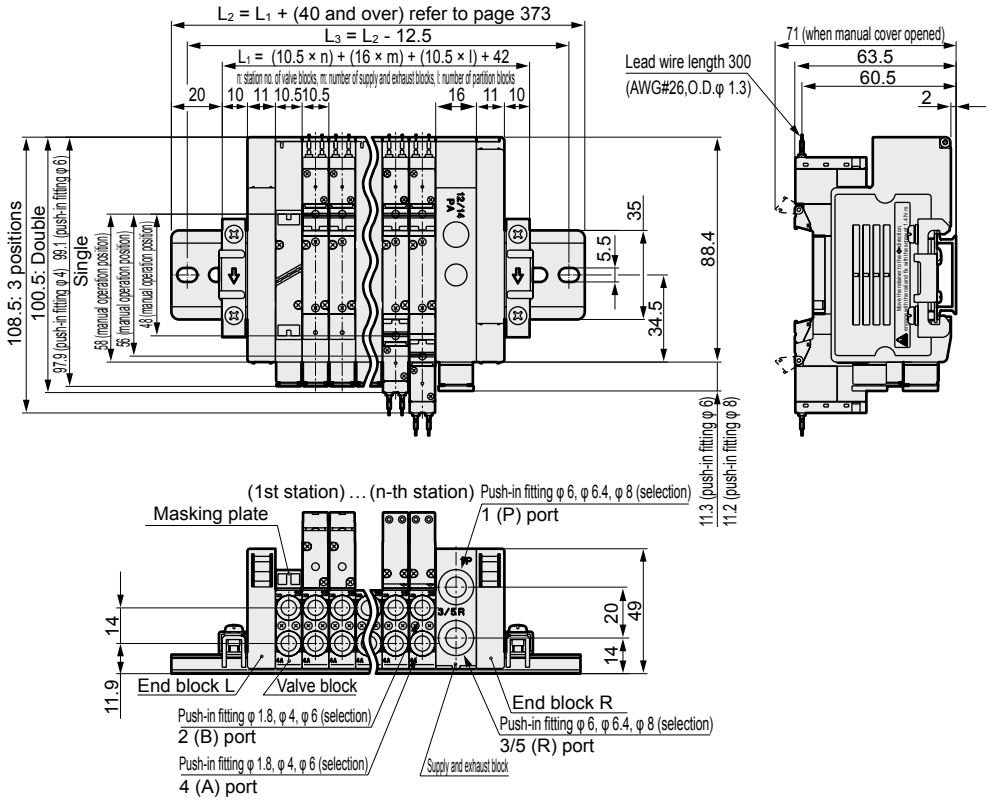
Dimensions CAD

MN4GB1

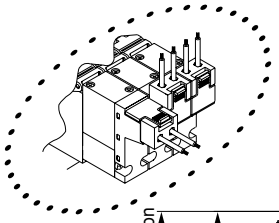
● Grommet lead wire (blank)

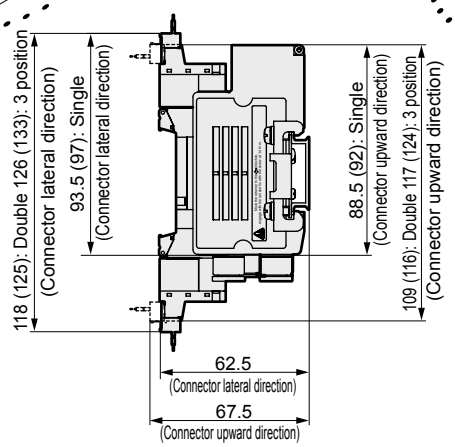


* For 2-position single 3 port valve, the port A or port B is a plug.
The dimension of dual 3 port valve integrated type is the same as that of the double type.



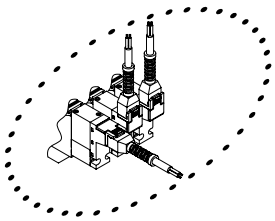
● E type connector type (E)

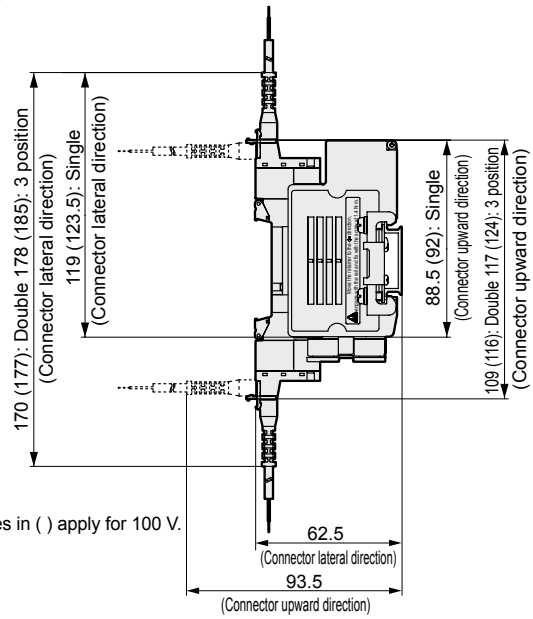




Note: Values in ( ) apply for 100 VAC.

● EJ type connector type (E**J)





Note: Values in ( ) apply for 100 V.

* Refer to page 350 for dimensions of the valve block push-in fitting and supply and exhaust block push-in fitting.

MN4GB2 Series

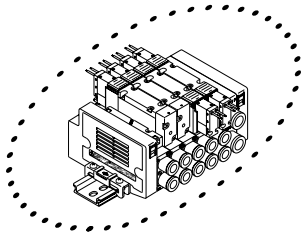
Individual wiring block manifold; base piping

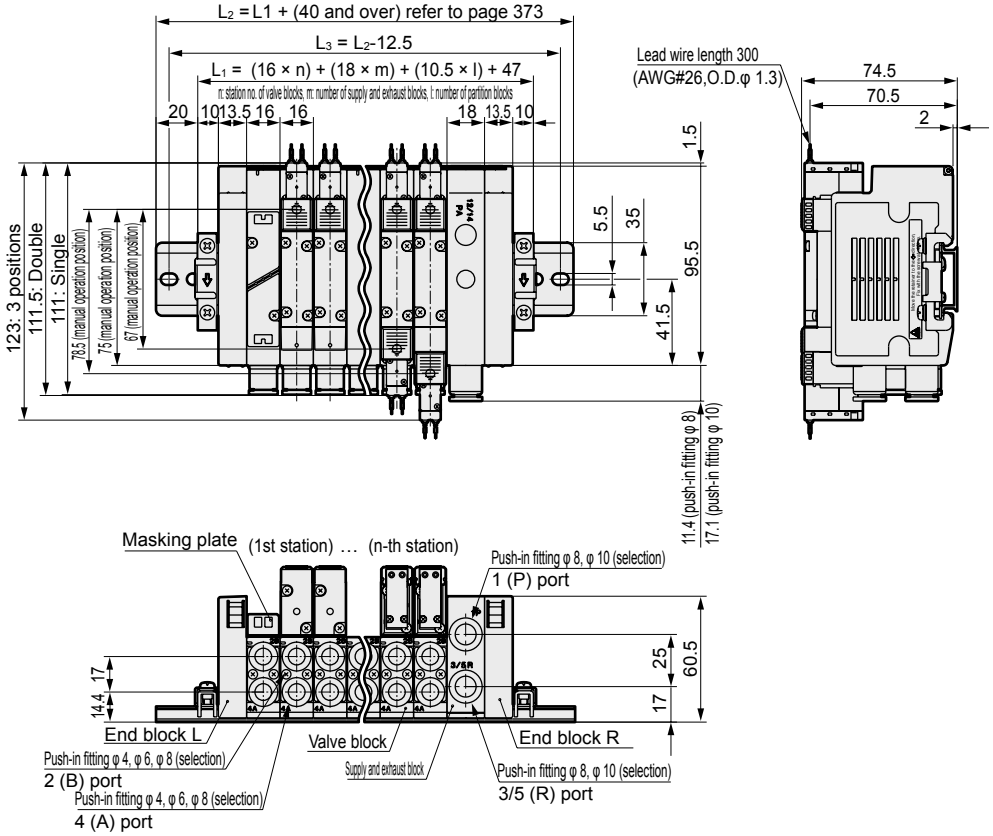
Dimensions CAD

MN4GB2

● Grommet lead wire (blank)

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

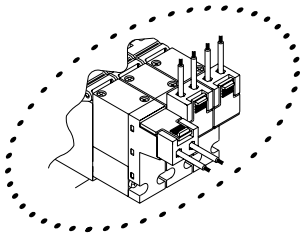


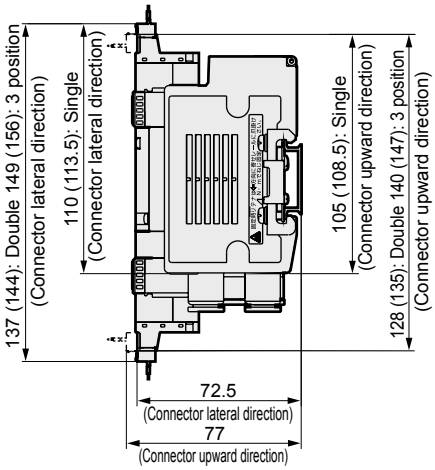


* Refer to page 351 for dimensions of the valve block push-in fitting and supply and exhaust block push-in fitting.

Dimensions

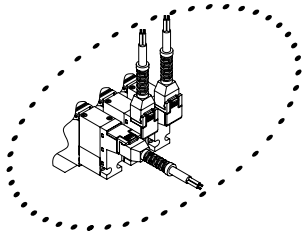
● E type connector type (E)

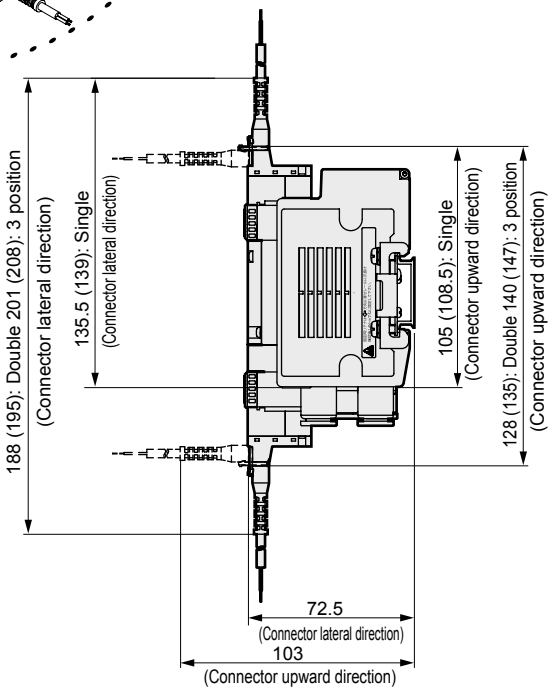




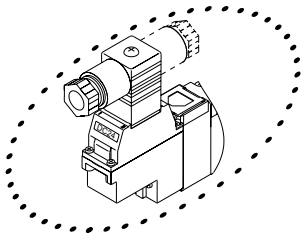
Note: Values in ( ) apply for 100 VAC.

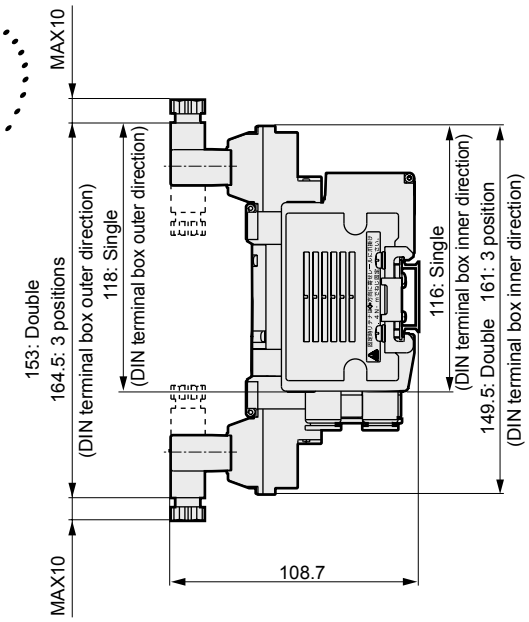
● EJ type connector type (E**J)





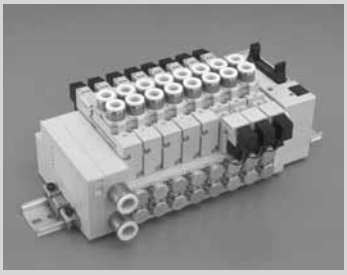
● DIN terminal box type (B)





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

Discontinue



Reduced wiring block manifold
Body piping

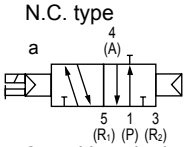
MN4GA1/2-T* Series

● Applicable cylinder bore size: φ 20 to φ 80

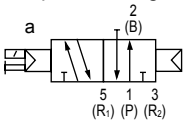
RoHS CAD

JIS symbol

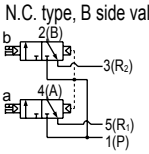
● 3 port valve 2-position single N.C. type



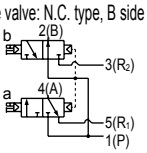
2-position single N.O. type



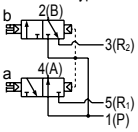
● Dual 3 port valve integrated type (A side valve: N.C. type, B side valve: N.C. type)



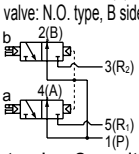
(A side valve: N.C. type, B side valve: N.O. type)



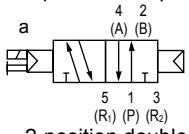
(A side valve: N.O. type, B side valve: N.C. type)



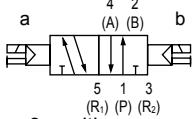
(A side valve: N.O. type, B side valve: N.O. type)



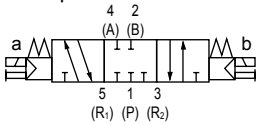
● 5 port valve 2-position single



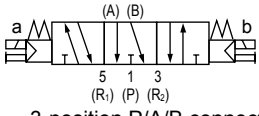
2-position double



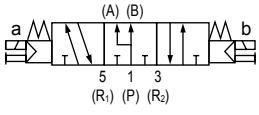
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

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

Electrical specification

Descriptions		
Rated voltage	DC	12, 24
Voltage fluctuation range		±10%
Holding current	24 VDC	0.025
A	12 VDC	0.050
Power consumption	24 VDC	0.6
W	12 VDC	0.6
Thermal class		B
Temperature rise °C		50
Surge suppressor		Zener diode
Indicator		LED

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated. Excessive or intermittent lubrication results in unstable operation.
Note 2 The degree of protection is dust proof. The unit is not water proof. Avoid water drops or oil, etc. during use.
Note 3 The working pressure range is 0 to 0.7 MPa when the external pilot (option symbol: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Individual specifications

Descriptions		MN3GA1/MN4GA1								
		T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1
Max. station no.	Standard wiring	14 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	8/16 stations	8/16 stations
	Double wiring	7 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations
Max. number of solenoid		14 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points
Port size	A, B port	Barbed fitting φ 1.8			Push-in fitting φ 1.8, φ 4, φ 6			M5		
	P, Port R	Push-in fitting φ 6, φ 8, φ 6.4								

Descriptions		MN3GA2/MN4GA2								
		T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1
Max. station no.	Standard wiring	14 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	8/16 stations	8/16 stations
	Double wiring	7 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations
Max. number of solenoid		14 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points
Port size	A, B port	Push-in fitting φ 4, φ 6, φ 8						Rc1/8		
	P, Port R	Push-in fitting φ 8, φ 10								

• For the weight, refer to page 324.
• G and NPT threads are available for piping port. Contact CKD for details.

Ozone proof specifications / Cutting oil proof type specifications

Selected the option "A" of Ⓕ in how to order on pages 322, 323.

Clean room specifications (Catalog no. CB-033S)

● Clean room compatible specifications

** – Voltage – P7*

Specifications for secondary battery (Catalog no. CC-947)

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

** – Voltage – P4

Flow characteristics

Model no.	Solenoid position		P→A/B		A/B→R	
			C[dm³/ (s/bar)]	b	C[dm³/ (s/bar)]	b
MN3GA1 MN4GA1	Dual 3 port valve integrated type		0.87	0.37	0.68	0.22
	2-position		0.98	0.33	0.71	0.27
	3-position	All ports closed	0.92	0.34	0.95	0.20
		ABR connection	0.92	0.29	0.69	0.22
		PAB connection	1.1	0.35	1.0	0.26
MN3GA2 MN4GA2	Dual 3 port valve integrated type		1.7	0.37	1.6	0.21
	2-position		2.2	0.21	1.7	0.10
	3-position	All ports closed	2.0	0.25	2.2	0.15
		ABR connection	2.0	0.27	1.7	0.12
		PAB connection	2.3	0.31	2.3	0.23

Note 1: Effective cross-sectional area S and sonic conductance C are converted as S ≒ 5.0 × C.
Note 2: Values for 2-position, dual 3 port valve integrated type, and ABR connection are the values when check valve is integrated.

Reduced wiring specifications

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

Serial transmission slave unit specifications (refer to page 398 for the applicable PLC table)

Descriptions		T6G1	T6C0*1	T6C1	T6A0*2	T6A1	T6J0*2	T6J1	T6E0	T6E1
Network name		CC-Link ver1.10	CompoBus/S		UNIWIRE SYSTEM		UNIWIRE H SYSTEM		S-LINK	
Power supply voltage	Unit side	24 VDC ±10%			24 VDC +10%, -5%					
	Valve side	24 VDC +10%, -5%			Power supply terminal common					
	Communication side	-	-		-		-		-	
Current consumption	Unit side	100 mA or less (when all output points are ON)			100 mA or less (when all output points are ON) Load current is not included					
	Valve side	15 mA or less (when all output points are OFF)								
	Communication side	-	-		-		-		-	
Output points		16 points	8 points	16 points	8 points	16 points	8 points	16 points	8 points	16 points
Occupied number		1 station	1 node address (8-point mode)	2 node address (8-point mode)	Output 8 points	Output 16 points	Output 8 points	Output16 points	FAN-in: 3 *3	FAN-in: 3 *3
Operation display		LED (power supply and communication state)								
Output type		NPN								

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

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

Discontinue

MN4GA1/2-T* Series

Reduced wiring block manifold; body piping

How to order

Common terminal block/D sub-connector/Flat cable connector

Manifold model no.

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

* Always indicate "Manifold specifications" (pages 375, 377).

3 port manifold model no.

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

Discrete valve block with solenoid valve

N4GA1 **1** 0 - C6 - A2N *1 **H** — 3

Discrete 3 port valve block with solenoid valve

N3GA1 **1** 0 - C6 - A2N *1 **H** — 3

* When a cable is required, refer to page 361 and specify the cable length for *1. When a cable is not required, leave the space blank.

Discrete solenoid valve

4GA1 **1** 9 - C6 - A2N **H** — 3

Discrete 3 port solenoid valve

3GA1 **1** 9 - C6 - A2N **H** — 3

Ⓑ Solenoid position

Ⓐ Model no.

Ⓒ Port size Note 1

Ⓓ Reduced wiring connection

- Indicate "A2N" for all the discrete arrangements.
- Refer to page 303 for a circuit diagram.

Ⓔ Terminal and connector pin wiring

Ⓕ Option

Ⓖ Station no.

Ⓗ Voltage

- Refer to page 387 for the model no. of cables with a D sub-connector cable.
- Refer to page 383 for the model no. of cables for flat cable connectors.

Note on selection guide

Note 1 Specify the port size of the P/R port with the supply and exhaust block.

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

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

Note 4 A push-in fitting mix for port 4(A) and 2(B) of the discrete valve cannot be selected.

Note 5 Standard wiring…Wired based on the type of valve used.
Double wiring…Wired for the double solenoid regardless of the type of valve used.

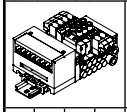
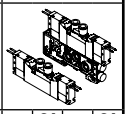
Note 6 3-position all ports closed and PAB connection are not provided with specifications (H) with check valve.
Refer to page 439 for details on check valve.

Note 7 Contact CKD when using a vacuum with the external pilot (K).

Note 8 Specify the spacer mounting position and quantity in manifold specifications.
Combination with the masking plate is not supported. Refer to page 368 for details.

Note 9 With "Z4", only T30*/T5* can be selected for Ⓓ reduced wiring connections.
With "Z5", only T6*/T50* can be selected for Ⓓ reduced wiring connections.

Ⓐ Model no.

	Manifold				Discrete valve block with solenoid valve/discrete solenoid valve			
	3 port valve		5 port valve					
								
Symbol / Descriptions	MN3GA1	MN3GA2	MN4GA1	MN4GA2	N3GA1/3GA1	N3GA2/3GA2	N4GA1/4GA1	N4GA2/4GA2
Ⓑ 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	●	●			●	●		
11	2-position single normally open	●	●			●	●		
66	Dual 3 port valve integrated type A side valve: Normally closed / Note 2, 3 B side valve: Normally closed	●	●			●	●		
67	Dual 3 port valve integrated type A side valve: Normally closed / Note 2, 3 B side valve: Normally open	●	●			●	●		
76	Dual 3 port valve integrated type A side valve: Normally open / Note 2, 3 B side valve: Normally closed	●	●			●	●		
77	Dual 3 port valve integrated type A side valve: Normally open / Note 2, 3 B side valve: Normally open	●	●			●	●		
8	Mix manifold (In case of multiple solenoid positions)	●	●	●	●				
Ⓒ Port size (ports A & B)								
C18	φ 1.8 push-in fitting for fiber tubes (applicable tube UP-9402-**)	●		●		●		●	
C4	φ 4 push-in fitting	●	●	●	●	●	●	●	●
C6	φ 6 push-in fitting	●	●	●	●	●	●	●	●
C8	φ 8 push-in fitting		●		●		●		●
CF	φ 1.8 barbed fitting for fiber tubes (applicable tube UP-9102-**)	●		●		●		●	
CX	Push-in fitting mix Note 4	●	●	●	●				
M5	M5 female thread	●		●		●		●	
06	Rc1/8		●		●		●		●
Ⓓ Reduced wiring (light and surge suppressor provided as standard)								
T10	Common terminal block (M3 thread) Left side specifications	●	●	●	●				
T10R	Common terminal block (M3 thread) Right side specifications	●	●	●	●				
T11	Common terminal block (clamping) Left side specifications	●	●	●	●				
T11R	Common terminal block (clamping) Right side specifications	●	●	●	●				
T30	D sub-connector Left side specifications	●	●	●	●				
T30R	D sub-connector Right side specifications	●	●	●	●				
T50	20 pin flat cable connector (with power supply terminal) Left side specifications	●	●	●	●				
T50R	20 pin flat cable connector (with power supply terminal) Right side specifications	●	●	●	●				
T51	20 pin flat cable connector (without power supply terminal) Left side specifications	●	●	●	●				
T51R	20 pin flat cable connector (without power supply terminal) Right side specifications	●	●	●	●				
T52	10 pin flat cable connector (without power supply terminal) Left side specifications	●	●	●	●				
T52R	10 pin flat cable connector (without power supply terminal) Right side specifications	●	●	●	●				
T53	26 pin flat cable connector (without power supply terminal) Left side specifications	●	●	●	●				
T53R	26 pin flat cable connector (without power supply terminal) Right side specifications	●	●	●	●				
A2N	A type connector (downward)					●	●	●	●
Ⓔ Terminal and connector pin wiring								
Blank	Standard wiring Note 5	●	●	●	●				
W	Double wiring Note 5	●	●	●	●				
Ⓕ Option								
Blank	Non-locking/locking common manual override	●	●	●	●	●	●	●	●
M	Non-locking manual override	●	●	●	●	●	●	●	●
H	With check valve Note 6	●	●	●	●	●	●	●	●
K	External pilot Note 7	●	●	●	●	●	●	●	●
A	Ozone/cutting oil proof	●	●	●	●	●	●	●	●
F	A/B port filter integrated (P port: standard)	●	●	●	●	●	●	●	●
Z1	Air supply spacer Note 8	●	●	●	●				
Z4	With collective cutoff switch Note 9	●	●	●	●				
Z5	With individual cutoff switch Note 9	●	●	●	●				
Ⓖ Station no.								
1 to 24	1 station to 24 stations (Refer to page 320 for the max. station no. for each model).	●	●	●	●				
Ⓗ Voltage								
3	24 VDC	●	●	●	●	●	●	●	●
4	12 VDC	●	●	●	●	●	●	●	●

is not available.

Discontinue

MN4GA1/2-T* Series

Reduced wiring block manifold; body piping

How to order

Serial transmission

Manifold model no.

MN4GA1 1 0 - C6 - T7E1 W H - 10 - 3

3 port manifold model no.

MN3GA1 1 0 - C6 - T7E1 W H - 10 - 3

Discrete valve block with solenoid valve

N4GA1 1 0 - C6 - A2N *1 H — 3

Discrete 3 port valve block with solenoid valve

N3GA1 1 0 - C6 - A2N *1 H — 3

* When a cable is required, refer to page 361 and specify the cable length for *1. When a cable is not required, leave the space blank.

Discrete solenoid valve

4GA1 1 9 - C6 - A2N H — 3

Discrete 3 port solenoid valve

3GA1 1 9 - C6 - A2N H — 3

- B Solenoid position
- A Model no.
- C Port size Note 1
- D Serial transmission Note 2
  - Indicate "A2N" for all the discrete arrangements.
  - Refer to page 303 for a circuit diagram.
- G Station no.
- E Terminal and connector pin wiring
- F Option
- H Voltage

Note on selection guide

Note 1 Specify the port size of the P/R port with the supply and exhaust block.

Note 2 Refer to page 398 for the communication cable wiring unit connector of the thin serial transmission slave station (T7**).

Note 3 Select MN4GA*80 when mixing with 4, 5 port valves. Select MN3GA*80 when mixing with the masking plate.

Note 4 Combination with the external pilot (K) is not available.
Dimensions are the same as the respective 2-position double.

Note 5 A push-in fitting mix for port 4(A) and 2(B) of the discrete valve cannot be selected.

Note 6 Standard wiring...Wired based on the type of valve used.
Double wiring...Wired for the double solenoid regardless of the type of valve used.

Note 7 3-position all ports closed and PAB connection are not provided with specifications (H) with check valve.
Refer to page 439 for details on check valve.

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

Note 9 Specify the spacer mounting position and quantity in manifold specifications. Combination with the masking plate is not supported. Refer to page 368 for details.

Note 10 D only serial transmission T6* can be selected.

* Always indicate "Manifold specifications" (pages 375, 377).

Symbol	Descriptions	A model no.							
		Manifold (3 port valve)		Manifold (5 port valve)		Discrete valve block with solenoid valve/discrete solenoid valve			
		MN3GA1	MN3GA2	MN4GA1	MN4GA2	N3GA1/3GA1	N3GA2/3GA2	N4GA1/4GA1	N4GA2/4GA2
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	●	●			●	●		
11	2-position single normally open	●	●			●	●		
66	Dual 3 port valve integrated type (A side valve: Normally closed, B side valve: Normally closed) Note 3, 4	●	●			●	●		
67	Dual 3 port valve integrated type (A side valve: Normally closed, B side valve: Normally open) Note 3, 4	●	●			●	●		
76	Dual 3 port valve integrated type (A side valve: Normally open, B side valve: Normally closed) Note 3, 4	●	●			●	●		
77	Dual 3 port valve integrated type (A side valve: Normally open, B side valve: Normally open) Note 3, 4	●	●			●	●		
8	Mix manifold (In case of multiple solenoid positions)	●	●	●	●				
C Port size (ports A & B)									
C18	φ 1.8 push-in fitting for fiber tubes (applicable tube UP-9402-**)	●		●		●		●	
C4	φ 4 push-in fitting	●	●	●	●	●	●	●	●
C6	φ 6 push-in fitting	●	●	●	●	●	●	●	●
C8	φ 8 push-in fitting		●		●		●		●
CF	φ 1.8 barbed fitting for fiber tubes (applicable tube UP-9102-**)	●		●		●		●	
CX	Push-in fitting mix Note 5	●	●	●	●				
M5	M5 female thread	●		●		●		●	
06	Rc1/8		●		●		●		●
D Serial transmission (light and surge suppressor provided as standard)									
T6A0	UNIWIRE SYSTEM 8 points	●	●	●	●				
T6A1	UNIWIRE SYSTEM 16 points	●	●	●	●				
T6C0	CompoBus/S 8 points	●	●	●	●				
T6C1	CompoBus/S 16 points	●	●	●	●				
T6E0	S-LINK 8 points	●	●	●	●				
T6E1	S-LINK 16 points	●	●	●	●				
T6G1	CC-Link 16 points	●	●	●	●				
T6J0	UNIWIRE H SYSTEM 8 points	●	●	●	●				
T6J1	UNIWIRE H SYSTEM 16 points	●	●	●	●				
T7C0	Thin type CompoBus/S 8 points	●	●	●	●				
T7C1	Thin type CompoBus/S 16 points	●	●	●	●				
T7D1	Thin type DeviceNet 16 points	●	●	●	●				
T7E0	Thin type S-LINK 8 points	●	●	●	●				
T7E1	Thin type S-LINK 16 points	●	●	●	●				
T7G1	Thin type CC-Link 16 points	●	●	●	●				
T7L1	Thin type SAVE NET 16 points	●	●	●	●				
T7S1	Thin type CompoNet compatible (NPN output)	●	●	●	●				
T7SP1	Thin type CompoNet compatible (PNP output)	●	●	●	●				
A2N	A type connector (downward)					●	●	●	●
E Terminal and connector pin wiring									
Blank	Standard wiring Note 6	●	●	●	●				
W	Double wiring Note 6	●	●	●	●				
F Option									
Blank	Non-locking/locking common manual override	●	●	●	●	●	●	●	●
M	Non-locking manual override	●	●	●	●	●	●	●	●
H	With check valve Note 7	●	●	●	●	●	●	●	●
K	External pilot Note 8	●	●	●	●	●	●	●	●
A	Ozone/cutting oil proof	●	●	●	●	●	●	●	●
F	A/B port filter integrated (P port: standard)	●	●	●	●	●	●	●	●
Z1	Air supply spacer Note 9	●	●	●	●				
Z5	With individual cutoff switch Note 10	●	●	●	●				
G Station no.									
1 to 16	1 station to 16 stations (Refer to page 320 for the max. station no. for each model.)	●	●	●	●				
H Voltage									
3	24 VDC	●	●	●	●	●	●	●	●

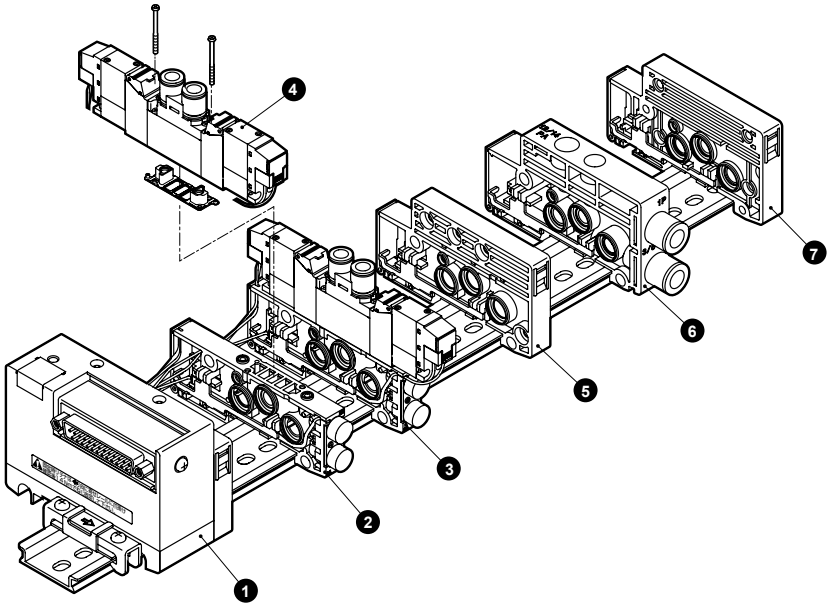
is not available.

Discontinue

MN4GA1/2-T* Series

Reduced wiring block manifold; body piping

Manifold components explanation and parts list



Main components list (refer to pages 358 to 369 for details)

No.	Component name	Model no. (example)	No.	Component name	Model no. (example)
1	Electrical block	N4G1-T30	5	Partition block	N4G1-S
2	Discrete valve block	N4GA1-V2	6	Supply and exhaust block	N4G1-Q-8
3	Discrete valve block with solenoid valve	N4GA120-C6-A2NH-3	7	End block R	N4G1-ER
4	Solenoid valve body	4GA129-C6-A2NH-3			

A type reduced wiring weight

4GA1

(g)

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N3GA110-C6-A2N-3	75	Supply and exhaust block	N4G1-Q-8	63	Electrical block	N4G1-T10(R)	229
	N3GA1110-C6-A2N-3	75		N4G1-QK-8	68		N4G1-T30(R)	163
	N4GA110-C6-A2N-3	75	End block	N4G1-E*	57		N4G1-T50(R)	165
	N4GA120-C6-A2N-3	92		N4G1-EX*	57		NG1-T6*	293
	N4GA1$\frac{3}{5}$0-C6-A2N-3	94	Partition block	N4G1-S	45		NG1-T7*	185
	N3GA1660-C6-A2N-3	92						
Valve block with masking plate	N4GA1-MP*-C6	34						

4GA2

(g)

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N3GA210-C8-A2N-3	143	Supply and exhaust block	N4G2-Q-10	99	Electrical block	N4G2-T10(R)	244
	N3GA2110-C8-A2N-3	143		N4G2-QK-10	104		N4G2-T30(R)	178
	N4GA210-C8-A2N-3	143	End block	N4G2-E*	83		N4G2-T50(R)	180
	N4GA220-C8-A2N-3	160		N4G2-EX*	84		NG2-T6*	308
	N4GA2$\frac{3}{5}$0-C8-A2N-3	172	Partition block	N4G2-S	60		NG2-T7*	200
	N4GA2660-C8-A2N-3	160						
Valve block with masking plate	N4GA2-MP*-C8	66						

Parts list

Applicable	Parts name	Model no.	Applicable	Parts name	Model no.
Valve 4G1	Cartridge fitting φ 1.8 straight type	4G1-JOINT-C18	Valve	Coil assembly	4G-A2N-[*2]-COIL-[*3] *2: Ozone/coolant oil proof type (blank, A) *3: Voltage (1, 3, 4)
	Cartridge fitting φ 4 straight type	4G1-JOINT-C4			
	Cartridge fitting φ 6 straight type	4G1-JOINT-C6			
	Cartridge fitting φ 1.8 barbed type	4G1-JOINT-CF	Manifold	Expansion socket assembly (Details on page 401)	a side solenoid N4G-SOCKET-ASSY-[selection no.]
	Plug cartridge	4G1-JOINT-CPG			
Valve 4G2	Cartridge fitting φ 4 straight type	4G2-JOINT-C4			b side solenoid N4G-RELAY-SOCKET-[selection no.]
	Cartridge fitting φ 6 straight type	4G2-JOINT-C6			
	Cartridge fitting φ 8 straight type	4G2-JOINT-C8			
	Plug cartridge	4G2-JOINT-CPG			

MEMO

Discontinue

MN4GA1/2-T10 Series

Reduced wiring block manifold; body piping

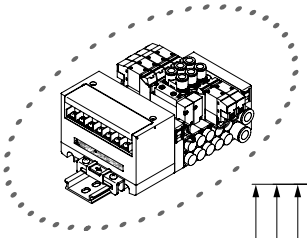
Dimensions CAD

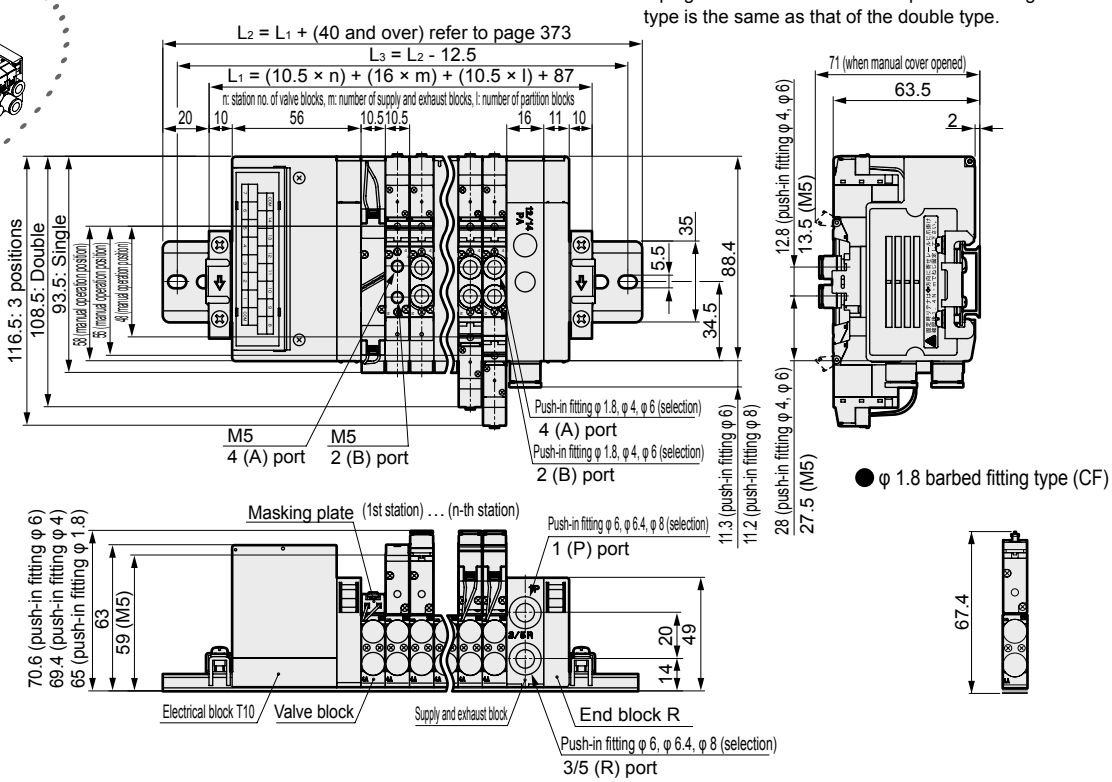
MN4GA1

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

Note 1: The push tightening specifications type (T11) is also available.
The dimensions are the same as T10.

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



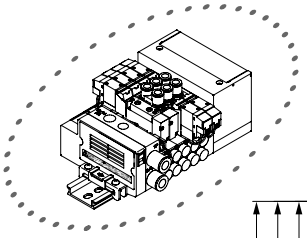


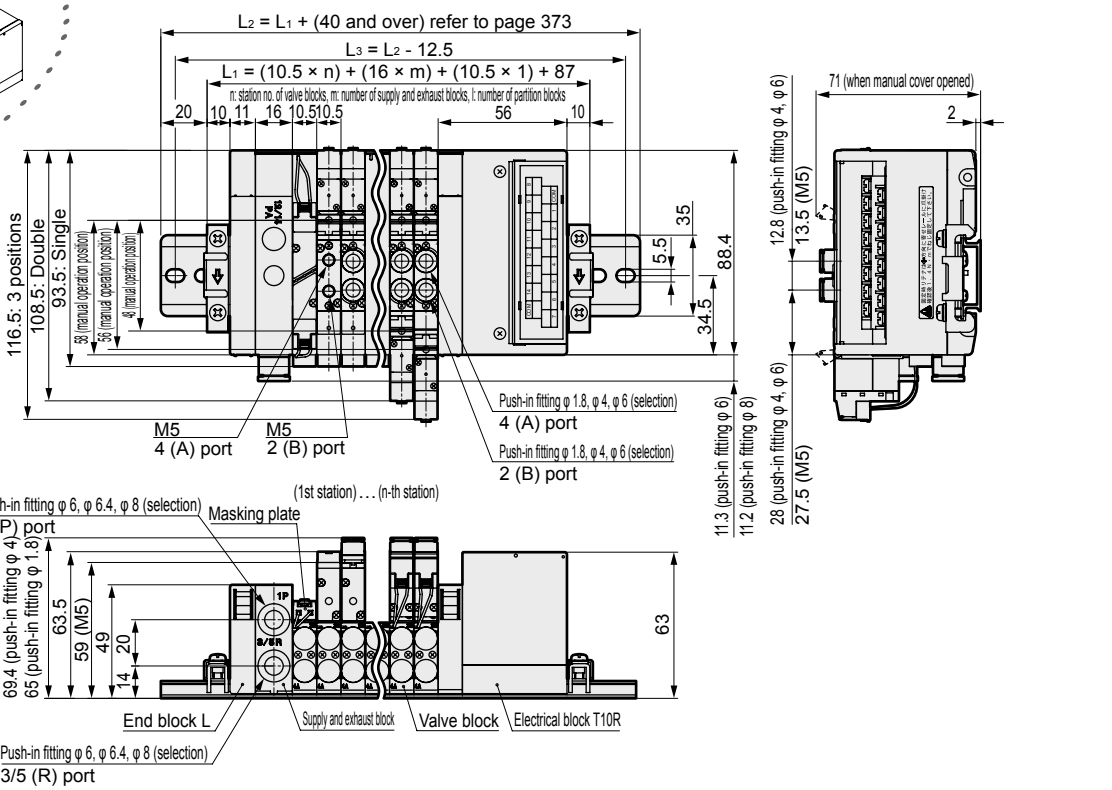
● φ 1.8 barbed fitting type (CF)

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

Note 1: The push tightening specifications type (T11R) is also available.
The dimensions are the same as T10R.

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



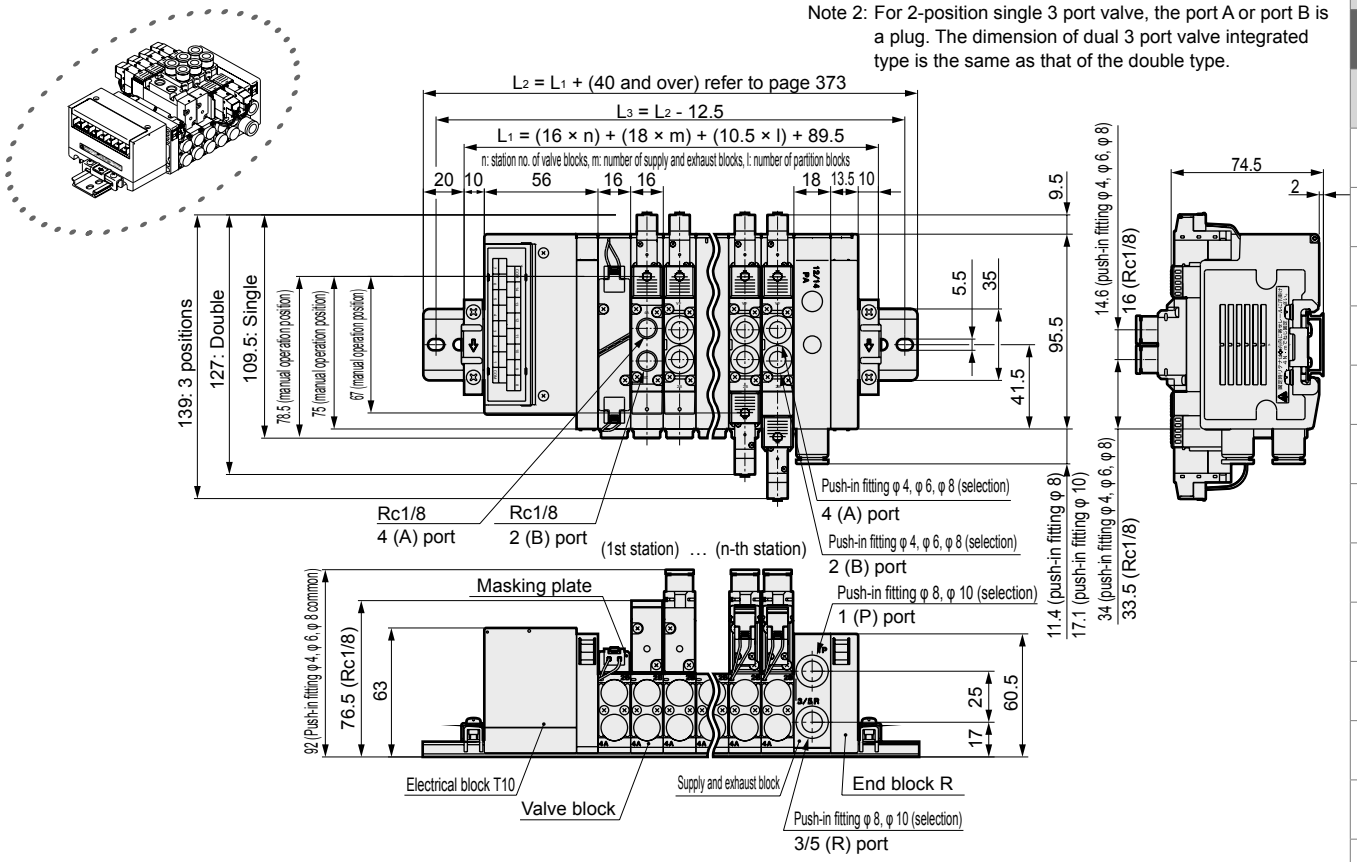


Dimensions

MN4GA2

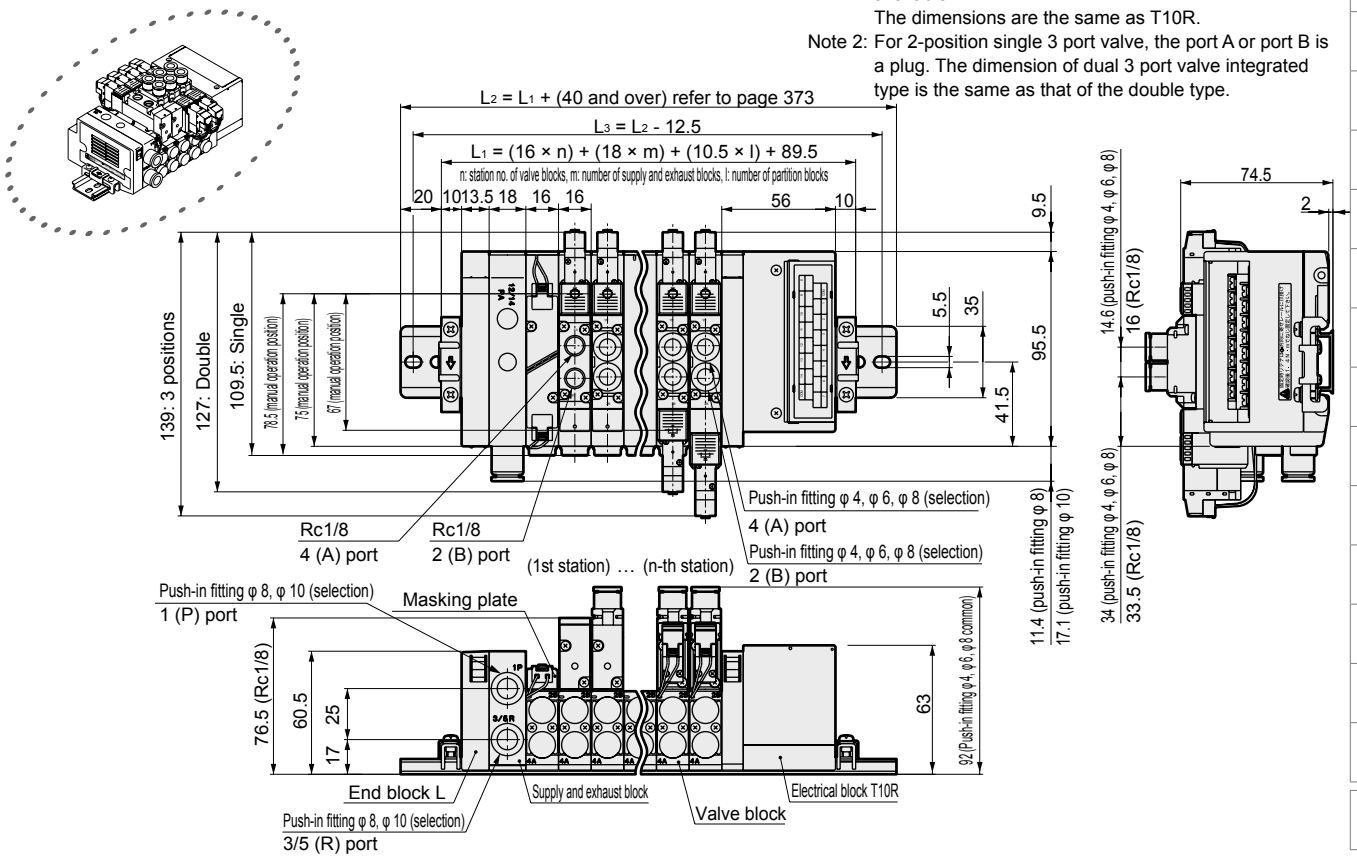
● Common terminal block (M3 screw) left side (T10)

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



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

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



Discontinue

MN4GA1/2-T30 Series

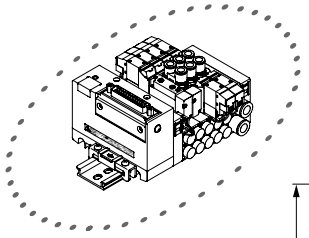
Reduced wiring block manifold; body piping

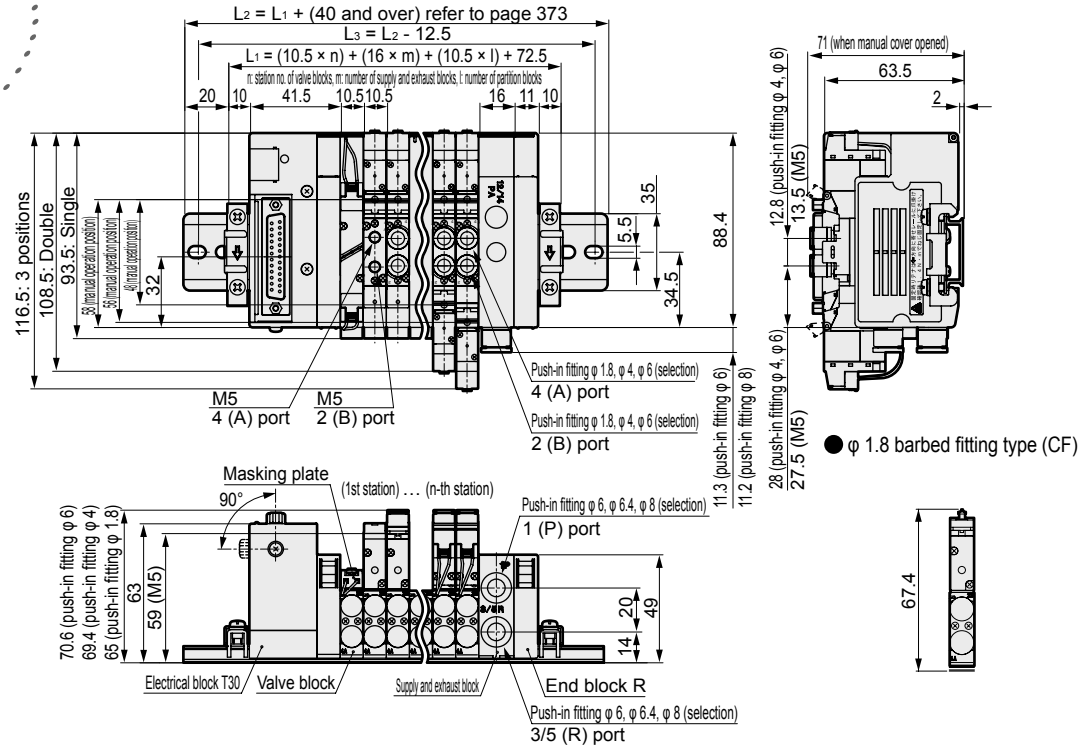
Dimensions CAD

MN4GA1

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

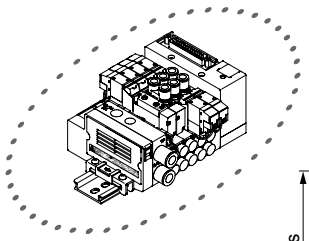
● D sub-connector left side (T30)

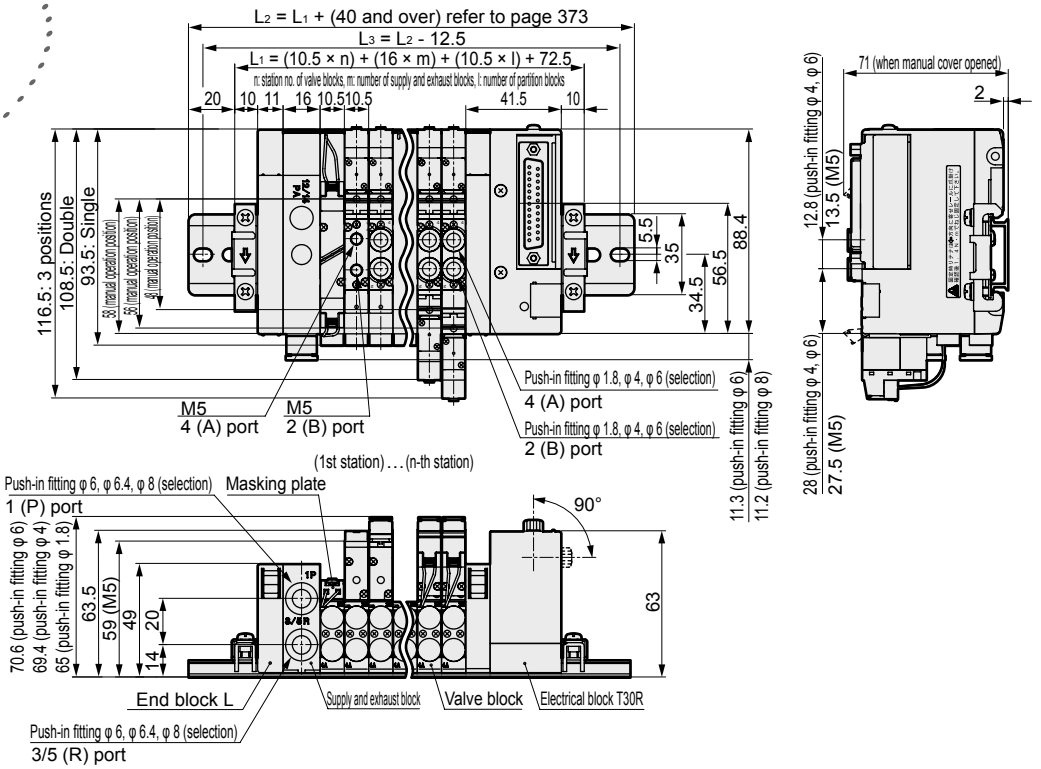




● φ 1.8 barbed fitting type (CF)

● D sub-connector right side (T30R)



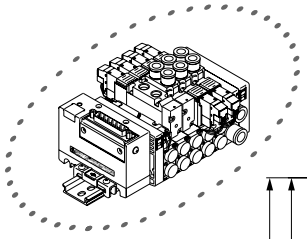


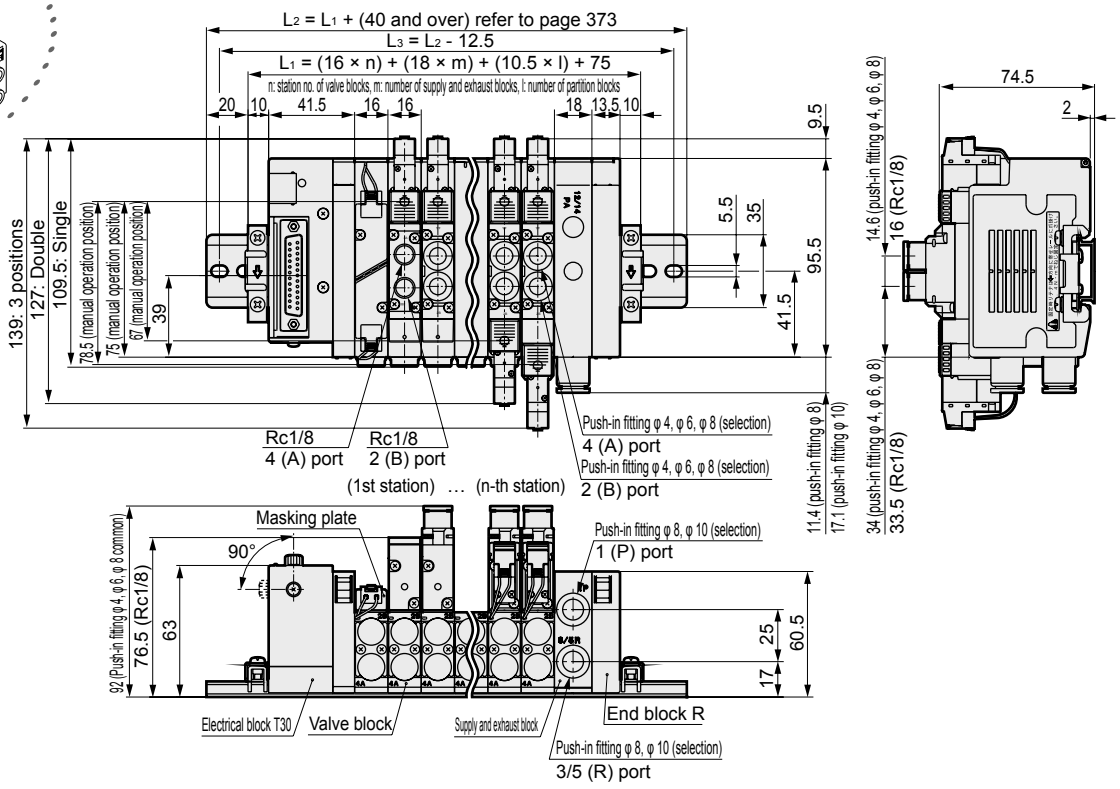
Dimensions

MN4GA2

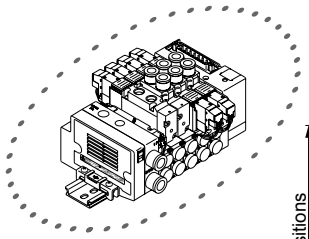
● D sub-connector left side (T30)

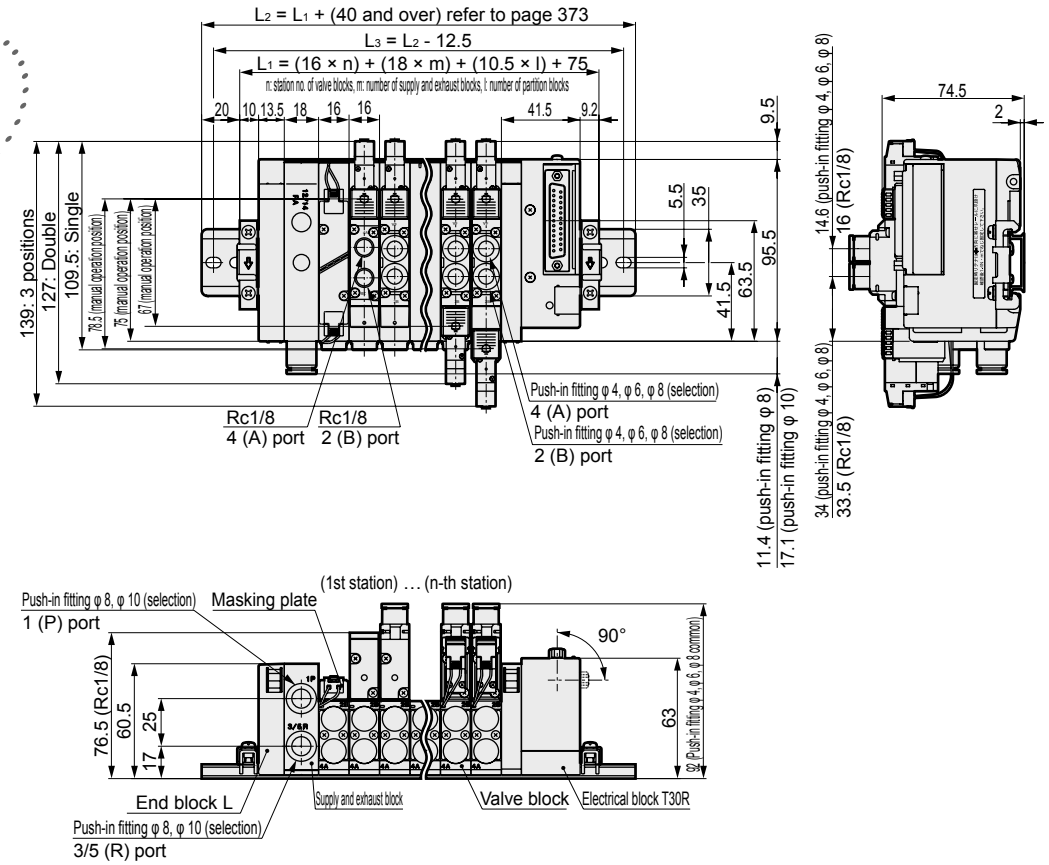
Note: For 2-position single 3 port valve, the port A or port B is a plug.
The dimension of dual 3 port valve integrated type is the same as that of the double type.





● D sub-connector right side (T30R)





Discontinue

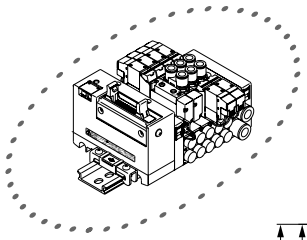
MN4GA1·2-T50 Series

Reduced wiring block manifold; body piping

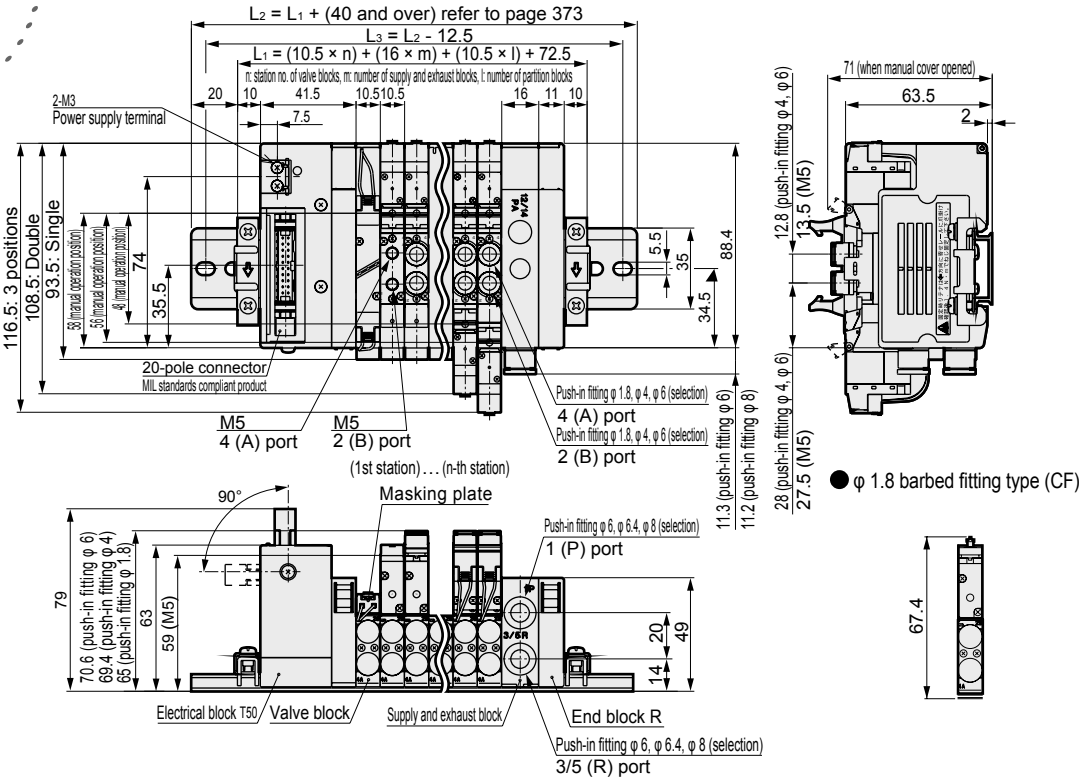
Dimensions CAD

MN4GA1

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

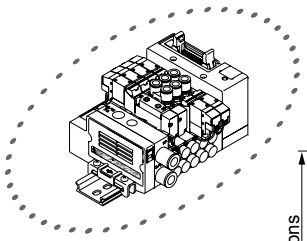


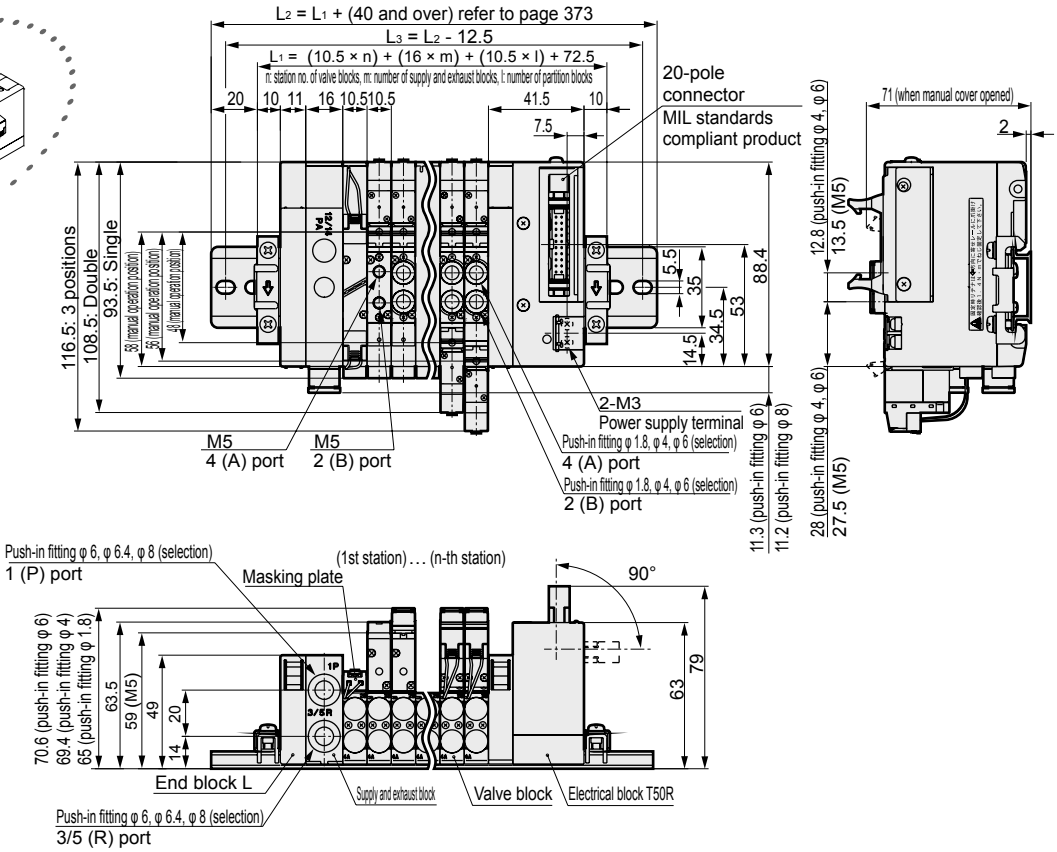
Note 1: T51, T52, and T53 are also available as flat cable connector models. The dimensions are the same as T50.
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.



● φ 1.8 barbed fitting type (CF)

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

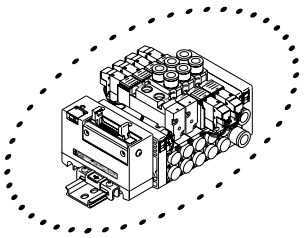




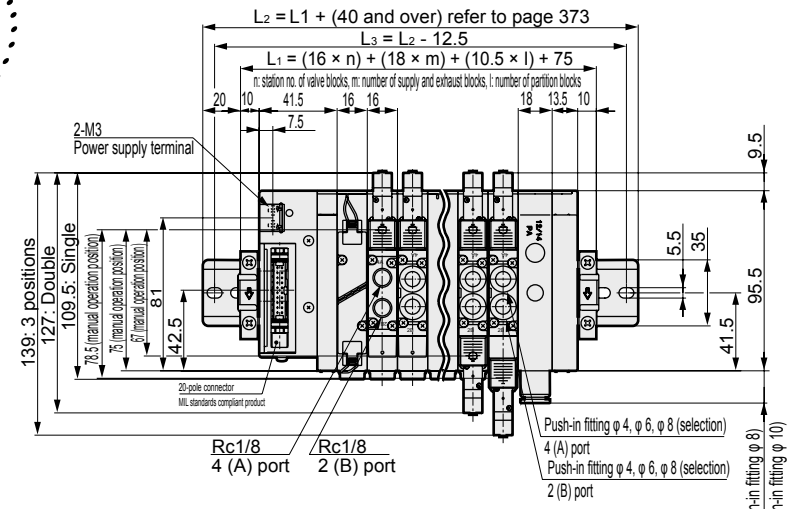
Dimensions

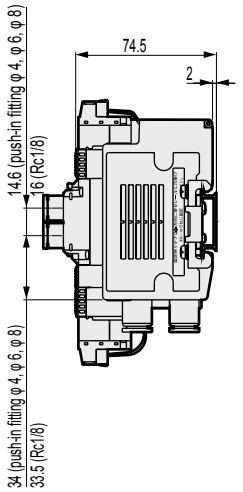
MN4GA2

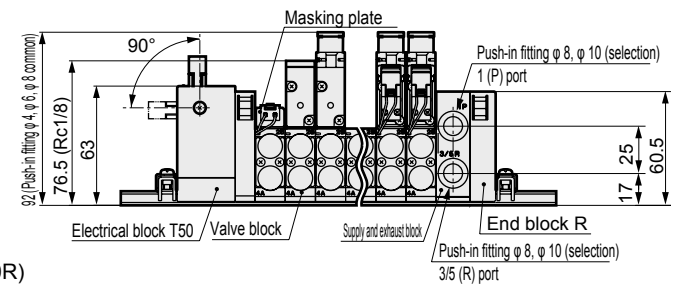
● Flat cable connector left side (T50)
with power supply terminal



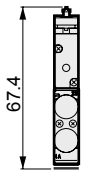
Note 1: T51, T52, and T53 are also available as flat cable connector models. The dimensions are the same as T50.
Note 2: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.



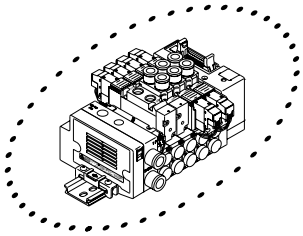


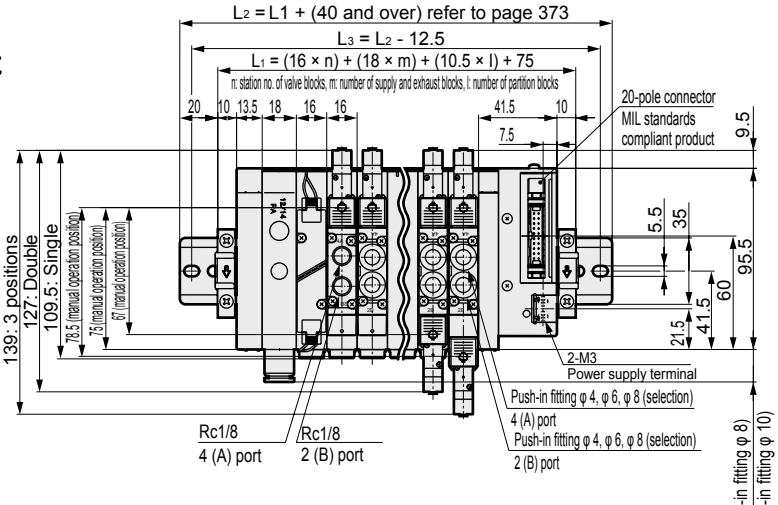


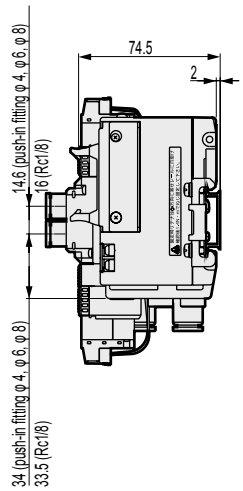
● φ 1.8 barbed fitting type (CF)

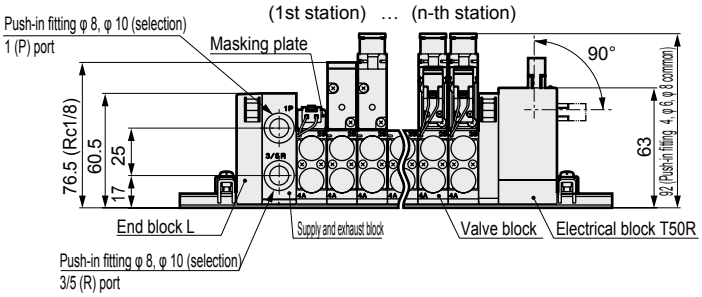


● Flat cable connector right side (T50R)
with power supply terminal









MN4GA1/2-T6* Series

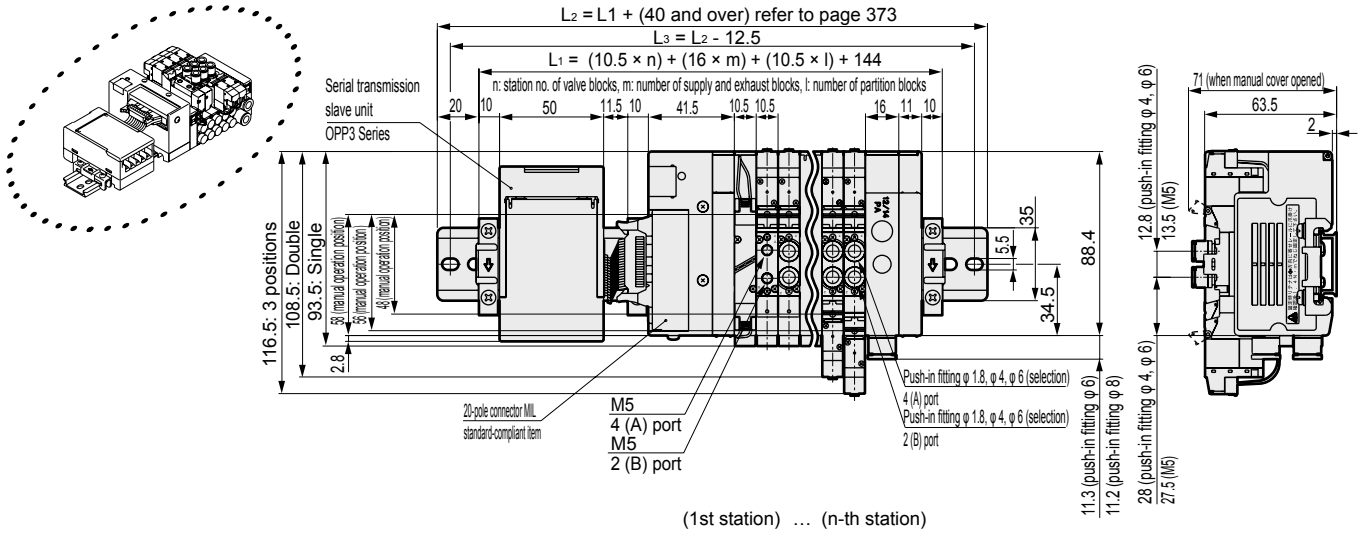
Reduced wiring block manifold; body piping

Dimensions CAD

MN4GA1

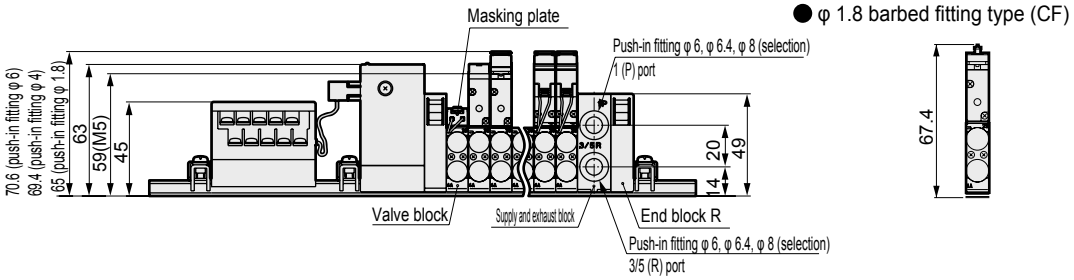
● Serial transmission (T6□)

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



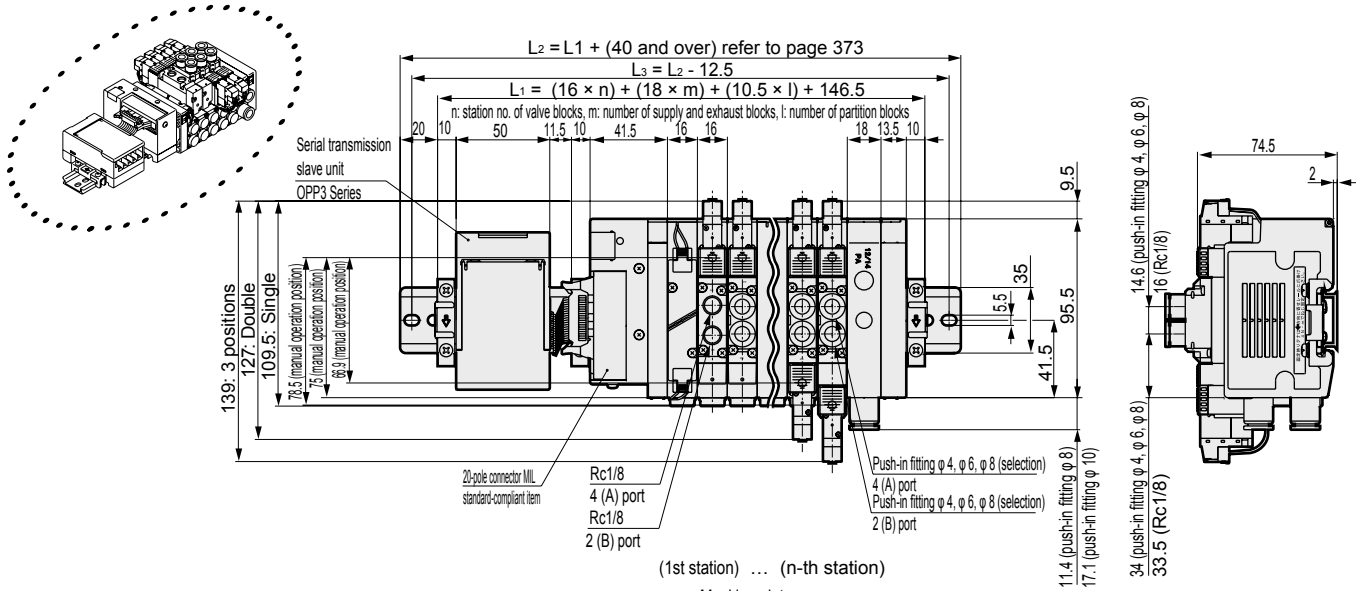
(1st station) … (n-th station)

● φ 1.8 barbed fitting type (CF)

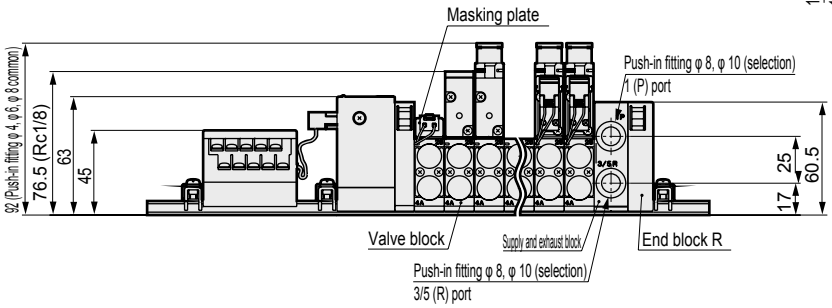


MN4GA2

● Serial transmission (T6□)



(1st station) … (n-th station)

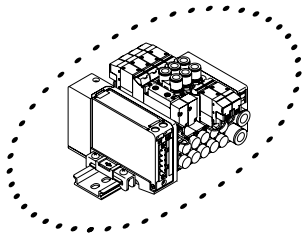


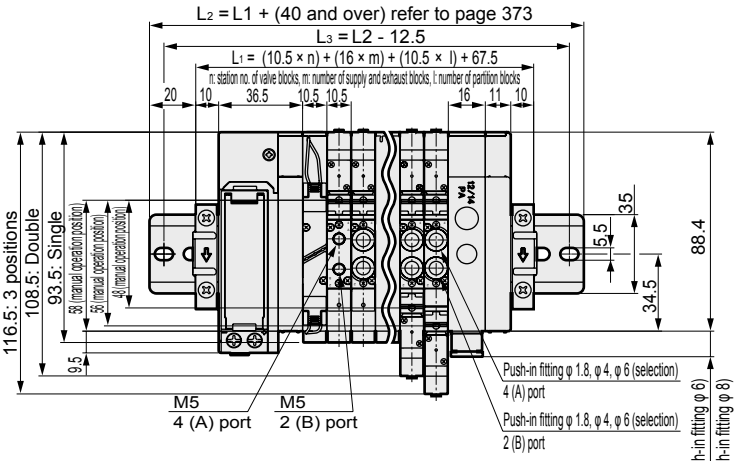
Dimensions

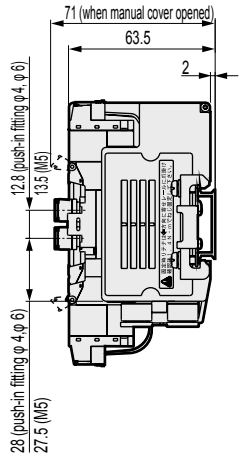
MN4GA1

● Thin serial transmission (T7□)

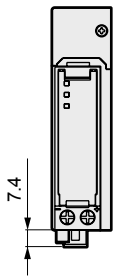
Note: For 2-position single 3 port valve, the port A or port B is a plug. The dimension of dual 3 port valve integrated type is the same as that of the double type.

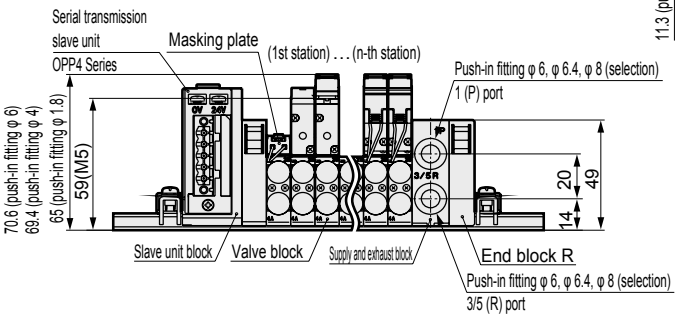




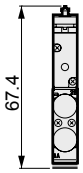


With T7S□1



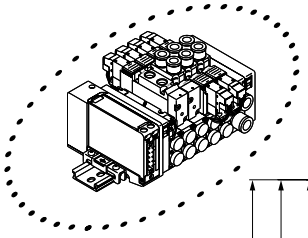


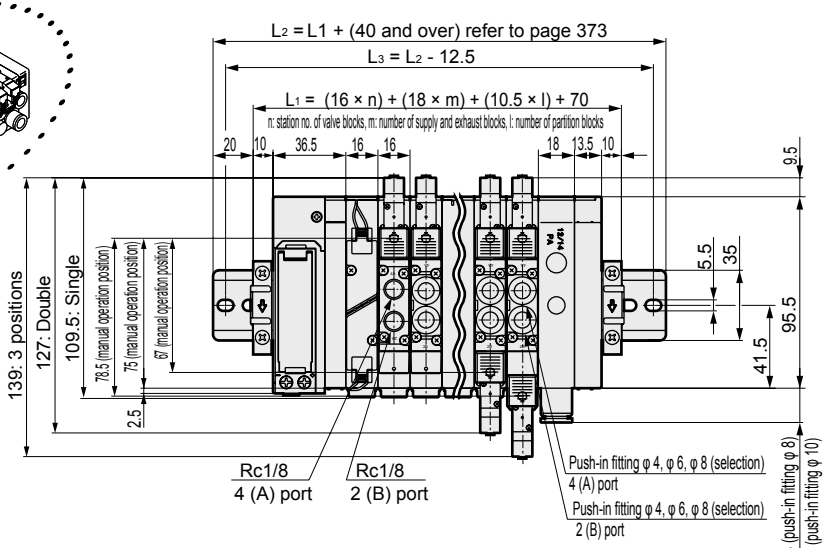
● φ 1.8 barbed fitting type (CF)

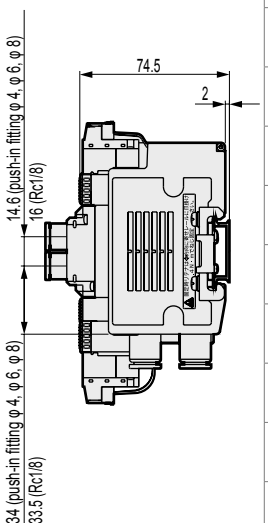


MN4GA2

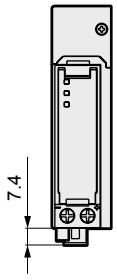
● Thin serial transmission (T7□)

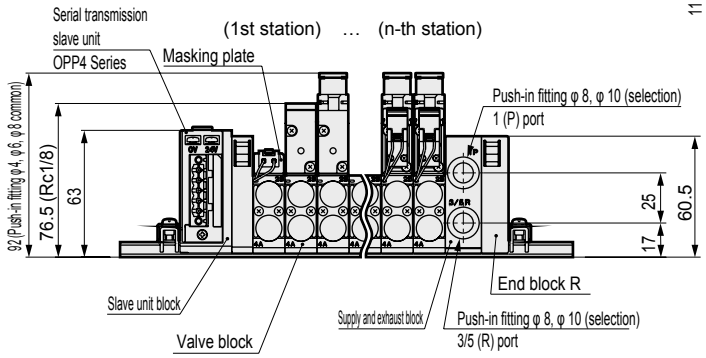






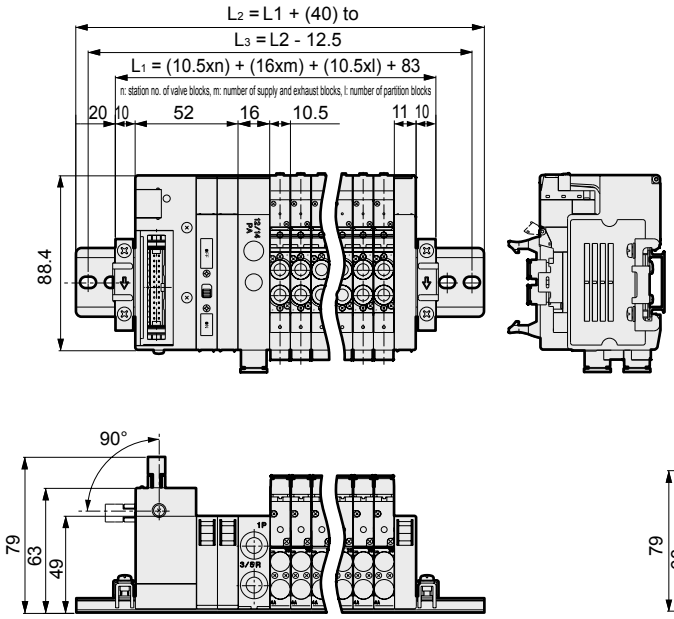
With T7S□1



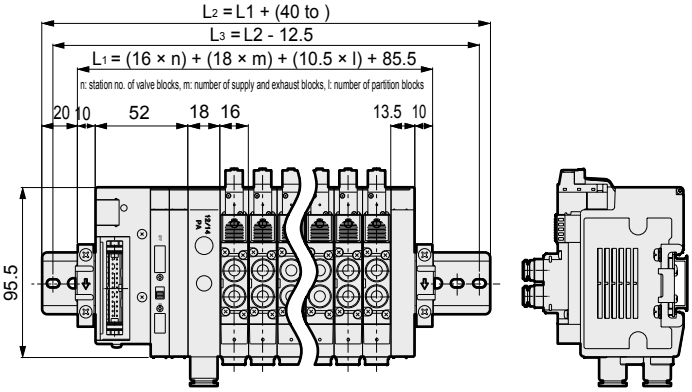


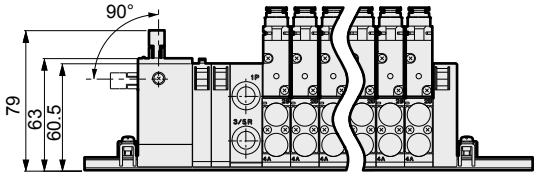
Dimensions

● MN4GA1*0-*-**-Z4

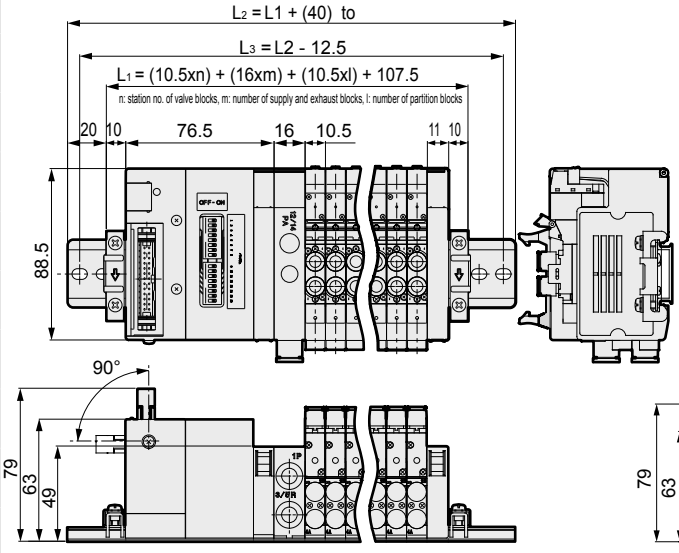


● MN4GA2*0-*-**-Z4

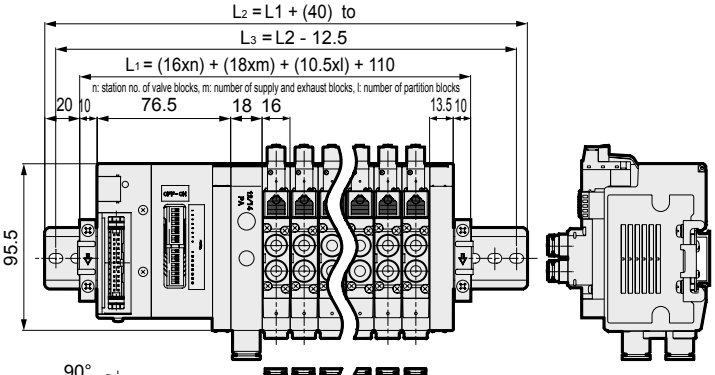


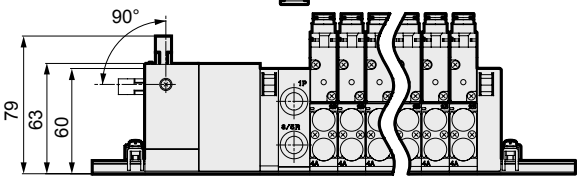


● MN4GA1*0-*-**-Z5



● MN4GA2*0-*-**-Z5



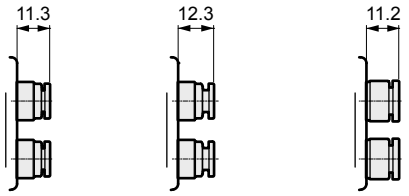


Dimensions

MN4G1 supply and exhaust block

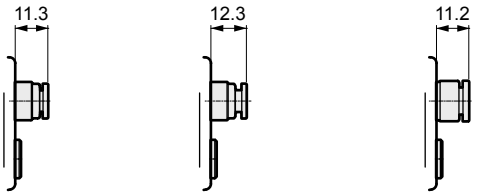
● Fitting straight

● φ 6 (6) ● φ 6.4 (6.4) ● φ 8 (8)



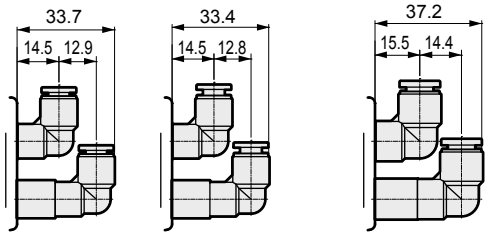
● Fitting straight, single plug

● φ 6 (6X) ● φ 6.4 (6.4X) ● φ 8 (8X)



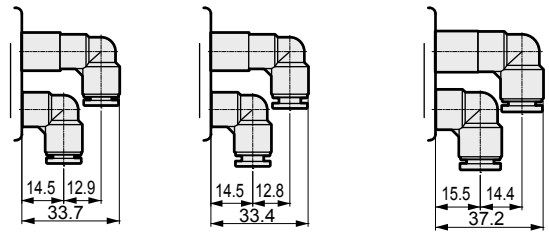
● Fitting L type (upward)

● φ 6 (6L) ● φ 6.4 (6.4L) ● φ 8 (8L)



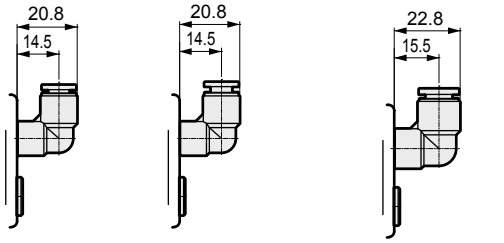
● Fitting L type (downward)

● φ 6 (6D) ● φ 6.4 (6.4D) ● φ 8 (8D)



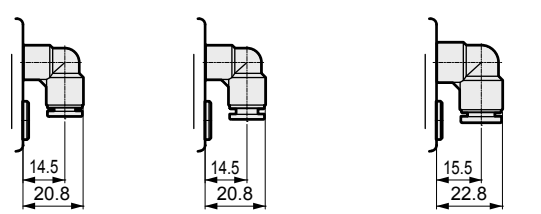
● Fitting L type (upward), single plug

● φ 6 (6LX) ● φ 6.4 (6.4LX) ● φ 8 (8LX)



● Fitting L type (downward), single plug

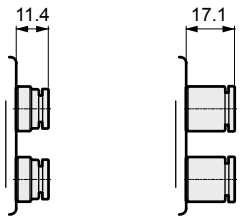
● φ 6 (6DX) ● φ 6.4 (6.4DX) ● φ 8 (8DX)



MN4G2 supply and exhaust block

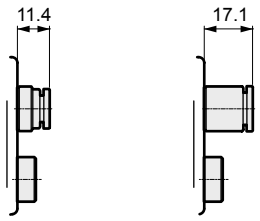
● Fitting straight

● φ 8 (8) ● φ 10 (10)



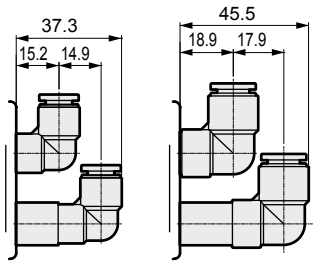
● Fitting straight, single plug

● φ 8 (8X) ● φ 10 (10X)



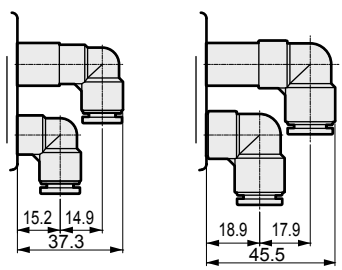
● Fitting L type (upward)

● φ 8 (8L) ● φ 10 (10L)



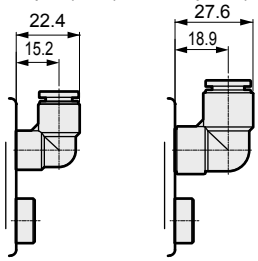
● Fitting L type (downward)

● φ 8 (8D) ● φ 10 (10D)



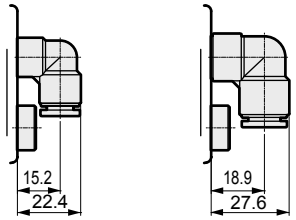
● Fitting L type (upward), single plug

● φ 8 (8LX) ● φ 10 (10LX)

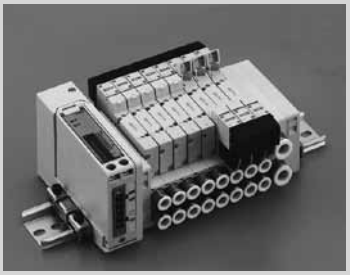


● Fitting L type (downward), single plug

● φ 8 (8DX) ● φ 10 (10DX)



Discontinue



Reduced wiring block manifold
Base piping

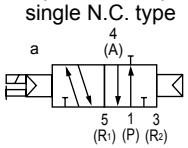
MN4GB1/2-T* Series

● Applicable cylinder bore size: φ 20 to φ 80

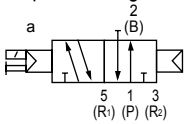
RoHS CAD

JIS symbol

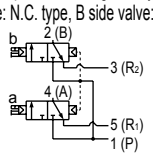
● 3 port valve 2-position single N.C. type



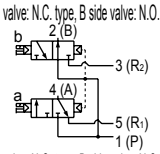
2-position single N.O. type



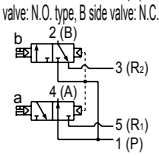
● Dual 3 port valve integrated type (A side valve: N.C. type, B side valve: N.C. type)



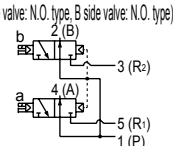
(A side valve: N.C. type, B side valve: N.O. type)



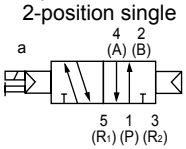
(A side valve: N.O. type, B side valve: N.C. type)



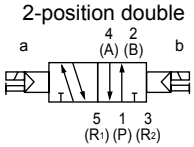
(A side valve: N.O. type, B side valve: N.O. type)



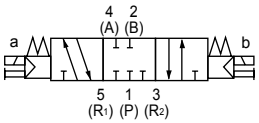
● 5 port valve 2-position single



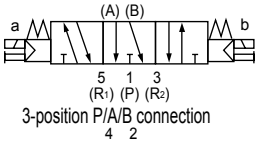
2-position double



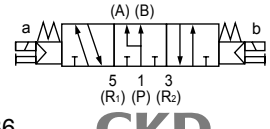
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

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

Electrical specification

Descriptions		
Rated voltage	DC	12, 24
Voltage fluctuation range		±10%
Holding current A	24 VDC	0.025
	12 VDC	0.050
Power consumption W	24 VDC	0.6
	12 VDC	0.6
Thermal class		B
Temperature rise °C		50
Surge suppressor		Zener diode
Indicator		LED

Note 1 Use the turbine oil Class 1 ISO VG32 if lubricated. Excessive or intermittent lubrication results in unstable operation.
Note 2 The degree of protection is dust proof. The unit is not water proof. Avoid water drops or oil, etc. during use.
Note 3 The working pressure range is 0 to 0.7 MPa when the external pilot (option symbol: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Individual specifications

Descriptions		MN3GB1/MN4GB1								
		T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1
Max. station no.	Standard wiring	14 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	8/16 stations	8/16 stations
	Double wiring	7 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations
Max. number of solenoid		14 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points
Port size	A/B port	Barbed fitting φ 1.8 Push-in fitting φ 1.8, φ 4, φ 6								
	P/R port	Push-in fitting φ 6, φ 8, φ 6.4								

• For the weight, refer to page 340.

Descriptions		MN3GB2/MN4GB2								
		T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1
Max. station no.	Standard wiring	14 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	8/16 stations	8/16 stations
	Double wiring	7 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations
Max. number of solenoid		14 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points
Port size	A/B port	Push-in fitting φ 4, φ 6, φ 8								
	P/R port	Push-in fitting φ 8, φ 10								

• For the weight, refer to page 340.

Ozone proof specifications / Cutting oil proof type specifications

Select the option "A" of Ⓕ in how to order on page 338.

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

● Clean room compatible specifications

** – Voltage – P7*

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

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

** – Voltage – P4

Flow characteristics

Model no.	Solenoid position		P→A/B		A/B→R	
			C[dm³/ (s·bar)]	b	C[dm³/ (s·bar)]	b
MN3GB1 MN4GB1	Dual 3 port valve integrated type		0.86	0.35	0.66	0.25
	2-position		1.0	0.30	0.72	0.26
	3-position	All ports closed	0.96	0.32	1.0	0.23
		ABR connection	0.96	0.29	0.71	0.30
		PAB connection	1.1	0.31	1.0	0.22
MN3GB2 MN4GB2	Dual 3 port valve integrated type		1.7	0.42	1.6	0.19
	2-position		2.4	0.35	1.7	0.19
	3-position	All ports closed	2.2	0.38	2.2	0.24
		ABR connection	2.2	0.38	1.7	0.20
		PAB connection	2.3	0.29	2.2	0.24

Note 1: Effective cross-sectional area S and sonic conductance C are converted as S ≒ 5.0 × C.
Note 2: Values for 2-position, dual 3 port valve integrated type, and ABR connection are the values when check valve is integrated.

Reduced wiring specifications

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

Serial transmission slave unit specifications (refer to page 398 for applicable PLC table)

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

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

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

Discontinue

MN4GB1/2-T* Series

Reduced wiring block manifold; base piping

How to order

Manifold model no.

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

3 port manifold model no.

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

Discrete valve block with solenoid valve

N4GB1 **1** 0 - C6 - A2N *1 **H** — 3

Discrete 3 port valve block with solenoid valve

N3GB1 **66** 0 - C6 - A2N *1 **H** — 3

Discrete solenoid valve

4GB1 **1** 9 - 00 - A2N **H** — 3

Discrete 3 port solenoid valve

3GB1 **66** 9 - 00 - A2N **H** — 3

- A Model no.
- B Solenoid position
- C Port size
  - Note 1
  - Note 2
  - Note 3
  - Note 4
- D Wiring method
  - Indicate "A2N" for all the discrete arrangements.
  - Refer to page 303 for a circuit diagram.
  - Note 5
- E Terminal and connector pin wiring
- F Option
- G Station no.
- H Voltage

● Refer to page 387 for the model no. of cables with a D sub-connector cable.
● Refer to page 383 for the model no. of cables for flat cable connectors.

* Always indicate "Manifold specifications" (pages 376, 378).

* When a cable is required, refer to page 361 and specify the cable length for *1. When a cable is not required, leave the space blank.

Note on selection guide

Note 1 The plug specifications of port A or B are configurations for 2-position single only.
Specify the port size of the P/R port with the supply and exhaust block.

Note 2 CL* push-in fitting L type (upward) is available only for the single solenoid manifold. The port A is a long elbow and the port B is short elbow.

Note 3 A/B port sizes do not differ for the mix (CX) of push-in fitting L type (upward).

Note 4 In the case of a discrete solenoid valve, set the port size of C to 00.

Note 5 Refer to page 398 for the communication cable wiring unit connector of the thin serial transmission slave station (T7**).

Note 6 Select MN4GB*80 when mixing with 4, 5 port valves.
Select MN3GB*80 when mixing with the masking plate.

Note 7 Combination with the external pilot (K) is not available.
Dimensions are the same as the respective 2-position double.

Note 8 Standard wiring… Wired based on the type of valve used.
Double wiring… Wired for the double solenoid regardless of the type of valve used.

Note 9 3-position all ports closed and PAB connection are not provided with specifications (H) with check valve.
Refer to page 439 for details on check valve.

Note 10 Contact CKD when using a vacuum with the external pilot (K).

Note 11 Specify the spacer mounting position and quantity in manifold specifications. Combination with the masking plate is not supported. Refer to page 368 for details.

Note 12 With "Z4", only T30*/T5* can be selected for D reduced wiring connections.
With "Z5", only T6*/T50* can be selected for D reduced wiring connections.

Symbol	Descriptions		A Model no.							
			Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
			Dual 3 port valve integrated type		5 port valve					
			MN3GB1	MN3GB2	MN4GB1	MN4GB2	N3GB1/3GB1	N3GB2/3GB2	N4GB1/4GB1	N4GB2/4GB2
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	Dual 3 port valve integrated type Note 6, 7	A side valve: Normally closed B side valve: Normally closed	●	●			●	●		
67	Dual 3 port valve integrated type Note 6, 7	A side valve: Normally closed B side valve: Normally open	●	●			●	●		
76	Dual 3 port valve integrated type Note 6, 7	A side valve: Normally open B side valve: Normally closed	●	●			●	●		
77	Dual 3 port valve integrated type Note 6, 7	A side valve: Normally open B side valve: Normally open	●	●			●	●		
8	Mix manifold (In case of multiple solenoid positions)		●	●	●	●				
C Port size (ports A & B)										
Refer to the next page for the port size.										
D Wiring method										
Refer to the next page for wiring connections.										
E Terminal and connector pin wiring										
Blank	Standard wiring	Note 8	●	●	●	●				
W	Double wiring	Note 8	●	●	●	●				
F Option										
Blank	Non-locking/locking common manual override		●	●	●	●	●	●	●	●
M	Non-locking manual override		●	●	●	●	●	●	●	●
H	With check valve	Note 9	●	●	●	●	●	●	●	●
K	External pilot	Note 10			●	●			●	●
A	Ozone/cutting oil proof		●	●	●	●	●	●	●	●
F	A/B port filter integrated (P port: standard equipped)		●	●	●	●	●	●	●	●
Z1	Air supply spacer	Note 11	●	●	●	●				
Z4	With collective cutoff switch	Note 12	●	●	●	●				
Z5	With individual cutoff switch	Note 12	●	●	●	●				
G Station no.										
1	1 station		●	●	●	●				
to	to									
24	24 stations (Refer to page 336 for the max. station no. for each model.)									
H Voltage										
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●

is not available.

(Port size and wiring connection list)

Ⓒ Port size (ports A & B)			Ⓐ Model no.							
			Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
			Dual 3 port valve integrated type		5 port valve					
			MN3GB1	MN3GB2	MN4GB1	MN4GB2	N3GB1/3GB1	N3GB2/3GB2	N4GB1/4GB1	N4GB2/4GB2
CF	φ 1.8 barbed fitting for fiber tube		●		●		●		●	
C18	φ 1.8 push-in fitting for fiber tube		●		●		●		●	
C4	φ 4 push-in fitting		●	●	●	●	●	●	●	●
C6	φ 6 push-in fitting		●	●	●	●	●	●	●	●
C8	φ 8 push-in fitting			●		●		●		●
CL18	φ 1.8 push-in fitting for fiber tube L type (upward)				●				●	
CL4	L type φ 4 push-in fitting (upward)				●				●	
CL6	L type φ 6 push-in fitting (upward)				●	●			●	●
CL8	L type φ 8 push-in fitting (upward)					●				●
CD18	φ 1.8 push-in fitting for fiber tube L type (downward)		●		●		●		●	
CD4	L type φ 4 push-in fitting (downward)		●		●		●		●	
CD6	L type φ 6 push-in fitting (downward)		●	●	●	●	●	●	●	●
CD8	L type φ 8 push-in fitting (downward)			●		●		●		●
CX	Push-in fitting mix		●	●	●	●				
Single side plugged specifications	A port	B port								
CFNC	φ 1.8 barbed fitting for fiber tube	Plug			●				●	
C18NC	φ 1.8 push-in fitting for fiber tube				●				●	
C4NC	φ 4 push-in fitting				●	●			●	●
C6NC	φ 6 push-in fitting				●	●			●	●
C8NC	φ 8 push-in fitting					●				●
CFNO	Plug	φ 1.8 barbed fitting for fiber tube			●				●	
C18NO		φ 1.8 push-in fitting for fiber tube			●				●	
C4NO		φ 4 push-in fitting			●	●			●	●
C6NO		φ 6 push-in fitting			●	●			●	●
C8NO		φ 8 push-in fitting				●				●
CL18NC	φ 1.8 push-in fitting for fiber tube (upward)	Plug			●				●	
CL4NC	L type φ 4 push-in fitting (upward)				●				●	
CL6NC	L type φ 6 push-in fitting (upward)				●	●			●	●
CL8NC	L typeφ 8 push-in fitting (upward)					●				●
CL18NO	Plug	φ 1.8 push-in fitting for fiber tube (upward)			●				●	
CL4NO		L type φ 4 push-in fitting (upward)			●				●	
CL6NO		L type φ 6 push-in fitting (upward)			●	●			●	●
CL8NO		L type φ 8 push-in fitting (upward)				●				●
CD18NC	φ 1.8 push-in fitting for fiber tube (downward)	Plug			●				●	
CD4NC	L type φ 4 push-in fitting (downward)				●				●	
CD6NC	L type φ 6 push-in fitting (downward)				●	●			●	●
CD8NC	L type φ 8 push-in fitting (downward)					●				●
CD18NO	Plug	φ 1.8 push-in fitting for fiber tube (downward)			●				●	
CD4NO		L type φ 4 push-in fitting (downward)			●				●	
CD6NO		L type φ 6 push-in fitting (downward)			●	●			●	●
CD8NO		L type φ 8 push-in fitting (downward)				●				●

Ⓓ Wiring method										
T10	Common terminal block (M3 thread)	Left side specifications	●	●	●	●				
T10R		Right side specifications	●	●	●	●				
T11	Common terminal block (push tightening)	Left side specifications	●	●	●	●				
T11R		Right side specifications	●	●	●	●				
T30	D sub-connector	Left side specifications	●	●	●	●				
T30R		Right side specifications	●	●	●	●				
T50	20 pin flat cable connector (with power supply terminal)	Left side specifications	●	●	●	●				
T50R		Right side specifications	●	●	●	●				
T51	20 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T51R		Right side specifications	●	●	●	●				
T52	10 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T52R		Right side specifications	●	●	●	●				
T53	26 pin flat cable connector (without power supply terminal)	Left side specifications	●	●	●	●				
T53R		Right side specifications	●	●	●	●				
T6A0	UNIWIRE SYSTEM 8 points		●	●	●	●				
T6A1	UNIWIRE SYSTEM 16 points		●	●	●	●				
T6C0	CompoBus/S 8 points		●	●	●	●				
T6C1	CompoBus/S 16 points		●	●	●	●				
T6E0	S-LINK 8 points		●	●	●	●				
T6E1	S-LINK 16 points		●	●	●	●				
T6G1	Mitsubishi CC-Link 16 points		●	●	●	●				
T6J0	UNIWIRE H SYSTEM 8 points		●	●	●	●				
T6J1	UNIWIRE H SYSTEM 16 points		●	●	●	●				
T7C0	Thin type CompoBus/S 8 points		●	●	●	●				
T7C1	Thin type CompoBus/S 16 points		●	●	●	●				
T7D1	Thin type DeviceNet 16 points		●	●	●	●				
T7E0	Thin type S-LINK 8 points		●	●	●	●				
T7E1	Thin type S-LINK 16 points		●	●	●	●				
T7G1	Thin type Mitsubishi CC-Link 16 points		●	●	●	●				
T7L1	Thin type SAVE NET 16 points		●	●	●	●				
T7S1	Thin type CompoNet compatible (NPN output)		●	●	●	●				
T7SP1	Thin type CompoNet compatible (PNP output)		●	●	●	●				
A2N	A type connector (downward)						●	●	●	●

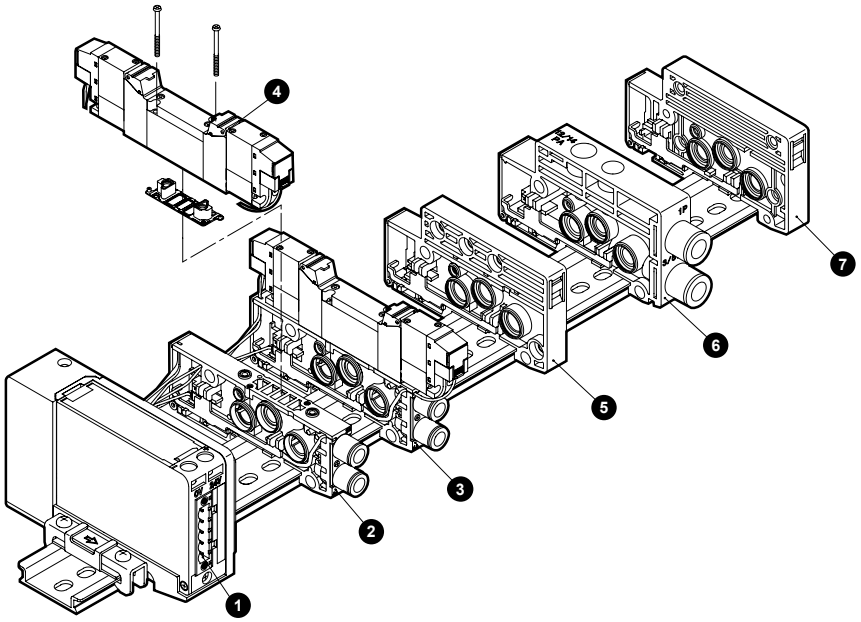
Note 13 The compatible tube for φ 1.8 barbed fitting for fiber tube is UP9102-**.
The compatible tube for φ 1.8 push-in fitting for fiber tube is UP9402-**.

Discontinue

MN4GB1/2-T* Series

Reduced wiring block manifold; base piping

Manifold components explanation and parts list



Main components list (refer to pages 358 to 369 for details)

No.	Component name	Model no. (example)	No.	Component name	Model no. (example)
1	Electrical block	N4G1-T7D1	5	Partition block	N4G1-S
2	Discrete valve block	N4GB1-V2-C6	6	Supply and exhaust block	N4G1-Q-8
3	Discrete valve block with solenoid valve	N4GB120-C6-A2NH-3	7	End block R	N4G1-ER
4	Solenoid valve body	4GB129-00-A2NH-3			

B type reduced wiring weight

4GB1

(g)

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N4GB110-C6-A2N-3	71	Supply and exhaust block	N4G1-Q-8	63	Electrical block	N4G1-T10(R)	229
	N4GB120-C6-A2N-3	88		N4G1-QK-8	68		N4G1-T30(R)	163
	N4GB1$^{3}_{5}$0-C6-A2N-3	89	End block	N4G1-E*	57		N4G1-T50(R)	165
	N3GB1660-C6-A2N-3	88		N4G1-EX*	57		NG1-T6*	293
Valve block with masking plate	N4GB1-MP*-C6	37	Partition block	N4G1-S	45		NG1-T7*	185

4GB2

(g)

Parts name	Model no.	Weight	Parts name	Model no.	Weight	Parts name	Model no.	Weight
Valve block with solenoid valve	N4GB210-C8-B2N-3	135	Supply and exhaust block	N4G2-Q-10	99	Electrical block	N4G2-T10(R)	244
	N4GB220-C8-B2N-3	152		N4G2-QK-10	104		N4G2-T30(R)	178
	N4GB2$^{3}_{5}$0-C8-A2N-3	163	End block	N4G2-E*	83		N4G2-T50(R)	180
	N4GB2660-C8-A2N-3	152		N4G2-EX*	84		NG2-T6*	308
Valve block with masking plate	N4GB2-MP*-C8	76	Partition block	N4G2-S	60		NG2-T7*	200

Parts list

Applicable	Parts name	Model no.
Valve 4G1	Cartridge fitting φ 1.8 straight type	4G1-JOINT-C18
	Cartridge fitting φ 4 straight type	4G1-JOINT-C4
	Cartridge fitting φ 6 straight type	4G1-JOINT-C6
	Cartridge fitting φ 1.8 (short) elbow type	4G1-JOINT-CL18
	Cartridge fitting φ 1.8 long elbow type	4G1-JOINT-CLL18
	Cartridge fitting φ 4 (short) elbow type	4G4-JOINT-CL4
	Cartridge fitting φ 4 long elbow type	4G1-JOINT-CLL4
	Cartridge fitting φ 6 (short) elbow type	4G1-JOINT-CL6
	Cartridge fitting φ 6 long elbow type	4G1-JOINT-CLL6
	Cartridge fitting φ 1.8 barbed type	4G1-JOINT-CF
	Plug cartridge	4G1-JOINT-CPG
Valve 4G2	Cartridge fitting φ 4 straight type	4G2-JOINT-C4
	Cartridge fitting φ 6 straight type	4G2-JOINT-C6
	Cartridge fitting φ 8 straight type	4G2-JOINT-C8
	Cartridge fitting φ 6 (short) elbow type	4G2-JOINT-CL6
	Cartridge fitting φ 6 long elbow type	4G2-JOINT-CLL6
	Cartridge fitting φ 8 (short) elbow type	4G2-JOINT-CL8
	Cartridge fitting φ 8 long elbow type	4G2-JOINT-CLL8
	Plug cartridge	4G2-JOINT-CPG

Applicable	Parts name	Model no.
Valve	Coil assembly	4G-A2N-(*2)-COIL-(*3) *2: Ozone/cutting oil proof type (blank, A) *3: Voltage (1,3,4)
Manifold	Expansion socket assembly (details on page 401)	a side solenoid N4G-SOCKET-ASSY-(selection no.)
		b side solenoid N4G-RELAY-SOCKET-(selection no.)

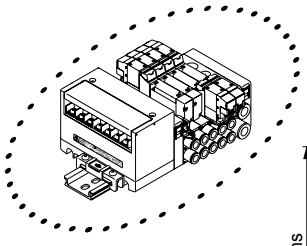
Dimensions CAD

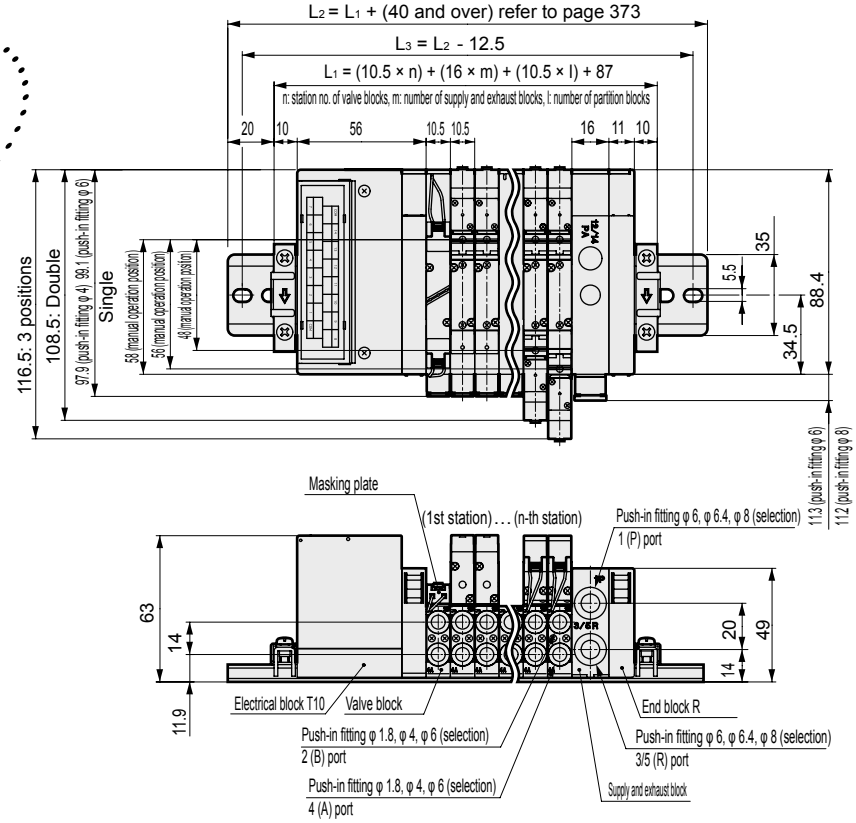
MN4GB1

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

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

Note: The push tightening specifications type (T11) is also available.
The dimensions are the same as T10.

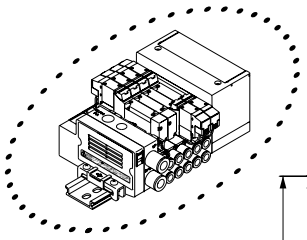


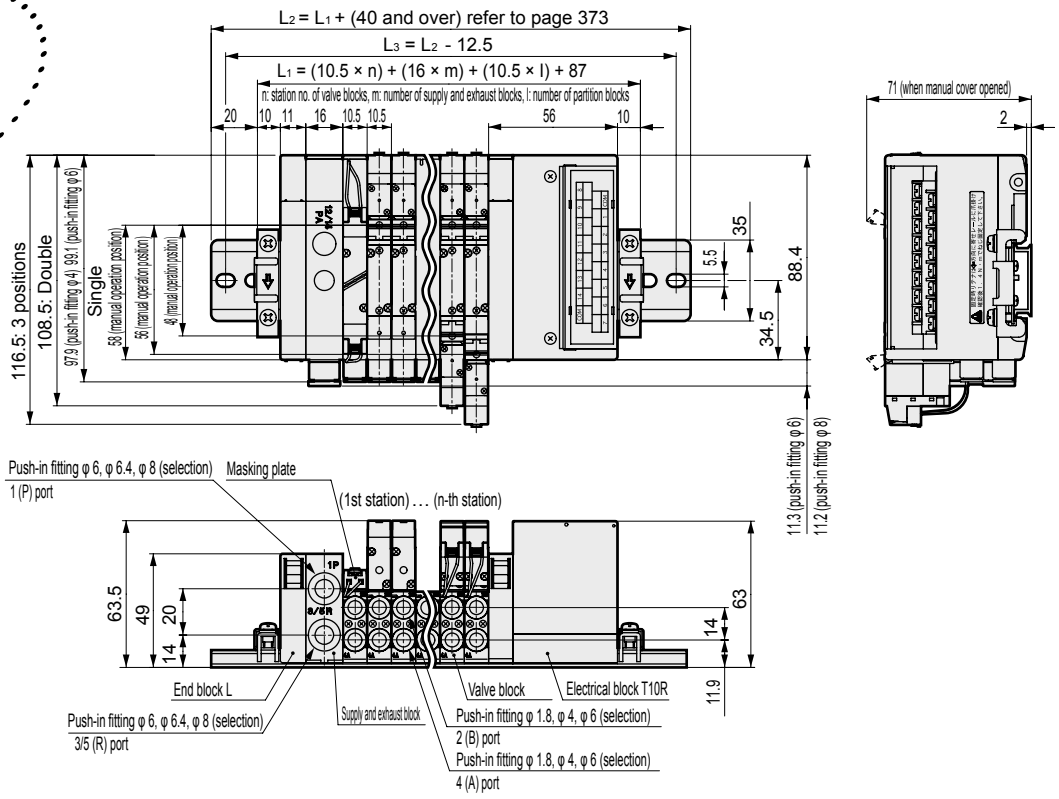


Note: Refer to page 350 for dimensions of the L type push-in fitting.

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

Note: The push tightening specifications type (T11R) is also available.
The dimensions are the same as T10R.





Discontinue

MN4GB2-T10 Series

Reduced wiring block manifold; base piping

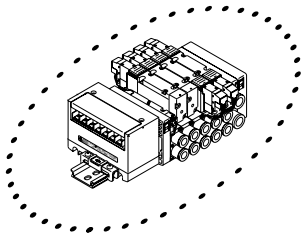
Dimensions CAD

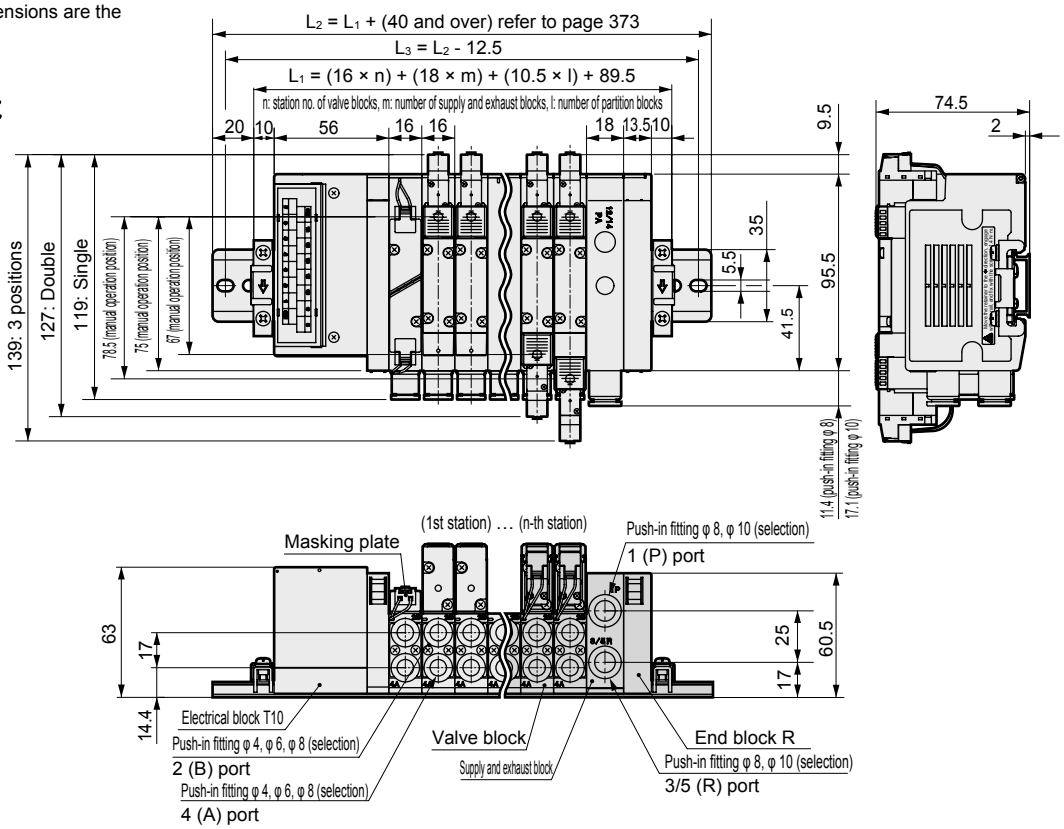
MN4GB2

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

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

Note: The push tightening specifications type (T11) is also available. The dimensions are the same as T10.

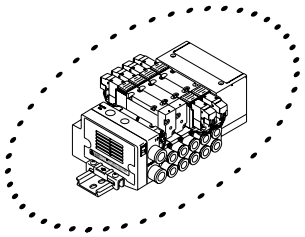


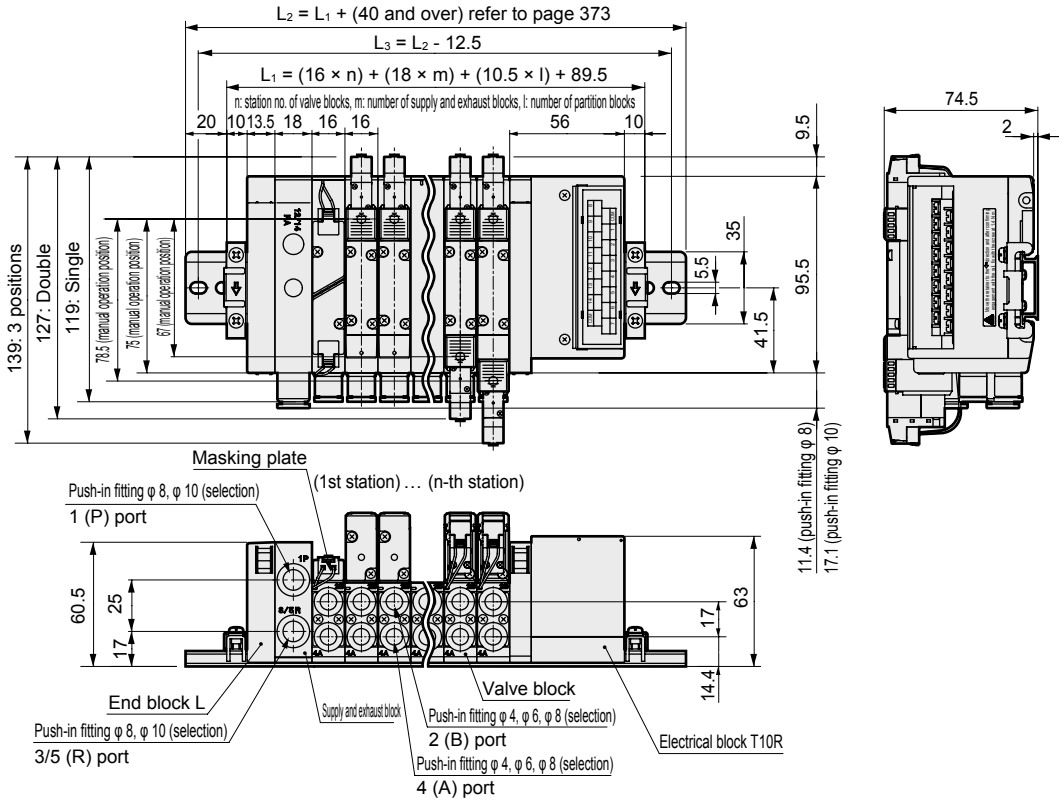


● Common terminal block (M3 screw) right side (T10R)

Note: The push tightening specifications type (T11R) is also available. The dimensions are the same as T10R.

Note: Refer to page 351 for dimensions of the L type push-in fitting.

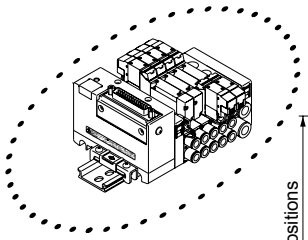




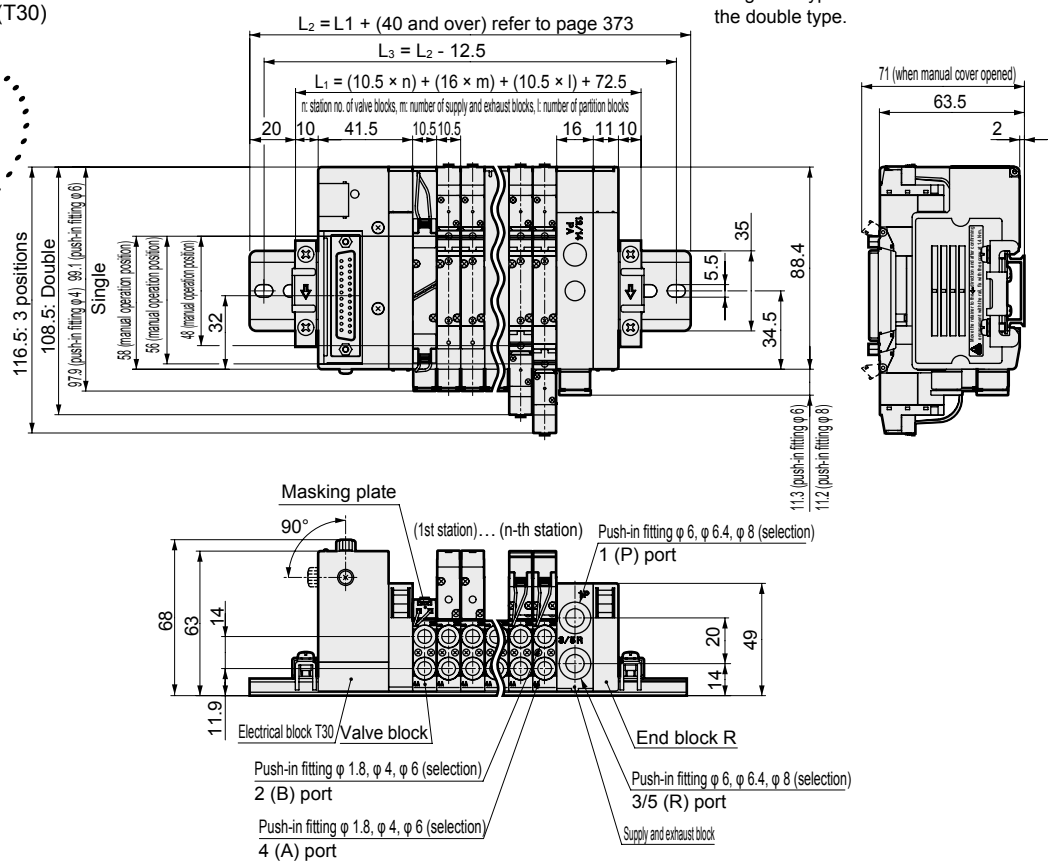
Dimensions

MN4GB1

● D sub-connector left side (T30)

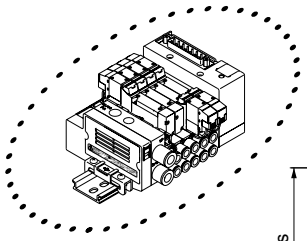


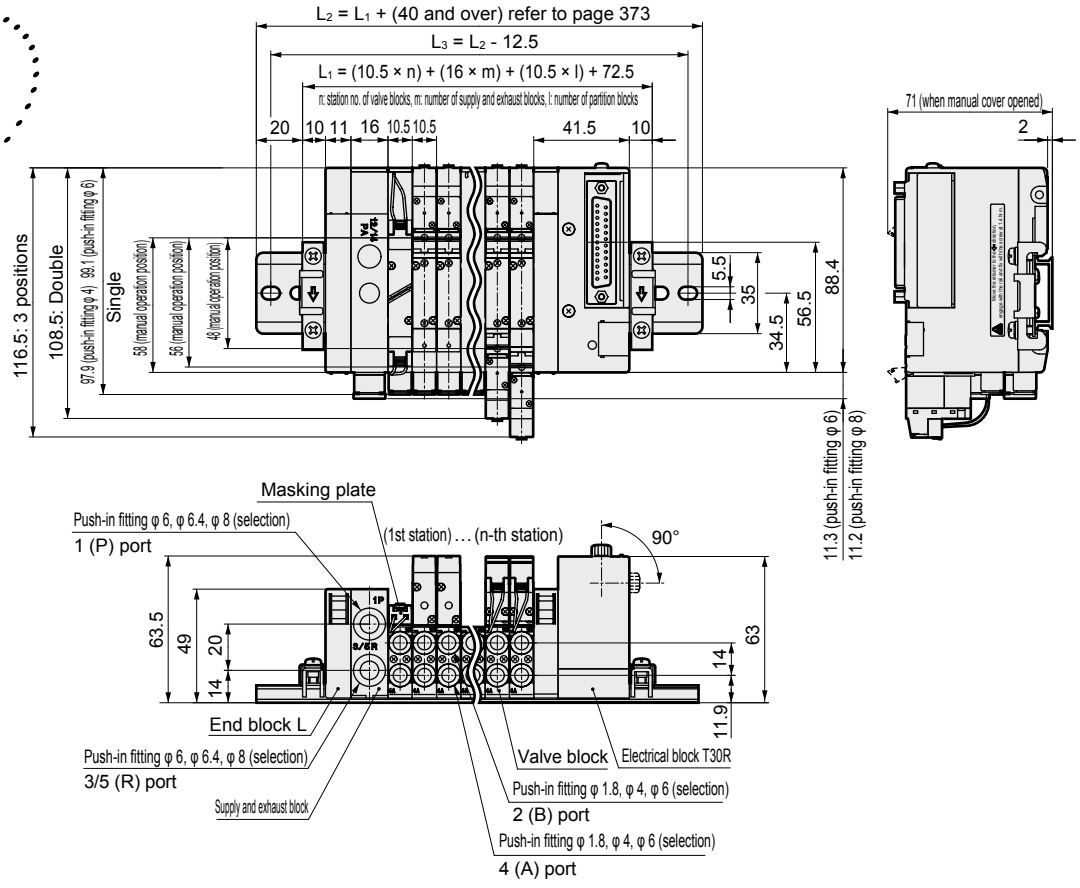
Note: The dimension of dual 3 port valve integrated type is the same as that of the double type.



● D sub-connector right side (T30R)

Note: Refer to page 350 for dimensions of the L type push-in fitting.





MN4GB2-T30 Series

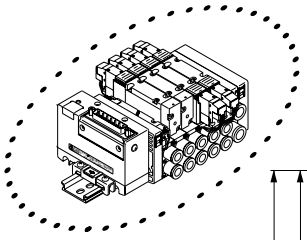
Reduced wiring block manifold; base piping

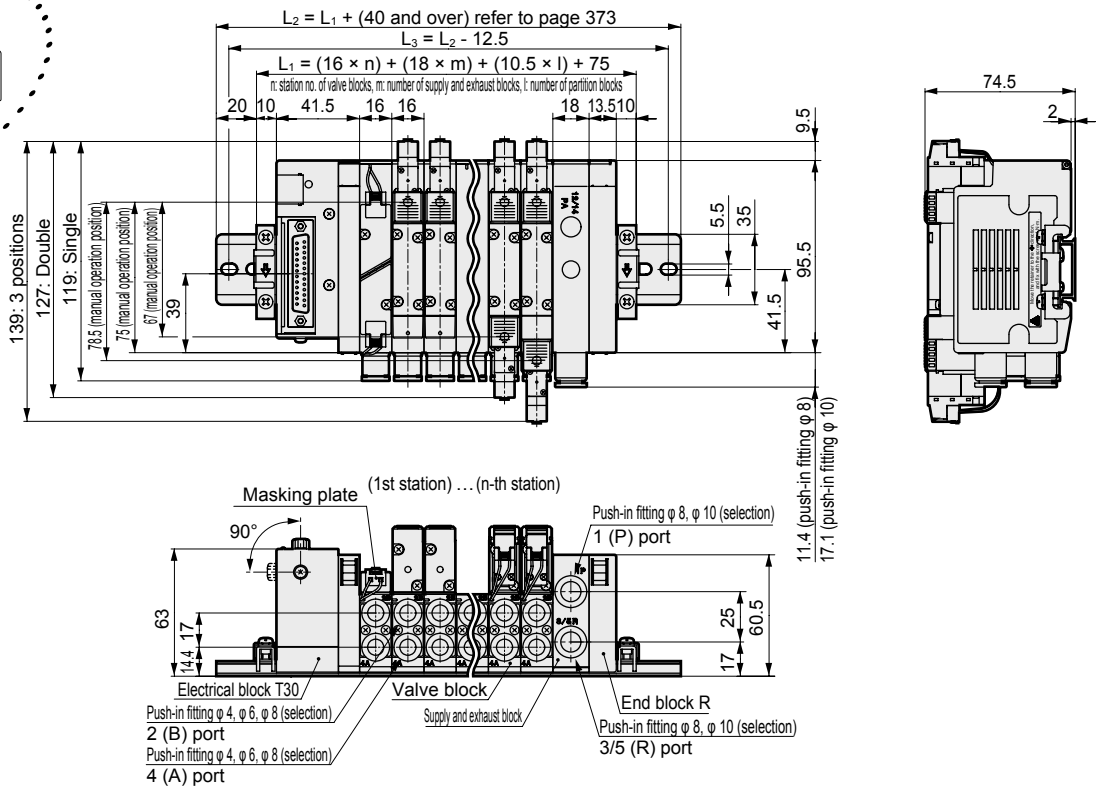
Dimensions CAD

MN4GB2

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

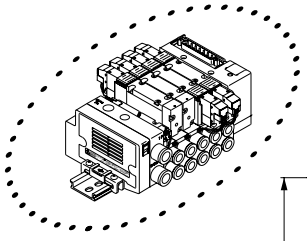
● D sub-connector left side (T30)

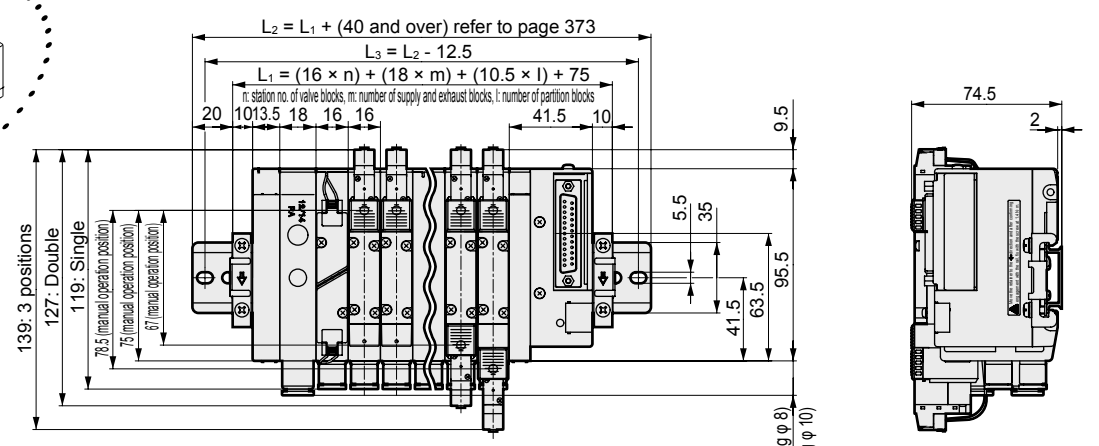


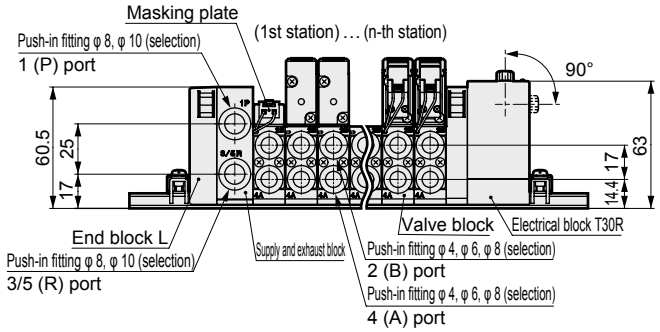


Note: Refer to page 351 for dimensions of the L type push-in fitting.

● D sub-connector right side (T30R)





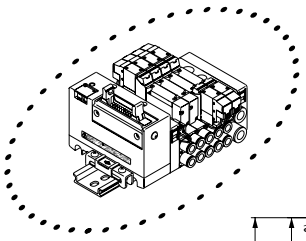


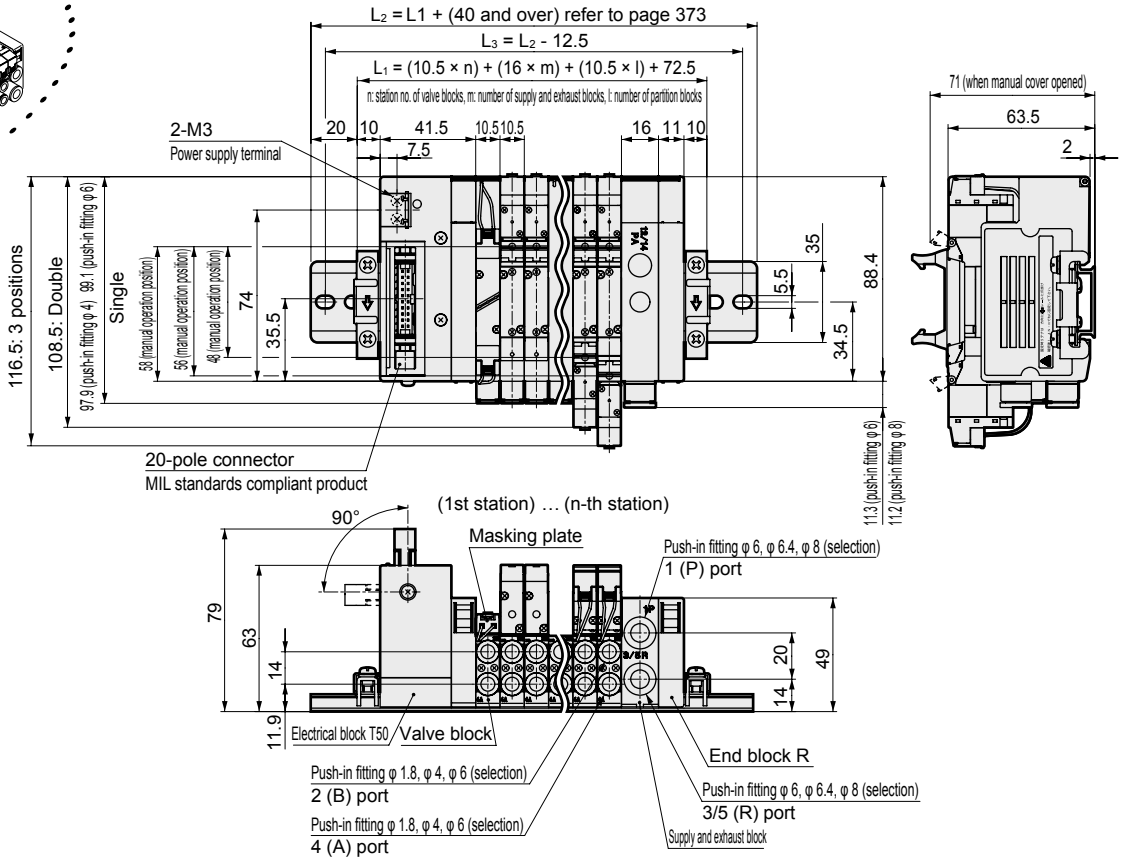
Dimensions CAD

MN4GB1

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

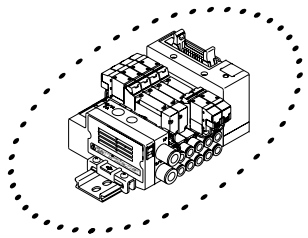
Note 1: T51, T52, and T53 are also available as flat cable connector models. The dimensions are the same as T50.
Note 2: The dimension of dual 3 port valve integrated type is the same as that of the double type.

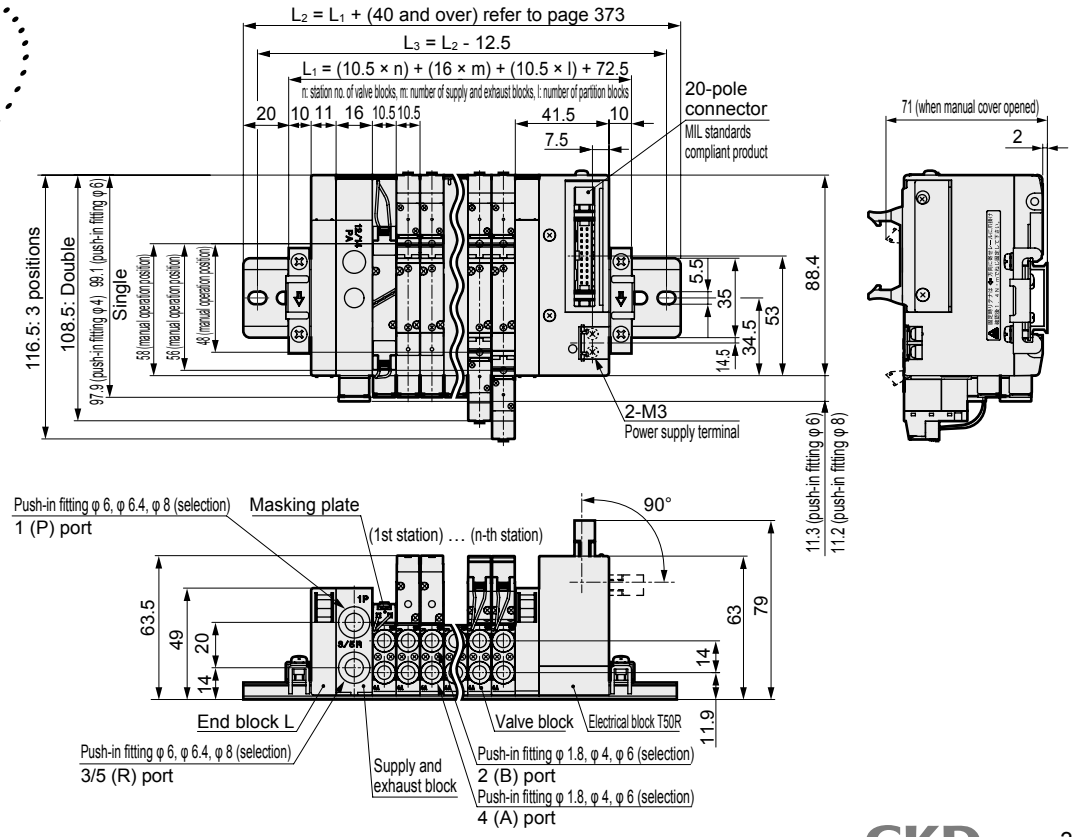




● Flat cable connector right side (T50R) with power supply terminal

Note: Refer to page 350 for dimensions of the L type push-in fitting.





Discontinue

MN4GB2-T50 Series

Reduced wiring block manifold; base piping

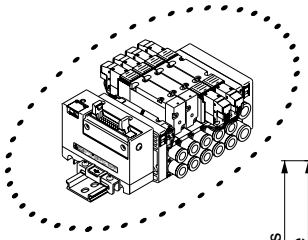
Dimensions CAD

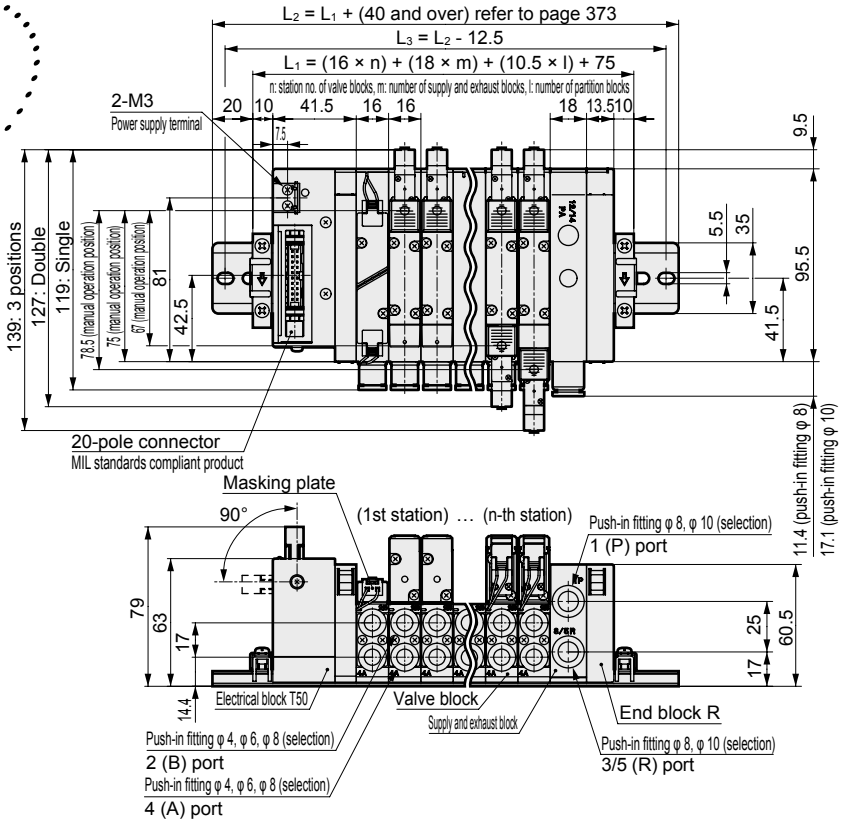
MN4GB2

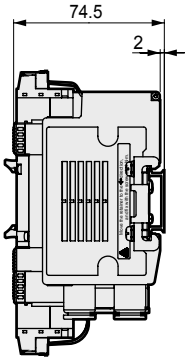
Note 1: T51, T52, and T53 are also available as flat cable connector models. The dimensions are the same as T50.

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

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

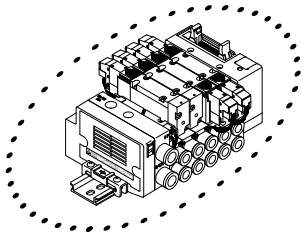


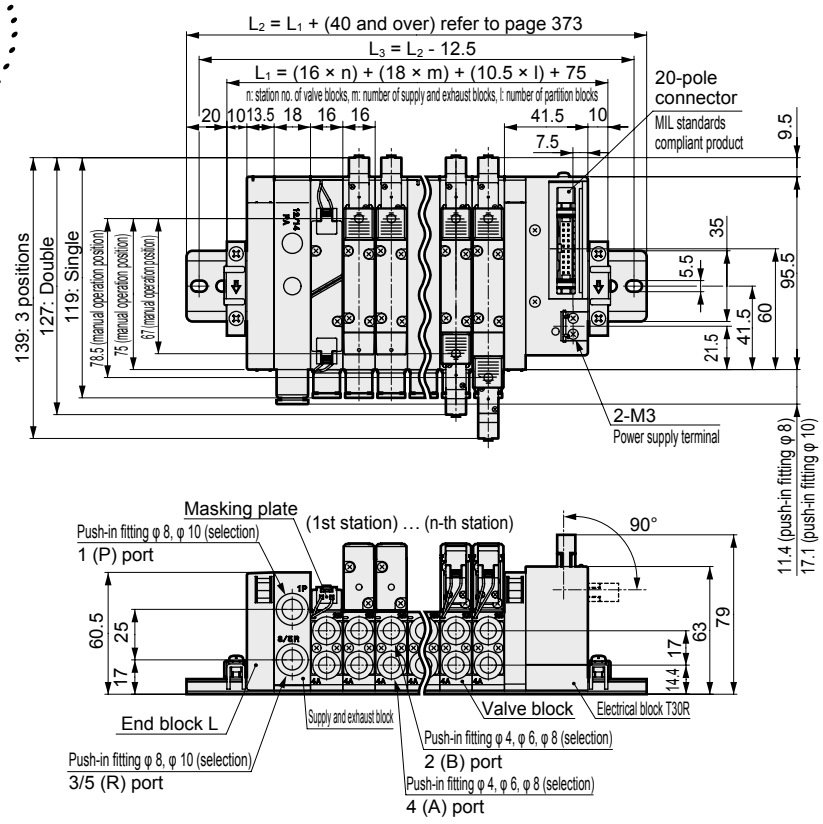


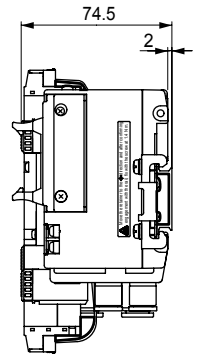


Note: Refer to page 351 for dimensions of the L type push-in fitting.

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





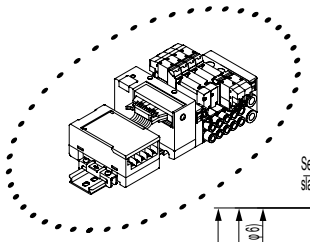


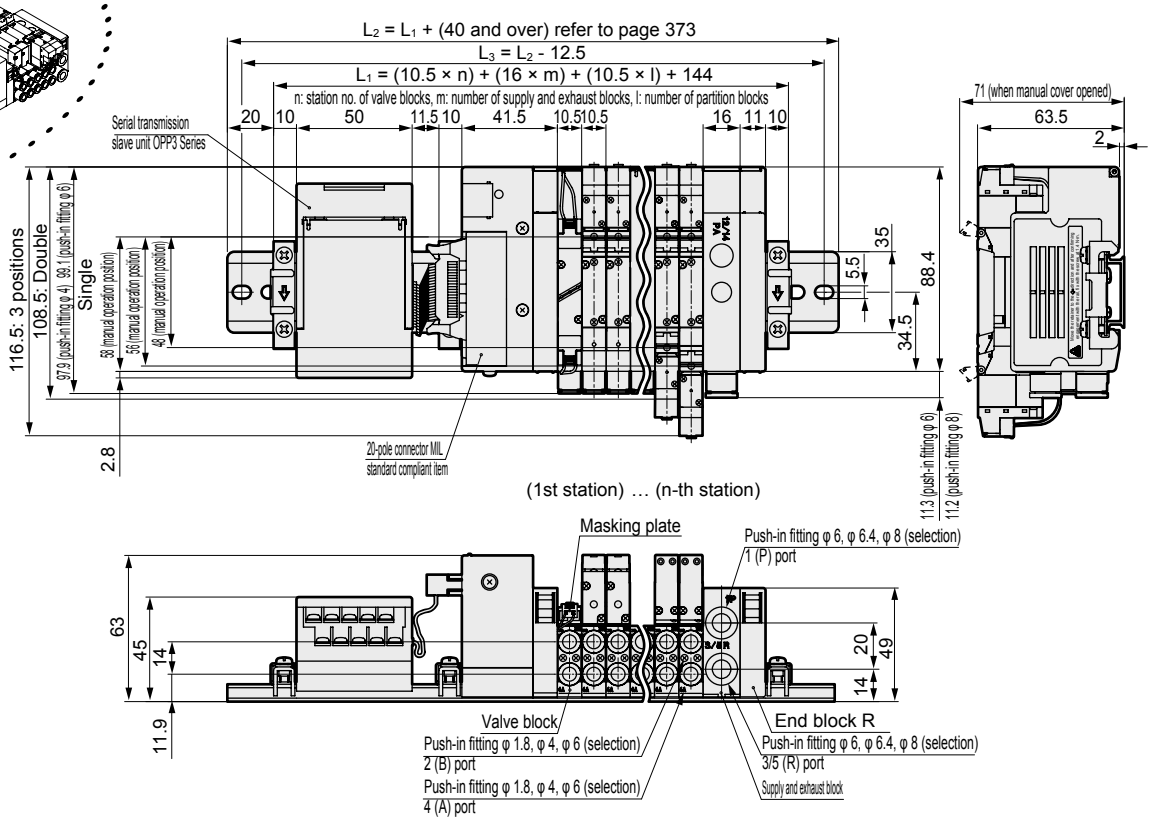
Dimensions CAD

MN4GB1

● Serial transmission (T6*)

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

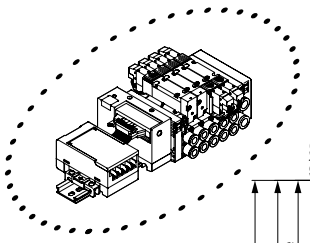


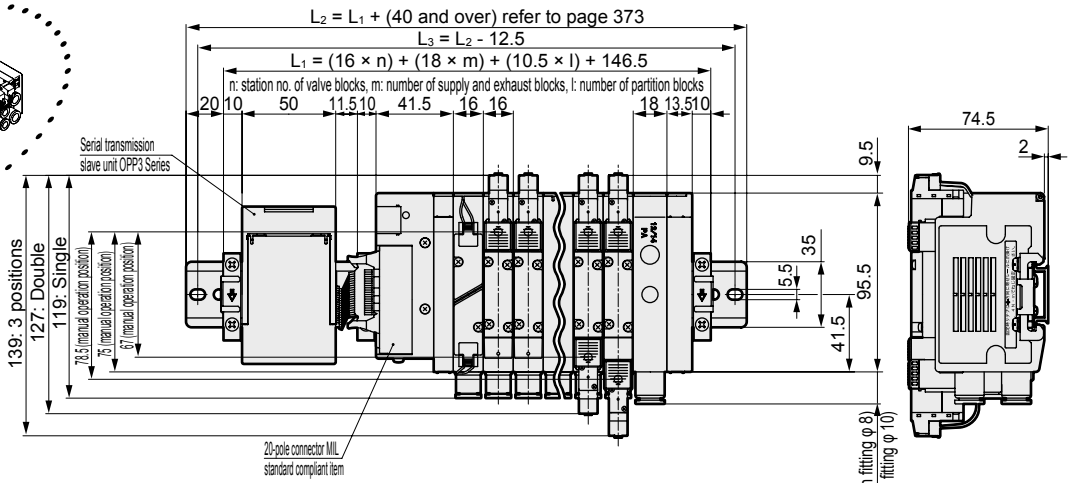


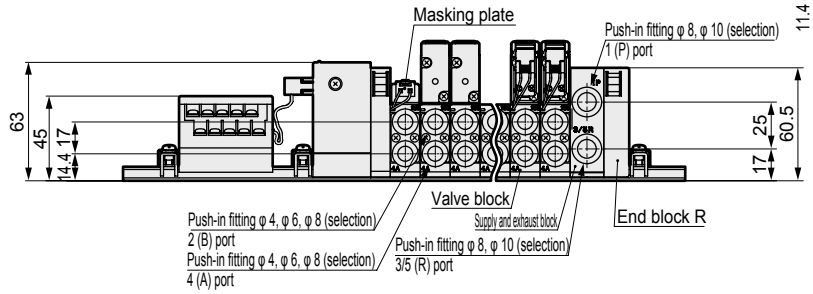
MN4GB2

● Serial transmission (T6:*)

Note: Refer to page 350 for dimensions of the L type push-in fitting.







Discontinue

MN4GB1/2-T7* Series

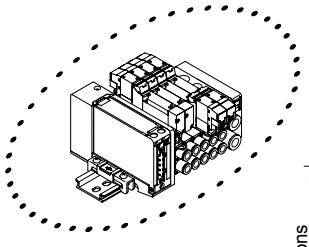
Reduced wiring block manifold; base piping

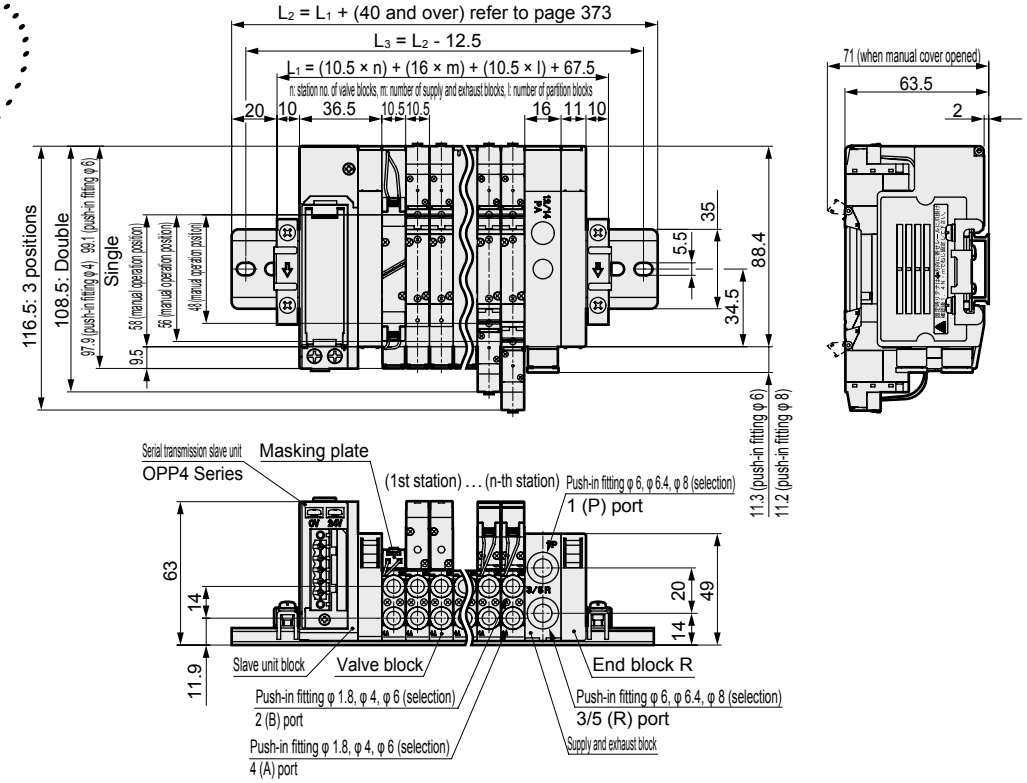
Dimensions CAD

MN4GB1

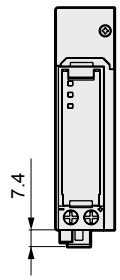
● Thin serial transmission (T7*)

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





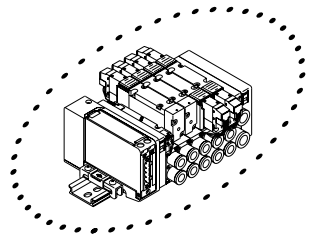
With T7S*1

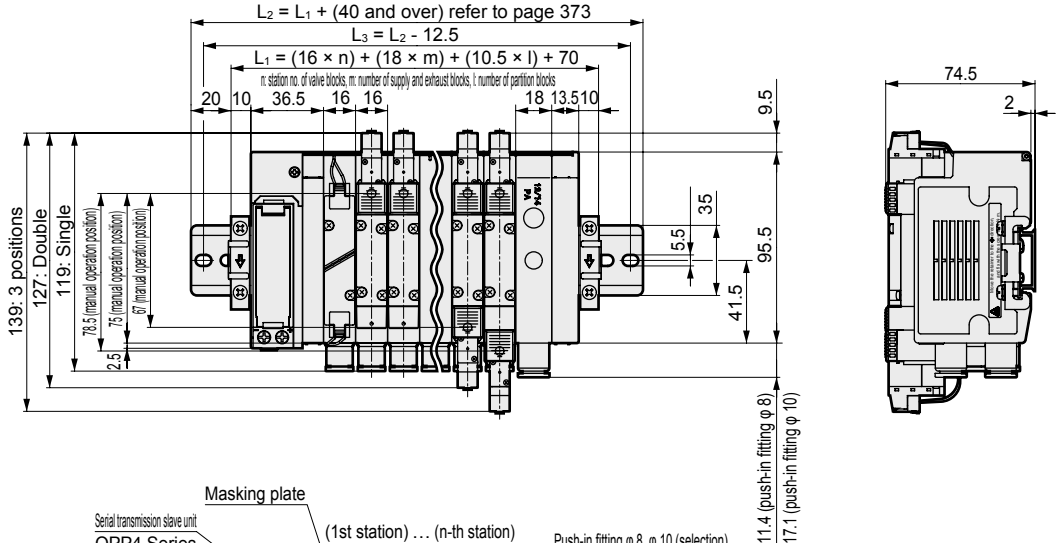


MN4GB2

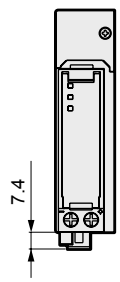
● Thin serial transmission (T7*)

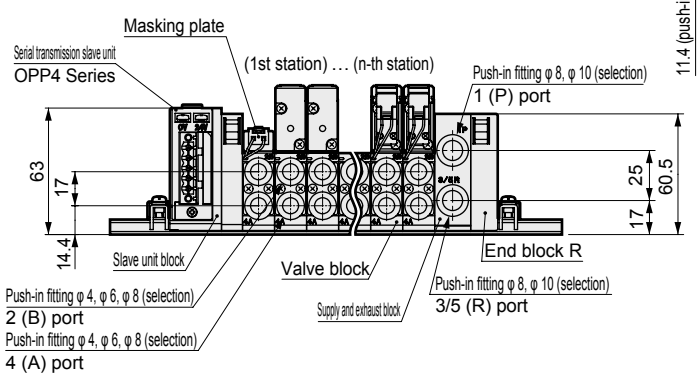
Note: Refer to page 350 for dimensions of the L type push-in fitting.





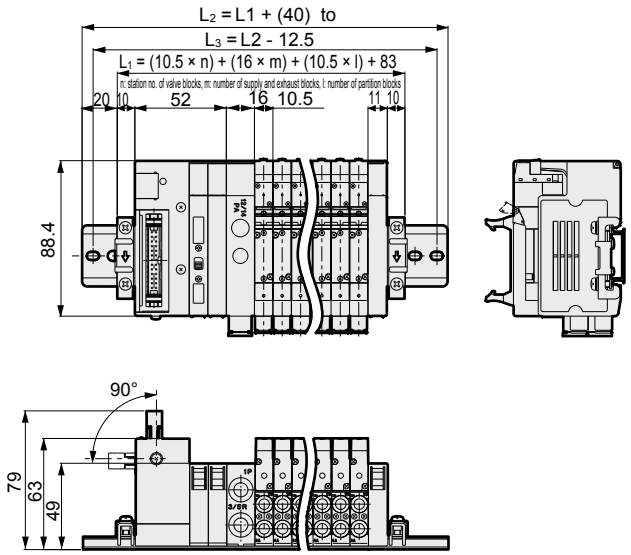
With T7S*1



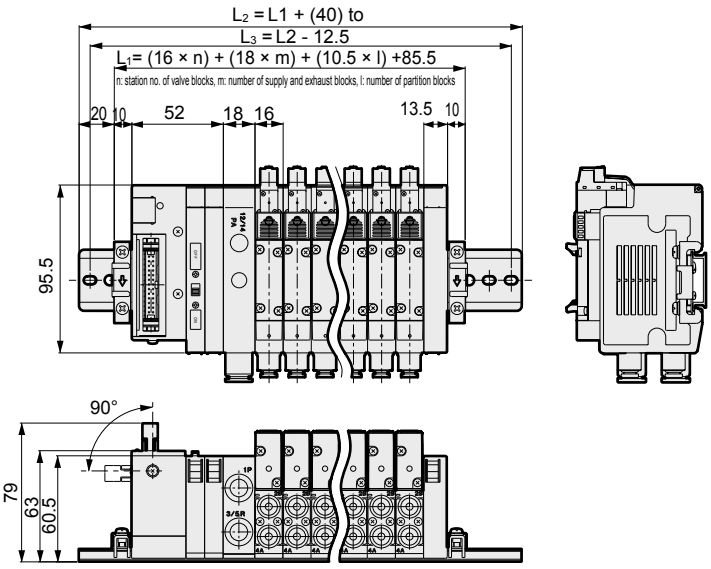


Dimensions

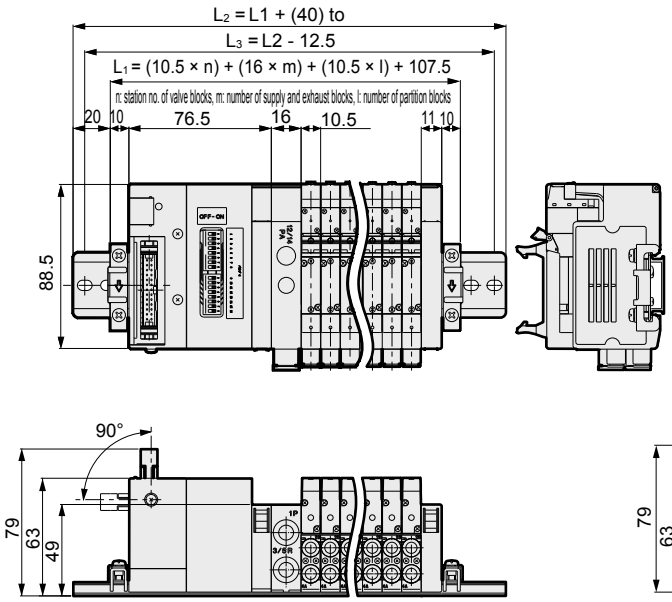
● MN4GB1 * 0- * - ** -Z4



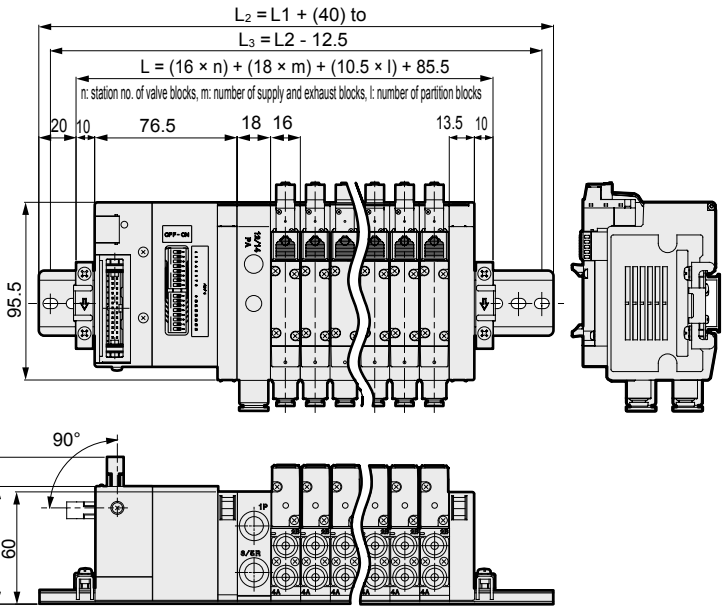
● MN4GB2 * 0- * - ** -Z4



● MN4GB1 * 0- * - ** -Z5



● MN4GB2 * 0- * - ** -Z5



Discontinue

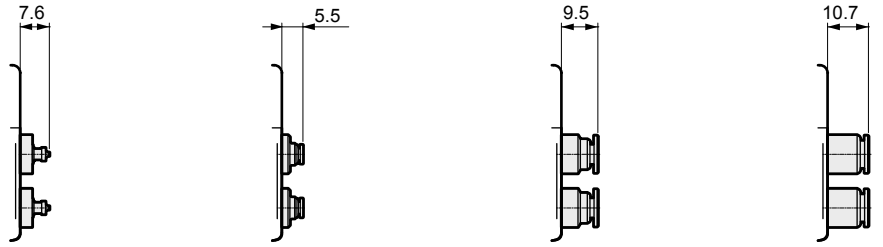
MN4GB1/2-T* Series

Dimensions

MN4GB1 valve block

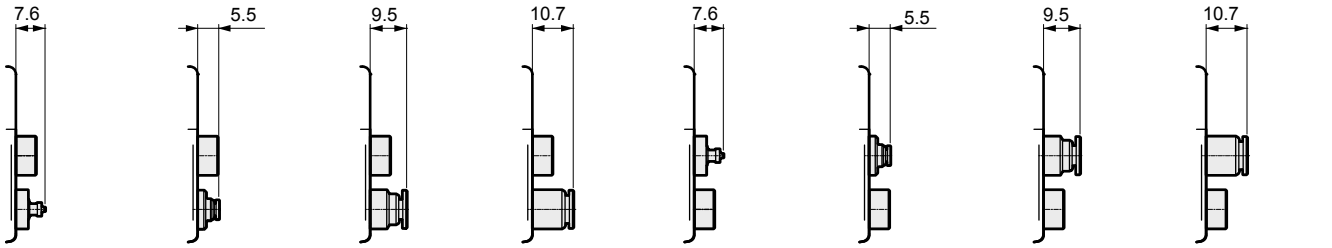
● Fitting straight

● φ 1.8 (CF) ● φ 1.8 (C18) ● φ 4 (C4) ● φ 6 (C6)



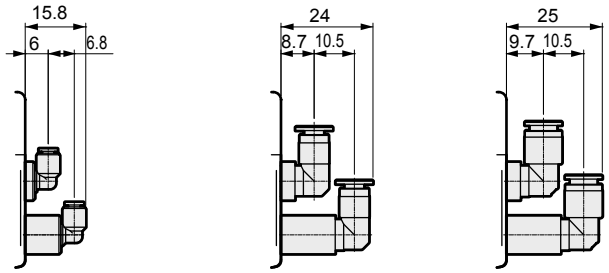
● Fitting straight, single plug

● φ 1.8 (CFNC) ● φ 1.8 (C18NC) ● φ 4 (C4NC) ● φ 6 (C6NC) ● φ 1.8 (CFNO) ● φ 1.8 (C18NO) ● φ 4 (C4NO) ● φ 6 (C6NO)



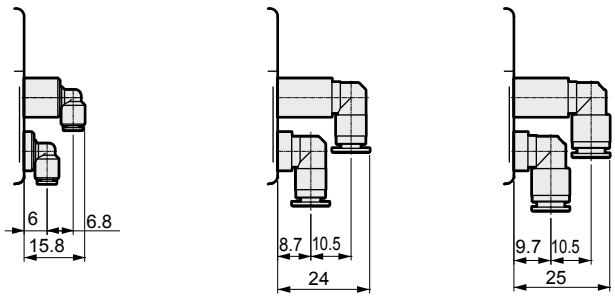
● Fitting L type (upward)

● φ 1.8 (CL18) ● φ 4 (CL4) ● φ 6 (CL6)



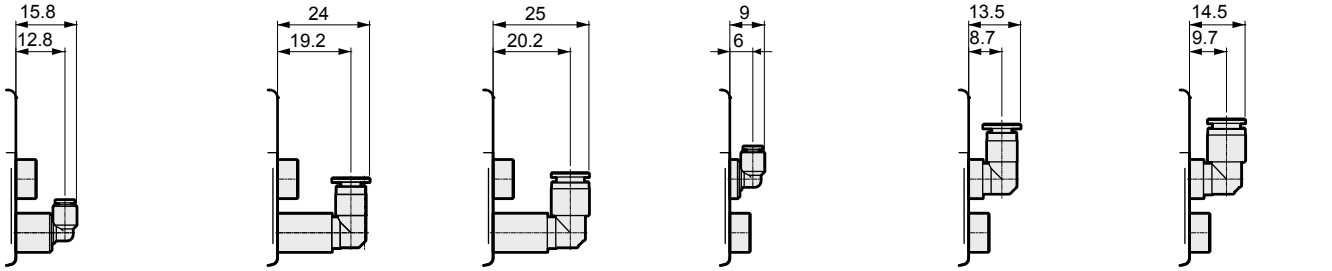
● Fitting L type (downward)

● φ 1.8 (CD18) ● φ 4 (CD4) ● φ 6 (CD6)



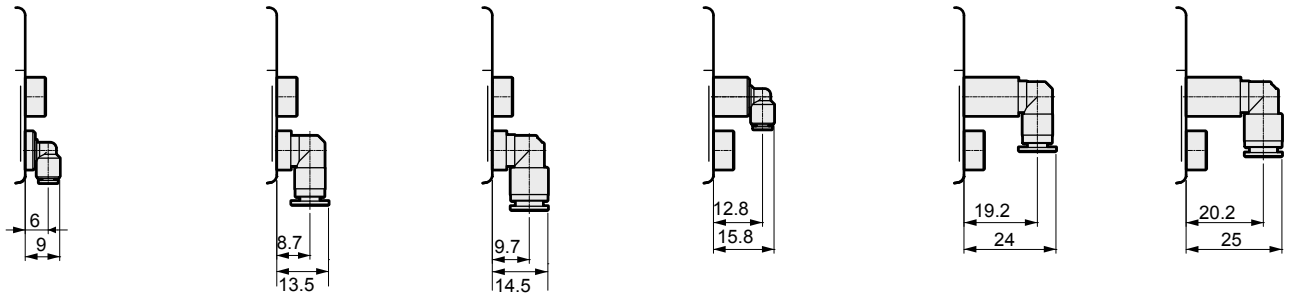
● Fitting L type (upward), single plug

● φ 1.8 (CL18NC) ● φ 4 (CL4NC) ● φ 6 (CL6NC) ● φ 1.8 (CL18NO) ● φ 4 (CL4NO) ● φ 6 (CL6NO)



● Fitting L type (downward), single plug

● φ 1.8 (CD18NC) ● φ 4 (CD4NC) ● φ 6 (CD6NC) ● φ 1.8 (CD18NO) ● φ 4 (CD4NO) ● φ 6 (CD6NO)

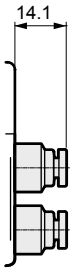


Dimensions

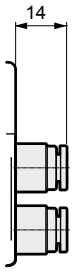
MN4GB2 valve block

● Fitting straight

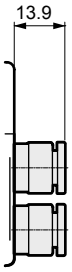
● φ 4 (C4)



● φ 6 (C6)

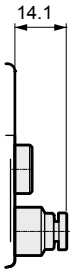


● φ 8 (C8)

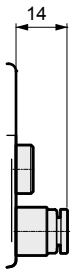


● Fitting straight, single plug

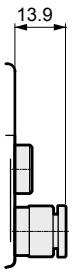
● φ 4 (C4NC)



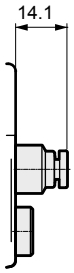
● φ 6 (C6NC)



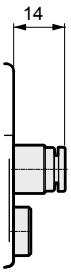
● φ 8 (C8NC)



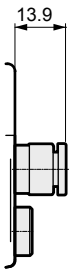
● φ 4 (C4NO)



● φ 6 (C6NO)

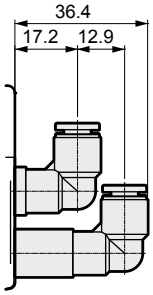


● φ 8 (C8NO)

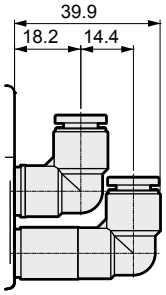


● Fitting L type (upward)

● φ 6 (CL6)

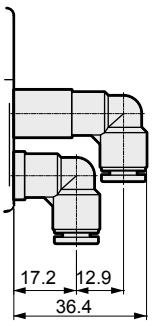


● φ 8 (CL8)

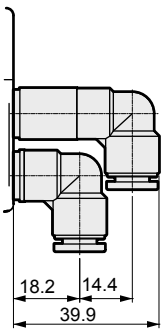


● Fitting L type (downward)

● φ 6 (CD6)

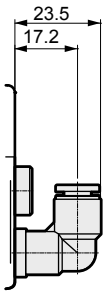


● φ 8 (CD8)

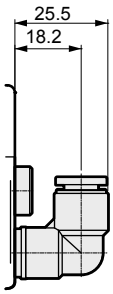


● Fitting L type (upward), single plug

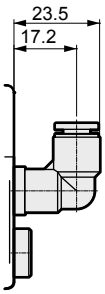
● φ 6 (CL6NC)



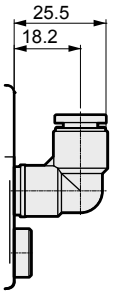
● φ 8 (CL8NC)



● φ 6 (CL6NO)

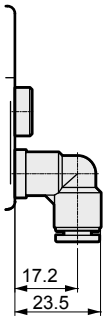


● φ 8 (CL8NO)

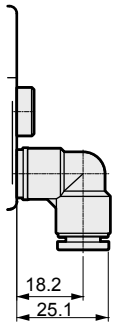


● Fitting L type (downward), single plug

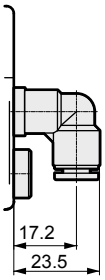
● φ 6 (CD6NC)



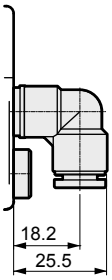
● φ 8 (CD8NC)



● φ 6 (CD6NO)



● φ 8 (CD8NO)



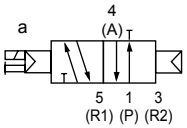
Discontinue

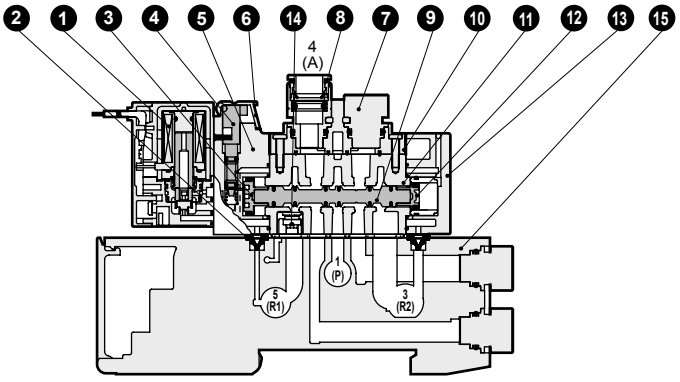
MN3GA1/2 Series

Internal structure and parts list

N3GA110/N3GA210

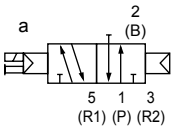
● 2-position single: normally closed
Grommet lead wire (blank)

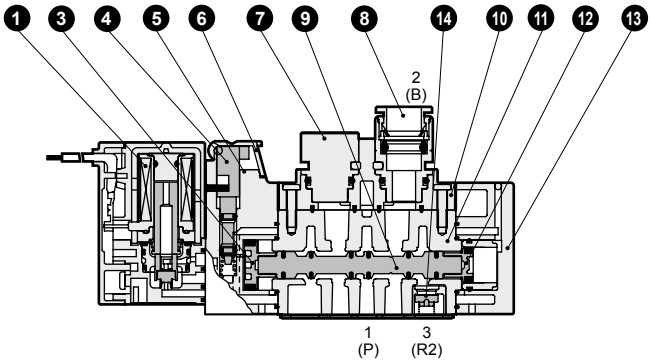




N3GA1110/N3GA2110

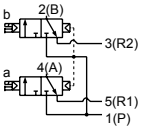
● 2-position single: normally open
Grommet lead wire (blank)

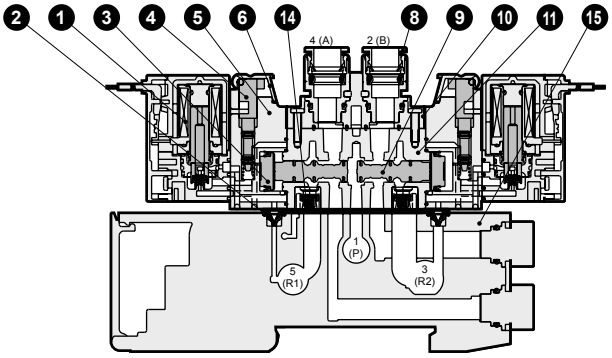




N3GA1660/N3GA2660

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





Main parts list

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

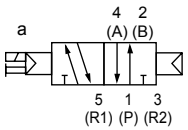
Parts list

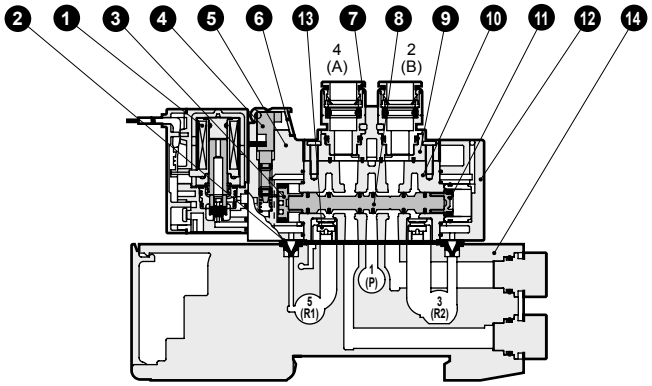
No.	Parts name			Model no.
1	Coil assembly			4G-[Electrical connections]-□-COIL-[Voltage] Blank: standard A: ozone specifications
8	Cartridge type push-in fitting and related parts	3G1 4G1	φ 1.8 straight type	4G1-JOINT-C18
			φ 4 straight type	4G1-JOINT-C4
			φ 6 straight type	4G1-JOINT-C6
			Plug cartridge	4G1-JOINT-CPG
		3G2 4G2	φ 4 straight type	4G2-JOINT-C4
			φ 6 straight type	4G2-JOINT-C6
			φ 8 straight type	4G2-JOINT-C8
			Plug cartridge	4G2-JOINT-CPG
-	E type connector socket assembly			4G-SOCKET-ASSY-[Electrical connections]-[Voltage]
-	EJ type connector socket assembly			4G-SOCKET-ASSY-[Electrical connections]
-	DIN terminal box assembly (only 3GA2)			4G-TERMINAL-BOX-[Voltage]

Internal structure and parts list

N4GA110/N4GA210

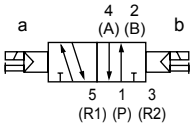
● 2-position single
Grommet lead wire (blank)

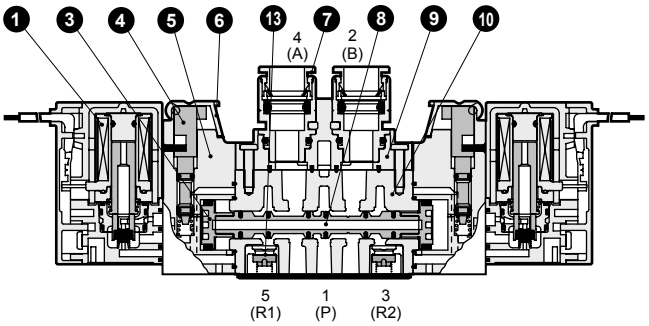




N4GA120/N4GA220

● 2-position double
Grommet lead wire (blank)

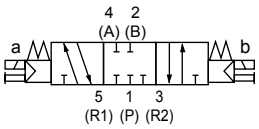




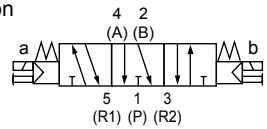
N4GA1$^{3}_{4}{}^{5}$0/N4GA2$^{3}_{4}{}^{5}$0

● 3-position
Grommet lead wire (blank)

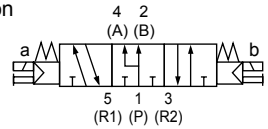
All ports closed

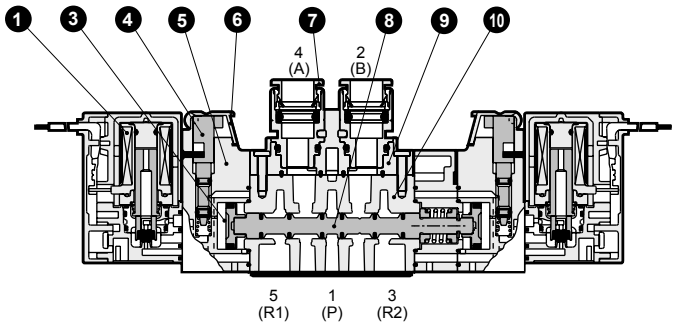


A/B/R connection



P/A/B connection





Main parts list

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

Parts list

No.	Parts name			Model no.
1	Coil assembly			4G-[Electrical connections]-□-COIL-[Voltage] Blank: standard A: ozone specifications
7	Cartridge type push-in fitting and related parts	3G1 4G1	φ 1.8 straight type	4G1-JOINT-C18
			φ 4 straight type	4G1-JOINT-C4
			φ 6 straight type	4G1-JOINT-C6
			Plug cartridge	4G1-JOINT-CPG
		3G2 4G2	φ 4 straight type	4G2-JOINT-C4
			φ 6 straight type	4G2-JOINT-C6
			φ 8 straight type	4G2-JOINT-C8
			Plug cartridge	4G2-JOINT-CPG
-	E type connector socket assembly			4G-SOCKET-ASSY-[Electrical connections]-[Voltage]
-	EJ type connector socket assembly			4G-SOCKET-ASSY-[Electrical connections]
-	DIN terminal box assembly (only 4GA2)			4G-TERMINAL-BOX-[Voltage]

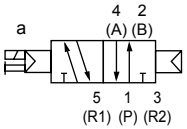
Internal structure and parts list

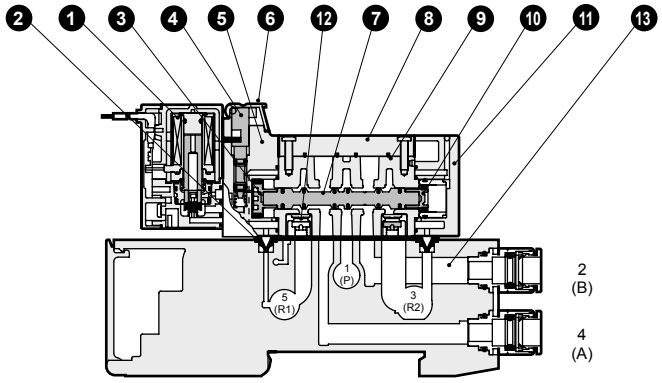
N3GB1660/N3GB2660

● Dual 3 port valve integrated type A side valve: normally closed, B side valve: normally closed
Refer to page 355 for the grommet lead wire (blank).

N4GB110/N4GB210

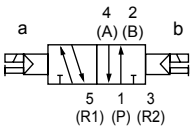
● 2-position single
Grommet lead wire (blank)

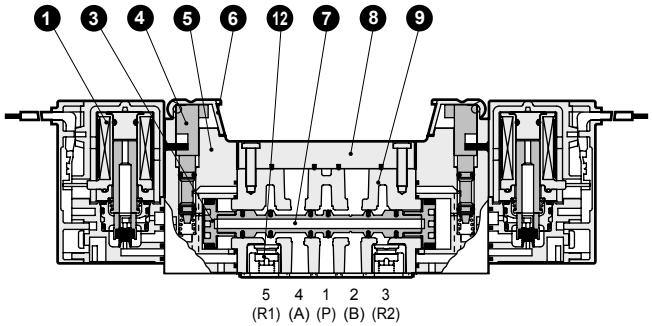




N4GB120/N4GB220

● 2-position double
Grommet lead wire (blank)

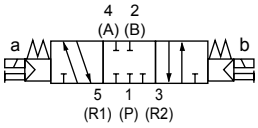




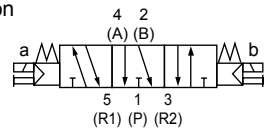
N4GB1$^{3}_{4}{}^{4}_{5}$0/N4GB2$^{3}_{4}{}^{4}_{5}$0

● 3-position
Grommet lead wire (blank)

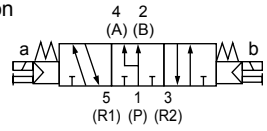
All ports closed

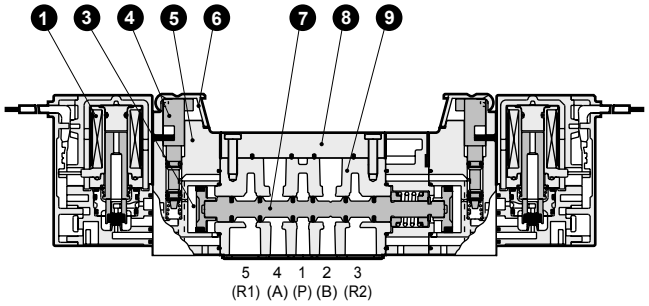


A/B/R connection



P/A/B connection





Main parts list

No.	Parts name	Material
1	Coil assembly	-
2	Pilot exhaust check valve	Hydrogenated nitrile rubber
3	Piston D assembly	-
4	Manual operating device	Resin
5	Piston room	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	Malfunction prevention valve	-
13	Valve block	Resin

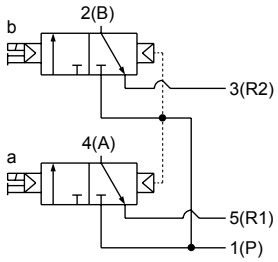
Parts list

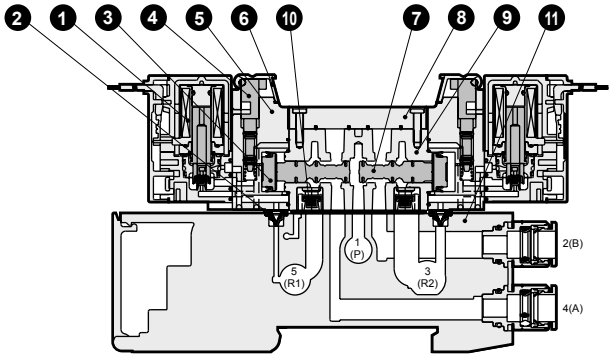
No.	Parts name	Model no.
1	Coil assembly	4G-[Electrical connections]-[ ]-COIL-[Voltage] Blank: standard A: ozone specifications
-	E type connector socket assembly	4G-SOCKET-ASSY-[Electrical connections]-[Voltage]
-	EJ type connector socket assembly	4G-SOCKET-ASSY-[Electrical connections]
-	DIN terminal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

Internal structure and parts list

N3GB1660/N3GB2660

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





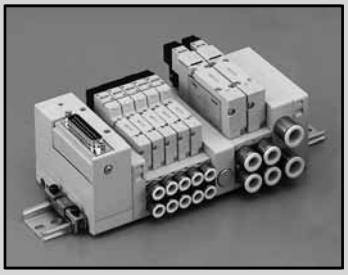
Main parts list

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

Parts list

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

Discontinue



4G1/2 mix manifold

MN3GAX12,MN4GAX12 MN4GBX12 Series

● Applicable cylinder bore size: φ 20 to φ 80

RoHS CAD

Specifications

Common with each series

For individual wiring, refer to page 304 (body piping) or page 312 (base piping), and for reduced wiring, refer to page 320 (body piping) or page 336 (base piping).

How to order

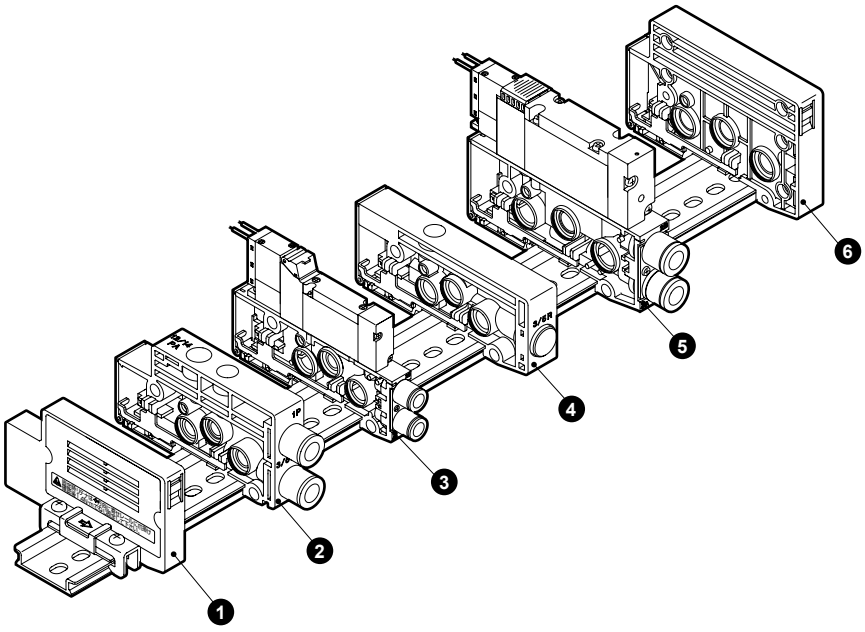
MN3G$^{A}_{B}$X12 - ○ - ○○○ - ○ - ○

MN4G$^{A}_{B}$X12 - ○ - ○○○ - ○ - ○

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

* The model no. will be "MN*G*X12-". Other items are common with the example of model no. for each series.
For individual wiring, refer to page 306 (body piping) or page 314 (base piping), and for reduced wiring, refer to page 322, 323 (body piping) or page 338, 339 (base piping).

Manifold components explanation and parts list



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

Main components list (Refer to pages 358 to 369 for details)

No.	Component name	Model no. (example)
1	End block L	N4G1-EL
2	Supply and exhaust block	N4G1-Q-8
3	Discrete valve block with solenoid valve	N4GB110-C6-H-3
4	Mix block	N4G12-MIX
5	Discrete valve block with solenoid valve	N4GB210-C8-H-3
6	End block R	N4G2-ER

Weight

N4G12-MIX: 49g

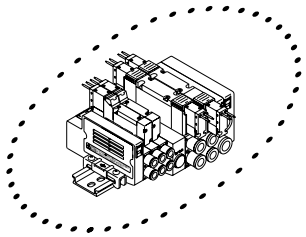
Refer to the specifications of each series for other components.

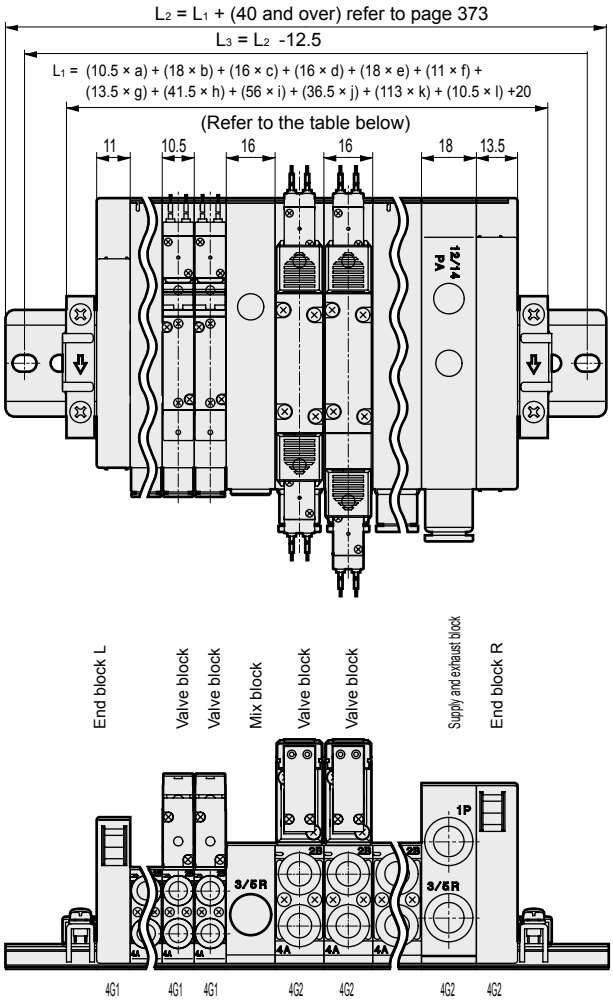
Mix block: dimensions

Unit mm

MN4GBX12

Note: For details regarding E type connector, EJ type connector, and DIN terminal box, refer to the pages of each model (MN4GA: from page 309, MN4GB: from page 317).
Note: Refer to pages 350, 351 for details of the L type push-in fitting.





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

Parts name	Dimensions
a: 4G1 number of valve blocks	10.5 × a
b: 4G2 number of valve blocks	16 × b
c: number of mix blocks	16 × c
d: 4G1 number of supply and exhaust blocks	16 × d
e: 4G2 number of supply and exhaust blocks	18 × e
f: 4G1 number of end block L	11 × f
g: 4G2 number of end block R	13.5 × g
h: 4G1/2 number of T30/T5* reduced wiring	41.5 × h
i: 4G1/2 number of T10 reduced wiring	56 × i
j: 4G1/2 number of T7* reduced wiring	36.5 × j
k: 4G1/2 number of T6* reduced wiring	113 × K
l: 4G1/2 number of partition blocks	10.5 × l

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

Block manifold; block configuration

Flexible assembly enables expansion of stations and maintenance.

● Valve block with solenoid valve

(1) The required types of solenoid valves for the required number of stations can be arranged on a DIN rail.
Note that the number of stations is determined based on the wiring method. (Refer to pages 320, 336.)
(2) The solenoid valve no. is numbered in a series as 1, 2, 3 and so forth from the left side with the fitting facing forward.

● Supply and exhaust block

(1) A necessary number of these can be freely arranged at the connecting sections of each block.
(2) As there are blocks for internal pilots and external pilots, configure an appropriate model depending on the type of solenoid valve.

● End block

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

● Partition block

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

● Mix block

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

Block manifold configuration

Piping section

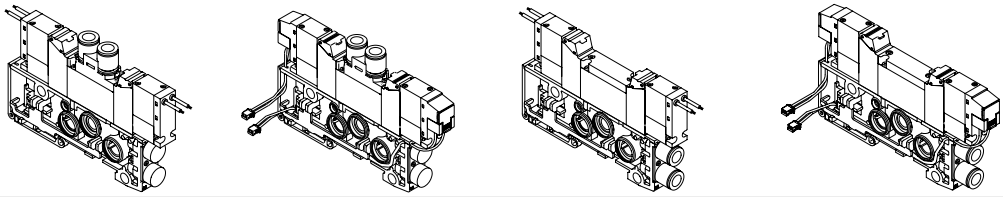
Wiring section

Related products

Piping block

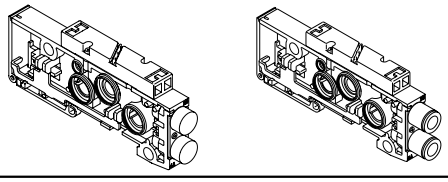
A Discrete valve block with solenoid valve

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



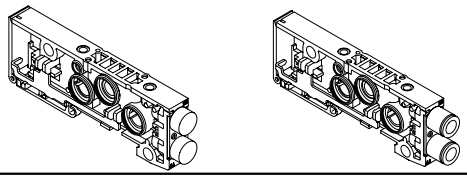
B Discrete valve block with masking plate

- For body piping
- For base piping



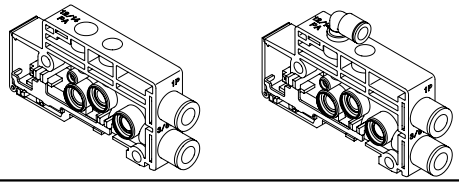
C Discrete valve block

- For body piping
- For base piping



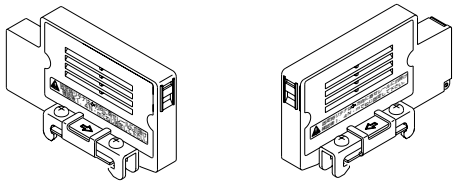
D Supply and exhaust block

- Internal pilot
- External pilot

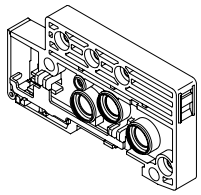


E End block

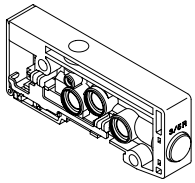
- For left
- For right



F Partition block



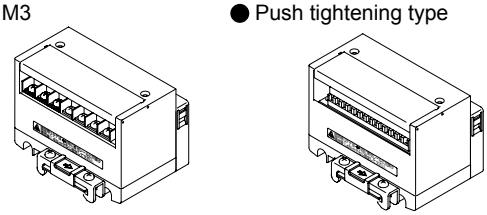
G Mix block



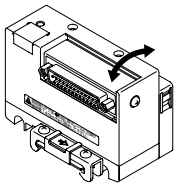
Wiring block

H Centralized terminal block

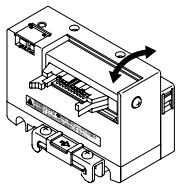
- M3
- Push tightening type



I D sub-connector block

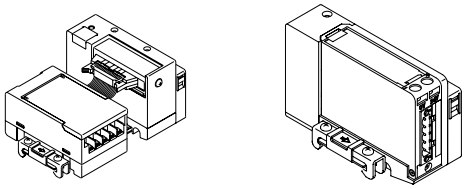


J Flat cable connector block



K Serial transmission block

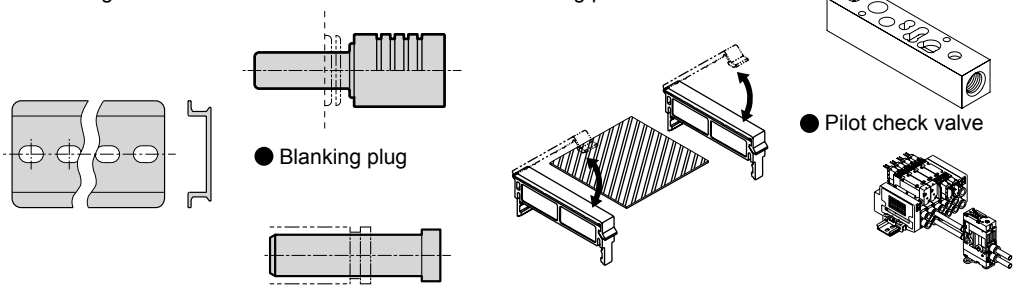
- Connector connection type
- Thin slot type



Related products

L Related products

- Mounting rail
- Silencer
- Tag plate
- Air supply spacer
- Blanking plug
- Pilot check valve



Discontinue

MN4GA/4GB Series

Block manifold: piping section

Piping section

A. Discrete valve block with solenoid valve

A block assembled with solenoid valve and a valve block (split resin base). For selection guides, refer to the following pages.
Body piping individual wiring: page 306, base piping individual wiring: page 314, body piping reduced wiring: pages 322, 323, base piping reduced wiring: pages 338, 339

B. Discrete valve block with masking plate

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

N4GA1 - MP ——— 3

N4GB1 - MPD - C4 - 3 - F

Ⓐ Model no. Ⓑ Type Ⓒ Port size *1 Ⓓ Cable length *2 Ⓔ Option

Ⓐ Model no.	Ⓑ Type	
N4GA1	MP	For individual wiring
N4GA2	MPS	For reduced wiring single
N4GB1	MPD	For reduced wiring double/3-position
N4GB2		

Ⓓ Cable length *2		Ⓔ Option	
Blank	For individual wiring	Blank	No option
2 to 10	Select a length from page 361	F	A/B port filter integrated

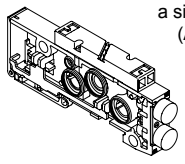
*2: When a purchase is made for the expansion of stations of reduced wiring, a socket assembly will be attached to the product.
Select a cable length from the following page and indicate the length in the field for the Ⓓ cable length. However, it will not be necessary to include the cable length when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

Ⓒ Post size (configuration required for base piping)	
CF	φ 1.8 barbed fitting for fiber tube *1
C18	φ 1.8 push-in fitting for fiber tube *1
C4	φ 4 push-in fitting
C6	φ 6 push-in fitting
C8	φ 8 push-in fitting *2
CL18	φ 1.8 push-in fitting for fiber tube (upward) *3
CL4	L type φ 4 push-in fitting (upward) *1 *3
CL6	L type φ 6 push-in fitting (upward) *3
CL8	L type φ 8 push-in fitting (upward) *2 *3
CD18	φ 1.8 push-in fitting for fiber tube (downward) *1
CD4	L type φ 4 push-in fitting (downward) *1
CD6	L type φ 6 push-in fitting (downward)
CD8	L type φ 8 push-in fitting (downward) *2

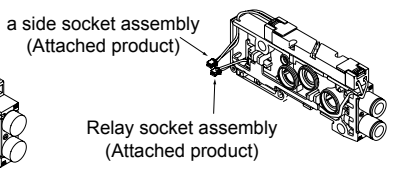
Single side plugged specifications	A port	B port
CFNC	φ 1.8 barbed fitting for fiber tube *1	Plug
C18NC	φ 1.8 push-in fitting for fiber tube *1	
C4NC	φ 4 push-in fitting	
C6NC	φ 6 push-in fitting	
C8NC	φ 8 push-in fitting *2	
CFNO	Plug	φ 1.8 barbed fitting for fiber tube *1
C18NO		φ 1.8 push-in fitting for fiber tube *1
C4NO		φ 4 push-in fitting
C6NO		φ 6 push-in fitting
C8NO		φ 8 push-in fitting *2
CL18NC	φ 1.8 push-in fitting for fiber tube (upward) *1 *3	Plug
CL4NC	L type φ 4 push-in fitting (upward) *1 *3	
CL6NC	L type φ 6 push-in fitting (upward) *3	
CL8NC	L type φ 8 push-in fitting (upward) *2 *3	
CL18NO	Plug	φ 1.8 push-in fitting for fiber tube (upward) *1 *3
CL4NO		L type φ 4 push-in fitting (upward) *1 *3
CL6NO		L type φ 6 push-in fitting (upward) *3
CL8NO		L type φ 8 push-in fitting (upward) *2 *3
CD18NC	φ 1.8 push-in fitting for fiber tube (downward) *1	Plug
CD4NC	L type φ 4 push-in fitting (downward) *1	
CD6NC	L type φ 6 push-in fitting (downward)	
CD8NC	L type φ 8 push-in fitting (downward) *2	
CD18NO	Plug	φ 1.8 push-in fitting for fiber tube (downward) *1
CD4NO		L type φ 4 push-in fitting (downward) *1
CD6NO		L type φ 6 push-in fitting (downward)
CD8NO		L type φ 8 push-in fitting (downward) *2

*1: Compatible only with 4GB1.
*2: Compatible only with 4GB2.
*3: L type push-in fitting (upward) is compatible only with single solenoid valves.

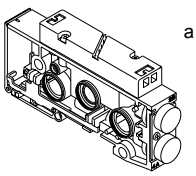
N4GA1-MP



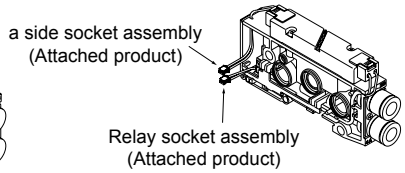
N4GB1-MPD-C4-3



N4GA2-MP



N4GB2-MPD-C6-5

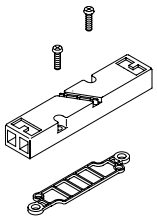


B-1. Masking plate

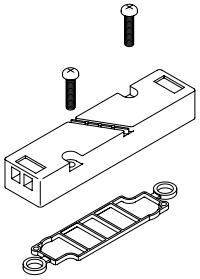
4G1 - MP

Ⓐ Model no.

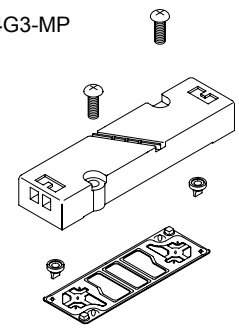
4G1-MP



4G2-MP



4G3-MP



Piping section

C. Discrete valve block (discrete only)

A discrete valve block (split resin base).

N4GA1 - V1 ——— 3

N4GB1 - V2 - C4 - 3 F

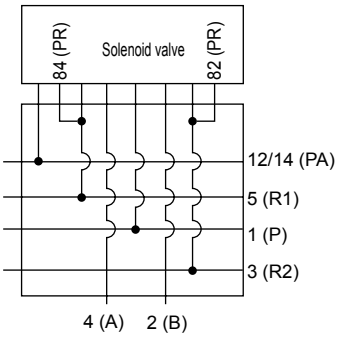
Ⓐ Model no. Ⓑ Type Ⓒ Port size *1 Ⓔ Option Ⓓ Cable length

Ⓐ Model no.	Ⓑ Type	
N4GA1	V1	For individual wiring
N4GA2		For reduced wiring single
N4GB1	V2	For reduced wiring double/3-position
N4GB2		

Ⓓ Cable length		Ⓔ Option	
Blank	For individual wiring	Blank	No option
2 to 10	Select a length from the following.	F	A/B port filter integrated

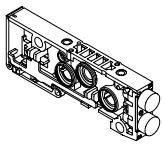
Ⓒ Post size (it is necessary to configure this with base piping)					
CF	φ 1.8 barbed fitting for fiber tube *1		Single side plugged specifications	A port	B port
C18	φ 1.8 push-in fitting for fiber tube *1		C4NO	Plug	φ 4 push-in fitting
C4	φ 4 push-in fitting		C6NO		φ 6 push-in fitting
C6	φ 6 push-in fitting		C8NO		φ 8 push-in fitting *2
C8	φ 8 push-in fitting *2		CL18NC	φ 1.8 push-in fitting for fiber tube (upward) *1 *3	Plug
CL18	φ 1.8 push-in fitting for fiber tube (upward) *3				
CL4	L type φ 4 push-in fitting (upward) *1 *3		CL4NC	L type φ 4 push-in fitting (upward) *1 *3	
CL6	L type φ 6 push-in fitting (upward) *3		CL6NC	L type φ 6 push-in fitting (upward) *3	
CL8	L type φ 8 L push-in fitting (upward) *2 *3		CL8NC	L type φ 8 push-in fitting (upward) *2 *3	
CD18	φ 1.8 push-in fitting for fiber tube (downward) *1		CL18NO	Plug	φ 1.8 push-in fitting for fiber tube (upward) *1 *3
CD4	L type φ 4 push-in fitting (downward) *1				
CD6	L type φ 6 push-in fitting (downward)		CL4NO		L type φ 4 push-in fitting (upward) *1 *3
CD8	L type φ 8 push-in fitting (downward) *2		CL6NO		L type φ 6 push-in fitting (upward) *3
Single side plugged specifications	A port	B port	CL8NO		L type φ 8 push-in fitting (upward) *2 *3
CFNC	φ 1.8 barbed fitting for fiber tube *1	Plug	CD18NC	φ 1.8 push-in fitting for fiber tube (downward) *1	Plug
C18NC	φ 1.8 push-in fitting for fiber tube *1		CD4NC	L type φ 4 push-in fitting (downward) *1	
C4NC	φ 4 push-in fitting		CD6NC	L type φ 6 push-in fitting (downward)	
C6NC	φ 6 push-in fitting		CD8NC	L type φ 8 push-in fitting (downward) *2	
C8NC	φ 8 push-in fitting *2		CD18NO	Plug	φ 1.8 push-in fitting for fiber tube (downward) *1
CFNO	Plug	φ 1.8 barbed fitting for fiber tube *1	CD4NO		L type φ 4 push-in fitting (downward) *1
C18NO		φ 1.8 push-in fitting for fiber tube (applicable tube UP-9402-**) *1	CD6NO		L type φ 6 push-in fitting (downward)
			CD8NO		L type φ 8 push-in fitting (downward) *2

*1: Compatible only with 4GB1.
*2: Compatible only with 4GB2.
*3: L type push-in fitting (upward) is compatible only with single solenoid valves.

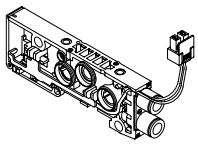


Discrete valve lock circuit diagram

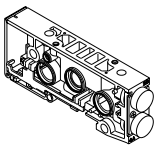
N4GA1-V1



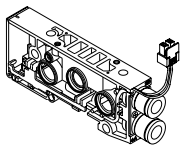
N4GB1-V2-C4



N4GA2-V1



N4GB2-V2-C6



Valve block for expansion, cable length

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

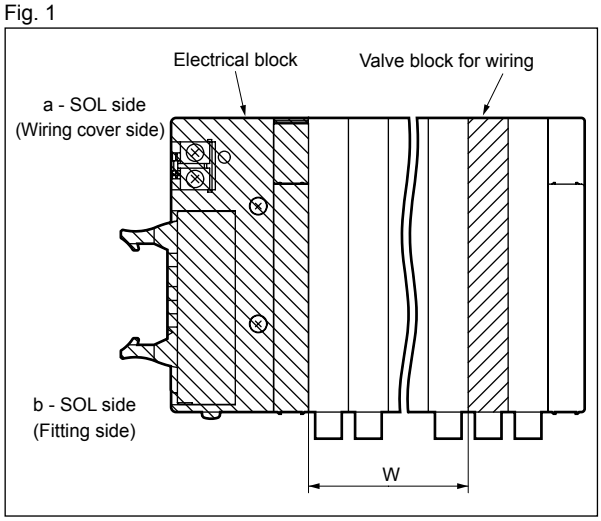
Calculation of W

- With MN4G1
  W = (10.5xn) + (16xm) + (10.5xl)
- With MN4G2
  W = (16xn) + (18xm) + (10.5xl)
  n: number of valve blocks, m: number of supply and exhaust blocks, l: number of partition blocks
- With MN4GX
  Perform calculations with a width of 16 for the mix block.

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

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

Fig. 1



Piping section

As problems may occur depending on the configuration, make selections with a sufficient understanding of the features of each block.

D. Supply and exhaust block

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

N4G1 - Q - 8 X

Model no. Ⓐ Type Ⓑ Port size Ⓒ Exhaust

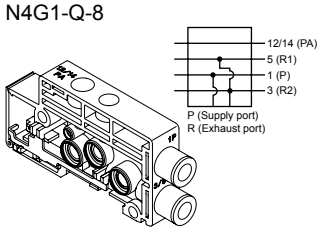
Ⓐ Type		Ⓑ Port size		Ⓒ Exhaust	
Q	Internal pilot	6	φ 6 push-in fitting	Blank	Common exhaust
QK	External pilot	6L	φ 6 push-in fitting Upward	X	Released to air
		6D	φ 6 push-in fitting Downward	(With X, configure atmosphere release for the end block.)	
		6.4	φ 6.4 push-in fitting		
		6.4L	φ 6.4 push-in fitting Upward		
		6.4D	φ 6.4 push-in fitting Downward		
		8	φ 8 push-in fitting		
		8L	φ 8 push-in fitting Upward		
		8D	φ 8 push-in fitting Downward		

N4G2 - QK - 10L X

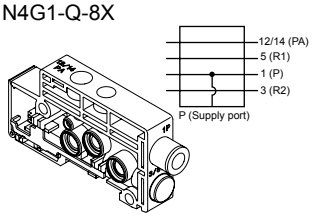
Model no. Ⓐ Type Ⓑ Port size Ⓒ Exhaust

Ⓐ Type		Ⓑ Port size		Ⓒ Exhaust	
Q	Internal pilot	8	φ 8 push-in fitting	Blank	Common exhaust
QK	External pilot	8L	φ 8 push-in fitting Upward	X	Released to air
		8D	φ 8 push-in fitting Downward	(With X, configure atmosphere release for the end block.)	
		10	φ 10 push-in fitting		
		10L	φ 10 push-in fitting Upward		
		10D	φ 10 push-in fitting Downward		

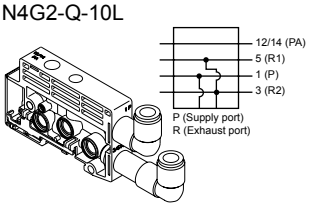
N4G1-Q-8



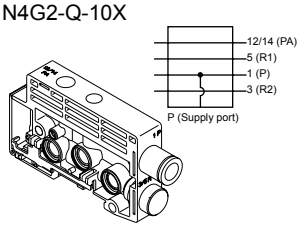
N4G1-Q-8X



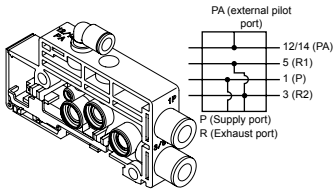
N4G2-Q-10L



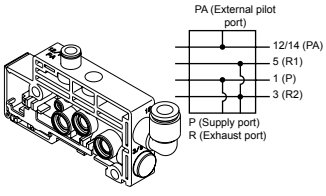
N4G2-Q-10X



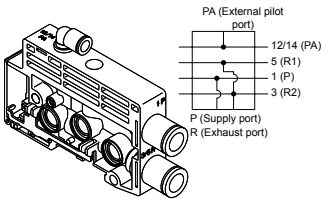
N4G1-QK-8



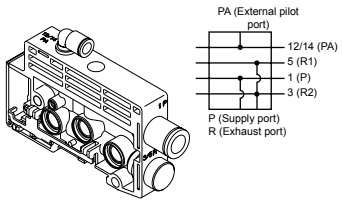
N4G1-QK-8LX



N4G2-QK-10



N4G2-QK-10X



* External pilot port: φ 6 push-in fitting

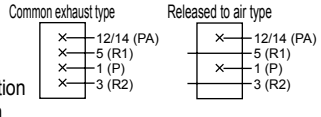
* External pilot port: φ 6 push-in fitting

E. End block

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

N4G1 - E R

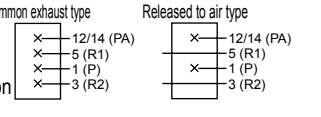
Model no. Ⓐ Type Ⓑ Installation position



Ⓐ Type		Ⓑ Installation position	
E	Common exhaust	L	For left side
EX	Released to air	R	For right side

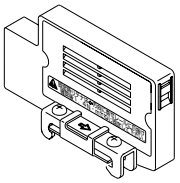
N4G2 - EX L

Model no. Ⓐ Type Ⓑ Installation position

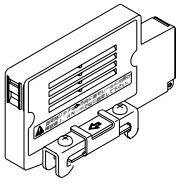


Ⓐ Type		Ⓑ Installation position	
E	Common exhaust	L	For left side
EX	Released to air	R	For right side

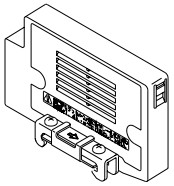
N4G1-EL



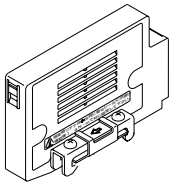
N4G1-ER



N4G2-EL



N4G2-ER



Piping section

F. Partition block

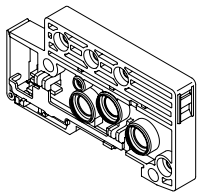
It is possible to implement measures to prevent mixture of different pressures and increase of back pressure by using the combination of a partition block and a supply and exhaust block.

N4G1 - S

Model no. Ⓐ Type

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

N4G1-S

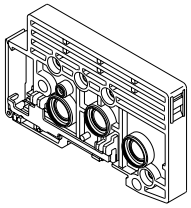


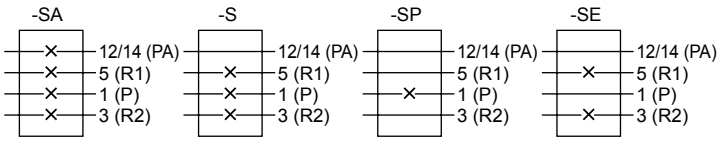
N4G2 - SA

Model no. Ⓐ Type

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

N4G2-S

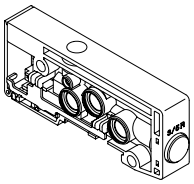


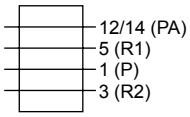


G. Mix block

Installed in cases when 4G1 and 4G2 coexist in the same manifold.
The installation positions will be 4G1 on the left side of the mix block and 4G2 on the right side.

N4G12 - MIX



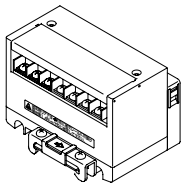


Wiring section (Electrical block) * Orders cannot be placed for only an electrical block.

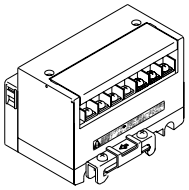
H. Centralized terminal block

M3 thread specifications

N4G1-T10

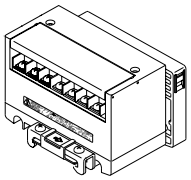


N4G1-T10R

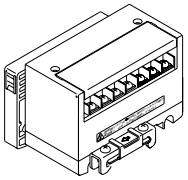


M3 thread specifications

N4G2-T10

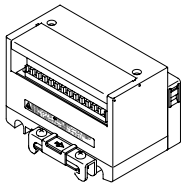


N4G2-T10R

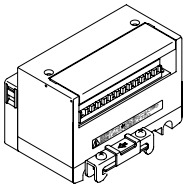


Push tightening specifications

N4G1-T11

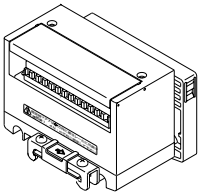


N4G1-T11R

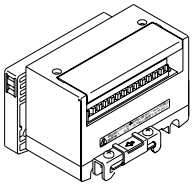


Push tightening specifications

N4G2-T11

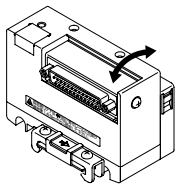


N4G2-T11R

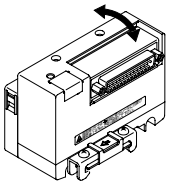


I. D sub-connector block

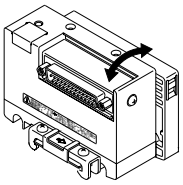
N4G1-T30



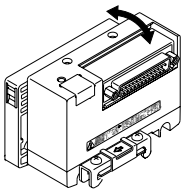
N4G1-T30R



N4G2-T30



N4G2-T30R

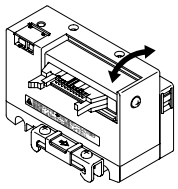


* Refer to page 387 for the model no. of cables with a D sub-connector cable.

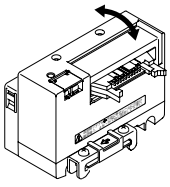
J. Flat cable connector block

● With power supply terminal

N4G1-T50

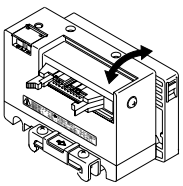


N4G1-T50R

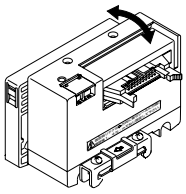


● With power supply terminal

N4G2-T50

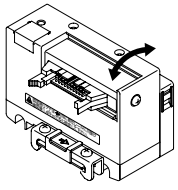


N4G2-T50R

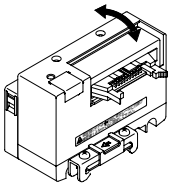


● Without power supply terminal

N4G1-T51(N4G1-T52)
(N4G1-T53)

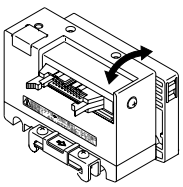


N4G1-T51R(N4G1-T52R)
(N4G1-T53R)

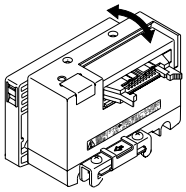


● Without power supply terminal

N4G2-T51(N4G2-T52)
(N4G2-T53)



N4G2-T51R(N4G2-T52R)
(N4G2-T53R)



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

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

K. Serial transmission block

● Connector connection type

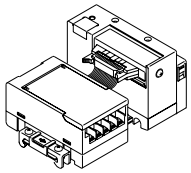
N4G1 - T6G1

Model no. Ⓐ Type

Ⓐ Type	
T6A0/1	UNIWIRE SYSTEM 8 points/16 points
T6C0/1	CompoBus/S8 points/16 points
T6G1	CC-Link 16 points
T6E0/1	S-LINK 8 points/16 points
T6J0/1	UNIWIRE H SYSTEM 8 points/16 points

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

N4G1-T6*



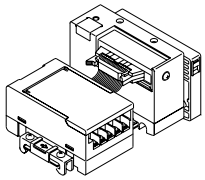
N4G2 - T6G1

Model no. Ⓐ Type

Ⓐ Type	
T6A0/1	UNIWIRE SYSTEM 8 points/16 points
T6C0/1	CompoBus/S8 points/16 points
T6G1	CC-Link 16 points
T6E0/1	S-LINK 8 points/16 points
T6J0/1	UNIWIRE H SYSTEM 8 points/16 points

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

N4G2-T6*



● Thin slot type

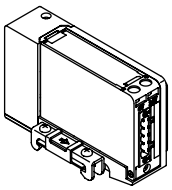
N4G1 - T7D1

Model no. Ⓐ Type

Ⓐ Type	
T7C0/1	CompoBus/S8 points/16 points
T7D1	DeviceNet 16 points
T7E0/1	S-LINK 8 points/16 points
T7G1	CC-Link 16 points
T7L1	SAVE NET 16 points

* Connectors for the communication cable wiring section are attached.

N4G1-T7*



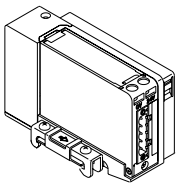
N4G2 - T7G1

Model no. Ⓐ Type

Ⓐ Type	
T7C0/1	CompoBus/s8 points/16 points
T7D1	DeviceNet 16 points
T7E0/1	S-LINK 8 points/16 points
T7G1	CC-Link 16 points
T7L1	SAVE NET 16 points

* Connectors for the communication cable wiring section are attached.

N4G2-T7*



L. Serial transmission slave unit

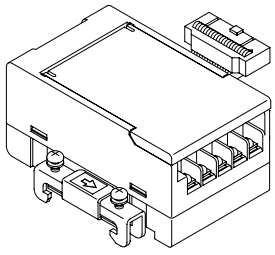
* It is possible to place an order for only the serial transmission slave unit.

● Discrete serial transmission slave unit (connector connection type)

4G - OPP3 - 0A

Ⓐ Wiring method

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

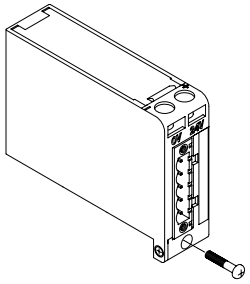


● Discrete serial transmission slave unit (thin slot type)

4G - OPP4 - 0CA

Ⓐ Wiring method

Symbol	Descriptions
Ⓐ Type	
0CA	T7C0 Thin type CompoBus/S 8 points
1CA	T7C1 Thin type CompoBus/S 16 points
1D	T7D1 Thin type Device Net 16 points
0E	T7E0 Thin type S-LINK 8 points
1E	T7E1 Thin type S-LINK 16 points
1G	T7G1 Thin type CC-Link 16 points
1L	T7L1 Thin type SAVE NET 16 points
1S	T7S1 Thin type CompoNet 16 points
1S-P	T7SP1 Thin type CompoNET 16 points PNP

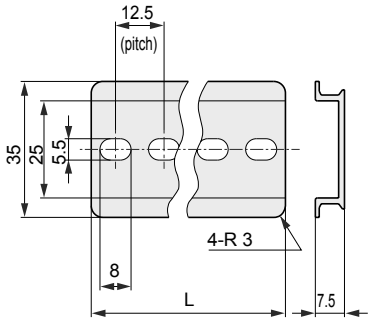


Related products

Mounting rail, silencer, blanking plug, tag plate

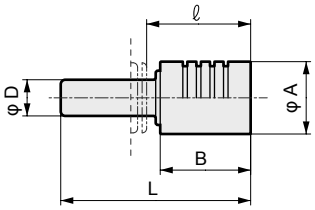
● Mounting rail

N4G-BAA <length>



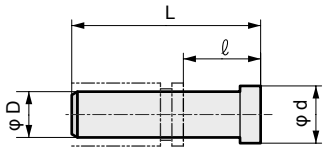
- The min. length is 87.5 mm.
- Select the length in pitches of 12.5 mm.
- Refer to page 373 for details.

● Silencer



Model no.	D	L	A	B	ℓ
SLW-H6	φ 6	41	16	20	23.5
SLW-H8	φ 8	42	16	20	23
SLW-H10	φ 10	53	20	27	31.5

● Blanking plug



Model no.	D	L	ℓ	d
GWP4-B	φ 4	27	16	6
GWP6-B	φ 6	29	11.5	8
GWP8-B	φ 8	33	14	10
GWP10-B	φ 10	40	18.5	12

● Tag plate Shipped upon being attached to the manifold.

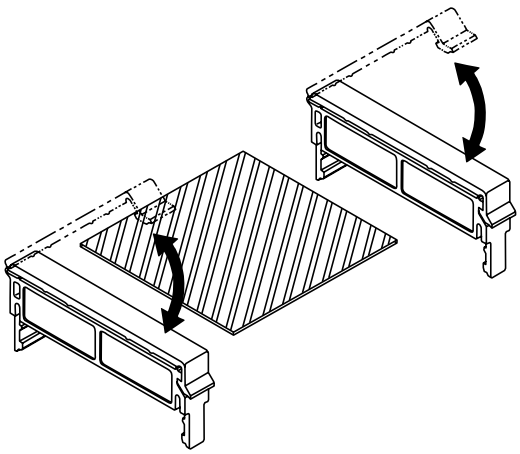
When required, place a circle on the field for tag plates in the manifold specifications on pages 375 to 378.

<Tag holder>

N4G1-TAG-HOLDER

Ⓐ Model no.
N4G1
N4G2

(Available in sets of 2.)



<Tag plate>

N4G1-TAG-PLATE-Ⓐ-200 Note 1

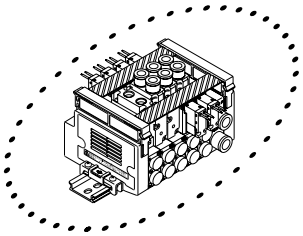
Ⓐ Model no.	Ⓑ Type		Ⓒ Length (mm) Note 1
N4G1	A	MN4GA1/2 shared	200
	B1	Wide type for MN4GB1	300
	B2	Narrow type for MN4GB1 Note 2	400
N4G2	B	For MN4GB2	

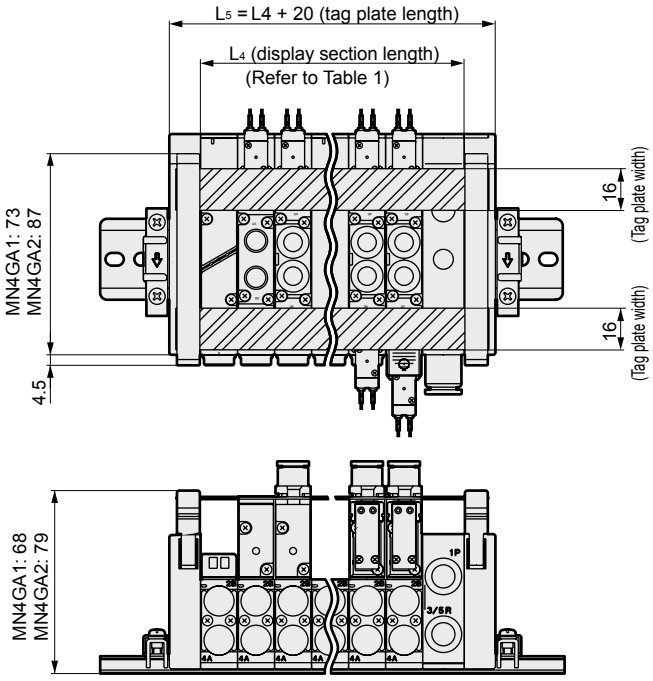
Note 1: As the <length> of the plates are available in the three different lengths of 200, 300, and 400, cut the plates to suit the product length.
Note 2: With the narrow type, manual operations are possible even with the tag plate covering the unit.
Note 3: Tag plates cannot be attached when spacers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

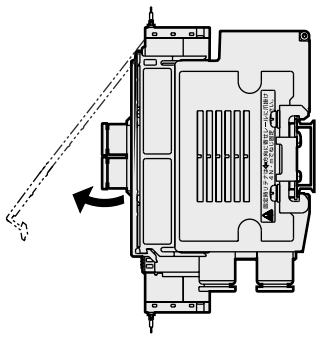
Dimensions: tag plate

MN4GA1/2

● Tag plate

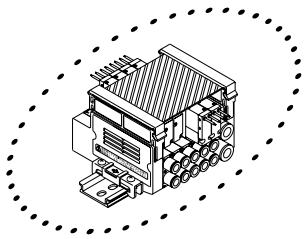


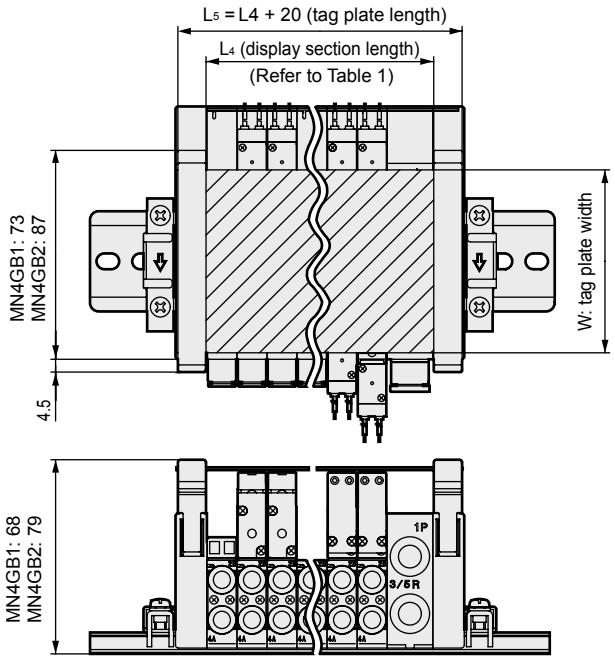


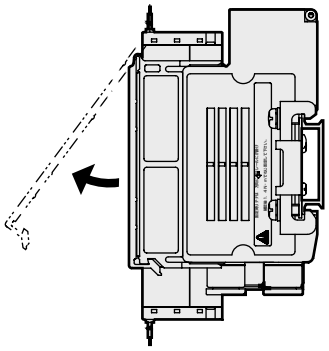


MN4GB1/2

● Tag plate







Model no.		W
N4G1-TAG-PLATE-B1-length	□	64
N4G1-TAG-PLATE-B2-length	□	30
N4G2-TAG-PLATE-B-length	□	45

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

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

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

Discontinue

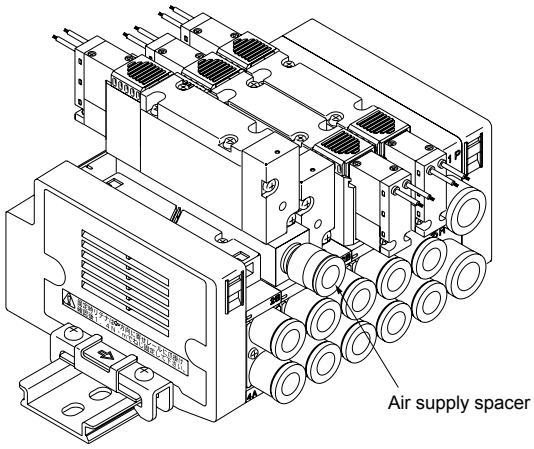
MN4GA/4GB Series

Block manifold; related products

Related products

Air supply spacer/pilot check valve

● Air supply spacer



Specifications

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

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

How to order discrete units

4G 2 – P – GWS6

Ⓐ Air supply spacer model no.

Ⓑ Port size Note 1

Symbol	Descriptions	Model no. 4GA1	4GB1	4GA2	4GB2
Ⓐ Air supply spacer model no.					
1	For 4G1	●			
2	For 4G2			●	
Ⓑ Port size					
Blank	M5 thread (4G1), Rc thread (4G2)	(1)		(2)	
GWS4	φ 4 fitting	●			
GWS6	φ 6 fitting	●		●	
GWS8	φ 8 fitting			●	

is not available.

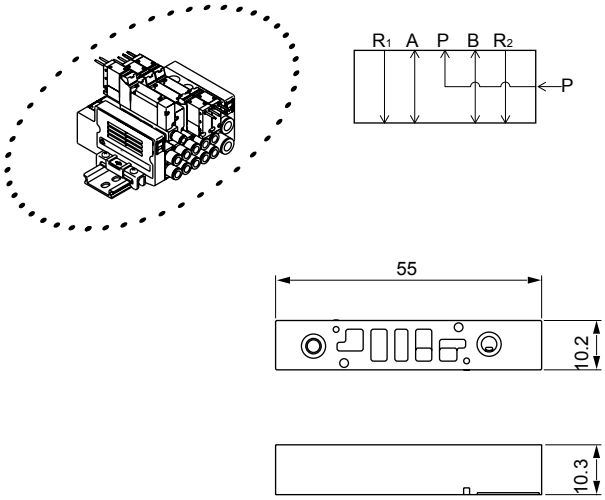
Accessories: 4G1 set screws (2), dedicated gasket (1)
4G2 set screws (2), PR check valves (2), body gasket (1)

⚠ Note on selection guide

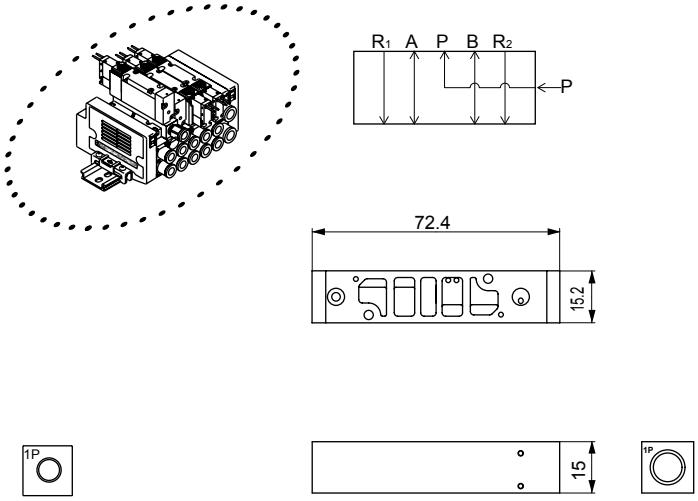
Note 1 Blank indicates (1) M5, (2) Rc1/8.
Note 2 Indicate the mounting positions and quantity of the air supply spacers for manifolds in the manifold specifications.
Note 3 When the A/B port fitting is an elbow type, the intake port of the air supply spacer will be faced towards the opposite side (a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

Dimensions

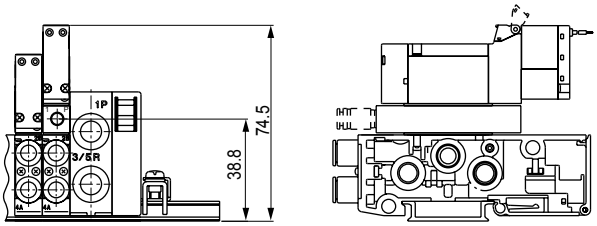
● 4G1



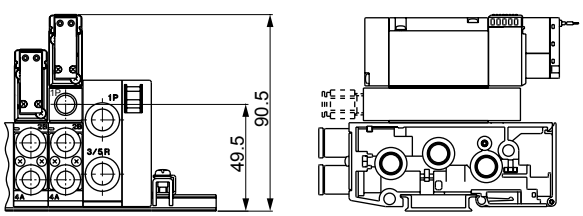
● 4G2



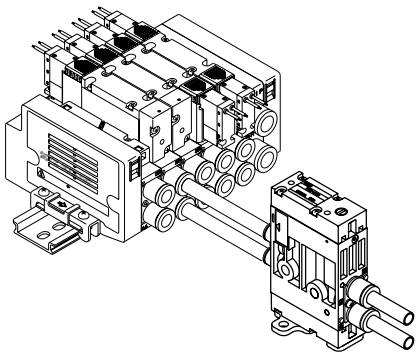
Dimensions upon installation



Dimensions upon installation



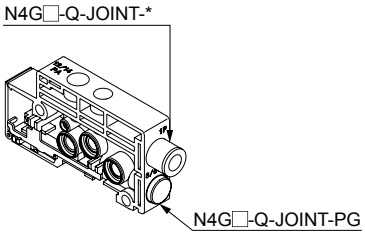
● Pilot check valve

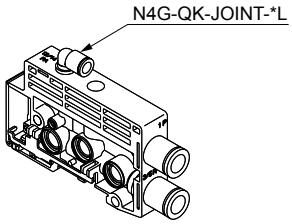


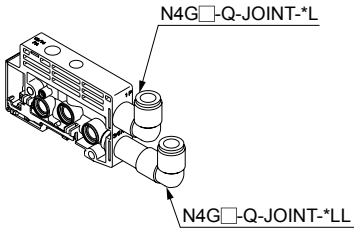
Refer to page 157 for details.

Related parts

1. MN4G cartridge type push-in fitting for supply and exhaust block







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

Part model no.
N4G1-Q-JOINT-4
N4G1-Q-JOINT-6
N4G1-Q-JOINT-6L
N4G1-Q-JOINT-6LL
N4G1-Q-JOINT-8
N4G1-Q-JOINT-8L
N4G1-Q-JOINT-8LL
N4G1-Q-JOINT-PG

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

Part model no.
N4G2-Q-JOINT-8
N4G2-Q-JOINT-8L
N4G2-Q-JOINT-8LL
N4G2-Q-JOINT-10
N4G2-Q-JOINT-10L
N4G2-Q-JOINT-10LL
N4G2-Q-JOINT-PG

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

Part model no.
N4G-QK-JOINT-6
N4G-QK-JOINT-6L

MEMO

How to prepare block manifold MN4G Series manifold specifications

● Example of manifold model no.

MN 4 GA1 8 0- CX - T50 W H - 8 - 3

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

When filling in this field, select the model no. from "Block configurations" (pages 358 to 369). (Note: Fill in for reduced wiring.)

Part name	Model no.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Electrical block (pages 364, 365)	N4G1-T 50	○																														1
Valve block with solenoid valve (page 360)	N4GA1 1 0- C4		○	○																												2
	N4GA1 2 0- C6					○																										1
	N4GA1 3 0- C4				○																											1
	N4GA1 0-																															
	N4GA1 0-																															
	N4GA1 0-																															
	N3GA1 1 0- C4									○	○	○																				3
	N3GA1 0-																															
Valve block with masking plate (page 360)	N4GA1-MP																															
	N4GA1-MPS																															
	N4GA1-MPD						○																									1
Supply and exhaust block (page 362)	N4G1-Q - 8L							○					○																			2
	N4G1-Q -																															
	N4G1-Q -																															
Partition block (page 363)	N4G1-S A								○																							1
	N4G1-S																															
	N4G1-S																															
End block (page 362)	N4G1-E R													○																		1
	N4G1-E																															
Mounting rail	L_2= (How to calculate length on next page)	Blanking plug: GWP4-B / GWP6-B / GWP8-B; Silencer: SLW-H6 / SLW-H8; Tag plate (attached): A; Cable with D sub-connector: N4T-CABLE-D0□-□; Push-in fitting tube remover (standard attached) ☑ Not required (Check): ○																														Accessories

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

Place a check here if the tube remover (standard attached product) is not required.

Preparing the manifold specifications

● Fill in order from the left with the piping port facing forward.
(Please include the model no. of the block selected from block configurations (pages 358 to 369) and instructions for the arrangement.)
● Indicate the total number of blocks specified in the quantity on the right end of the table.
● Place a circle on the required accessories.
● Fill in the length of the mounting rail. (Fill in only when a length other than the standard length is required.)
● As manifold specifications are available for each of the various series, fill in the form for the corresponding specifications.

- MN4GA1: page 375
- MN4GB1: page 376
- MN4GA2: page 377
- MN4GB2: page 378
- MN4GA×1/2 (Mix manifold): page 379
- MN4GB×1/2 (Mix manifold): page 380

Mounting rail length (L2)

① Determine the rail length using the calculation method shown below.
The obtained length is standard.

② For the standard length, it is not necessary to indicate the length (L2) in the specifications.
Indicate the length when using a non-standard length.

● How to determine the length of the mounting rail

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

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

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

Rail mounting pitch (L3) = L2 - 12.5

Block length (width) dimensions table

(mm)

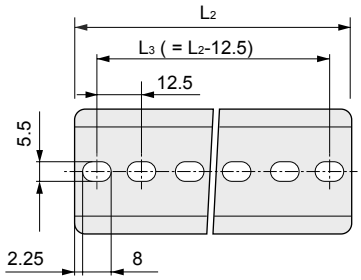
			MN4GA/B1	MN4GA/B2	MN4G1/2MIX	
					MN4GA/B1	MN4GA/B2
A	Valve block		10.5	16	10.5	16
B	Supply and exhaust block		16	18	16	18
C	Partition block		10.5	10.5	10.5	10.5
D	Individual wiring		42	47	44.5	
	Electrical block for reduced wiring	T10/T11	87	89.5	89.5	
		T10R/T11R	87	89.5	87	
		T30/T5*	72.5	75	75	
		T30R/T5*R	72.5	75	72.5	
		T6*	144	146.5	146.5	
		T7*	67.5	70	70	
E	Mixed block				16	

* The end block is included in the electrical block.

● DIN rail length quick reference table

L1 · · Manifold length	47.5 or less	Over 47.5 to 60 or less	60 to 72.5	72.5 to 85	85 to 97.5	97.5 to 110	110 to 122.5	122.5 to 135	135 to 147.5	147.5 to 160	160 to 172.5	172.5 to 185	185 to 197.5	197.5 to 210	210 to 222.5	222.5 to 235	235 to 247.5	247.5 to 260	260 to 272.5	272.5 to 285	285 to 297.5	297.5 to 310	310 to 322.5	322.5 to 335	335 to 347.5	347.5 to 360
L2 · · Rail length	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5	400
Pitch L3	75	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5

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



How to prepare the wiring specifications

This is not required for standard wiring or double wiring.

● Wiring specifications (example)

* The following example has been filled out in accordance with the manifold specifications on the previous page.

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

* Note that when the wiring method is T50/T50R, the polarity of COM will be + (plus).

● Precaution regarding wiring specifications

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

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

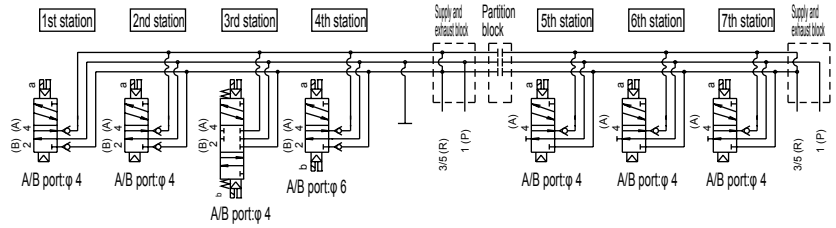
③ As the connector pin no. and valve no. will differ for every reduced wiring method (T1*/T30/T5*/T6*/T7*), fill out the form upon reviewing the precautions (pages 383 to 398) for each reduced wiring method.

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

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

⑥ It is not possible to install spare wires for expansions of stations in advance. Wire the socket assembly of the solenoid valve for expansion of stations. Refer to page 400 for instructions on how to expand stations.

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



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

* Select the model no. from block configurations (pages 358 to 369) and the page for model nos. of each of the specifications.

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

Discontinue

MN4GA1 Block manifold specifications

● Contact ● Quantity set(s) ● Request date /

Slip no.	Order no.

Date of issue / /

Your company name

Contact

Order no.

● Manifold model no.

MN ☐ GA1 ☐ 0- ☐ - ☐ ☐ ☐ - ☐ - ☐

Ⓐ Model no. Ⓑ Solenoid position Ⓒ Port size Ⓓ Electrical connections (reduced wiring connection) Ⓔ Terminal and connector pin wiring (Note: Fill in for reduced wiring.) Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When filling in this field, select the model no. from "Block configurations" (pages 358 to 369).

Part name (page)	Model no.	Layout position																													Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Electrical block (pages 364, 365)	**N4G1-T** ☐																														
Valve block with solenoid valve (page 360)	**N4GA1** ☐ **0-** ☐																														
	N4GA1 ☐ **0-** ☐																														
	N4GA1 ☐ **0-** ☐																														
	N4GA1 ☐ **0-** ☐																														
	N4GA1 ☐ **0-** ☐																														
	N4GA1 ☐ **0-** ☐																														
	N3GA1 ☐ **0-** ☐																														
	N3GA1 ☐ **0-** ☐																														
Valve block with masking plate (page 360)	**N4GA1-MP**																														
	N4GA1-MPS																														
	N4GA1-MPD																														
Air supply spacer (page 368)	**4G1-P-** ☐																														
	4G1-P- ☐																														
Supply and exhaust block (page 362)	**N4G1-Q** ☐ **-** ☐																														
	N4G1-Q ☐ **-** ☐																														
	N4G1-Q ☐ **-** ☐																														
Partition block (page 363)	**N4G1-S** ☐																														
	N4G1-S ☐																														
	N4G1-S ☐																														
End block (page 362)	**N4G1-E** ☐																														
	N4G1-E ☐																														

Mounting rail	**L2=** ☐ (How to determine the length page 373)	Blanking plug						Silencer				Tag plate (attached)		Accessories
		GWP4-B		**GWP6-B**		**GWP8-B**		**SLW-H6**		**SLW-H8**		**A**		
		Cable with D sub-connector		N4T-CABLE-D0☐-☐				Push-in fitting tube remover (standard attached) ☐ Not required (Check)						

Discontinue

MN4GB1 Block manifold specifications

● Contact ● Quantity set(s) ● Request date /

Slip no.	Order no.

Date of issue / /

Your company name

Contact

Order no.

● Manifold model no.

MN4GB1 ☐ **0-** ☐ **-** ☐ ☐ ☐ **-** ☐ **-** ☐

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

When filling in this field, select the model no. from "Block configurations" (pages 358 to 369). (Note: Fill in for reduced wiring.)

Part name (page)	Model no.	Layout position																														Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Electrical block (pages 364, 365)	N4G1-T ☐																															
Valve block with solenoid valve (page 360)	N4GB1 ☐ 0- ☐																															
	N4GB1 ☐ 0- ☐																															
	N4GB1 ☐ 0- ☐																															
	N4GB1 ☐ 0- ☐																															
	N4GB1 ☐ 0- ☐																															
	N4GB1 ☐ 0- ☐																															
	N3GB1 ☐ 0- ☐																															
	N3GB1 ☐ 0- ☐																															
Valve block with masking plate (page 360)	N4GB1-MP- ☐																															
	N4GB1-MPS- ☐																															
	N4GB1-MPD- ☐																															
Air supply spacer (page 368)	4G1-P- ☐																															
	4G1-P- ☐																															
Supply and exhaust block (page 362)	N4G1-Q ☐ - ☐																															
	N4G1-Q ☐ - ☐																															
	N4G1-Q ☐ - ☐																															
Partition block (page 363)	N4G1-S ☐																															
	N4G1-S ☐																															
	N4G1-S ☐																															
End block (page 362)	N4G1-E ☐																															
	N4G1-E ☐																															

Mounting rail	L_2= ☐ (How to determine the length page 373)	Blanking plug						Silencer				Tag plate (attached)				Accessories
		GWP4-B		GWP6-B		GWP8-B		SLW-H6		SLW-H8		B1		B2		
		Cable with D sub-connector			N4T-CABLE-D0□-□				Push-in fitting tube remover (standard attached) □ Not required (Check)							

MN4GA2 Block manifold specifications

● Contact ● Quantity set(s) ● Request date /

Slip no.	Order no.

Date of issue / /

Your company name

Contact

Order no.

● Manifold model no.

MN ☐ GA2 ☐ 0- ☐ - ☐ ☐ ☐ - ☐ - ☐

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

When filling in this field, select the model no. from "Block configurations" (pages 358 to 369). (Note: Fill in for reduced wiring.)

Part name (page)	Model no.	Layout position																													Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Electrical block (pages 364, 365)	N4G2-T																														
Valve block with solenoid valve (page 360)	N4GA2 0-																														
	N4GA2 0-																														
	N4GA2 0-																														
	N4GA2 0-																														
	N4GA2 0-																														
	N4GA2 0-																														
	N3GA2 0-																														
	N3GA2 0-																														
Valve block with masking plate (page 360)	N4GA2-MP																														
	N4GA2-MPS																														
	N4GA2-MPD																														
Air supply spacer (page 368)	4G2-P-																														
	4G2-P-																														
Supply and exhaust block (page 362)	N4G2-Q -																														
	N4G2-Q -																														
	N4G2-Q -																														
Partition block (page 363)	N4G2-S																														
	N4G2-S																														
	N4G2-S																														
End block (page 362)	N4G2-E																														
	N4G2-E																														

Mounting rail	L_2= (How to determine the length page 373)	Blanking plug				Silencer		Tag plate (attached)		Accessories
		GWP4-B		GWP8-B		SLW-H8		A		
		GWP6-B		GWP10-B		SLW-H10				
		Cable with D sub-connector		N4T-CABLE-D0☐-☐						

4GA/B
M4GA/B
4GA4/B4
MN4GA/B
4GA/B (Master)
MN3E MN4E
W4GA/B2
W4GB4
4TB
4L2-4/LMF0
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (Master)
4F
4F (Master)
PV5G GMF
PV5 GMF
PV5S-0
3QR 3QB
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4F*0E
HMV HSV
2QV 3QV
SKH
PCD
Silencer
Total air system
Total air system (Gamma)
Ending

MN4GB2 Block manifold specifications

● Contact ● Quantity set(s) ● Request date /

Date of issue / /

Your company name

Contact

Order no.

Slip no.	Order no.

● Manifold model no.

MN4GB2 ☐ **0-** ☐ **-** ☐ ☐ ☐ **-** ☐ **-** ☐

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

When filling in this field, select the model no. from "Block configurations" (pages 358 to 369). (Note: Fill in for reduced wiring.)

Layout position

Part name (page)	Model no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Electrical block (pages 364, 365)	N4G2-T																															
Valve block with solenoid valve (page 360)	N4GB2 0-																															
	N4GB2 0-																															
	N4GB2 0-																															
	N4GB2 0-																															
	N4GB2 0-																															
	N4GB2 0-																															
	N3GB2 0-																															
	N3GB2 0-																															
Valve block with masking plate (page 360)	N4GB2-MP -																															
	N4GB2-MPS-																															
	N4GB2-MPD-																															
Air supply spacer (page 368)	4G2-P-																															
	4G2-P-																															
Supply and exhaust block (page 362)	N4G2-Q -																															
	N4G2-Q -																															
	N4G2-Q -																															
Partition block (page 363)	N4G2-S																															
	N4G2-S																															
	N4G2-S																															
End block (page 362)	N4G2-E																															
	N4G2-E																															

Mounting rail		Blanking plug				Silencer		Tag plate (attached)		Accessories
	L2=	**GWP4-B**		**GWP8-B**		**SLW-H8**		**B**		
		GWP6-B		**GWP10-B**		**SLW-H10**				
	(How to determine the length page 373)	Cable with D sub-connector		N4T-CABLE-D0□-□						

Discontinue

MN4GA1/2 Mix manifold specifications

● Contact ● Quantity set(s) ● Request date /

Slip no.	Order no.

Date of issue / /

Your company name

Contact

Order no.

● Manifold model no.

MN ☐ GAX12- ☐ - ☐ ☐ ☐ ☐ - ☐ - ☐

Ⓐ Model no. Ⓒ Port size Ⓓ Electrical connections Ⓔ Terminal and connector pin wiring Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When filling in this field, select the model no. from "Block configurations" (pages 358 to 369). (reduced wiring connection) (Note: Fill in for reduced wiring.)

Part name (page)	Model no.	Layout position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	Quantity
Electrical block (pages 364, 365)	N4G ☐ -T ☐		
Valve block with solenoid valve (page 360)	N4GA ☐ 0- ☐		
	N4GA ☐ 0- ☐		
	N4GA ☐ 0- ☐		
	N4GA ☐ 0- ☐		
	N4GA ☐ 0- ☐		
	N4GA ☐ 0- ☐		
	N3GA ☐ 0- ☐		
	N3GA ☐ 0- ☐		
Valve block with masking plate (page 360)	N4GA ☐ -MP		
	N4GA ☐ -MPS		
	N4GA ☐ -MPD		
Air supply spacer (page 368)	4G1-P- ☐		
	4G2-P- ☐		
Mix block (page 363)	N4G12-MIX		
Supply and exhaust block (page 362)	N4G ☐ -Q ☐ - ☐		
	N4G ☐ -Q ☐ - ☐		
	N4G ☐ -Q ☐ - ☐		
Partition block (page 363)	N4G ☐ -S ☐		
	N4G ☐ -S ☐		
	N4G ☐ -S ☐		
End block (page 362)	N4G ☐ -E ☐		
	N4G ☐ -E ☐		
Mounting rail	L_2= ☐ (How to determine the length page 373)	Blanking plug: GWP ☐ -B ☐ / GWP ☐ -B ☐ / GWP ☐ -B ☐ / GWP ☐ -B ☐ — Silencer: SLW-H ☐ ☐ / SLW-H ☐ ☐ — Cable with D sub-connector — N4T-CABLE-D0☐-☐ — Push-in fitting tube remover (standard attached) ☐ Not required (Check)	Accessories

MN4GB1/2 Mix manifold specifications

● Contact ● Quantity set(s) ● Request date /

Date of issue / /

Your company name

Contact

Order no.

Slip no.	Order no.

● Manifold model no.

MN4GBX12- [ ] - [ ] [ ] [ ] - [ ] - [ ]

Ⓐ Model no. Ⓒ Port size Ⓓ Electrical connections Ⓔ Terminal and connector pin wiring Ⓕ Option Ⓖ Station no. Ⓗ Voltage

When filling in this field, select the model no. from "Block configurations" (pages 358 to 369). (reduced wiring connection) (Note: Fill in for reduced wiring.)

Part name	Model no.	Layout position																														Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Electrical block (pages 364, 365)	N4G -T																															
Valve block with solenoid valve (page 360)	N4GB 0-																															
	N4GB 0-																															
	N4GB 0-																															
	N4GB 0-																															
	N4GB 0-																															
	N4GB 0-																															
	N3GB 0-																															
	N3GB 0-																															
Valve block with masking plate (page 360)	N4GB -MP-																															
	N4GB -MPS-																															
	N4GB -MPD-																															
Air supply spacer (page 368)	4G1-P-																															
	4G2-P-																															
Mix block (page 363)	N4G12-MIX																															
Supply and exhaust block (page 362)	N4G -Q -																															
	N4G -Q -																															
	N4G -Q -																															
Partition block (page 363)	N4G -S																															
	N4G -S																															
	N4G -S																															
End block (page 362)	N4G -E																															
	N4G -E																															

Mounting rail		Blanking plug				Silencer		Accessories
	L_2=	GWP -B	GWP -B	GWP -B	GWP -B	SLW-H	SLW-H	
	(How to determine the length page 373)	Cable with D sub-connector	N4T-CABLE-D0□-□		Push-in fitting tube remover (standard attached) □ Not required (Check)			

Common terminal block type (T10/T11) wiring specifications

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

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

D sub-connector type (T30) wiring specifications

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

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

Discontinue

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

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

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

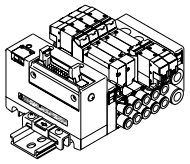
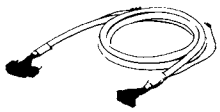
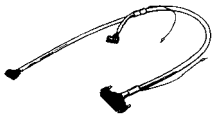
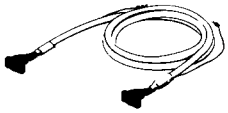
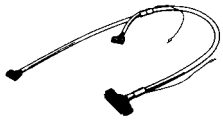
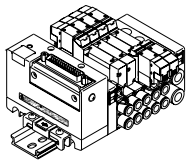
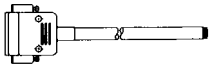
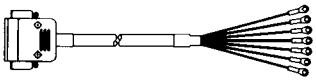
* Note that when the wiring method is T50/T50R, the polarity of COM will be + (plus).

Serial transmission (T6*/T7*) wiring specifications

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

Serial transmission type	Connector pin no.		Valve No.														
	T6*	T7*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Connector connection type	1	1																
T6A0: UNIWIRE SYSTEM 8 points	2	2																
T6A1: UNIWIRE SYSTEM 16 points	3	3																
T6C0: CompoBus/S8 points	4	4																
T6C1: CompoBus/S16 points	5	5																
T6G1: CC-Link 16 points	6	6																
T6E0: S-LINK 8 points	7	7																
T6E1: S-LINK 16 points	8	8																
T6J0: UNIWIRE H SYSTEM 8 points	9	9																
T6J1: UNIWIRE H SYSTEM 16 points	10 COM	10																
	11	11																
	12	12																
Thin slot-insertion type	13	13																
T7C0: CompoBus/S 8 points	14	14																
T7C1: CompoBus/S 16 points	15	15																
T7D1: DeviceNet 16 points	16	16																
T7E0: S-LINK 8 points	17	17																
T7E1: S-LINK 16 points	18	18																
T7G1: CC-Link 16 points	19	19																
T7L1: SAVE NET 16 points	20 COM	20																

Case example of wiring connection (recommended combination) ● Use with the combination below.

Wiring method	Case example of connection cable	PC and PC related equipment		
		Manufacturer	PC	Connection cable
Flat cable connector (T50/T50R) (T51/T51R) 		OMRON	Type C200H-0D215 Type C500-0D415CN	Type G79-*C
			Type C500-0D213	Type 79-0*DC-*
		Panasonic Electric Works Co., Ltd.	AFP33484	AY15133 to 7
			AFP53487	AY15223 to 7
D sub-connector (T30/T30R) 				Cable with D sub-connector (Refer to page 387 for cable model no. and details.)
				

*: Set the power supply voltage for valve activation by considering the voltage drop of the PLC and the flat cable.

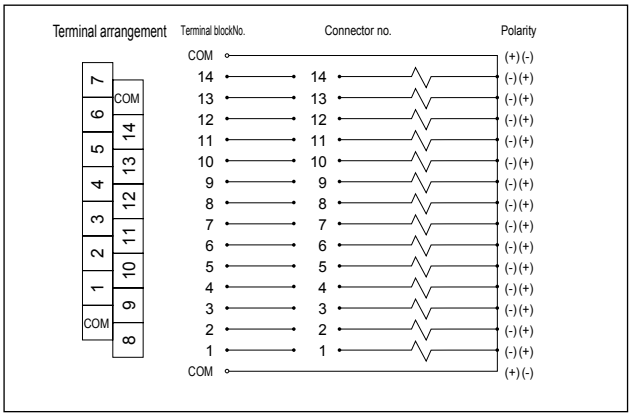
Centralized terminal block type (wiring method T10)

Notes on wiring

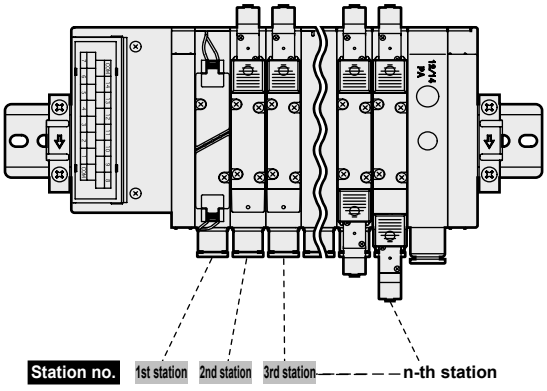
[Caution for centralized terminal block type (T10)]

(1) With the centralized terminal block type, common wires are treated inside beforehand.
When using the independent contact PLC output unit, lay the common wires at the contact section.
(2) Check the correspondence of the number of stations with solenoid positions to prevent incorrect wiring.
(Refer to the table below.)
(3) Note that the correspondence cannot be applied if the point of solenoid stations exceeds 14.
(4) The manifold station nos. are set in order from left with the piping port facing forward.
(5) The voltage could drop because of simultaneous energizing or the cable length. Confirm that the voltage drop for the solenoid is within 10% of the rated voltage.

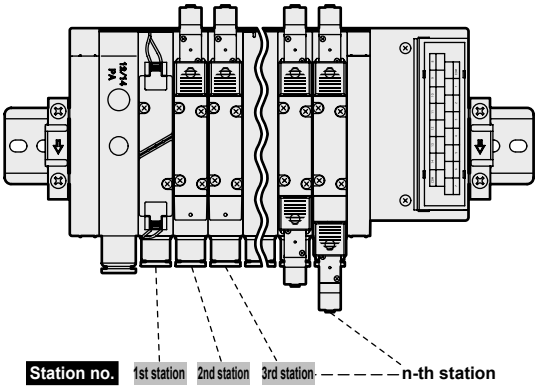
Internal wiring of wiring method T10 (up to 14 solenoid stations)



T10 (left side specifications)



T10R (right side specifications)



Terminal array of wiring method T10 (example)

*: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the 1st station and the 2nd station. The alphabetic characters a and b indicate a side solenoid and b side solenoid.
Max. station no. differs depending on the model.
Check the individual specifications.

Terminal No.

COM	14	13	12	11	10	9	8
7	6	5	4	3	2	1	COM

● For single solenoid valve

<Standard wiring>

Terminal block No.	14	13	12	11	10	9	8
Valve No.	14a	13a	12a	11a	10a	9a	8a
Terminal block No.	7	6	5	4	3	2	1
Valve No.	7a	6a	5a	4a	3a	2a	1a

<Double wiring>

Terminal block No.	14	13	12	11	10	9	8
Valve No.	(Void)	7a	(Void)	6a	(Void)	5a	(Void)
Terminal block No.	7	6	5	4	3	2	1
Valve No.	4a	(Void)	3a	(Void)	2a	(Void)	1a

● For double solenoid valve

Terminal block No.	14	13	12	11	10	9	8
Valve No.	7b	7a	6b	6a	5b	5a	4b
Terminal block No.	7	6	5	4	3	2	1
Valve No.	4a	3b	3a	2b	2a	1b	1a

Terminal block No.	14	13	12	11	10	9	8
Valve No.	7b	7a	6b	6a	5b	5a	4b
Terminal block No.	7	6	5	4	3	2	1
Valve No.	4a	3b	3a	2b	2a	1b	1a

● For mixed use (single/double solenoid mixture)

Terminal block No.	14	13	12	11	10	9	8
Valve No.	11a	10a	9a	8a	7b	7a	6a
Terminal block No.	7	6	5	4	3	2	1
Valve No.	5a	4b	4a	3b	3a	2a	1a

Terminal block No.	14	13	12	11	10	9	8
Valve No.	7b	7a	(Void)	6a	(Void)	5a	4b
Terminal block No.	7	6	5	4	3	2	1
Valve No.	4a	3b	3a	(Void)	2a	(Void)	1a

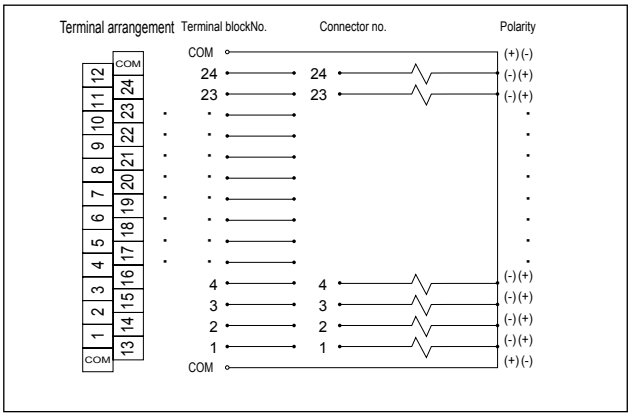
Centralized terminal block type (wiring method T11)

Notes on wiring

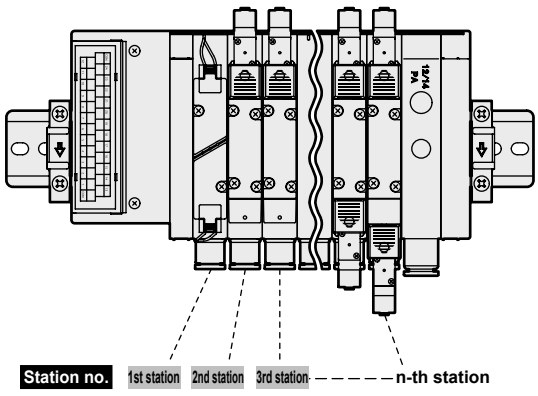
[Caution for centralized terminal block type (T11)]

(1) With the centralized terminal block type, common wires are treated inside beforehand.
When using the independent contact PLC output unit, lay the common wires at the contact section.
(2) Check the correspondence of the number of stations with solenoid positions to prevent incorrect wiring.
(Refer to the table below.)
(3) Note that the correspondence cannot be applied if the point of solenoid stations exceeds 24.
(4) The manifold station nos. are set in order from left with the piping port facing forward.
(5) The voltage could drop because of simultaneous energizing or the cable length. Confirm that the voltage drop for the solenoid is within 10% of the rated voltage.

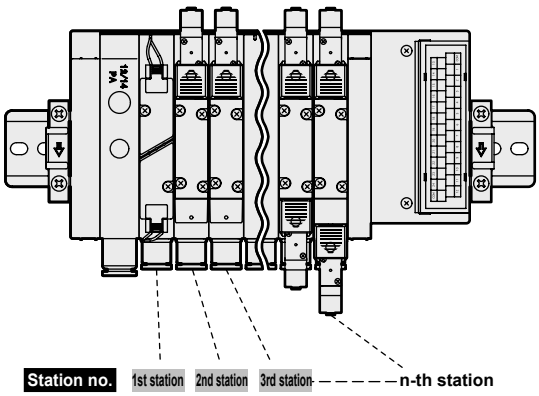
Internal wiring of wiring method T11 (up to 24 solenoid stations)



T11 (left side specifications)



T11R (right side specifications)



Terminal array of wiring method T11 (example)

*: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the 1st station and the 2nd station. The alphabetic characters a and b indicate a side solenoid and b side solenoid. Max. station no. differs depending on the model. Check the individual specifications.

Terminal No.

COM	24	23	22	21	20	19	18	17	16	15	14	13
12	11	10	9	8	7	6	5	4	3	2	1	COM

● For single solenoid valve

<Standard wiring>

Terminal block No.	24	23	22	21	20	19	18	17	16	15	14	13
Valve No.	24a	23a	22a	21a	20a	19a	18a	17a	16a	15a	14a	13a
Terminal block No.	12	11	10	9	8	7	6	5	4	3	2	1
Valve No.	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a

<Double wiring>

Terminal block No.	24	23	22	21	20	19	18	17	16	15	14	13
Valve No.	(Void)	12a	(Void)	11a	(Void)	10a	(Void)	9a	(Void)	8a	(Void)	7a
Terminal block No.	12	11	10	9	8	7	6	5	4	3	2	1
Valve No.	(Void)	6a	(Void)	5a	(Void)	4a	(Void)	3a	(Void)	2a	(Void)	1a

● For double solenoid valve

Terminal block No.	24	23	22	21	20	19	18	17	16	15	14	13
Valve No.	12b	12a	11b	11a	10b	10a	9b	9a	8b	8a	7b	7a
Terminal block No.	12	11	10	9	8	7	6	5	4	3	2	1
Valve No.	6b	6a	5b	5a	4b	4a	3b	3a	2b	2a	1b	1a

Terminal block No.	24	23	22	21	20	19	18	17	16	15	14	13
Valve No.	12b	12a	11b	11a	10b	10a	9b	9a	8b	8a	7b	7a
Terminal block No.	12	11	10	9	8	7	6	5	4	3	2	1
Valve No.	6b	6a	5b	5a	4b	4a	3b	3a	2b	2a	1b	1a

● For mixed use (single/double solenoid mixture)

Terminal block No.	24	23	22	21	20	19	18	17	16	15	14	13
Valve No.	18b	18a	17a	16a	15a	14a	13a	12b	12a	11b	11a	10a
Terminal block No.	12	11	10	9	8	7	6	5	4	3	2	1
Valve No.	9a	8a	7b	7a	6a	5a	4b	4a	3b	3a	2a	1a

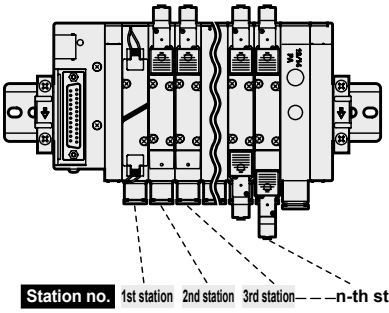
Terminal block No.	24	23	22	21	20	19	18	17	16	15	14	13
Valve No.	12b	12a	11b	11a	(Void)	10a	(Void)	9a	(Void)	8a	7b	7a
Terminal block No.	12	11	10	9	8	7	6	5	4	3	2	1
Valve No.	(Void)	6a	(Void)	5a	4b	4a	3b	3a	(Void)	2a	(Void)	1a

D sub-connector: Wiring method T30

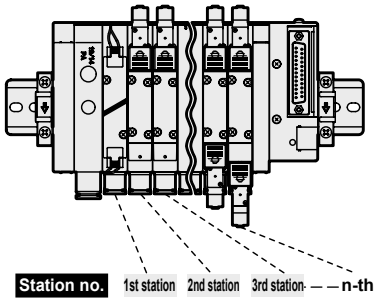
T30 connector

Connectors used for T30 wiring, called D sub-connector, is used widely for FA and OA devices. 25P type is an RS-232-C Standards designated connector especially used for personal computer communication. The manifold station nos. are set in order from left with the piping port facing forward.

T30 (left side specifications)

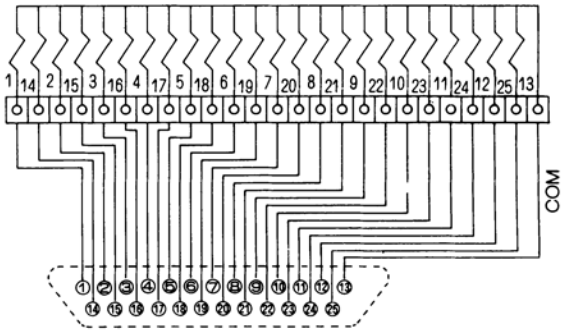


T30R (right side specifications)



Precautions for connector type T30

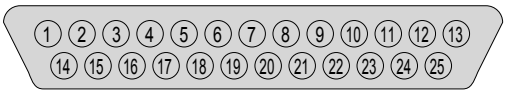
(1) Signal arrays of the PLC output unit must match signal arrays of the valve side.
(2) The working power is 12/24 VDC dedicated.
(3) The voltage could drop because of simultaneous energizing or the cable length. Confirm that the voltage drop for the solenoid is within 10% of the rated voltage.



T30 connector pin array (example)

*1: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the 1st station and the 2nd station. The alphabetic characters a and b indicate a side solenoid and b side solenoid.
Max. station no. differs depending on the model.
Check the individual specifications.

Connector pin no.



● For single solenoid valve

<Standard wiring>

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Valve No.	1a	3a	5a	7a	9a	11a	13a	15a	17a	19a	21a	23a	COM
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25	
Valve No.	2a	4a	6a	8a	10a	12a	14a	16a	18a	20a	22a	24a	

<Double wiring>

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Valve No.	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12a	COM
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25	
Valve No.	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	

● For double solenoid valve

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Valve No.	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12a	COM
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25	
Valve No.	1b	2b	3b	4b	5b	6b	7b	8b	9b	10b	11b	12b	

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Valve No.	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12a	COM
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25	
Valve No.	1b	2b	3b	4b	5b	6b	7b	8b	9b	10b	11b	12b	

● For mixed use (single/double solenoid mixture)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Valve No.	1a	3a	4a	5a	7a	8a	10a	11b	12b	14a	15b	17a	COM
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25	
Valve No.	2a	3b	4b	6a	7b	9a	11a	12a	13a	15a	16a	17b	

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Valve No.	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12a	COM
Pin No.	14	15	16	17	18	19	20	21	22	23	24	25	
Valve No.	(Void)	(Void)	3b	4b	(Void)	(Void)	7b	(Void)	(Void)	(Void)	11b	12b	

How to order

Cable with D sub-connector model no.

N4T - CABLE - D 0 0 - 1

* Each model no. of pneumatic valves
Available for D sub-connector T30N/T31 type

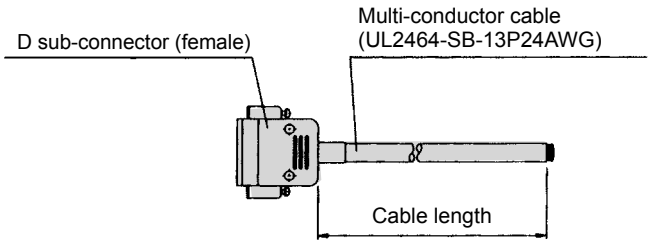
Symbol	Descriptions	Model no. N4T
Ⓐ User interface		
0	Cut only	●
1	With round terminal for M3.5 screw	●
Ⓑ Cable length		
1	1 m	●
3	3 m	●
5	5 m	●

Ⓐ User interface

Ⓑ Cable length

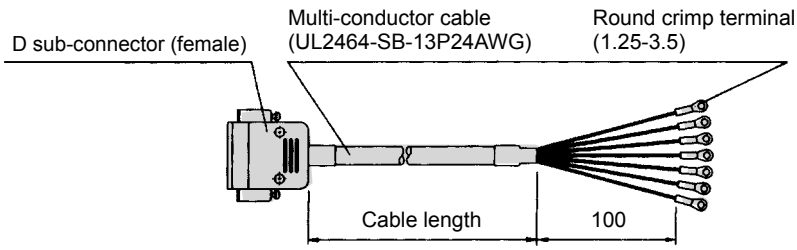
D sub-connector terminal no. and conductor

● N4T-CABLE-D00-Ⓑ



D sub-connector terminal no.		1	2	3	4	5	6	7	8	9	10	11	12	13
Conductor	Insulator color	Orange	Orange	Yellow	Yellow	Green	Green	Gray	Gray	White	White	Orange	Orange	Yellow
	Mark type	1 point	1 point	1 point	1 point	1 point	1 point	1 point	1 point	1 point	1 point	2 point	2 point	2 point
	Mark color	Black	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black
D sub-connector terminal no.		14	15	16	17	18	19	20	21	22	23	24	25	
Conductor	Insulator color	Yellow	Green	Green	Gray	Gray	White	White	Orange	Orange	Yellow	Yellow	Green	
	Mark type	2 point	2 point	2 point	2 point	2 point	2 point	2 point	3 point	3 point	3 point	3 point	3 point	
	Mark color	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black	

● N4T-CABLE-D01-Ⓑ



D sub-connector terminal no.		1	2	3	4	5	6	7	8	9	10	11	12	13
Conductor	Insulator color	Orange	Orange	Yellow	Yellow	Green	Green	Gray	Gray	White	White	Orange	Orange	Yellow
	Mark type	1 point	1 point	1 point	1 point	1 point	1 point	1 point	1 point	1 point	1 point	2 point	2 point	2 point
	Mark color	Black	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black
Mark tube no.		1	2	3	4	5	6	7	8	9	10	11	12	13
D sub-connector terminal no.		14	15	16	17	18	19	20	21	22	23	24	25	
Conductor	Insulator color	Yellow	Green	Green	Gray	Gray	White	White	Orange	Orange	Yellow	Yellow	Green	
	Mark type	2 point	2 point	2 point	2 point	2 point	2 point	2 point	3 point	3 point	3 point	3 point	3 point	
	Mark color	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black	
Mark tube no.		14	15	16	17	18	19	20	21	22	23	24	25	

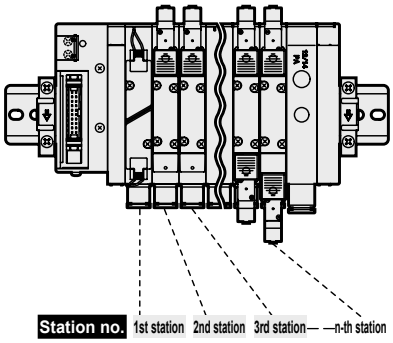
* Available for up to 24 points. Cut the wires for surplus points before use.

Flat cable connector type: Wiring method T50

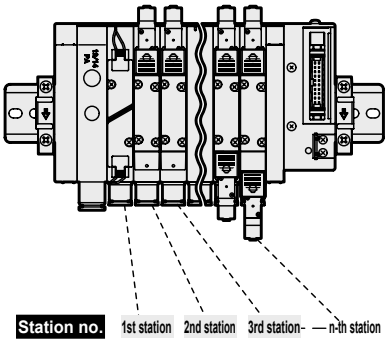
T50 connector

The connector used for T50 wiring method complies with MIL Standards (MIL-C-83503). Wiring work is simplified with the pressure welded flat cable.
Pin no. is assigned differently based on the PLC manufacturer, but the function assignment is the same.
Layout using connectors and the triangular mark (▼) shown below as a reference. The ▼ mark is the reference for both the plug and socket. The manifold station nos. are set in order from left with b side solenoid side (cap side for single) facing forward.

T50 (left side specifications)

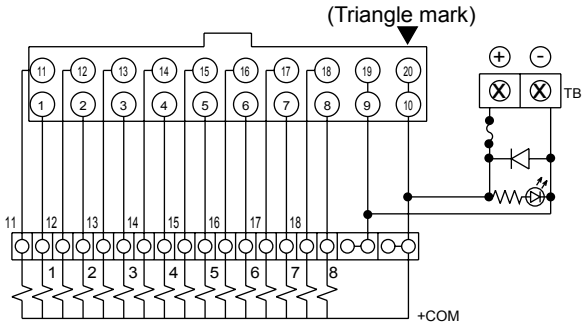


T50R (right side specifications)



Precautions for connector type T50

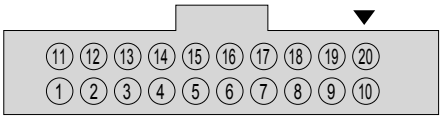
(1) Signal arrays of the PLC output unit must match signal arrays of the valve side. Direct connections with the PLC are limited. Use the dedicated cable for each PLC manufacturer.
(2) The working power is 12/24 VDC dedicated.
(3) When connecting T50 type to a general output unit, use the + terminal (20, 10) of the 20P connector as the + side common, and use the NPN transistor output open collector type for the drive circuit.
(4) Do not connect this manifold to the input unit as major faults could occur in this device and in peripherals. Connect this manifold to the output unit.
(5) The voltage could drop because of simultaneous energizing or the cable length. Confirm that the voltage drop for the solenoid is within 10% of the rated voltage.



T50 connector pin array (example)

*1: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the 1st station and the 2nd station. The alphabetic characters a and b indicate a side solenoid and b side solenoid.
Max. station no. differs depending on the model.
Check the individual specifications.

Connector pin no.



● For single solenoid valve

<Standard wiring>

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	9a	10a	11a	12a	13a	14a	15a	16a	-power supply	+power supply
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	2a	3a	4a	5a	6a	7a	8a	-power supply	+power supply

<Double wiring>

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5a	(Void)	6a	(Void)	7a	(Void)	8a	(Void)	-power supply	+power supply
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	(Void)	2a	(Void)	3a	(Void)	4a	(Void)	-power supply	+power supply

● For double solenoid valve

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5a	5b	6a	6b	7a	7b	8a	8b	-power supply	+power supply
PinNO.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	1b	2a	2b	3a	3b	4a	4b	-power supply	+power supply

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5a	5b	6a	6b	7a	7b	8a	8b	-power supply	+power supply
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	1b	2a	2b	3a	3b	4a	4b	-power supply	+power supply

● For mixed use (single/double solenoid mixture)

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	7a	7b	8a	9a	10a	10b	11a	11b	-power supply	+power supply
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	2a	3a	3b	4a	4b	5a	6a	-power supply	+power supply

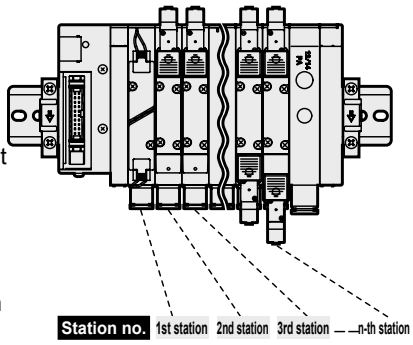
Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5a	(Void)	6a	(Void)	7a	7b	8a	(Void)	-power supply	+power supply
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	(Void)	2a	(Void)	3a	3b	4a	4b	-power supply	+power supply

Flat cable connector type: Wiring method T51

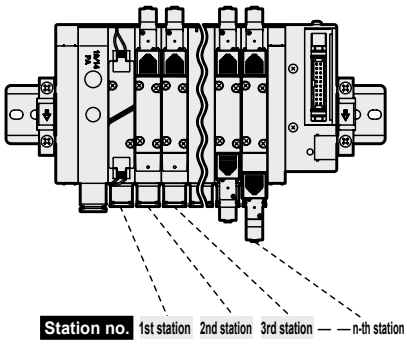
T51 connector

Connectors used for T51 wiring complies with MIL Standards (MIL-C-83503).
Wiring work is simplified with the pressure welded flat cable.
Pin nos. are assigned differently based on the PLC manufacturer, but the function assignment is the same. Layout using connectors and the triangular mark (▼) shown below as a reference. The (▼) mark is the reference for both the plug and socket.
The manifold station nos. are set in order from left with b side solenoid (cap for single) facing forward.

T51 (left side specifications)

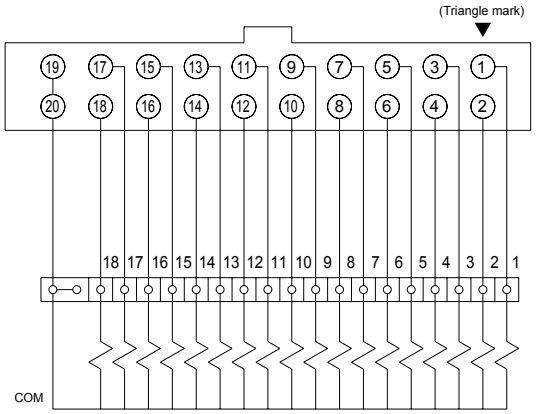


T51R (right side specifications)



Precautions for connector type (T51)

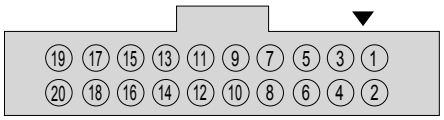
(1) Signal arrays of the PLC output unit must match signal arrays of the valve side.
(2) The working power is 12/24 VDC dedicated.
(3) T51 type is driven with a general output unit.
(4) Do not connect this manifold to the input unit as major faults could occur in this device and in peripherals. Connect this manifold to the output unit.
(5) The voltage could drop because of simultaneous energizing or the cable length. Confirm that the voltage drop for the solenoid is within 10% of the rated voltage.



T51 connector pin array (example)

*: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the 1st station and the 2nd station. The alphabetic characters a and b indicate a side solenoid and b side solenoid. Max. station no. differs depending on the model no. Check the individual specifications.

Connector pin no.



● For single solenoid valve

<Standard wiring>

Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	17a	15a	13a	11a	9a	7a	5a	3a	1a
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	18a	16a	14a	12a	10a	8a	6a	4a	2a

<Double wiring>

Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	9a	8a	7a	6a	5a	4a	3a	2a	1a
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)

● For double solenoid valve

Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	9a	8a	7a	6a	5a	4a	3a	2a	1a
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	9b	8b	7b	6b	5b	4b	3b	2b	1b

Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	9a	8a	7a	6a	5a	4a	3a	2a	1a
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	9b	8b	7b	6b	5b	4b	3b	2b	1b

● For mixed use (single/double solenoid mixture)

Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	12a	11a	10a	8a	7a	5a	4a	3a	1a
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	13a	11b	10b	9a	7b	6a	4b	3b	2a

Pin No.	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	9a	8a	7a	6a	5a	4a	3a	2a	1a
Pin No.	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	(Void)	(Void)	7b	(Void)	(Void)	4b	3b	(Void)	(Void)

Flat cable connector type: Wiring method T52

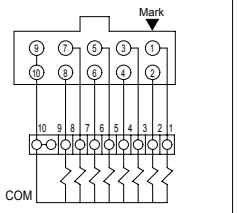
T52 connector

Connectors used for T52 wiring complies with MIL Standards (MIL-C-83503).
Wiring work is simplified with the pressure welded flat cable.
Pin nos. are assigned differently based on the PLC manufacturer, but the function assignment is the same.
Layout using connectors and the triangular mark (▼) shown below as a reference. The (▼) mark is the reference for both the plug and socket.
The manifold station nos. are set in order from left with b side solenoid (cap for single) facing forward.

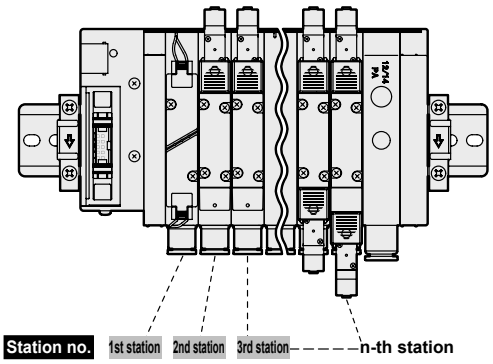
Precautions for connector type (T52)

(1) Signal arrays of the PLC output unit must match signal arrays of the valve side.
(2) The working power is 12/24 VDC dedicated.
(3) The T52 type is driven with a general output unit.
(4) Do not connect this manifold to the input unit as major faults could occur in this device and in peripherals. Connect this manifold to the output unit.
(5) The voltage could drop because of simultaneous energizing or the cable length. Confirm that the voltage drop for the solenoid is within 10% of the rated voltage.

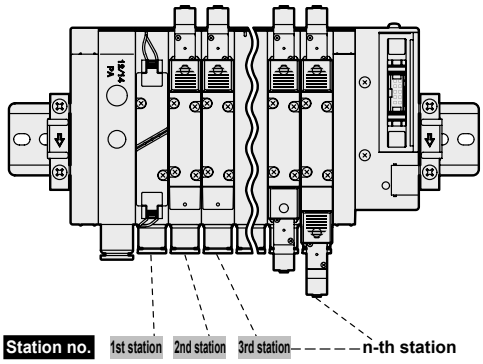
Connector pin array diagram (top view) and internal circuit diagram



T52 (left side specifications)



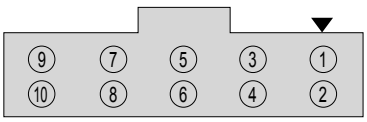
T52R (right side specifications)



T52 connector pin array (example)

*: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the 1st station and the 2nd station.
The alphabetic characters a and b indicate a side solenoid and b side solenoid.
Max. station no. differs depending on the model.
Check the individual specifications.

Connector pin no.



● For single solenoid valve

<Standard wiring>

Pin No.	9	7	5	3	1
Valve No.	COM	7a	5a	3a	1a
Pin No.	10	8	6	4	2
Valve No.	COM	8a	6a	4a	2a

<Double wiring>

Pin No.	9	7	5	3	1
Valve No.	COM	4a	3a	2a	1a
Pin No.	10	8	6	4	2
Valve No.	COM	(Void)	(Void)	(Void)	(Void)

● For double solenoid valve

Pin No.	9	7	5	3	1
Valve No.	COM	4a	3a	2a	1a
Pin No.	10	8	6	4	2
Valve No.	COM	4b	3b	2b	1b

Pin No.	9	7	5	3	1
Valve No.	COM	4a	3a	2a	1a
Pin No.	10	8	6	4	2
Valve No.	COM	4b	3b	2b	1b

● For mixed use (single/double solenoid mixture)

Pin No.	9	7	5	3	1
Valve No.	COM	5b	4b	3a	1a
Pin No.	10	8	6	4	2
Valve No.	COM	6a	5a	4a	2a

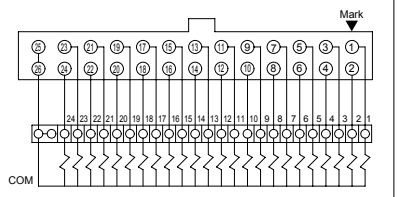
Pin No.	9	7	5	3	1
Valve No.	COM	4a	3a	2a	1a
Pin No.	10	8	6	4	2
Valve No.	COM	4b	(Void)	(Void)	(Void)

Flat cable connector type: Wiring method T53

T53 connector

Connectors used for T53 wiring complies with MIL Standards (MIL-C-83503).
Wiring work is simplified with the pressure welded flat cable.
Pin nos. are assigned differently based on the PLC manufacturer, but the function assignment is the same.
Layout using connectors and the triangular mark (▼) shown below as a reference. The (▼) mark is the reference for both the plug and socket.
The manifold station nos. are set in order from left with b side solenoid (cap for single) facing forward.

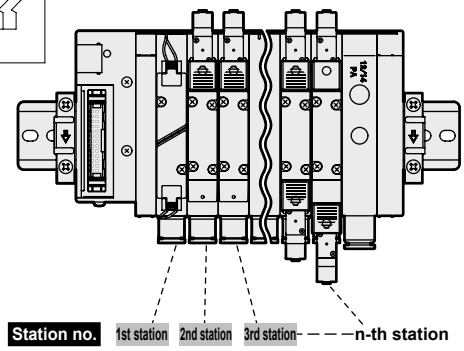
Connector pin array diagram (top view) and internal circuit diagram



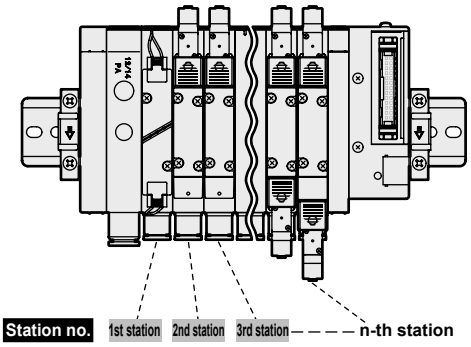
Precautions for connector type (T53)

(1) Signal arrays of the PLC output unit must match signal arrays of the valve side.
(2) The working power is 12/24 VDC dedicated.
(3) The T53 type is driven with a general output unit.
(4) Do not connect this manifold to the input unit as major faults could occur in this device and in peripherals. Connect this manifold to the output unit.
(5) The voltage could drop because of simultaneous energizing or the cable length. Confirm that the voltage drop for the solenoid is within 10% of the rated voltage.

T53 (left side specifications)



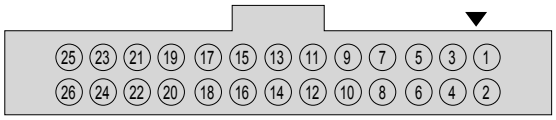
T53R (right side specifications)



T53 connector pin array (example)

*: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the 1st station and the 2nd station. The alphabetic characters a and b indicate a side solenoid and b side solenoid.
Max. station no. differs depending on the model.
Check the individual specifications.

Connector pin no.



<Standard wiring>

● For single solenoid valve

Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	23a	21a	19a	17a	15a	13a	11a	9a	7a	5a	3a	1a
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	24a	22a	20a	18a	16a	14a	12a	10a	8a	6a	4a	2a

● For double solenoid valve

Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	12b	11b	10b	9b	8b	7b	6b	5b	4b	3b	2b	1b

● For mixed use (single/double solenoid mixture)

Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	16a	15a	14a	12a	10a	9a	8a	7a	5b	4b	3a	1a
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	16b	15b	14b	13a	11a	9b	8b	7b	6a	5a	4a	2a

<Double wiring>

Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)

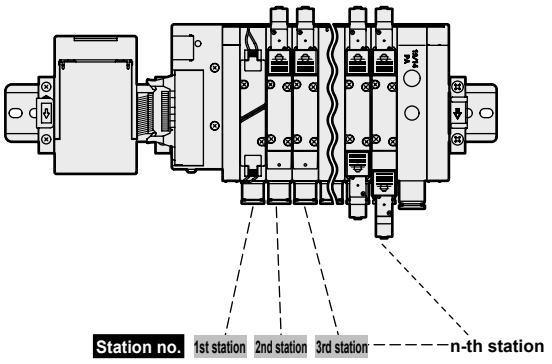
Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	12b	11b	10b	9b	8b	7b	6b	5b	4b	3b	2b	1b

Pin No.	25	23	21	19	17	15	13	11	9	7	5	3	1
Valve No.	COM	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a
Pin No.	26	24	22	20	18	16	14	12	10	8	6	4	2
Valve No.	COM	(Void)	(Void)	(Void)	9b	8b	7b	(Void)	5b	4b	(Void)	(Void)	(Void)

Serial transmission type: Wiring method

T6 *serial transmission type

- The slave unit's output no. is different with each manufacturer. The connector pin no. and the manifold solenoid correspond as shown below.
- Station manifolds are set in order from the left with the piping port facing forward regardless of the wiring block position.
- Internal connectors are wired in order, so there may be some void numbers depending on the number of stations. These void outputs cannot be used for drive other than the solenoid manifold in use.
- The working power is 24 VDC.
- A slave unit for each communication system is used. Contact CKD for the specifications on the usable PLC models, master unit models and communication systems. (Refer to page 398)
- Output no. is assigned differently based on the PLC manufacturer, but the function assignment is the same. Layout using connectors and the triangular mark (▼) shown below as a reference. The ▼ mark is the reference for both the plug and socket.



Combination of output no. and connector pin no.

● T6A0 T6C0 T6E0 T6J0

OutputNo.	0	1	2	3	4	5	6	7
Connector pin no.	1	2	3	4	5	6	7	8

● T6A1 T6C1 T6E1 T6J1

OutputNo.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Connector pin no.	1	2	3	4	5	6	7	8	11	12	13	14	15	16	17	18

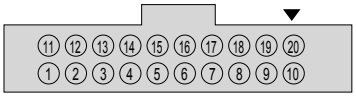
● T6G1

OutputNo.	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Connector pin no.	1	2	3	4	5	6	7	8	11	12	13	14	15	16	17	18

T6* connector pin array (example)

*: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the 1st station and the 2nd station.
The alphabetic characters a and b indicate a side solenoid and b side solenoid.
Max. station no. differs depending on the model no.
Check the individual specifications.

Connector pin no.



● For single solenoid valve

<Standard wiring>

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	9a	10a	11a	12a	13a	14a	15a	16a	(Void)	+COM
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	2a	3a	4a	5a	6a	7a	8a	(Void)	+COM

<Double wiring>

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5a	(Void)	6a	(Void)	7a	(Void)	8a	(Void)	(Void)	+COM
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	(Void)	2a	(Void)	3a	(Void)	4a	(Void)	(Void)	+COM

● For double solenoid valve

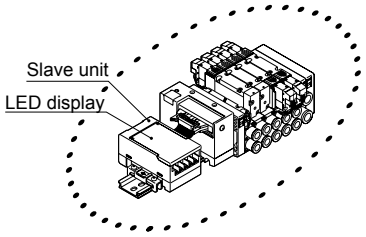
Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5a	5b	6a	6b	7a	7b	8a	8b	(Void)	+COM
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	1b	2a	2b	3a	3b	4a	4b	(Void)	+COM

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5a	5b	6a	6b	7a	7b	8a	8b	(Void)	+COM
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	1b	2a	2b	3a	3b	4a	4b	(Void)	+COM

● For mixed use (single/double solenoid mixture)

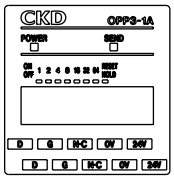
Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	7a	7b	8a	9a	10a	10b	11a	11b	(Void)	+COM
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	2a	3a	3b	4a	4b	5a	6a	(Void)	+COM

Pin No.	11	12	13	14	15	16	17	18	19	20
Valve No.	5a	(Void)	6a	(Void)	7a	7b	8a	(Void)	(Void)	+COM
Pin No.	1	2	3	4	5	6	7	8	9	10
Valve No.	1a	(Void)	2a	(Void)	3a	3b	4a	4b	(Void)	+COM



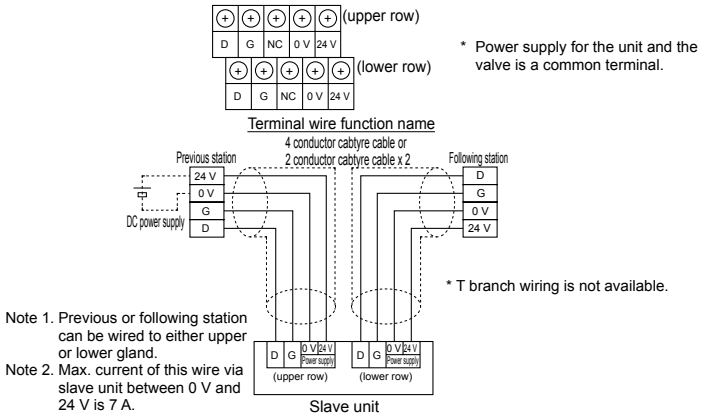
T6A0 T6A1

LED display



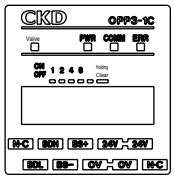
LED name	Display description
POWER	Lights when power is ON.
SEND	Blinks when transmission is normal. Lights or turns OFF when transmission is not normal.

Wiring method



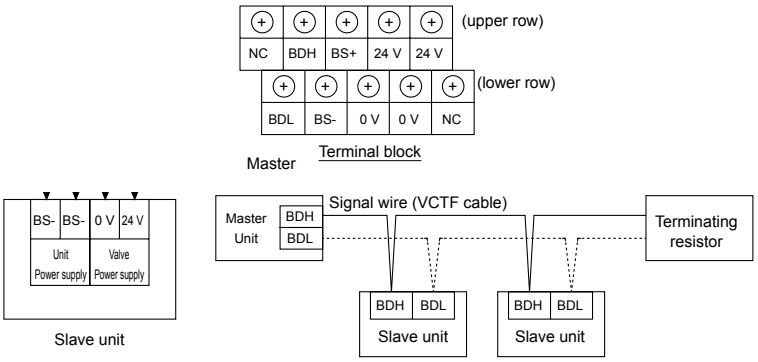
T6C0 T6C1

LED display



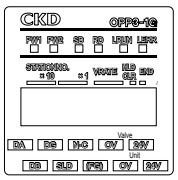
LED name	Display description
Valve (green)	Lights when valve power is ON.
PWR (green)	Lights when unit power is ON.
COMM (orange)	Lights during normal communication. OFF when communication is abnormal or standing by.
ERR (red)	Lights when communication error occurs. OFF when communication is normal or standing by.

Wiring method



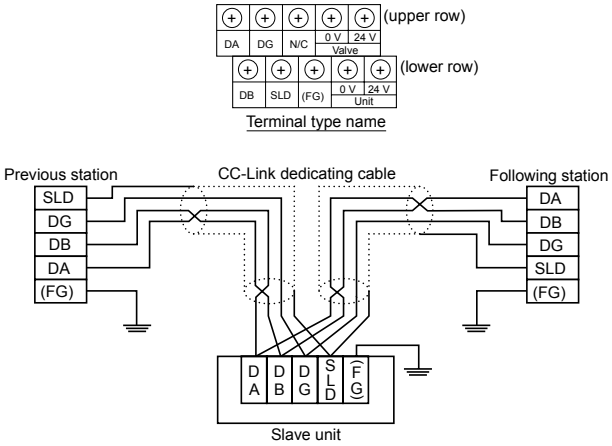
T6G1

LED display



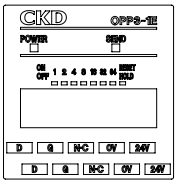
LED name	Display description
PW1	Lights when unit power is ON.
PW2	Lights when valve power is ON.
SD	Lights when sending data.
RD	Lights when receiving data.
L RUN	Lights when receiving normal data, and turns OFF at time over.
L ERR	Lights when transmission error occurs. Turns off when time has lapsed. Lights when the station No. setting or transmission speed setting is incorrect. Blinks when station no. or transmission speed in setting changes.

Wiring method



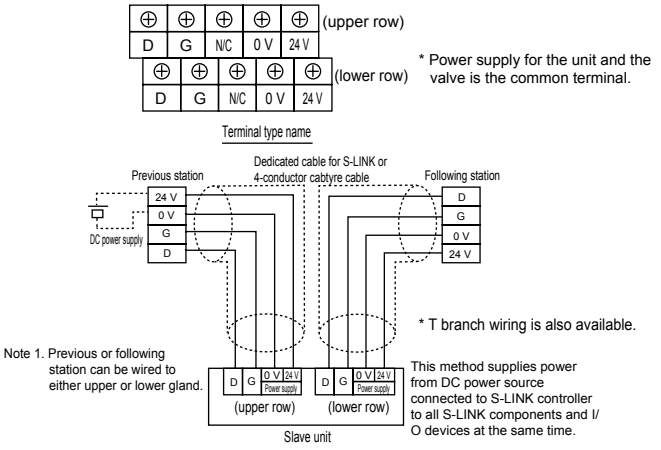
T6E0 T6E1

LED display



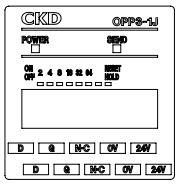
LED name	Display description
POWER	Lights when power is ON.
SEND	Blinks when transmission is normal. Lights or turns OFF when transmission is not normal.

Wiring method



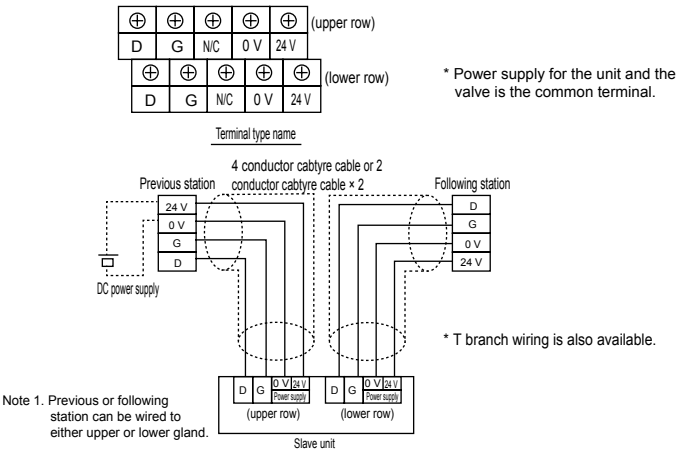
T6J0 T6J1

LED display



LED name	Display description
POWER	Lights when power is ON.
SEND	Blinks when transmission is normal. Lights or turns OFF when transmission is not normal.

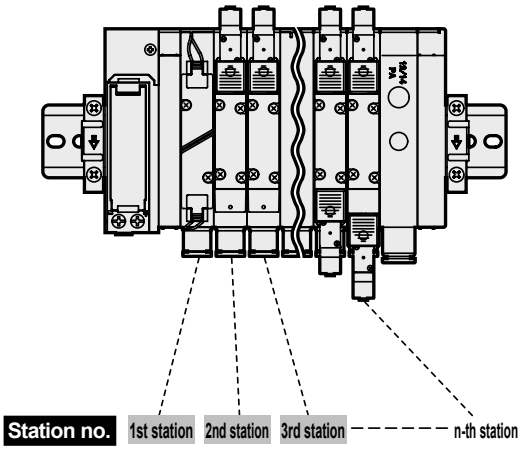
Wiring method



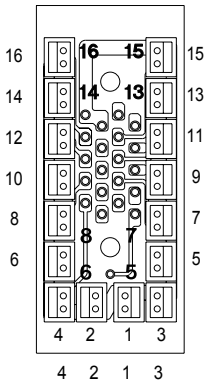
Serial transmission type: Wiring method

T7 *serial transmission type

- The slave unit's output no. is different with each manufacturer. The internal connector pin no. and the manifold solenoid correspond as shown below.
- Station manifolds are set in order from the left with the piping port facing forward regardless of the wiring block position.
- Internal connectors are wired in order, so there may be some void numbers depending on the number of stations. These void outputs cannot be used for drive other than the solenoid manifold in use.
- The working power is 24 VDC.
- A slave unit for each communication system is used. Contact CKD for the specifications on the usable PLC models, master unit models and communication systems. (Refer to page 398)
- Securely fix the enclosed connector with set screw. (Proper tightening torque 0.3 N·m)



Internal circuit board connector pin no.



Combination of output no. and connector pin no.

● T7C0, T7E0

OutputNo.	0	1	2	3	4	5	6	7
Connector pin no.	1	2	3	4	5	6	7	8

● T7C1, T7D1, T7E1, T7L1, T7S*1

OutputNo.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Connector pin no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

● T7G1

OutputNo.	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Connector pin no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

T7* connector pin array (example)

*: The numbers in the valve no. 1a, 1b, 2a, 2b and so forth indicate the first station and 2nd station. The alphabetic characters a and b indicate the a side solenoid and the b side solenoid. Max. station no. differs depending on the model no. Check the individual specifications.

<Standard wiring>

● For single solenoid valve

PinNo.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ValveNo.	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12a	13a	14a	15a	16a

● For double solenoid valve

PinNo.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ValveNo.	1a	1b	2a	2b	3a	3b	4a	4b	5a	5b	6a	6b	7a	7b	8a	8b

● For mixed use (single/double solenoid mixture)

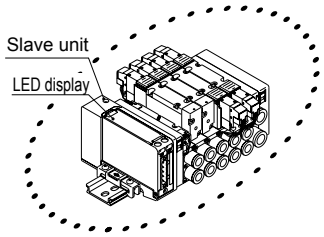
PinNo.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ValveNo.	1a	2a	3a	3b	4a	4b	5a	6a	7a	7b	8a	9a	10a	10b	11a	11b

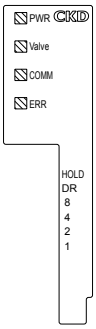
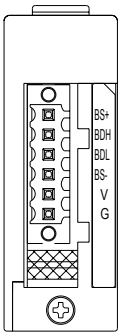
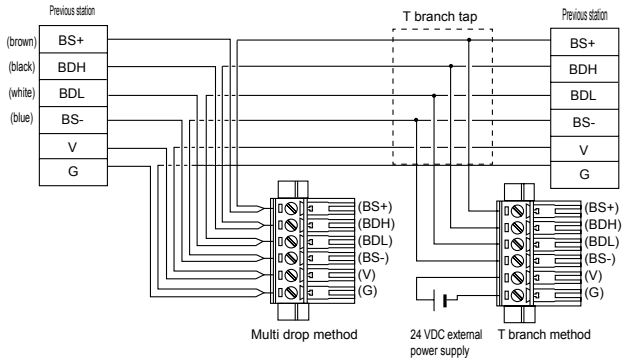
<Double wiring>

PinNo.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ValveNo.	1a	(Void)	2a	(Void)	3a	(Void)	4a	(Void)	5a	(Void)	6a	(Void)	7a	(Void)	8a	(Void)

PinNo.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ValveNo.	1a	1b	2a	2b	3a	3b	4a	4b	5a	5b	6a	6b	7a	7b	8a	8b

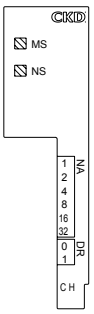
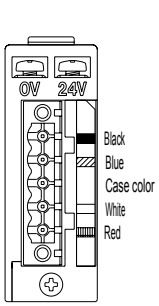
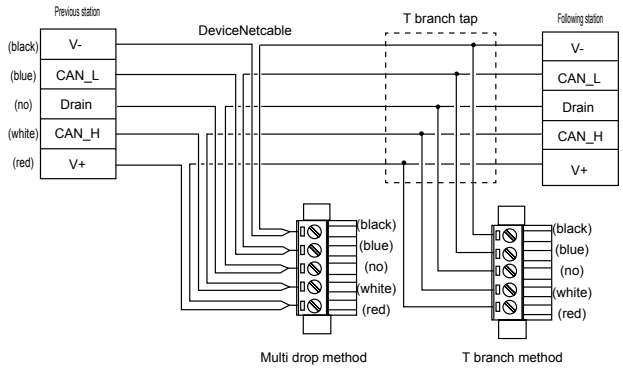
PinNo.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ValveNo.	1a	(Void)	2a	(Void)	3a	3b	4a	4b	5a	(Void)	6a	(Void)	7a	7b	8a	(Void)



Model no.	LED display	Wiring method
T7C0 **T7C1**		 

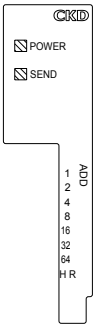
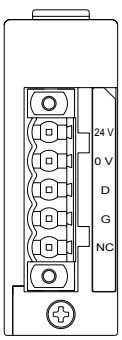
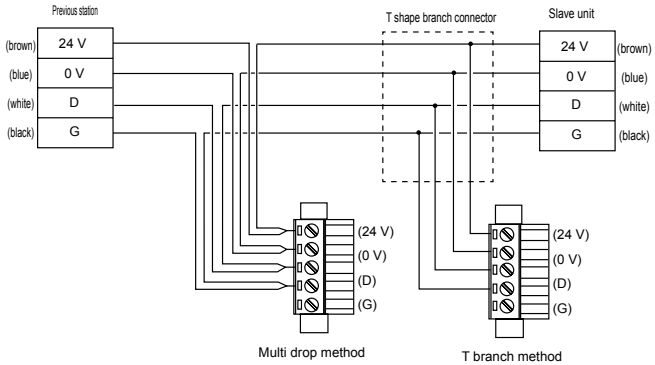
LED name	Display description
Valve (green)	Lights when valve power is ON.
PWR (green)	Lights when unit power is ON.
COMM (orange)	Lights during normal communication. OFF when communication is abnormal or standing by.
ERR (red)	Lights when communication error occurs. OFF when communication is normal or standing by.

- Power supply line and communication line are connected to the connector.
- Power supply for the unit and power supply for the valve have terminals separately.
- The wiring section connectors are enclosed.

T7D1		 

LED name	Display description
MS	Slave status is indicated with green and red LEDs. Errors are indicated using combination with "NS LED".
NS	Network status is indicated with green and red LEDs. Errors are indicated using combination with "MS LED".

- Power supply line is connected to the terminal box.
- DeviceNet cable is connected to the connector.
- The power terminal box (24 V, 0 V) is insulated from the communication power terminal (V+, V-).
- Power supply for the unit and the valve is the common terminal.
- The wiring section connectors are enclosed.

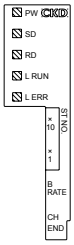
T7E0 **T7E1**		 

LED name	Display description
POWER	Lights when power is ON.
SEND	Blinks when transmission is normal. Lights or turns OFF when transmission is not normal.

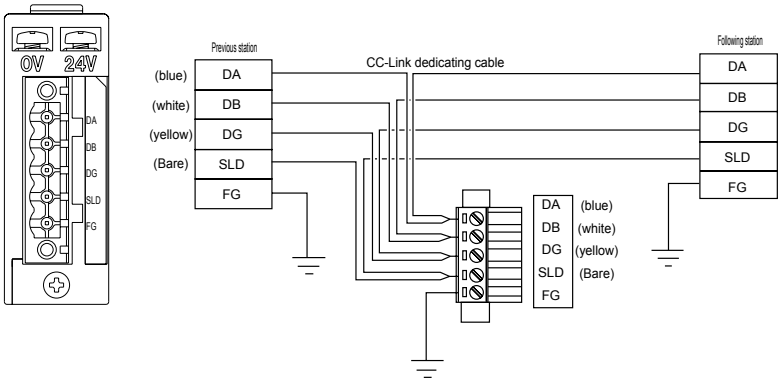
- Power supply line and communication line are connected to the connector.
- Power supply for the unit and the valve is the common terminal.
- The wiring section connectors are enclosed.

Model no.	LED display	Wiring method

T7G1

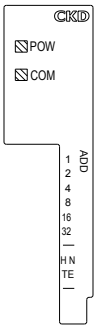


LED name	Display description
PW	Lights when power is ON.
SD	Lights when transmitting data.
RD	Lights when receiving data.
L RUN	Lights when receiving normal data. Turns OFF when time over occurs.
L ERR	Lights when transmission error occurs. Turns OFF when time over occurs. Lights when station no. or transmission speed setting fails. Blinks when station no. or transmission speed in setting changes.

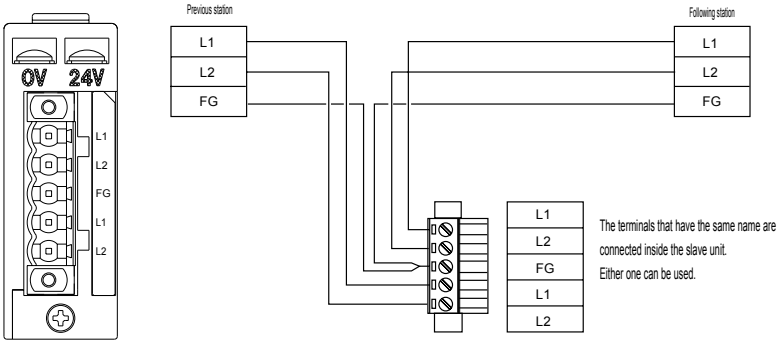


- Power supply line is connected to the terminal box.
- CC-Link cable is connected to the connector.
- Power supply for the unit and the valve is the common terminal.
- The wiring section connectors are enclosed.

T7L1

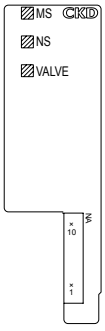


LED name	Display description
POW	Light is on when power supplies of master and slave units are ON.
COM	Light is on when normally communicating with master unit. Light is off when communication failure continues for a certain period.

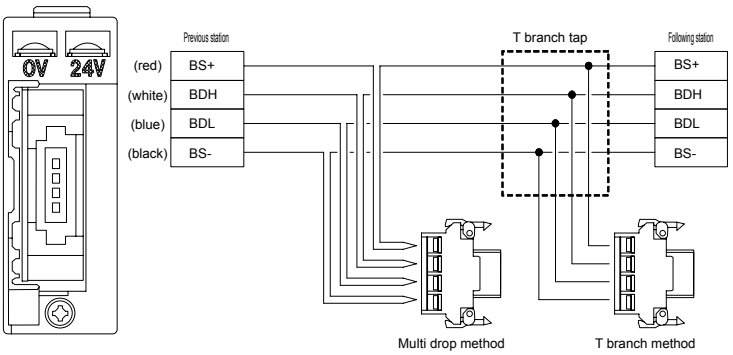


- Power supply line is connected to the terminal box.
- Communication line is connected to the connector.
- Power supply for the unit and the valve is the common terminal.
- The wiring section connectors are enclosed.

T7S□1



LED name	Display description
MS	Slave status is indicated with green and red lights Errors are indicated using combination with "NS LED"
NS	Network status is indicated with green and red lights Errors are indicated using combination with "MS LED"
VALVE	Green light is on when valve power is ON



- Communication line/communication power supply are connected to the plug for communication.
- Valve power supply is connected to the terminal box.
- The plug for communication is not attached for this product.

Note: Wiring connection connectors
The wiring connection connectors are enclosed with the product. However, any connector that fits the slave unit side connector listed below can be used.

	Slave unit side connector model no.	Wiring side connector recommended model no. (attachment)
	5-pole connector (communication)	5-pole connector (communication)
T7D (DeviceNet)	MSTB2.5/5-GF-5.08AU Phoenix Contact Corp.	MSTB2.5/5-STF-5.08AUM Phoenix Contact Corp.
T7G (CC-Link) T7E (S-LINK) T7L (SAVE NET)	SL5.08/5/90FAU Widemuller Corp.	BLZ5.08/5FAU Widemuller Corp.
T7C (CompoBus/S)	SL3.5/6/90F Widemuller Corp.	BL3.5/6F Widemuller Corp.
T7S□1	XW7D-PB4-R OMRON Corporation	The plug for communication is not attached for this product. (Recommended communication plug) DCN4-BR4 Flat connector plug (without sheath) Manufactured by OMRON Corporation DCN4-TB4 Open type connector (terminal box type) Manufactured by OMRON Corporation HCN-TB4LMZG-#B10 Open type connector (terminal box type): 10 pieces included Manufactured by Honda Tsushin Kogyo Co., Ltd. HCN-A4SMUG-#B10 Connector plug (VCTF/flat): 10 pieces included Manufactured by Honda Tsushin Kogyo Co., Ltd. (Recommended connector for multiple wiring) DCN4-MD4 Connector for multiple wiring Manufactured by OMRON Corporation HCN-MD4SAG-#B10 Connector for multiple wiring: 10 pieces included Manufactured by Honda Tsushin Kogyo Co., Ltd.

Compatible PLC table

Model no.	Manufacturer name (recommended body)	Communication system name	Host station model no.
T6A*	KURODA Pneumatics Ltd.	UNIWIRE SYSTEM	Connect to sending unit or each UNIWIRE interfaces
T6C*	OMRON	CompoBus/S (T6C0/1 does not support the long-distance mode)	CJ1W-SRM21 CS1W-SRM21 C200HW-SRM21-V1 CQM1-SRM21-V1
T7D1	ODVA	DeviceNet	Connect to the masters compatible with the manufacturers' DeviceNet systems
	OMRON		CJ1W-DRM21 CS1W-RDM21-V1 C200HW-DRM21-V1 CVM1-DRM21-V1
T6E* T7E*	Panasonic Industrial Devices SUNX Co., Ltd.	S-LINK	Connect to S-LINK controller or S-LINK control board
T6G1 T7G1	CC-Link Partner Association	CC-Link	Connect to each manufacturer's CC-Link master
	MITSUBISHI		QJ61BT11N A1SJ61QBT11 A1SJ61BT11
T6J*	CKD Corporation	UNIWIRE H SYSTEM	Connect to sending unit (UW-SDW-H2) or each UNIWIRE H system interfaces
	KURODA Pneumatics Ltd.		
T7L1	CKD Corporation	SAVE NET	Connect to master unit (CSN-1001-MA2) or each SAVE NET interfaces
	ONTEC Co.,Ltd.		
T7S□1	ODVA	CompoNet	Connect to the masters compatible with the manufacturers' CompoNet systems
	OMRON		CJ1W-CRM21 CS1W-CRM21

Note: For details on master units and models not listed above, contact each PLC manufacturer.

MEMO

M4G (metal base manifold)

* Refer to page 402 for MN4G (block manifold).

Pattern 1 Expansion to the position where preparatory wiring is equipped with

The masking plate at the planned expansion position is equipped with preparatory wiring beforehand. For the valve expansion method when preparatory wiring is equipped with, follow the steps below.

❶ Remove the preparatory socket from the masking plate.

❷ Remove the masking plate from the base.

❸ Mount the valve for expansion and assemble the socket.

Pattern 2 Expansion to the position where no preparatory wiring is equipped with

When changing single to double, additional internal wiring to the b side solenoid for expansion is required. For the valve expansion method when no preparatory wiring is equipped with, follow the steps below.

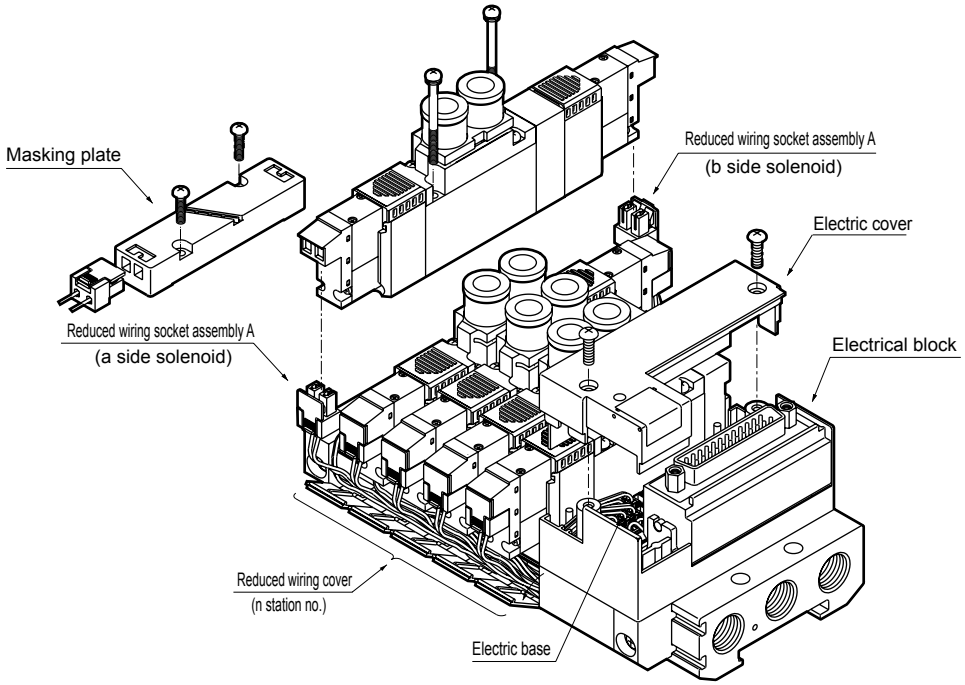
❶ Remove the electric cover and open the reduced wiring cover.

❷ Exchange the valve at the change position. Exchange the solenoid for the a side solenoid.

❸ Attach the socket for the b side solenoid (separately purchased). Pass the wiring through the valve and pull it out to the a side.

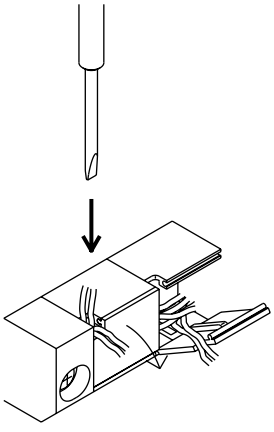
❹ Route the wire to inside of the electrical block and insert the connector to the electric base.

❺ Store the wiring in the reduced wiring cover, close the reduced wiring cover, and attach the electric cover.



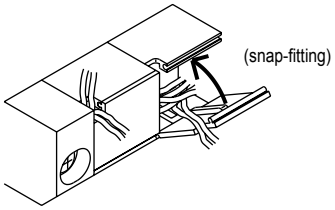
How to open and close the reduced wiring cover

How to open the reduced wiring cover



Catch the cable through hole of the reduced wiring cover with precision screw driver ,etc. and open the cover. Do not use a pointed tool so as not to damage the cable while catching the hole.

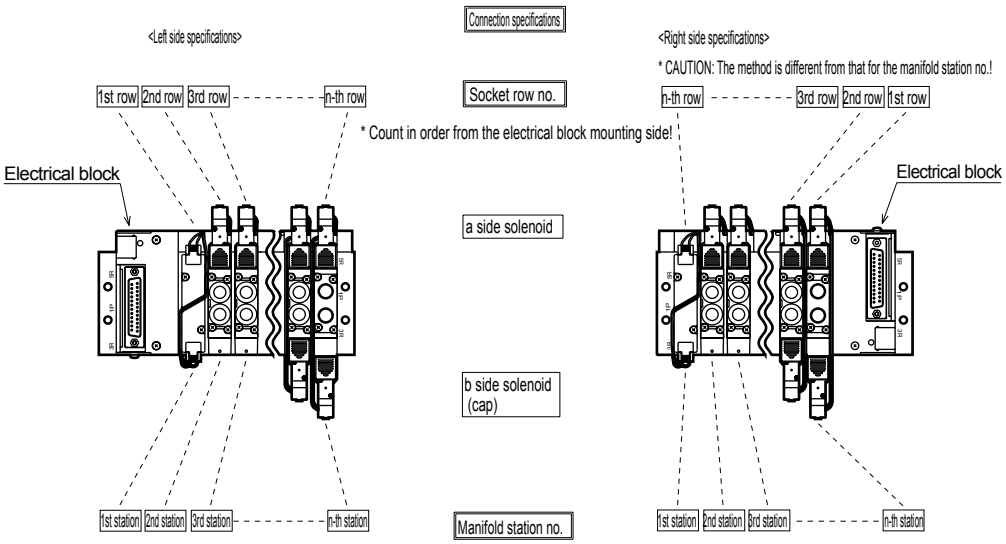
How to close the reduced wiring cover



Pass the cable through the cable through hole of the reduced wiring cover and close the cover. Be careful about line bite of cable, and close the cover until it clicks into place.

Selection of expansion socket assembly

For the expansion socket assembly, specify a cable with appropriate length corresponding to the expansion position. Incorrect selection could cause disconnection or line bite of cable. For A type socket assembly model no., the expansion positions are set in order from the electrical block mounting side. Be careful that this method is different from setting method for the manifold valve station nos. which are set in order from left with the b side solenoid facing forward.



Note
1. The same for T50/T51

Model no. of expansion socket assembly

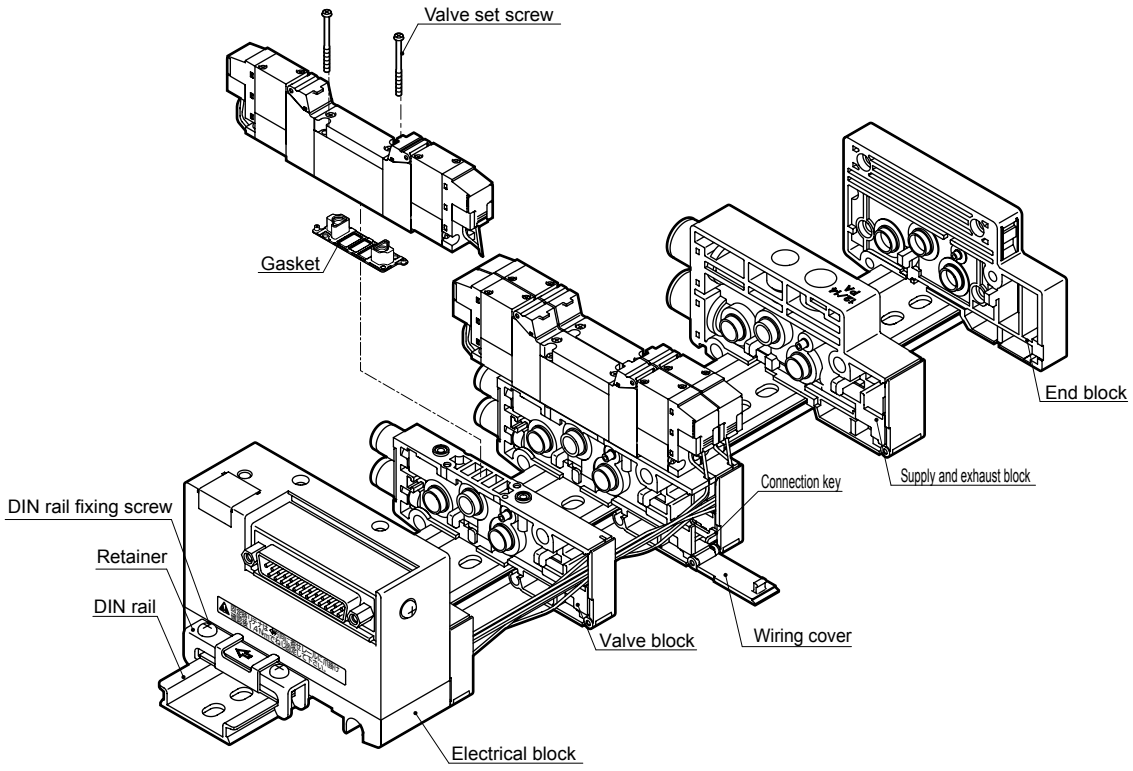
A type connector socket assembly

4G *1 - SOCKET - ASSY - A *2 *3 - *4

*1: Series		*2: Connection specifications		*3: Solenoid position		*4: Number of socket row	
1	4G1	Blank	Left	A	a side	1	1st row
2	4G2	R	Right	B	b side	to	to
3	4G3					24	24th row Note 1
4	4G4						

Note1: Available for up to 11th row.

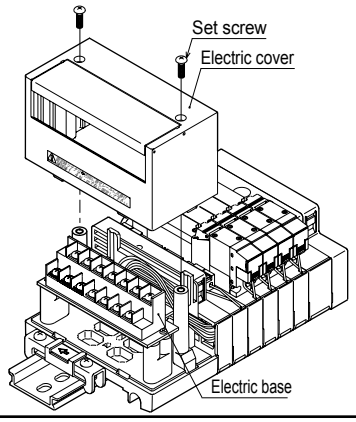
MN4G (exploded view of block manifold)



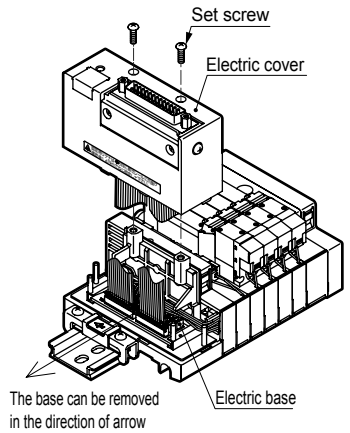
Example of disassembling: MN4GB1 For D sub-connector
right side wiring specifications

Removing the electric cover

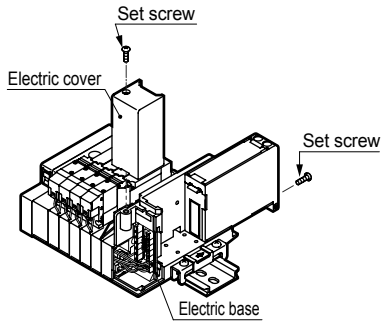
T10R/T11R



T30R/T5*R/T6*R



T7*



Replacing valves

Removing method

① Remove the socket (signal line).
② Loosen the set screws (2 positions).
③ Remove the valve from the valve block.

Installation method

Perform the reverse order of removing.
Refer to the right table for the recommended tightening torque for the set screw.
Note) The valve block differs between the single use (V1) and the double use (V2).
Accordingly, when changing from single to double or from double to single,
replace the whole of discrete valve block with solenoid valve.

Recommended tightening torque for the valve set screw

	Size	Recommended tightening torque (N·m)
4G1	M1.7	0.18 to 0.22
4G2	M2.5	0.35 to 0.40

Increasing the valve blocks

① Loosen the retainer's DIN rail set screws. (Refer to the exploded view)
② Open the reduced wiring cover
③ Pull the connecting key for the position to be expanded until it clicks, and disengage the connection between blocks.
④ Remove the cover of the electrical block to expose the electric base. (Removing the electric cover)
⑤ Connect the signal line (socket assembly) (*1) to the electric base (*2), and set the signal line to the valve block. (Fig. 1)
*1 (Refer to Selection of model no. of expansion socket assembly)
*2 (Refer to Instructions for connection to electric base)
⑥ Mount the valve block to be added to the DIN rail.
⑦ Press so that there is no gap between blocks, and press the key to engage.
⑧ While taking care about line bite of cable, close the wiring cover, and tighten the cover of the electrical block.
(tightening torque: 0.35 to 0.50 N·m)
⑨ A) Catch retainer jaws onto DIN rail,
B) press so that there is no gap between blocks,
C) press retainer in direction of arrow,
D) and tighten DIN rail fixing screw. (Fig. 2)
(tightening torque: 1.2 to 1.6 N·m)
* Up to two stations can be expanded at a position before the farthest position from the wiring block.

Fig. 1

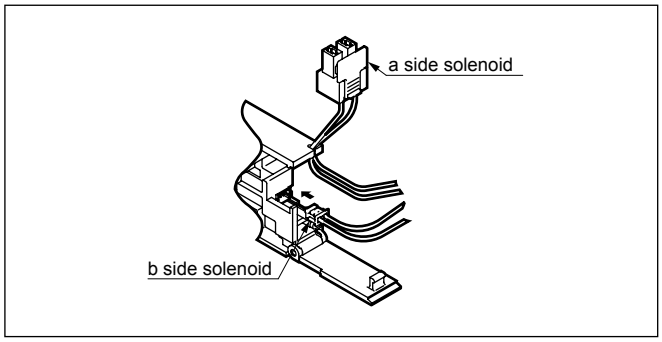
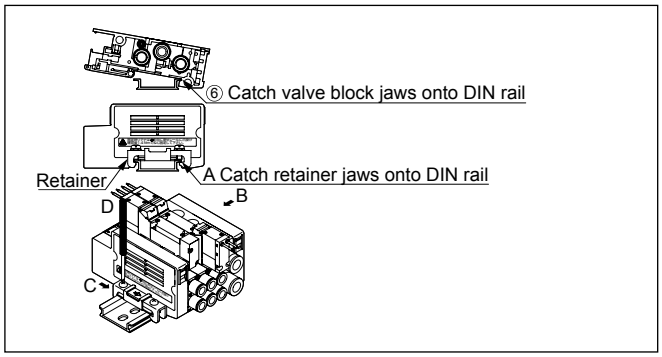


Fig. 2



Selection of expansion socket assembly

Calculate the distance W between the expansion position and the electrical block (Fig. 3), select a cable with appropriate length from <Table 1>.
Be careful that the required socket assembly differs between a side solenoid and b side solenoid.
Although Fig. 3 shows the electrical block with left side specifications, similarly calculate the distance W between the expansion position and the electrical block for the right side specifications.

Calculation of W

• For MN4G1

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

• For MN4G2

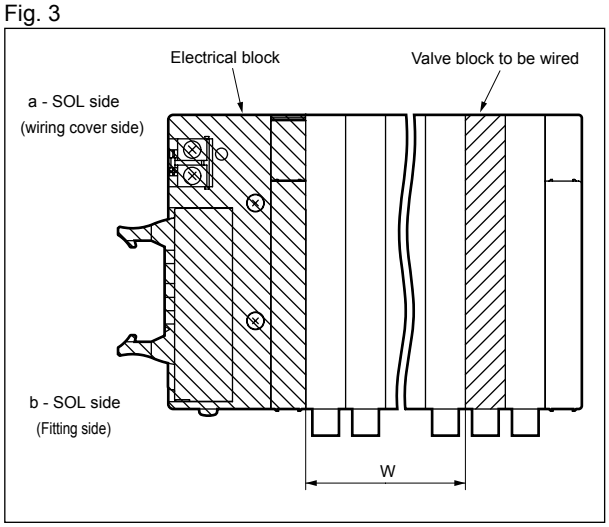
W = (16 x n) + (18 x m) + (10.5 x l)

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

• For MN4GX

Calculate W using the mix block width of 16.

Fig. 3



<Model no. of expansion socket assembly>

For a side solenoid

N4G - SOCKET - ASSY - A - Selection no.

For b side solenoid

N4G - RELAY - SOCKET - Selection no.

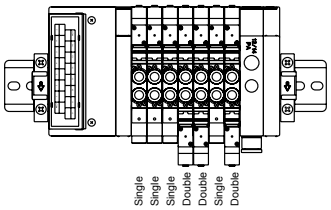
<Table 1> W length - Selection no. corresponding table

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

Instructions for connecting electric base (standard wiring)

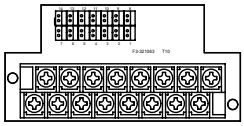
The corresponding rules for connector and valve on the electric base vary depending on the reduced wiring specifications (T10, T11, T30, T50, T51, T52, T53, T6*, T7*). For connector wiring, check the connector no. printed on the base.
For wiring of mix (consolidation), the manifold configuration as shown in the right figure is indicated as an example.

◦ Manifold configuration (Example)

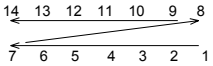


T10

Electric circuit board assembly



Wire in order of arrow



Compatibility with valves

1) For single SOL only (MF station no. up to 14 stations)

ConnectorNo.	14	13	12	11	10	9	8
ValveNo.	14a	13a	12a	11a	10a	9a	8a
ConnectorNo.	7	6	5	4	3	2	1
ValveNo.	7a	6a	5a	4a	3a	2a	1a

2) For double SOL only (MF station no. up to 7 stations)

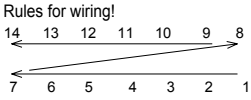
ConnectorNo.	14	13	12	11	10	9	8
ValveNo.	7b	7a	6b	6a	5b	5a	4b
ConnectorNo.	7	6	5	4	3	2	1
ValveNo.	4a	3b	3a	2b	2a	1b	1a

Wire in order of arrow

3) For mix (consolidation) (solenoid no. up to 14 positions)

ConnectorNo.	14	13	12	11	10	9	8
ValveNo.	(Void)	(Void)	(Void)	(Void)	7b	7a	6a
ConnectorNo.	7	6	5	4	3	2	1
ValveNo.	5b	5a	4b	4a	3a	2a	1a

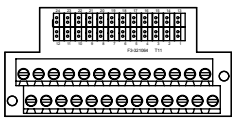
* Rules for wiring!



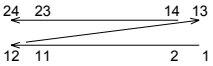
Wire in order of arrow.

T11

Electric circuit board assembly



Wire in order of arrow



Compatibility with valves

1) For single SOL only (MF station no. up to 24 stations)

ConnectorNo.	24	23	22	21	20	19	18	17	16	15	14	13
ValveNo.	24a	23a	22a	21a	20a	19a	18a	17a	16a	15a	14a	13a
ConnectorNo.	12	11	10	9	8	7	6	5	4	3	2	1
ValveNo.	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a

2) For double SOL only (MF station no. up to 12 stations)

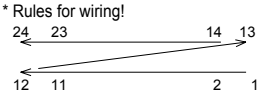
ConnectorNo.	24	23	22	21	20	19	18	17	16	15	14	13
ValveNo.	12b	12a	11b	11a	10b	10a	9b	9a	8b	8a	7b	7a
ConnectorNo.	12	11	10	9	8	7	6	5	4	3	2	1
ValveNo.	6b	6a	5b	5a	4b	4a	3b	3a	2b	2a	1b	1a

Wire in order of arrow

3) For mix (consolidation) (solenoid no. up to 24 positions)

ConnectorNo.	24	23	22	21	20	19	18	17	16	15	14	13
ValveNo.	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)
ConnectorNo.	12	11	10	9	8	7	6	5	4	3	2	1
ValveNo.	(Void)	(Void)	7b	7a	6a	5b	5a	4b	4a	3a	2a	1a

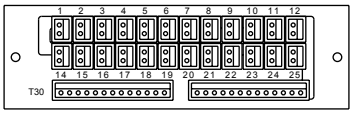
* Rules for wiring!



Wire in order of arrow.

T30

Electric circuit board assembly



Wire in order of arrow

Compatibility with valves

1) For single SOL (MF station no. up to 24 stations)

ConnectorNo.	1	2	3	4	5	6	7	8	9	10	11	12
ValveNo.	1a	3a	5a	7a	9a	11a	13a	15a	17a	19a	21a	23a
ConnectorNo.	14	15	16	17	18	19	20	21	22	23	24	25
ValveNo.	2a	4a	6a	8a	10a	12a	14a	16a	18a	20a	22a	24a

2) For double SOL (MF station no. up to 12 stations)

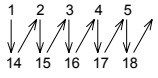
ConnectorNo.	1	2	3	4	5	6	7	8	9	10	11	12
ValveNo.	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12a
ConnectorNo.	14	15	16	17	18	19	20	21	22	23	24	25
ValveNo.	1b	2b	3b	4b	5b	6b	7b	8b	9b	10b	11b	12b

Wire in order of arrow

3) For mix (consolidation) (solenoid no. up to 24 positions)

ConnectorNo.	1	2	3	4	5	6	7	8	9	10	11	12
ValveNo.	1a	3a	4b	5b	7a	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)
ConnectorNo.	14	15	16	17	18	19	20	21	22	23	24	25
ValveNo.	2a	4a	5a	6a	7b	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)

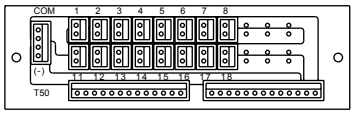
* Rules for wiring!



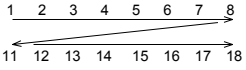
Wire in order of arrow.

T50/T6*

Electric circuit board assembly



Wire in order of arrow



Compatibility with valves

1) For single SOL (MF station no. up to 16 stations)

ConnectorNo.	1	2	3	4	5	6	7	8
ValveNo.	1a	2a	3a	4a	5a	6a	7a	8a
ConnectorNo.	11	12	13	14	15	16	17	18
ValveNo.	9a	10a	11a	12a	13a	14a	15a	16a

2) For double SOL (MF station no. up to 8 stations)

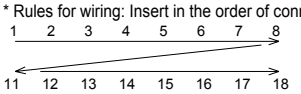
ConnectorNo.	1	2	3	4	5	6	7	8
ValveNo.	1a	1b	2a	2b	3a	3b	4a	4b
ConnectorNo.	11	12	13	14	15	16	17	18
ValveNo.	5a	5b	6a	6b	7a	7b	8a	8b

Wire in order of arrow

3) For mix (consolidation) (solenoid no. up to 16 positions)

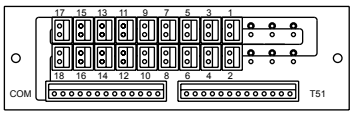
ConnectorNo.	1	2	3	4	5	6	7	8
ValveNo.	1a	2a	3a	4a	4b	5a	5b	6a
ConnectorNo.	11	12	13	14	15	16	17	18
ValveNo.	7a	7b	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)

* Rules for wiring: Insert in the order of connector no.!

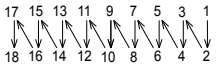


T51

Electric circuit board assembly



Wire in order of arrow



Compatibility with valves

1) For single SOL (MF station no. up to 18 stations)

ConnectorNo.	17	15	13	11	9	7	5	3	1
ValveNo.	17a	15a	13a	11a	9a	7a	5a	3a	1a
ConnectorNo.	18	16	14	12	10	8	6	4	2
ValveNo.	18a	16a	14a	12a	10a	8a	6a	4a	2a

2) For double SOL (MF station no. up to 9 stations)

ConnectorNo.	17	15	13	11	9	7	5	3	1
ValveNo.	9a	8a	7a	6a	5a	4a	3a	2a	1a
ConnectorNo.	18	16	14	12	10	8	6	4	2
ValveNo.	9b	8b	7b	6b	5b	4b	3b	2b	1b

Wire in order of arrow

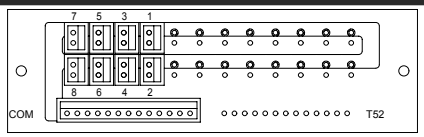
3) For mix (consolidation) (solenoid no. up to 18 positions)

ConnectorNo.	17	15	13	11	9	7	5	3	1
ValveNo.	(Void)	(Void)	(Void)	(Void)	7a	5b	4b	3a	1a
ConnectorNo.	18	16	14	12	10	8	6	4	2
ValveNo.	(Void)	(Void)	(Void)	(Void)	7b	6a	5a	4a	2a

* Rules for wiring!
Wire in order of arrow.
(in order of connector no.)

T52

Electric circuit board assembly



Wire in order of arrow

Compatibility with valves

1) For single SOL (MF station no. up to 8 stations)

ConnectorNo.	7	5	3	1
ValveNo.	7a	5a	3a	1a
ConnectorNo.	8	6	4	2
ValveNo.	8a	6a	4a	2a

2) For double SOL (MF station no. up to 4 stations)

ConnectorNo.	7	5	3	1
ValveNo.	4a	3a	2a	1a
ConnectorNo.	8	6	4	2
ValveNo.	4b	3b	2b	1b

Wire in order of arrow

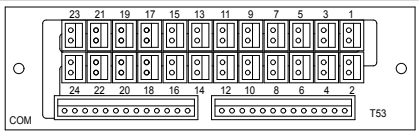
3) For mix (consolidation) (solenoid no. up to 8 positions)

ConnectorNo.	7	5	3	1
ValveNo.	5b	4b	3a	1a
ConnectorNo.	8	6	4	2
ValveNo.	6a	5a	4a	2a

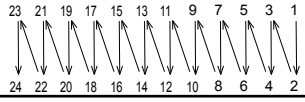
* Rules for wiring!
Wire in order of arrow.
(in order of connector no.)

T53

Electric circuit board assembly



Wire in order of arrow



Compatibility with valves

1) For single SOL (MF station no. up to 24 stations for MN4G1 and up to 20 stations for MN4G2))

ConnectorNo.	23	21	19	17	15	13	11	9	7	5	3	1
ValveNo.	23a	21a	19a	17a	15a	13a	11a	9a	7a	5a	3a	1a
ConnectorNo.	24	22	20	18	16	14	12	10	8	6	4	2
ValveNo.	24a	22a	20a	18a	16a	14a	12a	10a	8a	6a	4a	2a

2) For double SOL (MF station no. up to 12 stations)

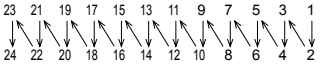
ConnectorNo.	23	21	19	17	15	13	11	9	7	5	3	1
ValveNo.	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a
ConnectorNo.	24	22	20	18	16	14	12	10	8	6	4	2
ValveNo.	12b	11b	10b	9b	8b	7b	6b	5b	4b	3b	2b	1b

Wire in order of arrow

3) For mix (consolidation) (solenoid no. up to 24 positions)

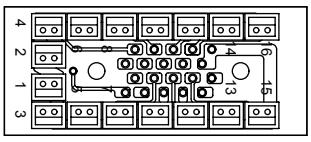
ConnectorNo.	23	21	19	17	15	13	11	9	7	5	3	1
ValveNo.	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	7a	5b	4b	3a	1a
ConnectorNo.	24	22	20	18	16	14	12	10	8	6	4	2
ValveNo.	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	7b	6a	5a	4a	2a

* Rules for wiring!
Wire in order of arrow.
(in order of connector no.)

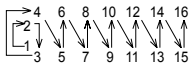


T7*

Electric circuit board assembly



Wire in order of arrow



Compatibility with valves

1) For single SOL only (MF station no. up to 16 stations)

ConnectorNo.	2	4	6	8	10	12	14	16
ValveNo.	2a	4a	6a	8a	10a	12a	14a	16a
ConnectorNo.	1	3	5	7	9	11	13	15
ValveNo.	1a	3a	5a	7a	9a	11a	13a	15a

2) For double SOL only (MF station no. up to 8 stations)

ConnectorNo.	2	4	6	8	10	12	14	16
ValveNo.	1b	2b	3b	4b	5b	6b	7b	8b
ConnectorNo.	1	3	5	7	9	11	13	15
ValveNo.	1a	2a	3a	4a	5a	6a	7a	8a

Wire in order of arrow

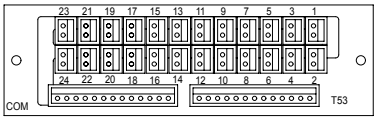
3) For mix (consolidation) (solenoid no. up to 16 positions)

ConnectorNo.	2	4	6	8	10	12	14	16
ValveNo.	2a	4a	5a	6a	7b	(Void)	(Void)	(Void)
ConnectorNo.	1	3	5	7	9	11	13	15
ValveNo.	1a	3a	4b	5b	7a	(Void)	(Void)	(Void)

* Rules for wiring!
Wire in order of arrow.
(in order of connector no.)

Instructions for connecting electric base (double wiring)

The double wiring specifications correspond to the wiring of the double solenoid, regardless of the switching position classification of solenoid valve to be mounted. Accordingly, the standard wiring and the double SOL only of double wiring have the same wiring. As an example, T53 is shown in the figure below. Refer to this example.

	T53 (example)
Electric circuit board assembly	
Wire in order of arrow	
Compatibility with valves	1) For single SOL (MF station no. up to 12 stations) 2) For double SOL (MF station no. up to 13 stations) 3) For mix (consolidation) (solenoid no. up to 24 positions)
Wire in order of arrow	* Rules for wiring! Wire in order of arrow. (in order of connector no.) 

1) For single SOL (MF station no. up to 12 stations)

ConnectorNo.	23	21	19	17	15	13	11	9	7	5	3	1
ValveNo.	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a
ConnectorNo.	24	22	20	18	16	14	12	10	8	6	4	2
ValveNo.	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)	(Void)

2) For double SOL (MF station no. up to 13 stations)

ConnectorNo.	23	21	19	17	15	13	11	9	7	5	3	1
ValveNo.	12a	11a	10a	9a	8a	7a	6a	5a	4a	3a	2a	1a
ConnectorNo.	24	22	20	18	16	14	12	10	8	6	4	2
ValveNo.	12b	11b	10b	9b	8b	7b	6b	5b	4b	3b	2b	1b

3) For mix (consolidation) (solenoid no. up to 24 positions)

ConnectorNo.	23	21	19	17	15	13	11	9	7	5	3	1
ValveNo.	(Void)	(Void)	(Void)	(Void)	(Void)	7a	6a	5a	4a	3a	2a	1a
ConnectorNo.	24	22	20	18	16	14	12	10	8	6	4	2
ValveNo.	(Void)	(Void)	(Void)	(Void)	(Void)	7b	(Void)	5b	4b	(Void)	(Void)	(Void)