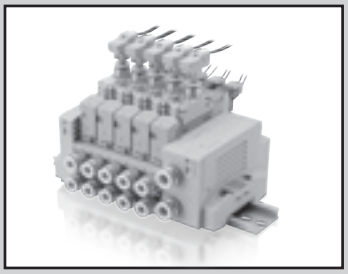


Individual wiring block manifold With pressure sensor
Base piping

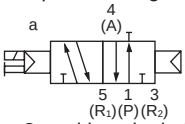
MN4GB1/2 Series

● Applicable cylinder bore size: ø20 to ø80

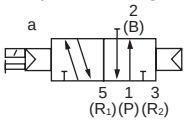
JIS symbol

● 3-port valve

2-position single NC

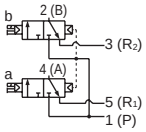


2-position single NO

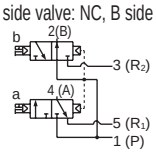


● Two 3-port valves integrated

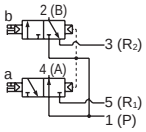
(A side valve: NC, B side valve: NC)



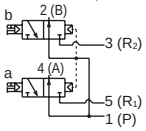
(A side valve: NC, B side valve: NO)



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

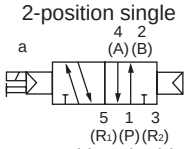


(A side valve: NO, B side valve: NO)

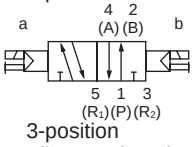


● 5-port valve

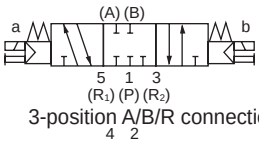
2-position single



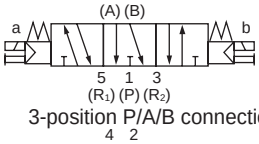
2-position double



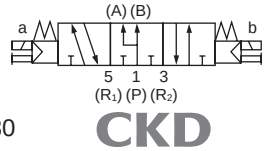
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	Description
Manifold	Block manifold
Mounting method	DIN rail mount
Air supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)
Piping direction	Side direction of base
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈101 psi, 7 bar)
Min. working pressure MPa	0.2 (≈29 psi, 2 bar) (*3)
Proof pressure MPa	1.05 (≈152 psi, 10 bar)
Ambient temperature °C	-5 (23°F) to 55 (131°F) (no freezing)
Fluid temperature °C	5 (41°F) to 55 (131°F)
Manual override	Non-locking/locking common (standard)
Lubrication (*1)	Not required
Degree of protection (*2)	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environments

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

Electrical specifications

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

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

Individual specifications

Item			MN3GB1/MN4GB1	MN3GB2/MN4GB2
Max. station No.			24 stations	20 stations
Port size	Metric fitting	Port A/B	Barbed fitting ø1.8 Push-in fitting ø1.8, ø4, ø6	Push-in fitting ø4, ø6, ø8
		Port P/R	Push-in fitting ø6, ø8	Push-in fitting ø8, ø10
	Inch fitting	Port A/B	Push-in fitting ø1/8", ø5/32"	Push-in fitting ø1/4", ø5/16"
		Port P/R	Push-in fitting ø1/4", ø5/16"	Push-in fitting ø5/16", ø3/8"

· For DIN rail mounting, refer to page 855 "Mounting orientation".
· Refer to page 384 for weight.

Performance/characteristics by model

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

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

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B→R1/R2	
			C[dm³ /(s·bar)]	b	C[dm³ /(s·bar)]	b
MN3GB1 MN4GB1	Two 3-port valves integrated		0.86	0.35	1.0 (0.66)	0.15 (0.25)
	2-position		1.0	0.30	1.1 (0.72)	0.11 (0.26)
	3-position	All ports closed	0.96	0.32	1.0 -	0.14 -
		ABR connection	0.96	0.29	1.2 (0.71)	0.11 (0.30)
		PAB connection	1.1	0.31	1.0 -	0.15 -
MN3GB2 MN4GB2	Two 3-port valves integrated		1.7	0.42	2.2 (1.6)	0.15 (0.19)
	2-position		2.4	0.35	2.5 (1.7)	0.19 (0.19)
	3-position	All ports closed	2.2	0.38	2.3 -	0.17 -
		ABRConnection	2.2	0.38	2.5 (1.7)	0.18 (0.20)
		PAB connection	2.3	0.29	2.3 -	0.15 -

*1: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.
*2: Values in ( ) are with the exhaust check valve.

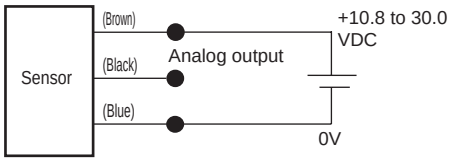
Sensor specifications

Discrete specifications

Item		Positive pressure	Negative pressure *2
Working pressure *1		0 to 1.0 MPa	-100kPa to 0
Service voltage		10.8 to 30.0 VDC	
Current consumption		5 mA (24 VDC, no load)	
Pressure detection method		Diffused semiconductor pressure switch	
Ambient temperature		0 to 55°C	
Proof pressure		1.5 MPa	0.5 MPa
Degree of protection		Dust-proof	
Analog output	Output voltage	1 to 5V	
	Zero point voltage	1±0.1V	
	Linearity	±0.5% F.S. max	
	Temperature characteristics	±2% F.S. max	
	Output current	0.5mA max. (load resistance 10 kΩ)	
Wiring method		Connector connection	
Wire length		1000 mm	

Lead wire color and content

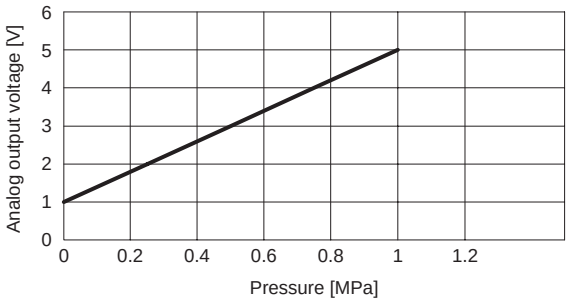
Line color	Description
Brown	Power supply (10.8 to 30.0 VDC)
Black	Analog output (1 to 5 V)
Blue	GND(0V)



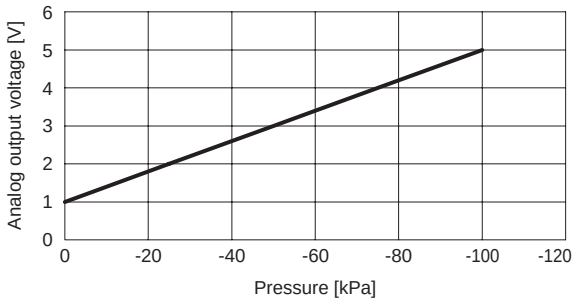
*1 Use the smaller working pressure range for the valve or pressure sensor.
*2 For negative pressure, only the single unit sensor is supported.

Analog output

● Positive pressure



● Negative pressure



MN4GB1/2 Series

Individual wiring block manifold; base piping

How to order

Manifold model No.

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

3-port manifold model No.

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

Discrete valve block with solenoid valve

N4GB1 1 0 R - C6 - E2 H — 3

Discrete 3-port valve block with solenoid valve

N3GB1 66 0 R - C6 - E2 H — 3

Single solenoid valve

4GB1 1 9 R - 00 - E2 H — 3

Discrete 3-port solenoid valve

3GB1 66 9 R - 00 - E2 H — 3

Ⓐ Model No.

Ⓑ Solenoid position

Ⓒ Port size (*1)(*2) (*3)

Ⓓ Electrical connections

Ⓔ Option

Ⓕ Station No.

Ⓖ Voltage

⚠ Precautions for model selection

*1 : Ports A and B plug specifications are available for 2-position single only. Specify the port P/R bore size with the supply and exhaust block model No. on the manifold specifications sheet.

*2 : Ports A and B are the same size for push-in L-fitting mix (CX).

*3 : For a discrete solenoid valve, select 00 for port size.

*4 : Select MN4GB*80R when mixing with 4, 5-port valves. Further, select MN3GB*80R when mixing with masking plate.

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

*6 : Simultaneously select option "L" for types other than single solenoid.

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

*8 : Available only for single solenoids.

Ozone-proof specifications • Coolant proof specifications

Page 383 Select option "A" of Item Ⓔ in How to order.

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

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

** - Voltage - P4

Clean-room specifications

● Anti-dust generation structure for use in cleanrooms

** - Voltage - P7*

CE marking specifications

** - Voltage - ST

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

Code	Description		Ⓐ Model No.							
			Manifold							
			Two 3-port valves integrated		5-port valve		Discrete valve block with solenoid valve/ discrete solenoid valve			
			MN3GB1	MN3GB2	MN4GB1	MN4GB2	(N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
Ⓑ 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	3-port valve Two valves integrated (*4))(*5)	A side valve: Normally closed B side valve: Normally closed	●	●			●	●		
67		A side valve: Normally closed B side valve: Normally open	●	●			●	●		
76		A side valve: Normally open B side valve: Normally closed	●	●			●	●		
77		A side valve: Normally open B side valve: Normally open	●	●			●	●		
8	Mix manifold (when there are multiple solenoid positions)		●	●	●	●	●	●	●	●
Ⓒ Port size (port A/B)										
Type	Metric fittingRc thread									
CF	ø1.8 barbed fitting (compatible tube UP-9102-**)		●		●		●		●	
C18	ø1.8 push-in fitting (compatible tube UP-9402-**)		●		●		●		●	
C4	ø4 push-in fitting		●	●	●	●	●	●	●	●
C6	ø6 push-in fitting		●	●	●	●	●	●	●	●
C8	ø8 push-in fitting			●		●		●		●
CL18	ø1.8 push-in L-fitting upward (compatible tube UP-9402-**)	(*6)	●		●		●		●	
CL4	ø4 push-in L-fitting (upward)	(*6)	●		●		●		●	
CL6	ø6 push-in L-fitting (upward)	(*6)	●	●	●	●	●	●	●	●
CL8	ø8 push-in L-fitting (upward)	(*6)		●		●		●		●
CD18	ø1.8 push-in L-fitting downward (compatible tube UP-9402-**)		●		●		●		●	
CD4	ø4 push-in L-fitting (downward)		●		●		●		●	
CD6	ø6 push-in L-fitting (downward)		●	●	●	●	●	●	●	●
CD8	ø8 push-in L-fitting (downward)			●		●		●		●
CX	Push-in fitting mix	(*7)	●	●	●	●				
Single side plug specs	Port A	Port B								
CFNC	ø1.8 barbed fitting (compatible tube UP-9102-**)	Plug			●				●	
C18NC	ø1.8 push-in fitting (compatible tube UP-9402-**)				●				●	
C4NC	ø4 push-in fitting				●	●			●	●
C6NC	ø6 push-in fitting				●	●			●	●
C8NC	ø8 push-in fitting					●				●
CFNO	Plug	ø1.8 barbed fitting (compatible tube UP-9102-**)			●				●	
C18NO		ø1.8 push-in fitting (compatible tube UP-9402-**)			●				●	
C4NO		ø4 push-in fitting			●	●			●	●
C6NO		ø6 push-in fitting			●	●			●	●
C8NO		ø8 push-in fitting				●				●
CL18NC	ø1.8 push-in L-fitting upward (compatible tube UP-9402-**)	Plug			●				●	
CL4NC	ø4 push-in L-fitting (upward)				●				●	
CL6NC	ø6 push-in L-fitting (upward)				●	●			●	●
CL8NC	ø8 push-in L-fitting (upward)					●				●
CL18NO	Plug	ø1.8 push-in L-fitting upward (compatible tube UP-9402-**)			●				●	
CL4NO		ø4 push-in L-fitting (upward)			●				●	
CL6NO		ø6 push-in L-fitting (upward)			●	●			●	●
CL8NO		ø8 push-in L-fitting (upward)				●				●
CD18NC	ø1.8 push-in L-fitting downward (compatible tube UP-9402-**)	Plug			●				●	
CD4NC	ø4 push-in L-fitting (downward)				●				●	
CD6NC	ø6 push-in L-fitting (downward)				●	●			●	●
CD8NC	ø8 push-in L-fitting (downward)					●				●
CD18NO	Plug	ø1.8 push-in L-fitting downward (compatible tube UP-9402-**)			●				●	
CD4NO		ø4 push-in L-fitting (downward)			●				●	
CD6NO		ø6 push-in L-fitting (downward)			●	●			●	●
CD8NO		ø8 push-in L-fitting (downward)				●				●
Type	Inch fittingInch thread									
C3N	ø1/8" push-in fitting		●		●		●		●	
C4N	ø5/32" push-in fitting		●		●		●		●	
C6N	ø1/4" push-in fitting			●		●		●		●
C8N	ø5/16" push-in fitting			●		●		●		●
CL3N	ø1/8" push-in L-fitting (upward)	(*8)								
CL4N	ø5/32" push-in L-fitting (upward)	(*8)								
CL6N	ø1/4" push-in L-fitting upward	(*8)								
CL8N	Radial ø5/16 push-in fitting (upward)	(*8)								
CXN	Push-in fitting mix	(*7)	●	●	●	●				
Single side plug specs	Port A	Port B								
C3NCN	ø1/8" push-in fitting	Plug			●				●	
C4NCN	ø5/32" push-in fitting				●				●	
C6NCN	ø1/4" push-in fitting					●				●
C8NCN	ø5/16" push-in fitting					●				●
C3NON	Plug	ø1/8" push-in fitting			●				●	
C4NON		ø5/32" push-in fitting			●				●	
C6NON		ø1/4" push-in fitting				●				●
C8NON		ø5/16" push-in fitting				●				●
CL3NCN	ø1/8" push-in L-fitting (upward)	Plug								
CL4NCN	ø5/32" push-in L-fitting (upward)									
CL6NCN	ø1/4" push-in L-fitting upward									
CL8NCN	Radial ø5/16 push-in fitting (upward)									
CL3NON	Plug	ø1/8" push-in L-fitting (upward)								
CL4NON		ø5/32" push-in L-fitting (upward)								
CL6NON		ø1/4" push-in L-fitting upward								
CL8NON		Radial ø5/16 push-in fitting (upward)								
00	Discrete valve for integrated base						●	●	●	●

is not available. ○ indicates made to order.

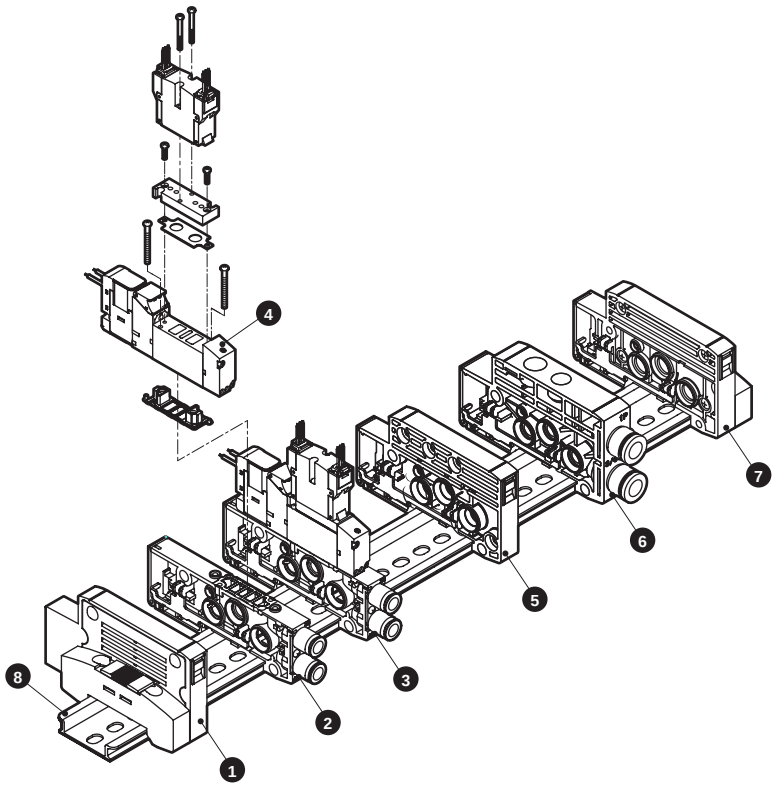
[Options, stations, voltage, electrical connection list]

Code	Description		Ⓐ Model No. Manifold: Two 3-port valves integrated: MN3GB1	MN3GB2	5-port valve: MN4GB1	MN4GB2	Discrete valve block with solenoid valve/discrete solenoid valve: (N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
Ⓓ Electrical connections										
Blank	Grommet lead wire (300 mm)	(*17)	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7)	with surge suppressor/lamp (*18) (*21)		●		●		●		●
BN	DIN terminal box (Pg7) (no terminal box)	with surge suppressor/lamp (*18) (*21)		●		●		●		●
E-connector (upward/lateral direction common)										
E0	Lead wire (300 mm)	(*19)	●	●	●	●	●	●	●	●
E00	Lead wire (500 mm)	(*19)	●	●	●	●	●	●	●	●
E01	Lead wire (1000 mm)	(*19)	●	●	●	●	●	●	●	●
E02	Lead wire (2000 mm)	(*19)	●	●	●	●	●	●	●	●
E03	Lead wire (3000 mm)	(*19)	●	●	●	●	●	●	●	●
E0N	Without lead wire (no socket)	(*19)	●	●	●	●	●	●	●	●
E1	Without lead wire (socket/terminal included)	(*19)	●	●	●	●	●	●	●	●
E2	Lead wire (300 mm)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
E20	Lead wire (500 mm)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
E21	Lead wire (1000 mm)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
E22	Lead wire (2000 mm)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
E23	Lead wire (3000 mm)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
E2N	Without lead wire (without socket)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral direction common)										
E01J	Lead wire (1000 mm)	(*19)	●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm)	(*19)	●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm)	(*19)	●	●	●	●	●	●	●	●
E21J	Lead wire (1000 mm)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
E22J	Lead wire (2000 mm)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
E23J	Lead wire (3000 mm)	With surge suppressor/lamp	●	●	●	●	●	●	●	●
Ⓔ Option										
Blank	Non-locking/locking common manual override		●	●	●	●	●	●	●	●
M	Non-locking manual override		●	●	●	●	●	●	●	●
H	With exhaust check valve	(*9)	●	●	●	●	●	●	●	●
K	External pilot	(*10)			●	●			●	●
A	Ozone/coolant proof		●	●	●	●	●	●	●	●
S	Surgeless	(*11)	●	●	●	●	●	●	●	●
E	Low exoergic/energy saving circuit	(*11) (*12)	●	●	●	●	●	●	●	●
L	With piping adapter		●	●	●	●	●	●	●	●
F	A/B port filter integrated	(*13)	●	●	●	●	●	●	●	●
G1	With sensor (1-port detection type)	(*22) (*23)			●	●				
G2	With sensor (2-port detection type)	(*23)	●	●	●	●				
Z1	Air supply spacer	(*14)	●	●	●	●				
Z2	In-stop valve spacer	(*14) (*15)	●	●	●	●				
Z3	Exhaust spacer	(*14)	●	●	●	●				
Z6	Spacer pilot check valve	(*14) (*20)				●				
Ⓕ Station No.										
1	1 station		●	●	●	●				
to	to									
24	24 stations (max. station No. for MN4GB2 is 20)									
Ⓖ Voltage										
1	100 VAC (rectifier integrated)		●	●	●	●	●	●	●	●
2	200 VAC (rectifier integrated)	(*16)		●		●		●		●
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●
7	3 VDC		○	○	○	○	○	○	○	○
8	5 VDC		○	○	○	○	○	○	○	○

is not available.
○ indicates made to order.

*9 : 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to page 851 for details on the exhaust check valve.
*10: Consult with CKD when using vacuum with external pilot (K).
*11: In addition, surgeless "S" and low exoergic/energy saving circuit "E" cannot be selected together.
*12: Surgeless specifications.
*13: A filter is built into port P as standard.
*14: Specify the spacer mounting position and quantity on the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Only single solenoid can be selected together with push-in L-fitting (upward). For details, refer to page 410 to page 414.
*15: Not compatible when combined with external pilot (K).
*16: Only the DIN terminal box is supported.
*17: The grommet lead wire specifications are compatible with DC voltage only.
*18: AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.
*19: AC voltage includes a rectifier circuit.
*20: Combination with push-in L-fittings (upward) is not supported.
*21: The terminal box conforms to EN175301-803 Type C (former DIN 43650-C). Details on pages 856 and 857.
*22: Single and double only.
*23: The pressure range is 0 to 0.7 MPa.

Manifold configuration explanation and parts list



List of main components (refer to pages 400 to 417 for details)

No.	Component name	Model No. (example)	No.	Component name	Model No. (example)
1	End block L	N4G1R-EL	5	Partition block	N4G1R-S
2	Discrete valve block	N4GB1R-V1-C6	6	Supply and exhaust block	N4G1R-Q-8
3	Discrete valve block with solenoid valve	N4GB110R-C6-H-3	7	End block R	N4G1R-ER
4	Solenoid valve body	4GB119R-00-H-3	8	DIN rail	N4GR-BAA (length)

Individual wiring weight

4GB1 (g)

Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N4GB110R-C6	67	Supply and exhaust block	N4G1R-Q-8	58
	N4GB120R-C6	84		N4G1R-QK-8	60
	N4GB1$\frac{3}{5}$0R-C6	85	End block	N4G1R-E*	60
	N3GB1660R-C6-3	84		N4G1R-EX*	60
Valve block with masking plate	N4GB1R-MP-C6	37	Partition block	N4G1R-S	45
			Valve block	N4GB1R-V1-C*	33
			DIN rail	N4GR-BAA*	0.19/mm

4GB2 (g)

Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N4GB210R-C8	128	Supply and exhaust block	N4G2R-Q-10	83
	N4GB220R-C8	145		N4G2R-QK-10	85
	N4GB2$\frac{3}{5}$0R-C8	156	End block	N4G2R-E*	84
	N4GB2660R-C8-3	145		N4G2R-EX*	85
Valve block with masking plate	N4GB2R-MP-C8	69	Partition block	N4G2R-S	60
			Valve block	N4GB2R-V1-C*	55
			DIN rail	N4GR-BAA*	0.19/mm

Parts list

Compatible product(s)	Part name		Model No.
Valve 4G1	ø1.8 barbed		4G1R-JOINT-CF
	ø1.8 straight		4G1R-JOINT-C18
	ø4 straight		4G1R-JOINT-C4
	ø6 straight		4G1R-JOINT-C6
	ø1.8 elbow		4G1R-JOINT-CL18, CLL18
	ø4 elbow		4G1R-JOINT-CL4, CLL4
	ø6 elbow		4G1R-JOINT-CL6, CLL6
	ø1/8" straight		4G1R-JOINT-C3N
	ø5/32" straight		4G1R-JOINT-C4N
	ø1/8" elbow	(*1)	4G1R-JOINT-CL3N
	ø5/32" elbow	(*1)	4G1R-JOINT-CL4N
	Plug cartridge		4G1R-JOINT-CPG
Valve 4G2	ø4 straight		4G2R-JOINT-C4
	ø6 straight		4G2R-JOINT-C6
	ø8 straight		4G2R-JOINT-C8
	ø6 elbow		4G2R-JOINT-CL6, CLL6
	ø8 elbow		4G2R-JOINT-CL8, CLL8
	ø1/4" straight		4G2R-JOINT-C6N
	ø5/16" straight		4G2R-JOINT-C8N

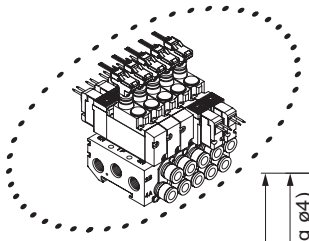
Compatible product(s)	Part name		Model No.
Valve 4G2	ø1/4" elbow	(*1)	4G2R-JOINT-CL6N
	ø5/16" elbow	(*1)	4G2R-JOINT-CL8N
	Plug cartridge		4G2R-JOINT-CPG
Common	Coil assembly		4GR-[*1]-[*2]-COIL-[*3] *1: Electrical connections (blank, B, E0, ...), *2: Ozone/coolant proof (blank, A) Surgeless (S) Low exoergic/energy saving circuit (E) External pilot (K) *3: Voltage (1, 2, 3, 4)
	E-connector socket assembly		4GR-SOCKET-ASSY-[*1]-[*3] *1: Electrical connections (E0, E00, ...), *3: Voltage (1, 3, 4)
	EJ-connector socket assembly		4GR-SOCKET-ASSY-[*1] *1: Electrical connections (E01J, E02J, ...)
Valve 4G2	DIN terminal box assembly		4GR-TERMINAL-BOX-[*3] *3: Voltage (1, 2, 3, 4)

*1: Available as made to order.

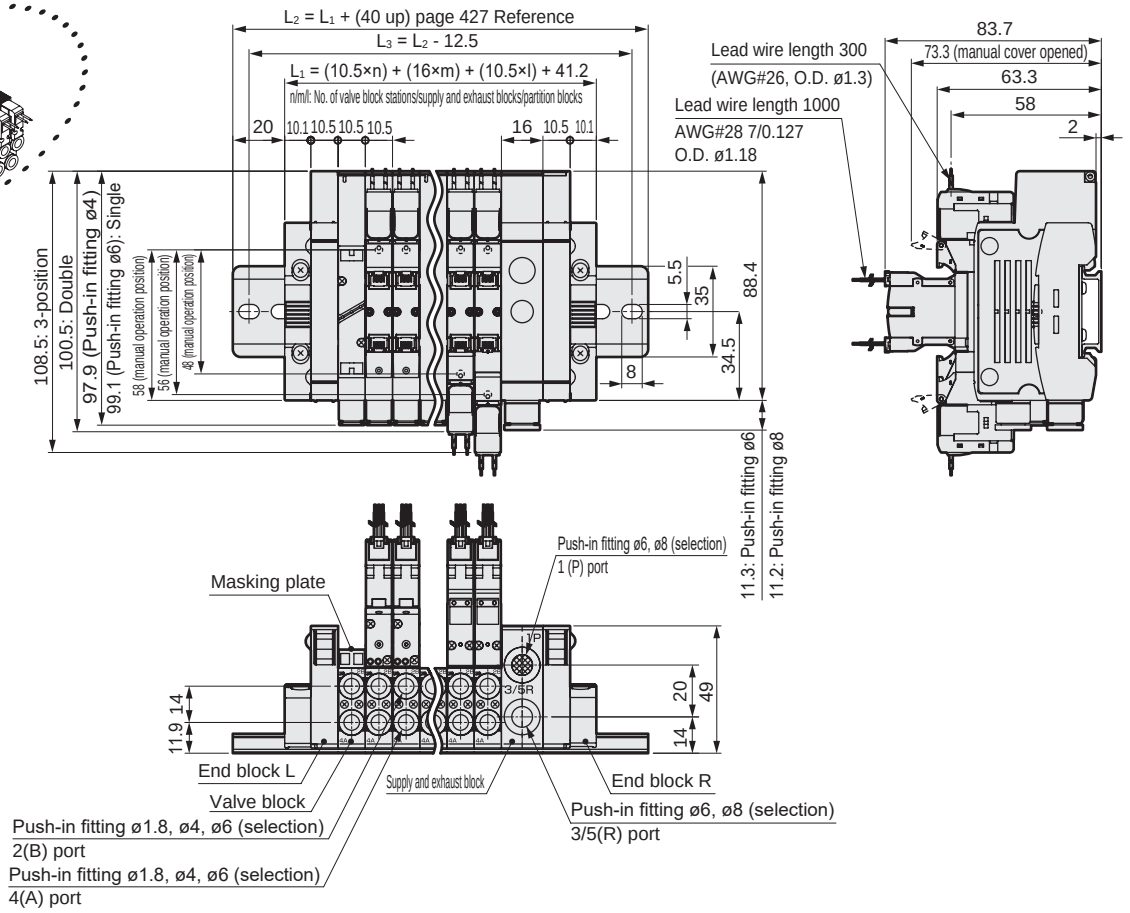
Dimensions

MN4GB1

● Grommet lead wire (blank)

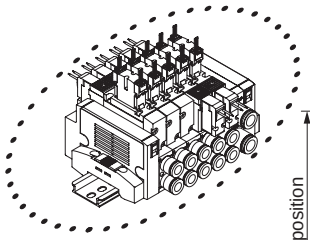


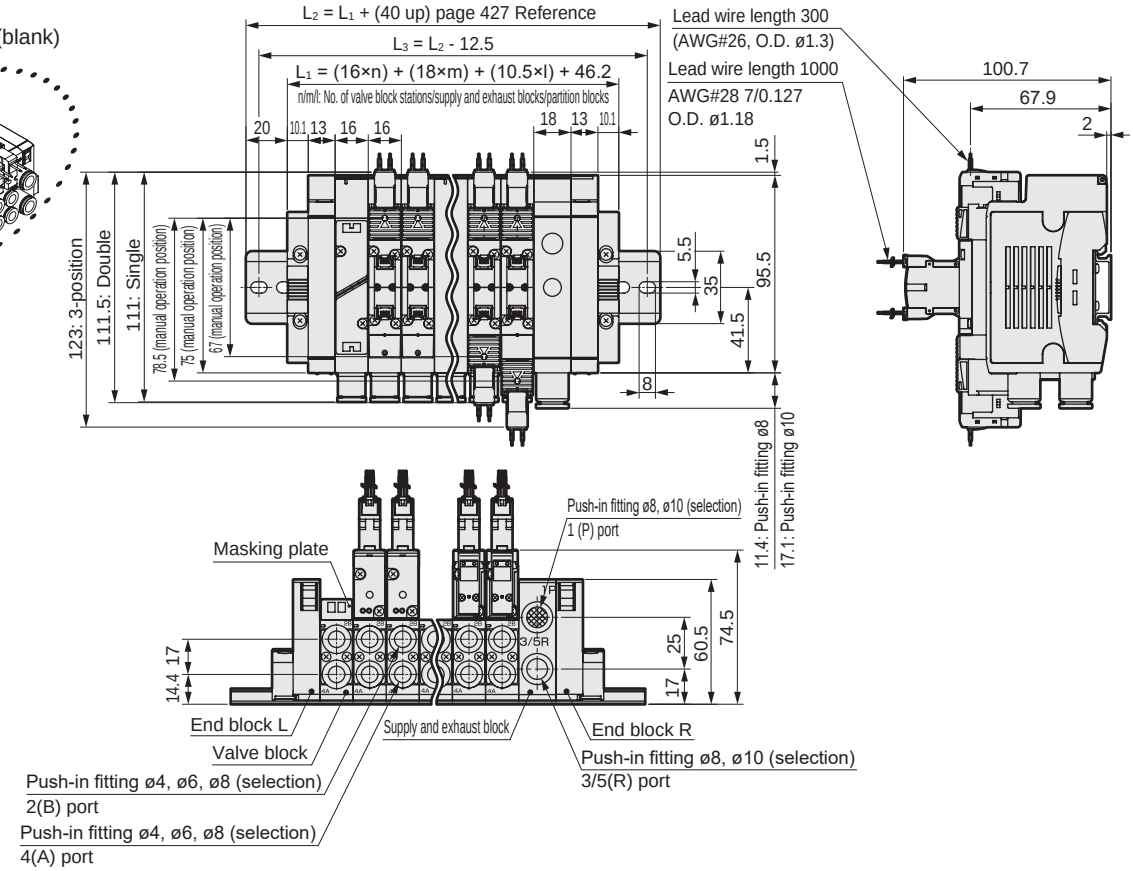
* For the 2-position single 3-port valve, either port A or port B is a plug. In addition, the two 3-port valve built-in type has the same dimensions as the double model.



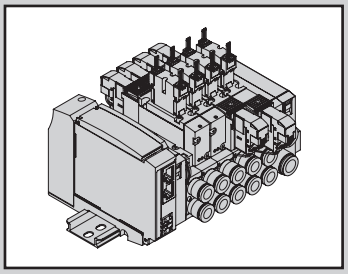
MN4GB2

● Grommet lead wire (blank)





* Refer to pages 276 to 279 for dimensions of the valve block push-in fitting and supply and exhaust block push-in fitting.



Reduced wiring block manifold
Base piping

With pressure sensor

MN4GB1/2-T* Series

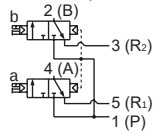
● Applicable cylinder bore size: ø20 to ø80

RoHS CAD

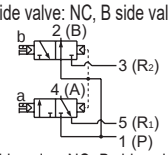
JIS symbol

● Two 3-port valves integrated

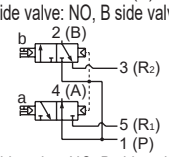
(A side valve: NC, B side valve: NC)



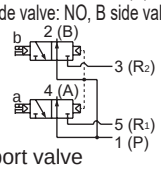
(A side valve: NC, B side valve: NO)



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

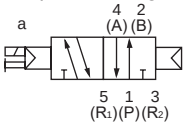


(A side valve: NO, B side valve: NO)

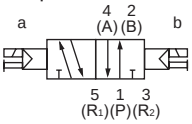


● 5-port valve

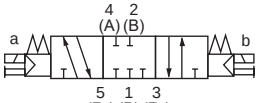
2-position single



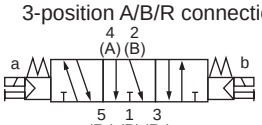
2-position double



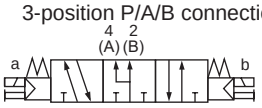
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	Description
Manifold	Block manifold
Mounting method	DIN rail mount
Air supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)
Piping direction	Side direction of base
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈101 psi, 7 bar)
Min. working pressure MPa	0.2 (≈29 psi, 2 bar) (*3)
Proof pressure MPa	1.05 (≈152 psi, 10 bar)
Ambient temperature °C	-5 (23°F) to 55 (131°F) (no freezing)
Fluid temperature °C	5 (41°F) to 55 (131°F)
Manual override	Non-locking/locking common (standard)
Lubrication (*1)	Not required
Degree of protection (*2)	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environments

Electrical specifications

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

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

Individual specifications

Item			MN3GB1/MN4GB1									
			T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2
Max. station No.		Standard wiring	16 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	16 stations	8/16 stations	16/24 stations
		Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	8 stations	4/8 stations	8/16 stations
Max. number of solenoids			16 points	24 points	24 points	16 points	18 points	8 points	24 points	16 points	8/16 points	16/32 points
Port size	Metric fitting	Port A/B	Barbed fitting ø1.8 Push-in fitting ø1.8, ø4, ø6									
		Port P/R	Push-in fitting ø6, ø8									
	Inch fitting	Port A/B	Push-in fitting ø1/8", ø5/32"									
		Port P/R	Push-in fitting ø1/4", ø5/16"									

· Refer to page 392 for weight.

Item			MN3GB2/MN4GB2									
			T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2
Max. station No.		Standard wiring	16 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	16 stations	8/16 stations	16/20 stations
		Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	8 stations	4/8 stations	8/16 stations
Max. number of solenoids			16 points	24 points	24 points	16 points	18 points	8 points	24 points	16 points	8/16 points	16/32 points
Port size	Metric fitting	Port A/B	Push-in fitting ø4, ø6, ø8									
		Port P/R	Push-in fitting ø8, ø10									
	Inch fitting	Port A/B	Push-in fitting ø1/4", ø5/16"									
		Port P/R	Push-in fitting ø5/16", ø3/8"									

· Refer to page 392 for weight.

Flow characteristics

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

*1: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 × C.
*2: Values in ( ) are with the exhaust check valve.

Reduced wiring specifications

Item	T10	T11	T30	T50	T51	T52	T53
Type	Common terminal block M3 thread	Common terminal block Clamping method	D-sub-connector	20-pin flat cable connector (with power supply terminal)	20-pin flat cable connector, no power supply terminal	10-pin flat cable connector, no power supply terminal	26-pin flat cable connector, no power supply terminal
Connector	—	—	D-sub-connector 25-pin	MIL-C-83503 standard compliant pressure welding socket 20-pin	MIL-C-83503 standard compliant pressure welding socket 20-pin	MIL-C-83503 standard compliant pressure welding socket 10-pin	MIL-C-83503 standard compliant pressure welding socket 26-pin

Serial transmission device unit specifications

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

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

Item		T7G1	T7L1*1	T7D1	T7S1	T7SP1
Network name		CC-Link ver. 1.10	SAVE NET	DeviceNet*2,*3	CompoNet	
Power supply voltage	Unit side	24 VDC 10%, -5% Common power supply terminal				
	Valve side					
	Communication side	—	—	11 to 25 VDC *4	14.0 VDC to 26.4V	
Current consumption	Unit side	110 mA or less (when all output points are ON) Load current is not included			40 mA or less (when all output points are ON) Load current is not included	
	Valve side					
	Communication side	—	—	50 mA or less	65mA or less (all points ON: 24 VDC) 95 mA or less (all points ON: 14 VDC)	
No. of output points		16 points	16 points	16 points	16 points	
Occupied number		1 station	1 station	2 bytes	Word device 1 node (16 points)	
Operation display		LED(Power supply and communication status)				
Output		NPN				PNP

Item		T8G1 / T8G2	T8GP1 / T8GP2	T8P1 / T8P2	T8PP1 / T8PP2	T8EC1 / T8EC2	T8ECP1 / T8ECP2	T8EN1 / T8EN2	T8ENP1 / T8ENP2	T8D1 / T8D2	T8DP1 / T8DP2	T8EB1 / T8EB2	T8EBP1 / T8EBP2	T8EP1 / T8EP2	T8EPP1 / T8EPP2
Communication protocol		CC-Link ver. 1.10		PROFIBUS-DP (V0)		EtherCAT		EtherNet/IP		DeviceNet		CC-Link IEF Basic		PROFINET	
Power supply voltage	Unit side	24 VDC ±10%								11 to 25 VDC		24 VDC ±10%			
	Valve side	24 VDC+10%, -5%													
Current consumption	Unit side	60 mA or less (when all output points are ON)		60 mA or less (when all output points are ON)		110 mA or less (when all output points are ON)		120 mA or less (when all output points are ON)		70 mA or less (when all output points are ON)		130 mA or less (when all output points are ON)		130 mA or less (when all output points are ON)	
	Valve side	T8 □1: 15mA or less T8 □ 2:20mA or less (when all output points are ON) Load current is not included								15 mA or less (When all output points are ON) Load current is not included					
No. of output points		T8 □ 1:16 points T8 □ 2:32 points													
Occupied number		1 station													
Operation display		LED(Power supply and communication status)													
Output		NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output

*1 Transmission bit rate of 128 bits and half-duplex transmission method are supported. Contact CKD for other specifications.
*2 DeviceNet compliant networks (DLNK, etc.) are supported as well.
*3 Contact CKD for EDS file. EDS file: A text file of parameters for communication with various companies' master units
*4 Communication power supply (V+ and V- of DeviceNet cable) is isolated from power supply terminals (unit power supply/valve power supply).

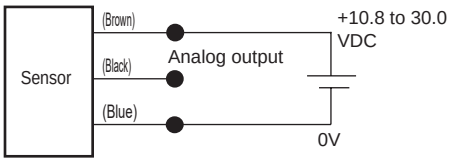
Sensor specifications

Discrete specifications

Item		Positive pressure	Negative pressure *2
Working pressure *1		0 to 1.0 MPa	-100kPa to 0
Service voltage		10.8 to 30.0 VDC	
Current consumption		5 mA (24 VDC, no load)	
Pressure detection method		Diffused semiconductor pressure switch	
Ambient temperature		0 to 55°C	
Proof pressure		1.5 MPa	0.5 MPa
Degree of protection		Dust-proof	
Analog output	Output voltage	1 to 5V	
	Zero point voltage	1±0.1V	
	Linearity	±0.5% F.S. max	
	Temperature characteristics	±2% F.S. max	
	Output current	0.5mA max. (load resistance 10 kΩ)	
Wiring method		Connector connection	
Wire length		1000 mm	

Lead wire color and content

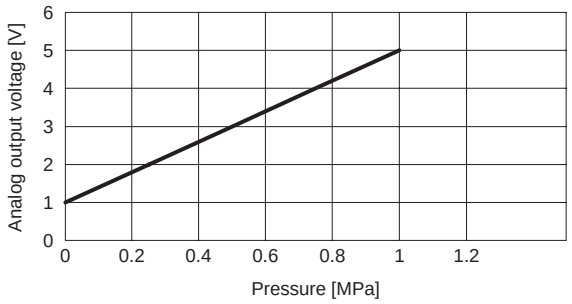
Line color	Description
Brown	Power supply (10.8 to 30.0 VDC)
Black	Analog output (1 to 5 V)
Blue	GND(0V)



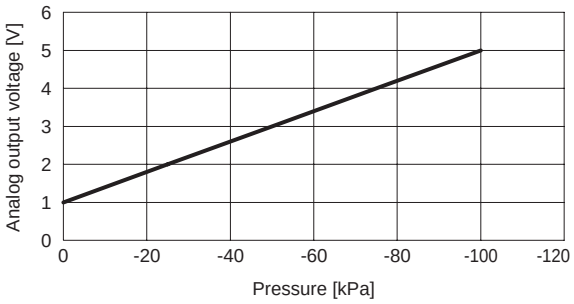
*1 Use the smaller working pressure range for the valve or pressure sensor.
*2 For negative pressure, only the single unit sensor is supported.

Analog output

● Positive pressure



● Negative pressure



MEMO

MN4GB1/2-T* Series

Reduced wiring block manifold; base piping

How to order

● Manifold model No.

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

● 3-port manifold model No.

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

● Discrete valve block with solenoid valve

N4GB1 **1** **0** **R** - **C6** - A2N *1 **H** — **3**

● Discrete 3-port valve block with solenoid valve

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

* When a cable is required, refer to page 404 and specify the cable length for *1. When not required, leave the space blank.

● Single solenoid valve

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

● Discrete 3-port solenoid valve

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

- A Model No.
- B Solenoid position
- C Port size (*1) (*2) (*3)
- D Reduced wiring connection
- E Terminal/connector pin array
- F Option
- G Station No.
- H Voltage

Code	Description		A Model No. Manifold: Two 3-port valves integrated: MN3GB1	MN3GB2	5-port valve: MN4GB1	MN4GB2	Discrete valve block with solenoid valve/discrete solenoid valve: (N)3GB1	(N)3GB2	(N)4GB1	(N)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	Two 3-port valves integrated (*4) (*5)	A side valve: Normally closed B side valve: Normally closed	●	●			●	●		
67		A side valve: Normally closed B side valve: Normally open	●	●			●	●		
76		A side valve: Normally open B side valve: Normally closed	●	●			●	●		
77		A side valve: Normally open B side valve: Normally open	●	●			●	●		
8	Mix manifold (for multiple solenoid positions)		●	●	●	●	●	●	●	●
C Port size (ports A/B)										
Type	**Metric fitting/Rc thread**									
CF	ø1.8 barbed fitting (compatible tube UP-9102-**)		●		●		●		●	
C18	ø1.8 push-in fitting (compatible tube UP-9402-**)		●		●		●		●	
C4	ø4 push-in fitting		●	●	●	●	●	●	●	●
C6	ø6 push-in fitting		●	●	●	●	●	●	●	●
C8	ø8 push-in fitting			●		●		●		●
CL18	ø1.8 push-in L-fitting upward (Compatible tube UP-9402-**)	(*6)	●		●		●		●	
CL4	ø4 push-in L-fitting upward	(*6)	●		●		●		●	
CL6	ø6 push-in L-fitting upward	(*6)	●	●	●	●	●	●	●	●
CL8	ø8 push-in L-fitting upward	(*6)		●		●		●		●
CD18	ø1.8 push-in L-fitting downward (compatible tube UP-9402-**)		●		●		●		●	
CD4	ø4 push-in L-fitting (downward)		●		●		●		●	
CD6	ø6 push-in L-fitting (downward)		●	●	●	●	●	●	●	●
CD8	ø8 push-in L-fitting (downward)			●		●		●		●
CX	Push-in fitting mix	(*7)	●	●	●	●				
Single side plug specifications	Port A	Port B								
CFNC	ø1.8 barbed fitting (compatible tube UP-9102-**)	Plug			●				●	
C18NC	ø1.8 push-in fitting (compatible tube UP-9402-**)	Plug			●				●	
C4NC	ø4 push-in fitting	Plug			●	●			●	●
C6NC	ø6 push-in fitting	Plug			●	●			●	●
C8NC	ø8 push-in fitting	Plug				●				●
CFNO	Plug	ø1.8 barbed fitting (compatible tube UP-9102-**)			●				●	
C18NO	Plug	ø1.8 push-in fitting (compatible tube UP-9402-**)			●				●	
C4NO	Plug	ø4 push-in fitting			●	●			●	●
C6NO	Plug	ø6 push-in fitting			●	●			●	●
C8NO	Plug	ø8 push-in fitting				●				●
CL18NC	Rad ø1.8 push-in fit upward (compat tube UP-9402-**)	Plug			●				●	
CL4NC	ø4 push-in L-fitting (upward)	Plug			●				●	
CL6NC	ø6 push-in L-fitting (upward)	Plug			●	●			●	●
CL8NC	ø8 push-in L-fitting (upward)	Plug				●				●
CL18NO	Plug	Rad ø1.8 push-in fit upward (compat tube UP-9402-**)			●				●	
CL4NO	Plug	ø4 push-in L-fitting (upward)			●				●	
CL6NO	Plug	ø6 push-in L-fitting (upward)			●	●			●	●
CL8NO	Plug	ø8 push-in L-fitting (upward)				●				●
CD18NC	Rad ø1.8 push-in fit downward (compat tube UP-9402-**)	Plug			●				●	
CD4NC	ø4 push-in L-fitting (downward)	Plug			●				●	
CD6NC	ø6 push-in L-fitting (downward)	Plug			●	●			●	●
CD8NC	ø8 push-in L-fitting (downward)	Plug				●				●
CD18NO	Plug	Rad ø1.8 push-in fit downward (compat tube UP-9402-**)			●				●	
CD4NO	Plug	ø4 push-in L-fitting (downward)			●				●	
CD6NO	Plug	ø6 push-in L-fitting (downward)			●	●			●	●
CD8NO	Plug	ø8 push-in L-fitting (downward)				●				●
Type	**Inch fitting/inch thread**									
C3N	ø1/8" push-in fitting		●		●		●		●	
C4N	ø5/32" push-in fitting		●		●		●		●	
C6N	ø1/4" push-in fitting			●		●		●		●
C8N	ø5/16" push-in fitting			●		●		●		●
CL3N	ø1/8" push-in L-fitting upward	(*8)	○		○		○		○	
CL4N	ø5/32" push-in L-fitting upward	(*8)	○		○		○		○	
CL6N	ø1/4" push-in L-fitting upward	(*8)		○		○		○		○
CL8N	ø5/16" push-in L-fitting upward	(*8)		○		○		○		○
CXN	Push-in fitting mix	(*7)	●	●	●	●				
Single side plug specifications	Port A	Port B								
C3NCN	ø1/8" push-in fitting	Plug			●				●	
C4NCN	ø5/32" push-in fitting	Plug			●				●	
C6NCN	ø1/4" push-in fitting	Plug				●				●
C8NCN	ø5/16" push-in fitting	Plug				●				●
C3NON	Plug	ø1/8" push-in fitting			●				●	
C4NON	Plug	ø5/32" push-in fitting			●				●	
C6NON	Plug	ø1/4" push-in fitting				●				●
C8NON	Plug	ø5/16" push-in fitting				●				●
CL3NCN	ø1/8" push-in L-fitting (upward)	Plug			○				○	
CL4NCN	ø5/32" push-in L-fitting (upward)	Plug			○				○	
CL6NCN	ø1/4" push-in L-fitting (upward)	Plug				○				○
CL8NCN	ø5/16" push-in L-fitting (upward)	Plug				○				○
CL3NON	Plug	ø1/8" push-in L-fitting (upward)			○				○	
CL4NON	Plug	ø5/32" push-in L-fitting (upward)			○				○	
CL6NON	Plug	ø1/4" push-in L-fitting (upward)				○				○
CL8NON	Plug	ø5/16" push-in L-fitting (upward)				○				○
00	Discrete valve for integrated base						●	●	●	●

is not available.

○ indicates made to order.

Precautions for model selection

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

[Port size/wiring method list]

Code	Description		Ⓐ Model No. Manifold: Two 3-port valves integrated MN3GB1	MN3GB2	5-port valve MN4GB1	MN4GB2	Discrete valve block with solenoid valve/discrete solenoid valve (N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
Ⓓ Reduced wiring (lamp and surge suppressor provided as standard) 12/24 VDC										
T10	Common terminal block (M3 thread)	Left-sided specifications	●	●	●	●				
T10R		Right-sided specifications	●	●	●	●				
T11	Common terminal block (clamping)	Left-sided specifications	●	●	●	●				
T11R		Right-sided specifications	●	●	●	●				
T30	D-sub-connector	Left-sided specifications	●	●	●	●				
T30R		Right-sided specifications	●	●	●	●				
T50	20-pin flat cable connector (with power supply terminal)	Left-sided specifications	●	●	●	●				
T50R		Right-sided specifications	●	●	●	●				
T51	20-pin flat cable connector (without power supply terminal)	Left-sided specifications	●	●	●	●				
T51R		Right-sided specifications	●	●	●	●				
T52	10-pin flat cable connector (without power supply terminal)	Left-sided specifications	●	●	●	●				
T52R		Right-sided specifications	●	●	●	●				
T53	26-pin flat cable connector (without power supply terminal)	Left-sided specifications	●	●	●	●				
T53R		Right-sided specifications	●	●	●	●				
Ⓓ Serial transmission (lamp/surge suppressor provided as standard) 24 VDC										
T6G1	CC-Link	NPN 16 points	●	●	●	●				
T7D1	DeviceNet	NPN 16 points	●	●	●	●				
T7G1	CC-Link	NPN 16 points	●	●	●	●				
T7L1	SAVE NET	NPN 16 points	●	●	●	●				
T7S1	CompoNet	NPN 16 points	●	●	●	●				
T7SP1		PNP 16 points	●	●	●	●				
T8G1	CC-Link	NPN 16 points	●	●	●	●				
T8G2		NPN 32 points	●	●	●	●				
T8GP1		PNP 16 points	●	●	●	●				
T8GP2		PNP 32 points	●	●	●	●				
T8P1	PROFIBUS-DP	NPN 16 points	●	●	●	●				
T8P2		NPN 32 points	●	●	●	●				
T8PP1		PNP 16 points	●	●	●	●				
T8PP2		PNP 32 points	●	●	●	●				
T8EC1	EtherCAT	NPN 16 points	●	●	●	●				
T8EC2		NPN 32 points	●	●	●	●				
T8ECP1		PNP 16 points	●	●	●	●				
T8ECP2		PNP 32 points	●	●	●	●				
T8EN1	EtherNet/IP	NPN 16 points	●	●	●	●				
T8EN2		NPN 32 points	●	●	●	●				
T8ENP1		PNP 16 points	●	●	●	●				
T8ENP2		PNP 32 points	●	●	●	●				
T8D1	DeviceNet	NPN 16 points	●	●	●	●				
T8D2		NPN 32 points	●	●	●	●				
T8DP1		PNP 16 points	●	●	●	●				
T8DP2		PNP 32 points	●	●	●	●				
T8EB1	CC-Link IEF Basic	NPN 16 points	●	●	●	●				
T8EB2		NPN 32 points	●	●	●	●				
T8EBP1		PNP 16 points	●	●	●	●				
T8EBP2		PNP 32 points	●	●	●	●				
T8EP1	PROFINET	NPN 16 points	●	●	●	●				
T8EP2		NPN 32 points	●	●	●	●				
T8EPP1		PNP 16 points	●	●	●	●				
T8EPP2		PNP 32 points	●	●	●	●				
A2N	Without lead wire (without socket)	with surge suppressor and indicator lamp					●	●	●	●
Ⓔ Terminal/connector pin array										
Blank	Standard wiring	(*9))	●	●	●	●	●	●	●	●
W	Double wiring	(*9))	●	●	●	●	●	●	●	●
W1	Double wiring (with single spare wiring)	(*9))(*10)	●	●	●	●	●	●	●	●
Ⓕ Option										
Blank	Manual override of non-locking/locking common		●	●	●	●	●	●	●	●
M	Manual override of non-locking		●	●	●	●	●	●	●	●
H	With exhaust check valve	(*11)	●	●	●	●	●	●	●	●
K	External pilot	(*12)			●	●			●	●
A	Ozone/coolant proof		●	●	●	●	●	●	●	●
S	Surgeless	(*13)	●	●	●	●	●	●	●	●
E	Low exoergic/energy saving circuit	(*13)(*14)	●	●	●	●	●	●	●	●
L	With pipe adaptor		●	●	●	●	●	●	●	●
Q	Reduced wiring duct	(*18)	●	●	●	●	●	●	●	●
F	Port A/B filter built in	(*15)	●	●	●	●	●	●	●	●
G1	With sensor (1-port detection type)	(*19)(*20)			●	●				
G2	With sensor (2-port detection type)	(*20)	●	●	●	●				
Z1	Air supply spacer	(*16)	●	●	●	●				
Z2	In-stop valve spacer	(*16)(*17)	●	●	●	●				
Z3	Exhaust spacer	(*16)	●	●	●	●				
Z6	Spacer pilot check valve	(*16)				●				
Ⓖ Station No.										
1 to 24	1 stations to 24 stations (Max. station number for MN4GB2 is 20.)		●	●	●	●				
Ⓗ Voltage										
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●

Ozone-proof specifications • Coolant proof specifications

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

Clean-room specifications

● Clean room compatible specifications

** - Voltage - **P7***

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

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

** - Voltage - **P4**

CE marking specifications

** - Voltage - **ST**

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

⚠ Precautions for model selection

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

*10: Spare wiring (A type socket assembly) is included on the cap side for single types. A holder for retaining the socket assembly is included for single unit valves (A2N). For details, refer to page 416. Not compatible with combination with port size C*NC or C*NO.

*11: 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to page 628 for details on the exhaust check valve.

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

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

*14: Surgeless specifications.

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

*16: Specify the spacer mounting position and quantity on the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Cannot be selected together with push-in L-fitting (upward). For details, refer to page 410 to page 414.

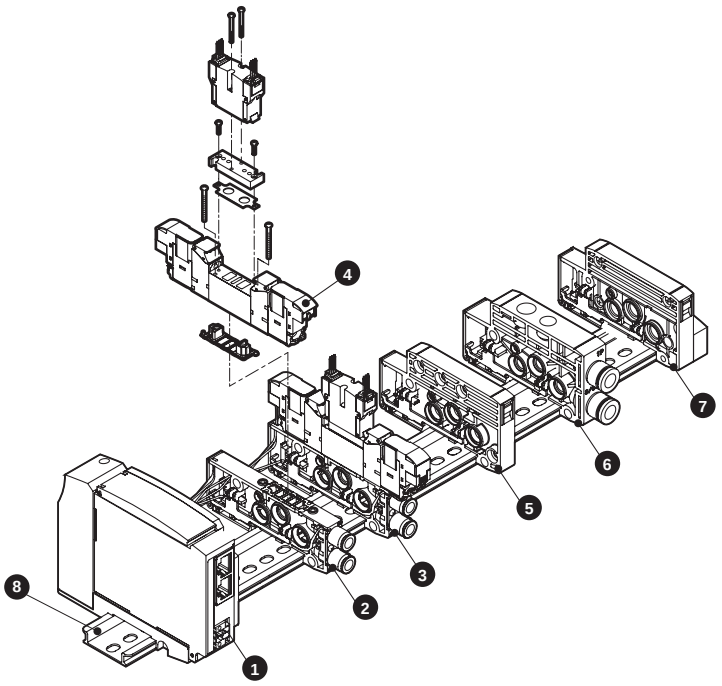
*17: Not compatible in combination with external pilot (K).

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

*19: Single and double only.

*20: The pressure range is 0 to 0.7 MPa.

Manifold configuration explanation and parts list



List of main components (refer to pages 400 to 417 for details)

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

(Note) Wiring block cannot be ordered as a single item.

Reduced wiring weight

4GB1

(g)

Part name	Model No.	Weight	Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N4GB110R-C6-A2N-3	69	End block	N4G1R-E*	60	Wiring block (Note)	N4G1R-T10(R)	207
	N4GB120R-C6-A2N-3	88		N4G1R-EX*	60		N4G1R-T30(R)	165
	N4GB1[2/4]0R-C6-A2N-3	89	Partition block	N4G1R-S	45		N4G1R-T50(R)	167
	N3GB1660R-C6-A2N-3	88	Valve block	N4GB1R-V1-C*	33		N4G1R-T6*	295
Valve block with masking plate	N4GB1R-MP * -C6	37		N4GB1R-V2-C*	35		N4G1R-T7*	203
Supply and exhaust block	N4G1R-Q-8	58	DIN rail	N4GR-BAA*	0.19/mm		N4G1R-T8*	229
	N4G1R-QK-8	60						

(Note) Wiring block cannot be ordered as a single item.

4GB2

(g)

Part name	Model No.	Weight	Part name	Model No.	Weight	Part name	Model No.	Weight
Valve block with solenoid valve	N4GB210R-C8-A2N-3	130	End block	N4G2R-E*	84	Wiring block (Note)	N4G2R-T10(R)	223
	N4GB220R-C8-A2N-3	149		N4G2R-EX*	85		N4G2R-T30(R)	182
	N4GB2[2/4]0R-C8-A2N-3	160	Partition block	N4G2R-S	60		N4G2R-T50(R)	184
	N4GB2660R-C8-A2N-3	149	Valve block	N4GB2R-V1-C*	55		N4G2R-T6*	312
Valve block with masking plate	N4GB2R-MP * -C8	69		N4GB2R-V2-C*	57		N4G2R-T7*	204
Supply and exhaust block	N4G2R-Q-10	83	DIN rail	N4GR-BAA*	0.19/mm		N4G2R-T8*	242
	N4G2R-QK-10	85						

(Note) Wiring block cannot be ordered as a single item.

Parts list

Compatible product(s)	Part name	Model No.
Valve 4G1	ø1.8 barbed	4G1R-JOINT-CF
	ø1.8 straight	4G1R-JOINT-C18
	ø4 straight	4G1R-JOINT-C4
	ø6 straight	4G1R-JOINT-C6
	ø1.8 elbow	4G1R-JOINT-CL18, CLL18
	ø4 elbow	4G1R-JOINT-CL4, CLL4
	ø6 elbow	4G1R-JOINT-CL6, CLL6
	ø1/8" straight	4G1R-JOINT-C3N
	ø5/32" straight	4G1R-JOINT-C4N
	ø1/8" elbow *1	4G1R-JOINT-CL3N
	ø5/32" elbow *1	4G1R-JOINT-CL4N
	Plug cartridge	4G1R-JOINT-CPG
Valve 4G2	ø4 straight	4G2R-JOINT-C4
	ø6 straight	4G2R-JOINT-C6
	ø8 straight	4G2R-JOINT-C8
	ø6 elbow	4G2R-JOINT-CL6, CLL6
	ø8 elbow	4G2R-JOINT-CL8, CLL8

Compatible product(s)	Part name	Model No.
Valve 4G2	ø1/4" straight	4G2R-JOINT-C6N
	ø5/16" straight	4G2R-JOINT-C8N
	ø1/4" elbow *1	4G2R-JOINT-CL6N
	ø5/16" elbow *1	4G2R-JOINT-CL8N
	Plug cartridge	4G2R-JOINT-CPG
Common	Coil assembly	4GR-A2N-[*2]-COIL-[*3] *2: Ozone/coolant proof (blank, A) Surgeless (S) Low exoergic/energy saving circuit (E) External pilot (K) *3: Voltage (1, 3, 4)
Manifold	Expansion socket assembly (Details on page 837)	a side for solenoid N4GR-SOCKET-ASSY-[selection No.] b side for solenoid N4GR-RELAY-SOCKET-[selection No.]

*1: Available as made to order.

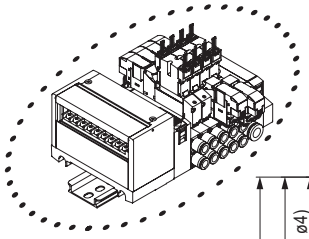
Dimensions

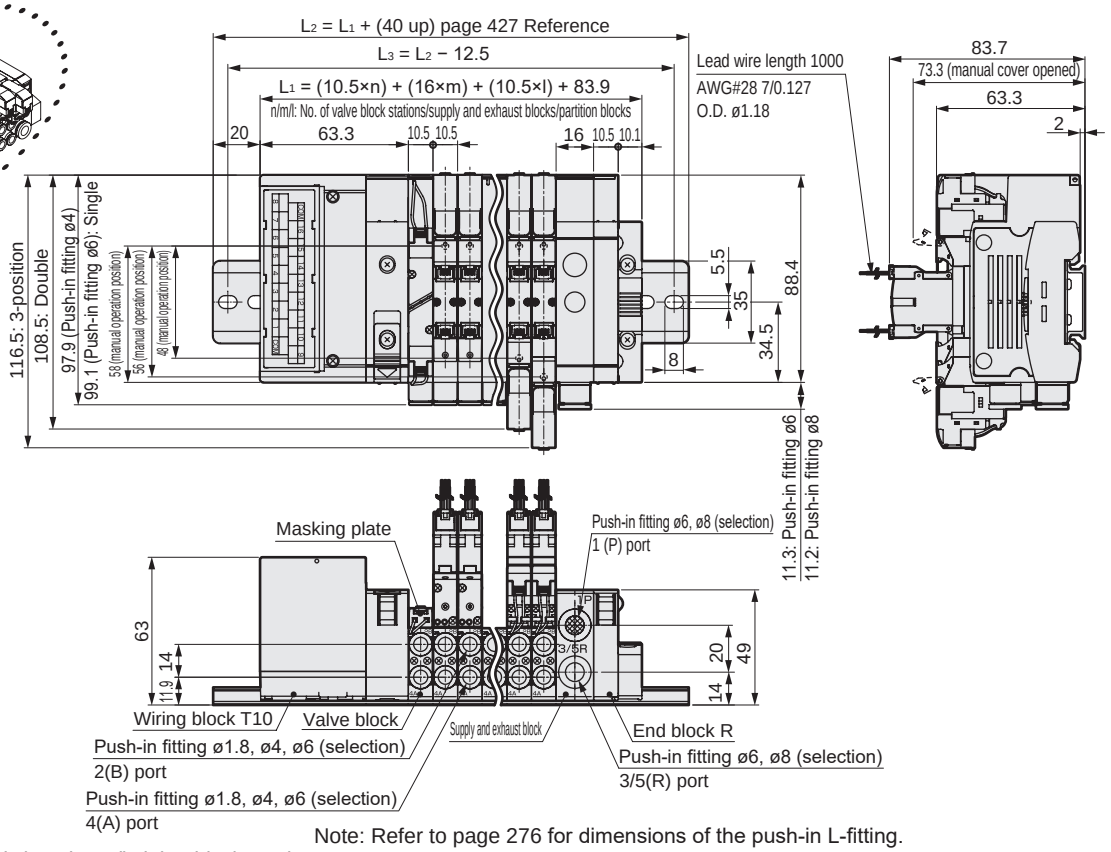
MN4GB1

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

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

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

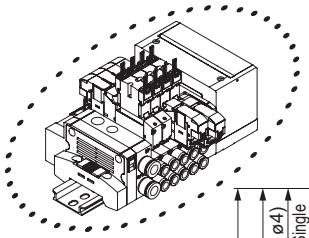


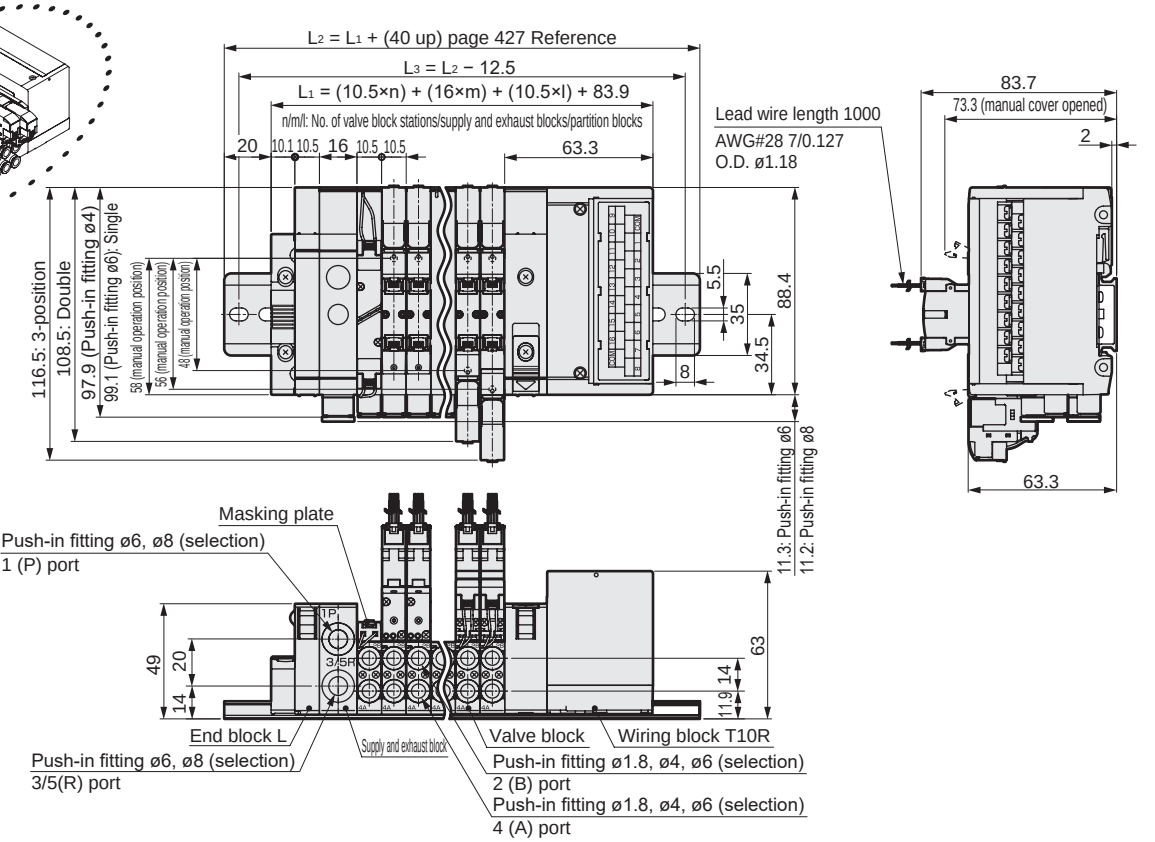


Note: Refer to page 276 for dimensions of the push-in L-fitting.

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

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





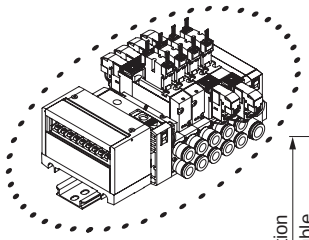
Dimensions

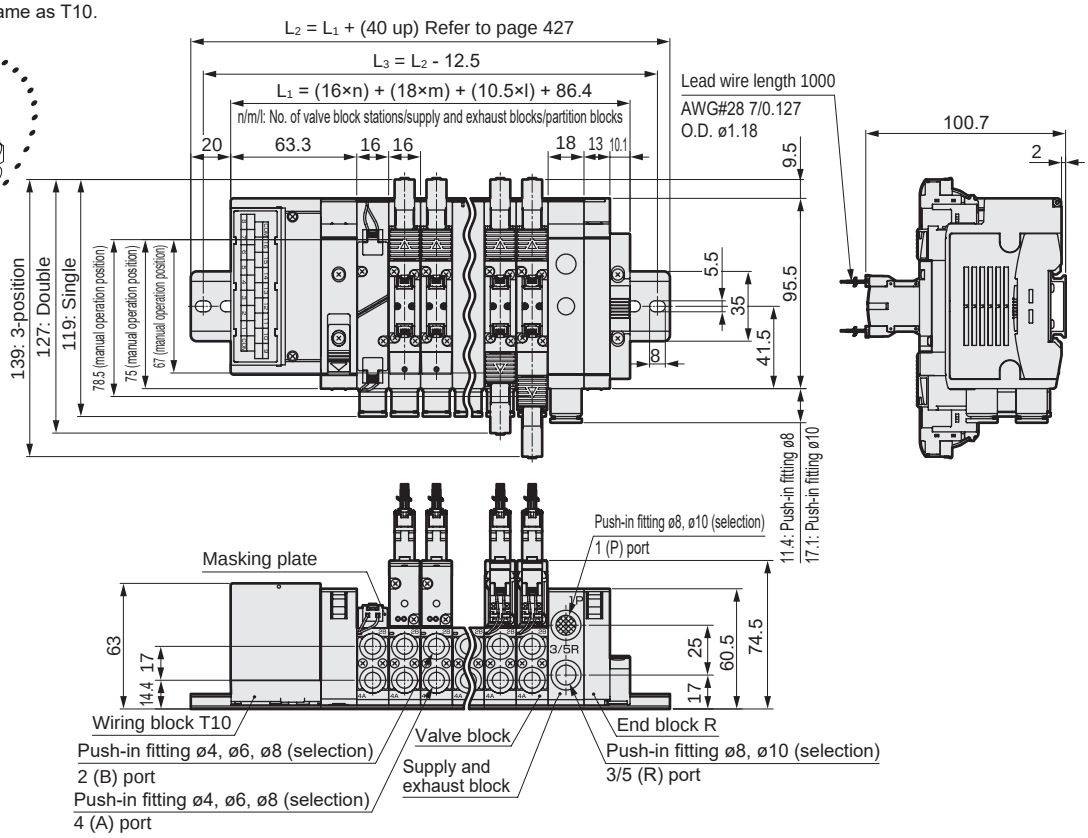
MN4GB2

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

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

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

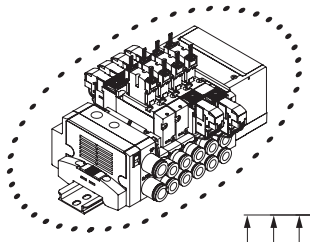


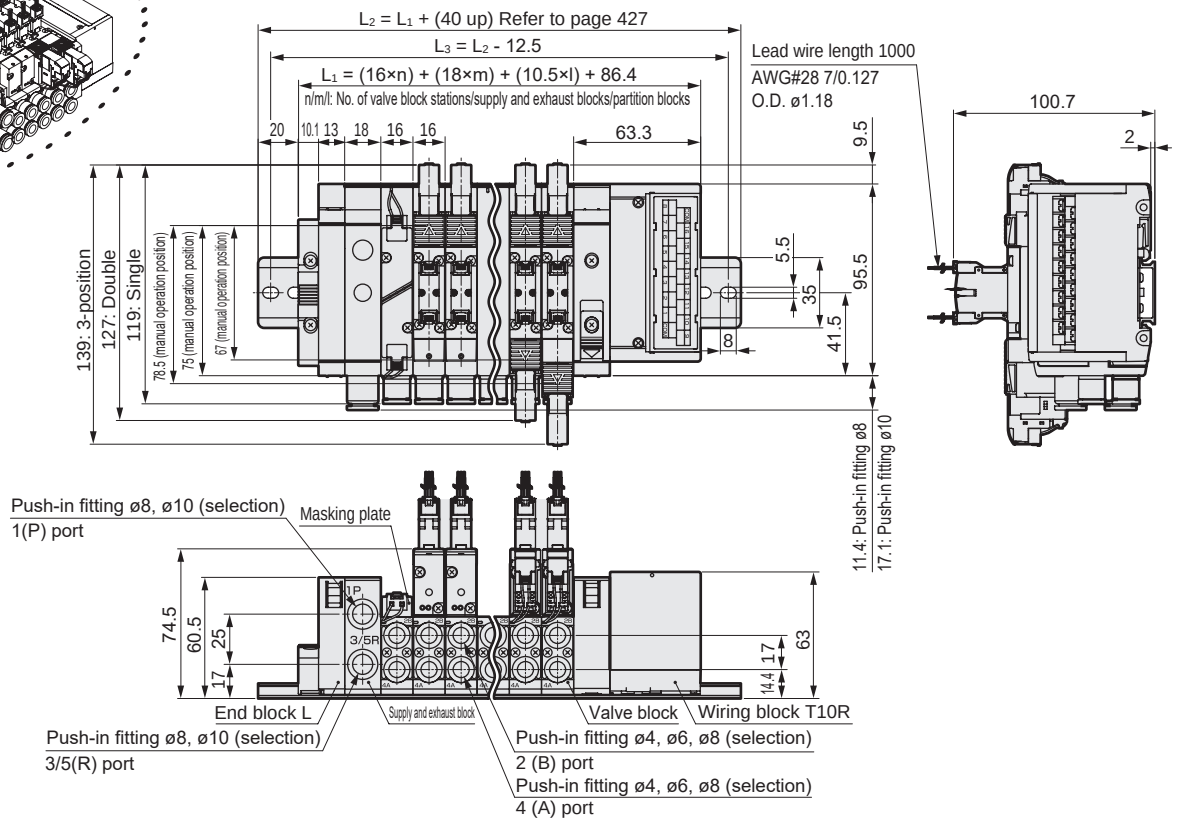


● Common terminal block (M3 thread) right side (T10R)

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

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



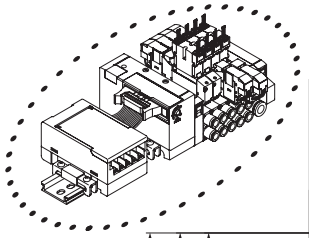


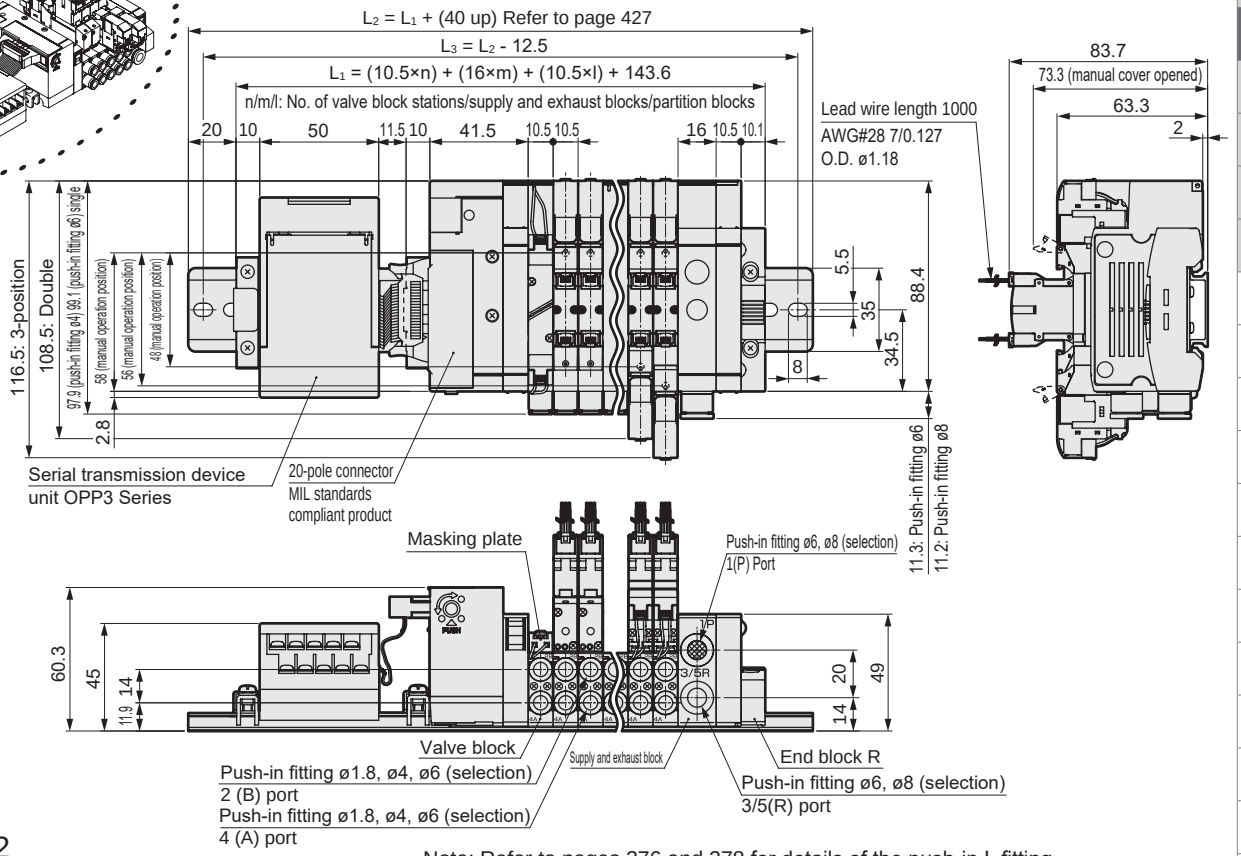
Dimensions

MN4GB1

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

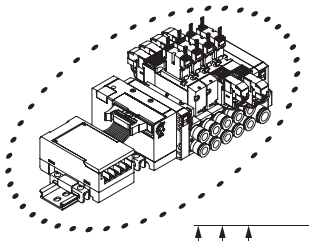
● Serial transmission (T6G1)



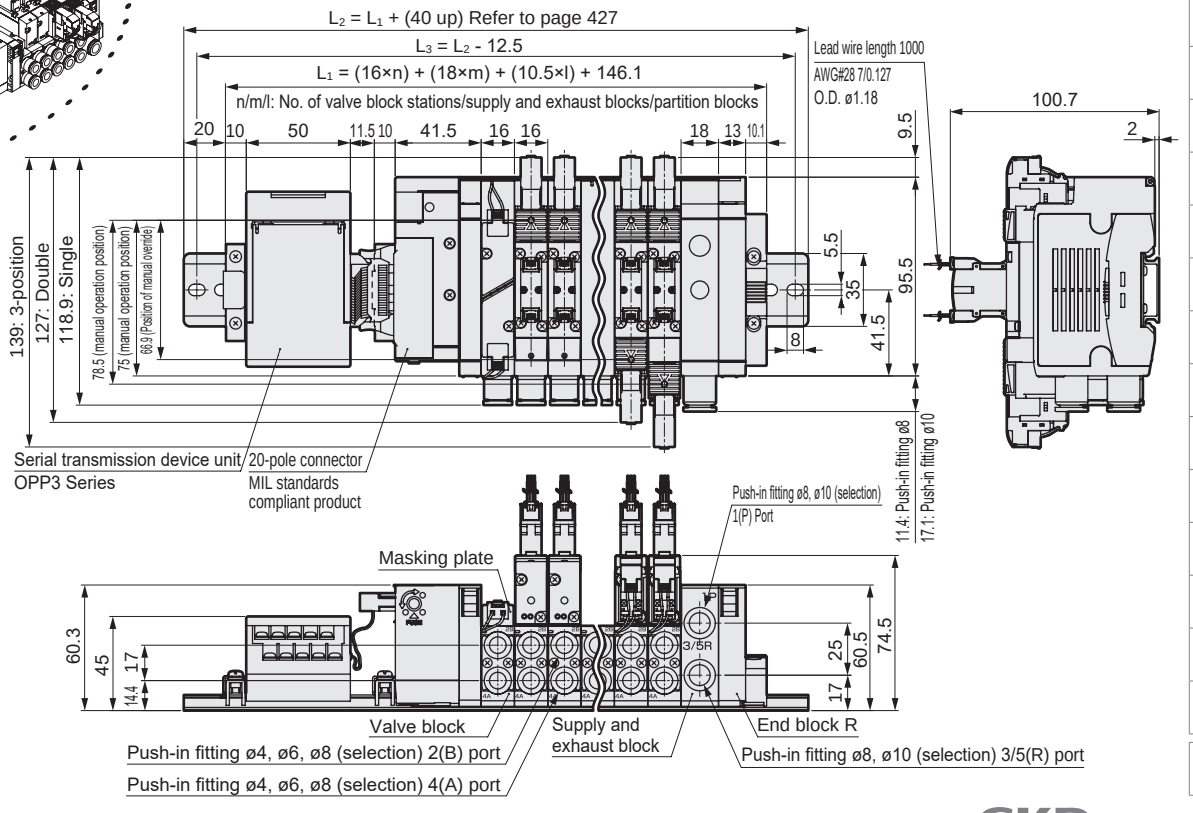


MN4GB2

● Serial transmission (T6G1)



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

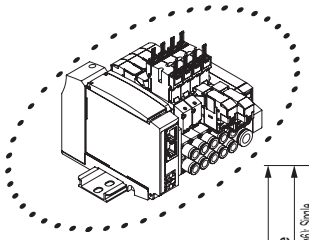


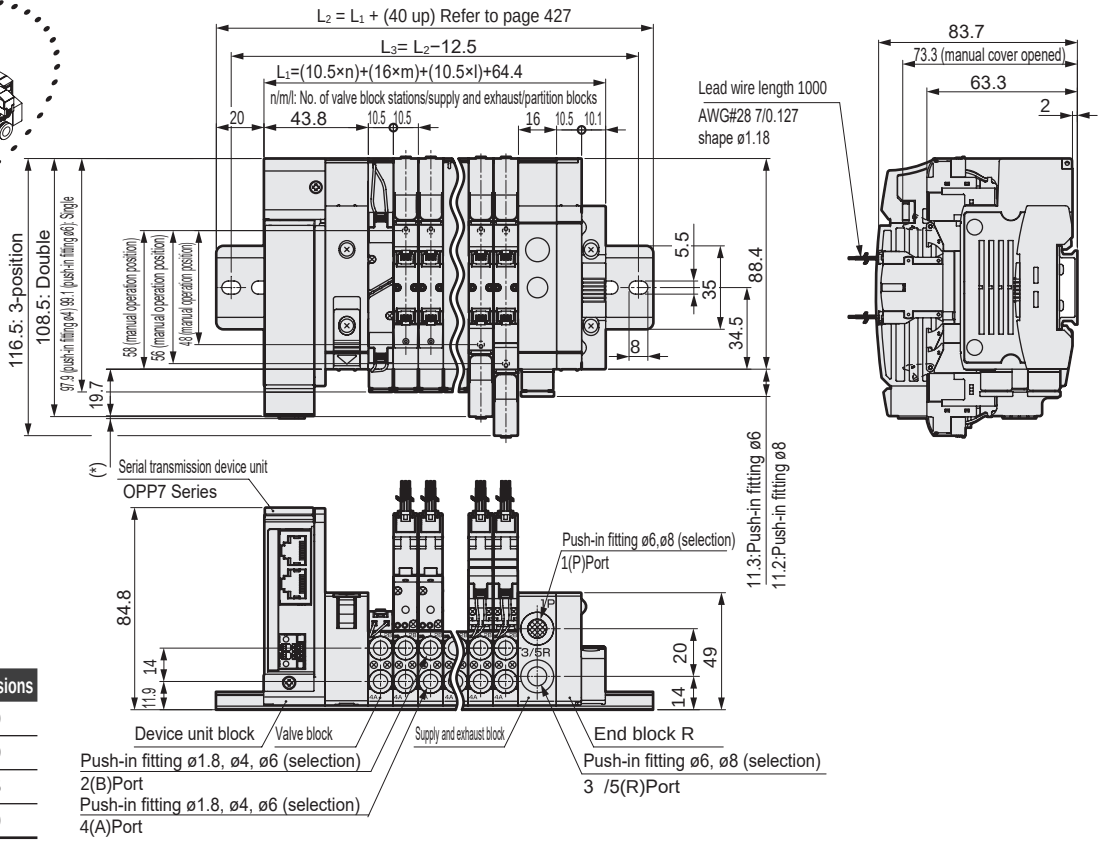
Dimensions

MN4GB1

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

● Thin serial transmission (T8*)



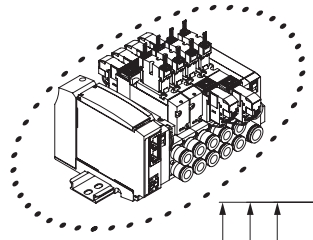


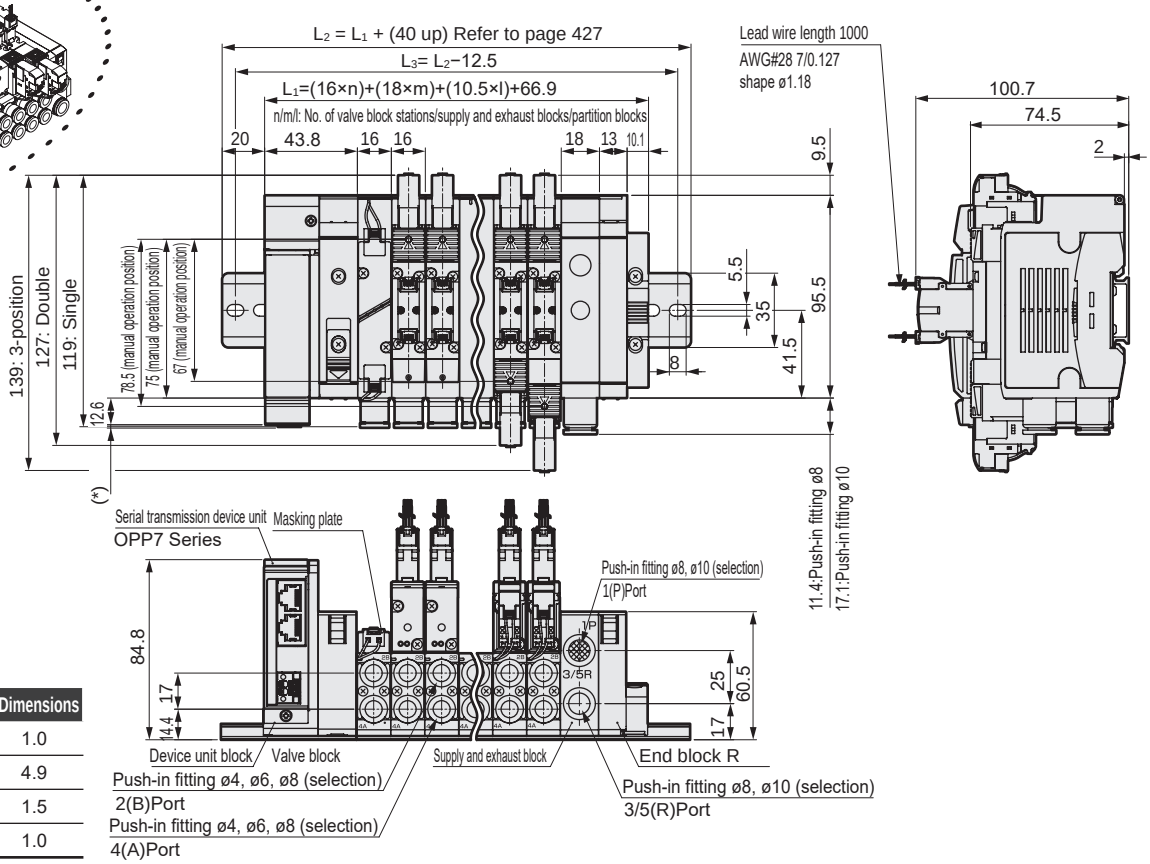
Serial transmission	* Dimensions
T8G□	1.0
T8P□	4.9
T8E□	1.5
T8D□	1.0

MN4GB2

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

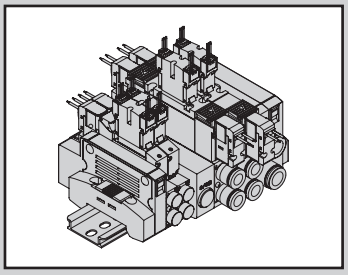
● Thin serial transmission (T8*)





Serial transmission	* Dimensions
T8G □	1.0
T8P □	4.9
T8E □	1.5
T8D □	1.0

MEMO



4G1/2 mix manifold

MN4GBX12 Series

● Cylinder bore size: ø20 to ø80

RoHS CAD

Specifications

Common with all series.

For individual wiring, refer to page 380, and for reduced wiring, refer to page 386.

How to order

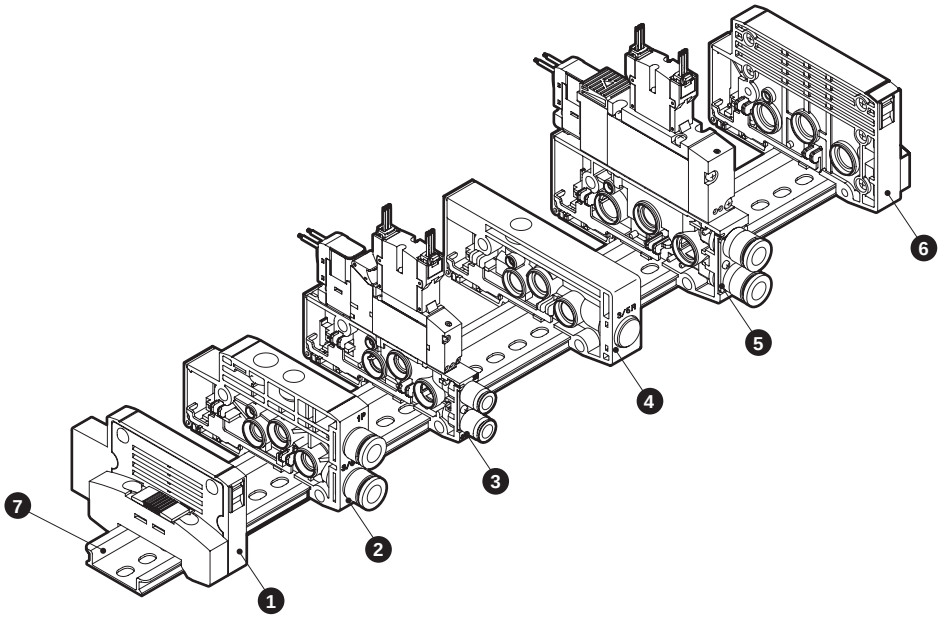
MN3GBX12R- ☐ - ☐ ☐ - ☐ - ☐

MN4GBX12R- ☐ - ☐ ☐ - ☐ - ☐

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

* The model No. will be "MN□GBX12R-". Other items are common with the example of model No. for each series.
For individual wiring, refer to page 382, and for reduced wiring, refer to page 390.

Manifold configuration explanation and parts list



* Notes on 4G1/2 mix manifolds
With the fitting at the front, the left side of the mixed block is the 4G1 Series and the right side the 4G2 Series.
(Note that these position settings cannot be reversed.)

List of main components (refer to pages 400 to 417 for details)

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

Weight

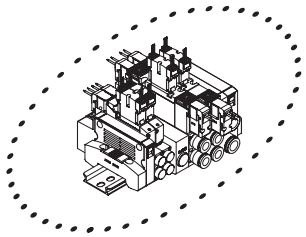
N4G12R-MIX:49g Refer to the specifications of each series for other components.

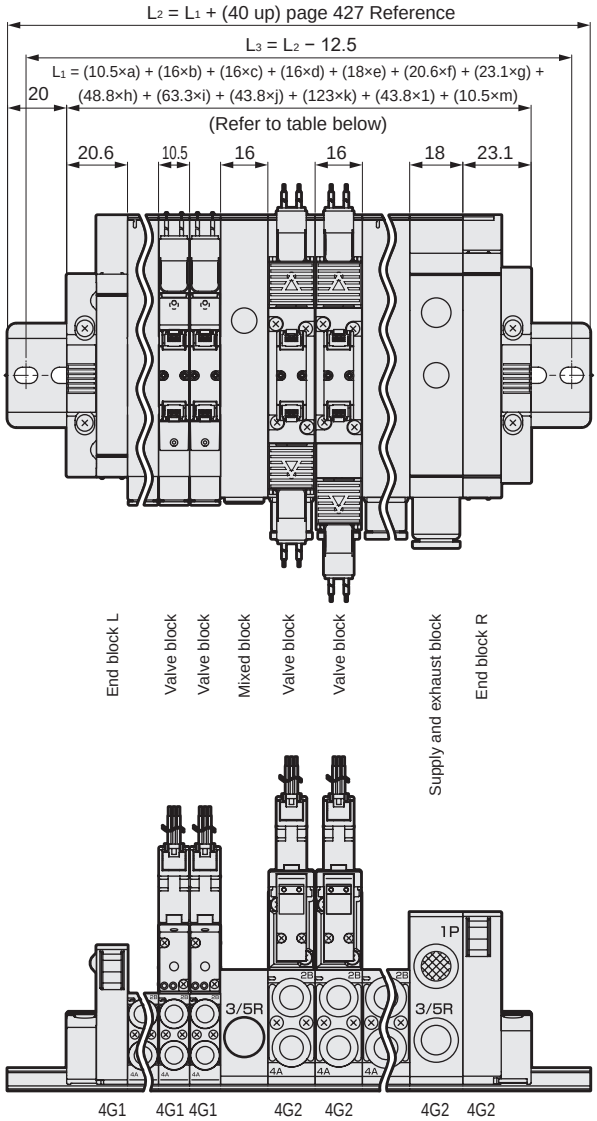
Mixed block: Dimensions

Unit mm

MN4GBX12R

Note: For details of the E-connector, EJ-connector, and DIN terminal box, refer to page 243.
Note: Refer to pages 276 to 279 for details of the push-in L fitting.





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

Part name	Dimensions
a : 4G1 No. of valve blocks	10.5 × a
b : 4G2 No. of valve blocks	16 × b
c : No. of mix blocks	16 × c
d : 4G1 No. of supply and exhaust blocks	16 × d
e : 4G2 No. of supply and exhaust blocks	18 × e
f : 4G1 No. of L end blocks	20.6 × f
g : 4G2 No. of R end blocks	23.1 × g
h : 4G1/2 No. of reduced wiring T30/T5*	48.8 × h
i : 4G1/2 No. of reduced wiring T10/T11*	63.3 × i
j : 4G1/2 No. of reduced wiring T7*	43.8 × j
k : 4G1/2 No. of reduced wiring T6G1*	123 × k
l : 4G1/2 No. of reduced wiring T8*	43.8 × l
m : 4G1/2 No. of partition blocks	10.5 × m

*1: The mixed block must be placed between 4G1 and 4G2.
*2: The max. station No. is 20.