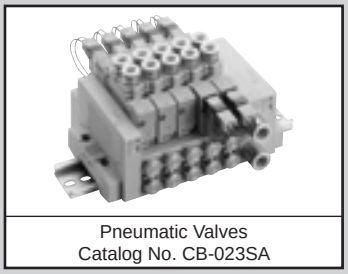


Pneumatic Valves
Catalog No. CB-023SA

Individual wiring block manifold
Body piping

MN4GA1/2-FP1 Series

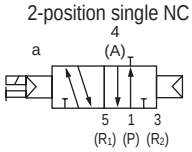
● Cylinder bore size: ø20 to ø80

RoHS CAD

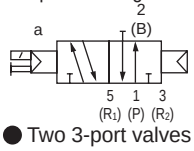
JIS symbol

● 3-port valve

2-position single NC

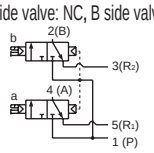


2-position single NO

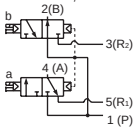


● Two 3-port valves integrated

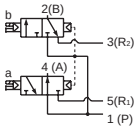
(A side valve: NC, B side valve: NC)



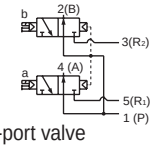
(A side valve: NC, B side valve: NO)



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

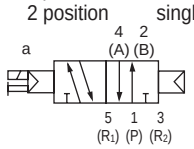


(A side valve: NO, B side valve: NO)

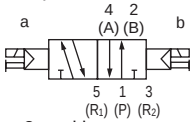


● 5-port valve

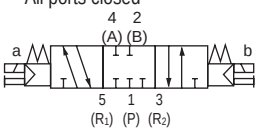
2 position single



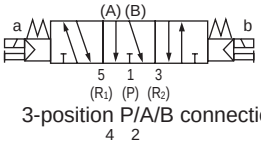
2-position double



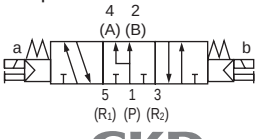
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item	Description
Manifold	Block manifolds
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	Valve top direction
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7
Min. working pressure MPa	0.2 (*2)
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual override	Non-locking/locking common (standard)
Degree of protection (*1)	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 Avoid dripping water or 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.

*2 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	100 AC	200 AC
Voltage fluctuation range		±10%			
Holding current A (*3)	Standard	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
	With low exoergic/energy circuit	0.005	0.010	-	
Power consumption W (*3)	Standard	0.35(0.40)		-	
	With low exoergic/energy circuit	0.1		-	
Apparent power VA (*3)	Standard	-		0.93 (0.98)	1.40
Thermal class		B			
Surge suppressor		Option			
Indicator		Lamp (option)			

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

Individual specifications

Item			MN3GA1/MN4GA1	MN3GA2/MN4GA2
Max. station No.			24 Stations	20 Stations
Port size	Metric fitting/ M5, Rc thread	Port A/B	Push-in fitting ø4,ø6 M5	Push-in fitting ø4,ø6,ø8 Rc1/8
		P/R Port	Push-in fitting ø6,ø8	Push-in fitting ø8,ø10

Item			MN3GA1/MN4GA1		MN3GA2/MN4GA2	
			ON	OFF	ON	OFF
Response time ms	Two 3-port valves integrated		9	12	12	29
	2-position	Single	15	15	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
MN3GA1 MN4GA1	Two 3-port valves integrated		0.87	0.37	1.0 (0.68)	0.14 (0.22)
	2-position		0.98	0.33	1.2 (0.71)	0.11 (0.27)
	3-position	All ports closed	0.92	0.34	1.0 -	0.16 -
		ABR connection	0.92	0.29	1.1 (0.69)	0.13 (0.22)
		PAB connection	1.1	0.35	1.1 -	0.17 -
MN3GA2 MN4GA2	Two 3-port valves integrated		1.7	0.37	2.2 (1.6)	0.13 (0.21)
	2-position		2.2	0.21	2.5 (1.7)	0.19 (0.10)
	3-position	All ports closed	2.0	0.25	2.3 -	0.10 -
		ABRConnection	2.0	0.27	2.5 (1.7)	0.18 (0.12)
		PAB connection	2.3	0.31	2.3 -	0.16 -

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

MN4GA1/2-FP1 Series

Individual wiring block manifold; Body piping

How to order

Manifold model No.

MN4GA1 1 0 R - C6 - E2 H - 10 - 3 - FP1

3-port manifold model No.

MN3GA1 1 0 R - C6 - E2 H - 10 - 3 - FP1

Discrete valve block with solenoid valve

N4GA1 1 0 R - C6 - E2 H — 3 - FP1

Discrete 3-port valve block with solenoid valve

N3GA1 1 0 R - C6 - E2 H — 3 - FP1

Single solenoid valve

4GA1 1 9 R - C6 - E2 H — 3 - FP1

Discrete 3-port solenoid valve

3GA1 1 9 R - C6 - E2 H — 3 - FP1

Ⓐ Model No.

Ⓑ Solenoid position

Ⓒ Port size *1

Ⓓ Electrical connections

Ⓔ Option

Ⓕ Station No.

Ⓖ Voltage

Code	Description		Ⓐ Model No.							
			Manifold				Valve with a solenoid valve			
			3-port valve		5-port valve		Discrete block, Single solenoid valve			
			MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N)3GA1	(N)3GA2	(N)4GA1	(N)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 *2		●	●			●	●		
11	2-position single normally open *2		●	●			●	●		
66	3-port valve Two valves integrated *2	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 fitting/Rc thread									
C4	ø4 push-in fitting		●		●		●		●	
C6	ø6 push-in fitting		●	●	●	●	●	●	●	●
C8	ø8 push-in fitting			●		●		●		●
CX	Push-in fitting mix *3		●	●	●	●				
M5	M5		●		●		●		●	
06	Rc1/8			●		●		●		●
Ⓓ Electrical connections										
Refer to the following page for electrical connections										
Ⓔ Option										
Blank	Manual override of non-locking/locking common		●	●	●	●	●	●	●	●
M	Manual override of non-locking		○	○	○	○	○	○	○	○
H	With exhaust check valve *4		●	●	●	●	●	●	●	●
S	Surgeless *5		●	●	●	●	●	●	●	●
E	Low exoergic/energy saving circuit *5, 6		●	●	●	●	●	●	●	●
F	Port A/B filter built in *7		●	●	●	●	●	●	●	●
Z1	Air supply spacer *8		●	●	●	●				
Z2	In-stop valve spacer *8, 9		●	●	●	●				
Z3	Exhaust spacer *8		●	●	●	●				
Ⓕ Station No.										
1	1 stations		●	●	●	●				
to	to									
24	24 stations (Max. station number for MN3GA2/MN4GA2 is 20.)									
Ⓖ Voltage										
1	100 VAC (rectifier integrated)		●	●	●	●	●	●	●	●
2	200 VAC (rectifier integrated) *9			●		●		●		●
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●

is not available.
○ indicates made to order.

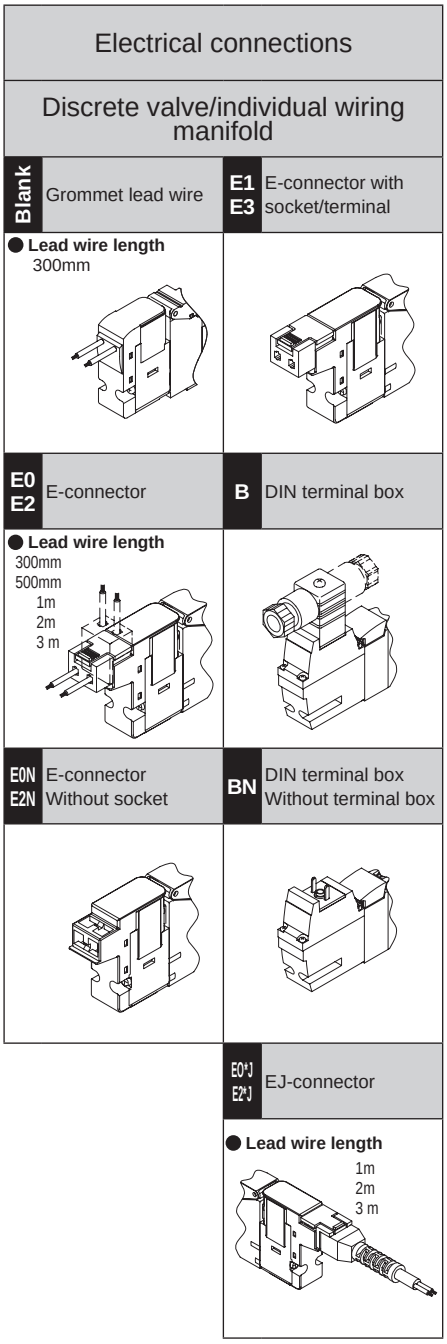
⚠ Precautions for model selection

*1: Specify the port P/R bore size with the supply and exhaust block model No. in the manifold specifications sheet.
*2: MN4GA*80 when using a mixture of 4, 5-port valves. Further, select MN3GA*80 when mixing with masking plate.
*3: The push-in fitting cannot be mixed with the single valve's 4(A) or 2(B) port.
*4: The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H).
*5: Surgeless "S" and low exoergic/energy circuit "E" cannot be selected together.
*6: Surgeless specifications.
*7: A filter is built into port P as standard.
*8: Specify the spacer mounting position/ quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 167 to 168 for details.
*9: Only the DIN terminal box is supported.

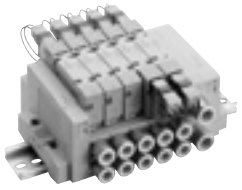
[Electrical connection list]

Ⓓ Electrical connections		Ⓐ Model No.							
		Manifold				Valve with a solenoid valve Discrete block/ Single solenoid valve			
		3-port valve		5-port valve					
		MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N)3GA1	(N)3GA2	(N)4GA1	(N)4GA2
Blank	Grommet lead wire (300 mm) *10	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7) With surge suppressor/lamp * 11, * 13		●		●		●		●
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor/lamp *11, *13		●		●		●		●
E-connector (upward/lateral common)									
E0	Lead wire(300 mm) *12	●	●	●	●	●	●	●	●
E00	Lead wire(500 mm) *12	●	●	●	●	●	●	●	●
E01	Lead wire(1000 mm) *12	●	●	●	●	●	●	●	●
E02	Lead wire(2000 mm) *12	●	●	●	●	●	●	●	●
E03	Lead wire(3000 mm) *12	●	●	●	●	●	●	●	●
E0N	Without lead wire(Without socket) *12	●	●	●	●	●	●	●	●
E1	Without lead wire(socket/terminal attached) *14	●	●	●	●	●	●	●	●
E2	Lead wire(300 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E20	Lead wire(500 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E21	Lead wire(1000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E22	Lead wire(2000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E23	Lead wire(3000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E2N	Without lead wire (without socket) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral common)									
E01J	Lead wire(1000 mm) *12	●	●	●	●	●	●	●	●
E02J	Lead wire(2000 mm) *12	●	●	●	●	●	●	●	●
E03J	Lead wire(3000 mm) *12	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●

*10: The grommet lead wire specifications are compatible with DC voltage only.
*11: A lamp comes with the terminal box.
*12: AC voltage is with a rectifier circuit.
*13: The terminal box is a product of EN175301-803TypeC (former DIN43650-C) compliant.



Refer to the MN4GA1, 2 Series in "Pneumatic Valves (CB-023SA)" for dimensions.



Pneumatic Valves
Catalog No. CB-023SA

Individual wiring block manifold
Base piping

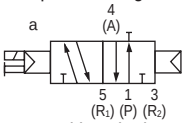
MN4GB1/2-FP1 Series

● Cylinder bore size: ø20 to ø80

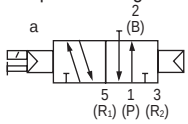
JIS symbol

● 3-port valve

2-position single NC

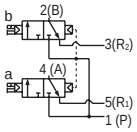


2-position single NO

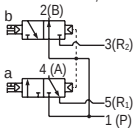


● Two 3-port valves integrated

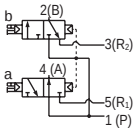
(A side valve: NC, B side valve: NC)



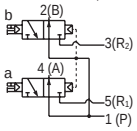
(A side valve: NC, B side valve: NO)



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

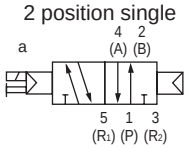


(A side valve: NO, B side valve: NO)

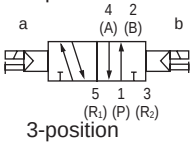


● 5-port valve

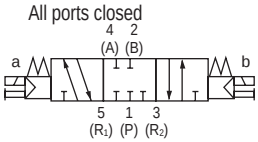
2 position single



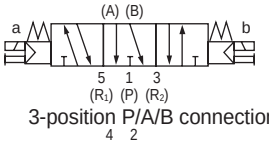
2-position double



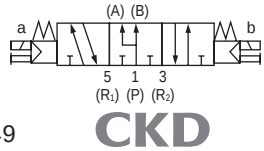
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item	Description
Manifold	Block manifolds
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
Min. working pressure MPa	0.2 (*2)
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual override	Non-locking/locking common (standard)
Degree of protection (*1)	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: Avoid dripping water or 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.

*2: The working pressure range is 0 to 0.7MPa 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	100 AC	200 AC
Voltage fluctuation range		±10%			
Holding current A (*3)	Standard	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
	With low exoergic/energy circuit	0.005	0.010	-	
Power consumption W (*3)	Standard	0.35 (0.40)		-	
	With low exoergic/energy circuit	0.1		-	
Apparent power VA (*3)	Standard	-		0.93 (0.98)	1.40
Thermal class		B			
Surge suppressor		Option			
Indicator		Lamp (option)			

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

Individual specifications

Item			M3GB1/M4GB1	M3GB2/M4GB2
Max. station No.			24 Stations	20 Stations
Port size	Metric fitting	Port A/B	Push-in fitting ø4,ø6	Push-in fitting ø6,ø8
		P/R Port	Push-in fitting ø6,ø8	Push-in fitting ø8,ø10

Item			MN3GB1/MN4GB1		MN3GB2/MN4GB2	
			ONHour	OFF	ON	OFF
Response time ms	Two 3-port valves integrated		9	12	12	29
	2-position	Single	15	15	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.

MN4GB1/2-FP1 Series

Individual wiring block manifold; Base piping

How to order

Manifold model No.

MN4GB1 1 0 R - C6 - E2 H - 10 - 3 - FP1

3-port manifold model No.

MN3GB1 66 0 R - C6 - E2 H - 10 - 3 - FP1

Discrete valve block with solenoid valve

N4GB1 1 0 R - C6 - E2 H — 3 - FP1

Discrete 3-port valve block with solenoid valve

N3GB1 66 0 R - C6 - E2 H — 3 - FP1

Single solenoid valve

4GB1 1 9 R - 00 - E2 H — 3 - FP1

Discrete 3-port solenoid valve

3GB1 66 9 R - 00 - E2 H — 3 - FP1

Ⓐ Model No.
Ⓑ Solenoid position
Ⓒ Port size *1, *2 *3
Ⓓ Electrical connections
Ⓔ Option
Ⓕ Station No.
Ⓖ Voltage

Code	Description		Ⓐ Model No. Manifold: 3-port valve Two valves integrated: MN3GB1	MN3GB2	Manifold: 5-port valve: MN4GB1	MN4GB2	Valve with a solenoid valve Discrete block/ Single solenoid valve: (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	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 fitting/Rc thread**									
C4	ø4 push-in fitting		●		●		●		●	
C6	ø6 push-in fitting		●	●	●	●	●	●	●	●
C8	ø8 push-in fitting			●		●		●		●
CX	Push-in fitting mix *4		●	●	●	●				
Single side plug specifications	Port A	Port B								
C4NC	ø4 push-in fitting	Plug			●				●	
C6NC	ø6 push-in fitting				●	●			●	●
C8NC	ø8 push-in fitting					●				●
C4NO	Plug	ø4 push-in fitting			●				●	
C6NO		ø6 push-in fitting			●	●			●	●
C8NO		ø8 push-in fitting				●				●
00	Discrete valve for integrated base						●	●	●	●
Ⓓ Station No.										
Refer to the next page for electrical connections.										
Ⓔ Option										
Blank	Manual override of non-locking/locking common		●	●	●	●	●	●	●	●
M	Manual override of non-locking		○	○	○	○	○	○	○	○
H	With exhaust check valve *5		●	●	●	●	●	●	●	●
S	Surgeless *6		●	●	●	●	●	●	●	●
E	Low exoergic/energy saving circuit *6, 7		●	●	●	●	●	●	●	●
F	Port A/B filter built in *8		●	●	●	●	●	●	●	●
Z1	Air supply spacer *9		●	●	●	●				
Z2	In-stop valve spacer *9		●	●	●	●				
Z3	Exhaust spacer *9		●	●	●	●				
Ⓕ Station No.										
1	1 stations		●	●	●	●				
to	to									
24	24 stations (Max. station number for MN4GB2 is 20)									
Ⓖ Voltage										
1	100 VAC (rectifier integrated)		●	●	●	●	●	●	●	●
2	200 VAC (rectifier integrated) *10			●		●		●		●
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●

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. in the manifold specifications sheet.
*2: For a discrete solenoid valve, select 00 for port size.
*3: MN4GB*80R when using a mixture of 4, 5-port valves. Further, select MN3GB*80R when mixing with masking plate.
*4: The push-in fitting cannot be mixed with the single valve's 4(A) or 2(B) port.
*5: The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H).
*6: Surgeless "S" and low exoergic/energy circuit "E" cannot be selected together.
*7: Surgeless specifications.
*8: A filter is built into port P as standard.
*9: Specify the spacer mounting position/quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 167 to 168 for details.
*10: DIN terminal box only is supported.

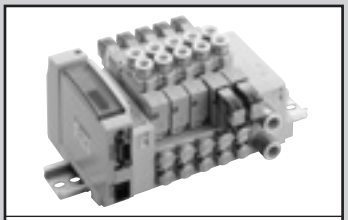
[Electrical connection list]

Code	Description	Model No.							
		Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
		3-port valve Two valves integrated		5-port valve					
		MN3GB1	MN3GB2	MN4GB1	MN4GB2	(N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
D Electrical connections									
Blank	Grommet lead wire (300 mm) *11	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg7) With surge suppressor/lamp *12, *14		●		●		●		●
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor/lamp *12, *14		●		●		●		●
E-connector (upward/lateral direction common)									
E0	Lead wire (300 mm) *13	●	●	●	●	●	●	●	●
E00	Lead wire (500 mm) *13	●	●	●	●	●	●	●	●
E01	Lead wire (1000 mm) *13	●	●	●	●	●	●	●	●
E02	Lead wire (2000 mm) *13	●	●	●	●	●	●	●	●
E03	Lead wire (3000 mm) *13	●	●	●	●	●	●	●	●
E0N	Without lead wire (without socket) *13	●	●	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal) *13	●	●	●	●	●	●	●	●
E2	Lead wire (300 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E20	Lead wire (500 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E21	Lead wire (1000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E22	Lead wire (2000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E23	Lead wire (3000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E2N	Without lead wire (without socket) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E3	Without lead wire (with socket/terminal) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral direction common)									
E01J	Lead wire (1000 mm) *13	●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm) *13	●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm) *13	●	●	●	●	●	●	●	●
E21J	Lead wire (1000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E22J	Lead wire (2000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●
E23J	Lead wire (3000 mm) with surge suppressor and indicator lamp	●	●	●	●	●	●	●	●

is not available.

*11 The grommet lead wire specifications are compatible with DC voltage only.
*12 A lamp comes with the terminal box.
*13 AC voltage is with a rectifier circuit.
*14 The terminal box is a EN175301-803 TypeC (former DIN43650-C) compliant product.

Refer to the MN4GB1, 2 Series in "Pneumatic Valves (CB-023SA)" for dimensions.



Pneumatic Valves
Catalog No. CB-023SA

Reduced wiring block manifold
Body piping

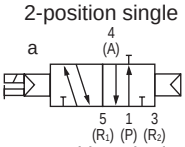
MN4GA1/2-T*-FP1 Series

● Cylinder bore size: ø20 to ø80

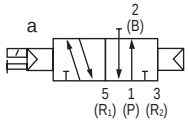
JIS symbol

● 3-port valve

2-position single NC

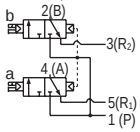


2-position single NO

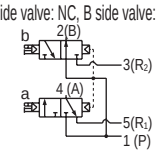


● Two 3-port valves integrated

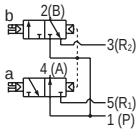
(A side valve: NC, B side valve: NC)



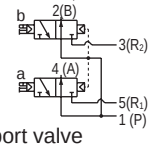
(A side valve: NC, B side valve: NO)



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

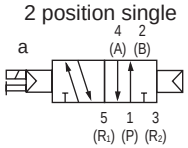


(A side valve: NO, B side valve: NO)

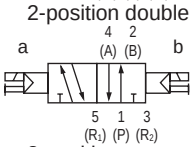


● 5-port valve

2 position single

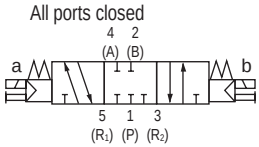


2-position double

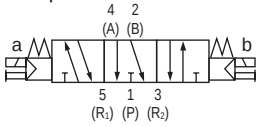


3-position

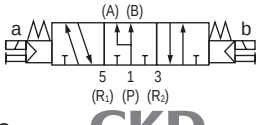
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item	Description
Manifold	Block manifolds
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	Valve top direction
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7
Min. working pressure MPa	0.2 (*2)
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual override	Non-locking/locking common (standard)
Degree of protection (*1)	Dust-proof
Vibration resistance m/s²	50 or less
Shock resistance m/s²	300 or less
Atmosphere	Cannot be used in corrosive gas environments

Electrical specifications

Item		Description		
Rated voltage V		T1□, T30□, T5□		T6□, T7□, T8□
		DC24	DC12	DC24
Voltage fluctuation range (*3)		±10%		+10%, -5%
Holding current A	Standard	0.017	0.034	0.017
	With low exoergic/ energy saving circuit	0.005	0.010	0.005
Power consumption W	Standard	0.4		
	With low exoergic/ energy saving circuit	0.1		
Thermal class		B		
Surge suppressor (*4)		Zener diode		
Indicator		LED		

*3: Since voltage drops depending on the internal circuit of T6, T7, and T8 (serial transmission), pay attention to the voltage fluctuation range.

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

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

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

Individual specifications

Item			MN3GA1/MN4GA1									
			T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station No.	Standard wiring		16 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	8/16 stations	8/16 stations	16/24 stations
	Double wiring		8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations	8/16 stations
Max. number of solenoids			16 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points	16/32 points
Port size	Metric fitting/M5, Rc thread	Port A/B	Push-in fitting ø4, ø6 M5									
		P/R Port	Push-in fitting ø6,ø8									

Item			MN3GA2/MN4GA2									
			T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station No.	Standard wiring		16 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	8/16 stations	8/16 stations	16/20 stations
	Double wiring		8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations	8/16 stations
Max. number of solenoids			16 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points	16/32 points
Port size	Metric fitting/M5, Rc thread	Port A/B	Push-in fitting ø4,ø6,ø8 Rc1/8									
		P/R Port	Push-in fitting ø8,ø10									

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B → R1/R2	
			C[dm³/(s·bar)]	b	C[dm³ (s·bar)]	b
MN3GA1 MN4GA1	Two 3-port valves integrated		0.87	0.37	1.0 (0.68)	0.14 (0.22)
	2-position		0.98	0.33	1.2 (0.71)	0.11 (0.27)
	3-position	All ports closed	0.92	0.34	1.0 -	0.16 -
		ABR connection	0.92	0.29	1.1 (0.69)	0.13 (0.22)
		PAB connection	1.1	0.35	1.1 -	0.17 -
MN3GA2 MN4GA2	Two 3-port valves integrated		1.7	0.37	2.2 (1.6)	0.13 (0.21)
	2-position		2.2	0.21	2.5 (1.7)	0.19 (0.10)
	3-position	All ports closed	2.0	0.25	2.3 -	0.10 -
		ABRConnection	2.0	0.27	2.5 (1.7)	0.18 (0.12)
		PAB connection	2.3	0.31	2.3 -	0.16 -

*1: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

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

Reduced wiring specifications

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

Serial transmission slave unit specifications

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

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

Item		T7G1	T7L1*1	T7D1	T7S1	T7SP1
Network name		CC-Link ver. 1.10	SAVE NET	DeviceNet*2	CompoNet	
Power supply voltage	Unit side	24 VDC 10%, −5% Common power supply terminal				
	Valve side					
	Communication side	-	-	11 to 25 VDC *3	14.0 to 26.4 VDC	
Current consumption	Unit side	110 mA or less (when all output points are ON) Load current is not included			40 mA or less (when all output points are ON) Load current is not included	
	Valve side					
	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 slave 1 node (16 points)	
Operation display		LED (power supply and communication status)				
Output		NPN			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	T8EF1 / T8EF2	T8EFP1 / T8EFP2	T8EP1 / T8EP2	T8EPP1 / T8EPP2	T8KC1 / T8KC2	T8KCP1 / T8KCP2
Communication protocol		CC-Link ver. 1.10		PROFIBUS-DP (V0)		EtherCAT		EtherNet/IP		DeviceNet		CC-Link IEF Basic		CC-Link IE Field		PROFINET		IO-Link	
Power supply voltage	Unit side	24 VDC±10% (11 to 25 VDC for T8D* only)																	
	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)		140 mA or less (when all output points are ON)		130 mA or less (when all output points are ON)		50 mA or less (when all output points are ON)	
	Valve side	T8□1: 15 mA or less T8□2: 20 mA or less (When all output points are ON) Load current is not included								15 mA or less (When all output points are ON) Load current is not included									
No. of 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	NPN output	PNP output	NPN output	PNP output

MN4GA1/2-T*-FP1 Series

Reduced wiring block manifold; Body piping

How to order

Manifold model No.

MN4GA1 (1) 0 R - C6 - T30 (W) (H) - 10 - 3 - FP1

3-port manifold model No.

MN3GA1 (1) 0 R - C6 - T30 (W) (H) - 10 - 3 - FP1

Discrete valve block with solenoid valve

N4GA1 (1) 0 R - C6 - (A2N *1) ( ) (H) — 3 - FP1

Discrete 3-port valve block with solenoid valve

N3GA1 (1) 0 R - C6 - (A2N *1) ( ) (H) — 3 - FP1

* If a cable is required, refer to page 165 and specify the cable length of "*1". When not required, leave the space blank.

Single solenoid valve

4GA1 (1) 9 R - C6 - (A2N) ( ) (H) — 3 - FP1

Discrete 3-port solenoid valve

3GA1 (1) 9 R - C6 - (A2N) ( ) (H) — 3 - FP1

Ⓐ Model No.

Ⓑ Solenoid position

Ⓒ Port size *1

Ⓓ Reduced wiring connection, serial transmission

Ⓔ Terminal/connector pin array

Ⓕ Option

Ⓖ Station No.

Ⓗ Voltage

Precautions for model selection

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

*2: MN4GA/80R when using a mixture of 4, 5-port valves. MN3GA/80R when used with a masking plate.

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

4: 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.

*5: 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).

*6: 3-position all ports closed and PAB connection are not provided with the exhaust check valve (H).

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

*8: Surgeless specifications.

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

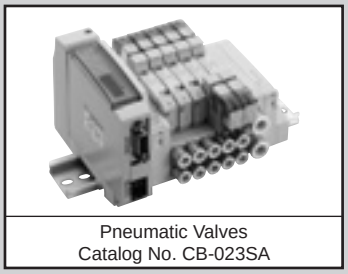
*10: Specify the spacer mounting position/ quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. For details, refer to pages 167 and 168

Ⓐ Model No.	Manifold				Valve with a solenoid valve			
	3-port valve		5-port valve		Discrete block/ Single solenoid valve			
Code / Description	MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N)3GA1	(N)3GA2	(N)4GA1	(N)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 *2	○	○			○	○		
11 2-position single normally open *2	○	○			○	○		
66 3-port valve Two valves integrated *2 — A side valve: Normally closed / B side valve: Normally closed	○	○			○	○		
67 3-port valve Two valves integrated *2 — A side valve: Normally closed / B side valve: Normally open	○	○			○	○		
76 3-port valve Two valves integrated *2 — A side valve: Normally open / B side valve: Normally closed	○	○			○	○		
77 3-port valve Two valves integrated *2 — 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 fitting/Rc thread								
C4 ø4 push-in fitting	●		●		●		●	
C6 ø6 push-in fitting	●	●	●	●	●	●	●	●
C8 ø8 push-in fitting		●		●		●		●
CX Push-in fitting mix *3	●	●	●	●				
M5 M5	●		●		●		●	
06 Rc1/8		●		●		●		●
Ⓓ Reduced wiring connection, serial transmission								
Refer to the next page for reduced wiring and serial transmission.								
Ⓔ Terminal/connector pin array								
Blank Standard wiring *4	●	●	●	●	●	●	●	●
W Double wiring *4	●	●	●	●	●	●	●	●
W 1 Double wiring (with single spare wiring) *4, 5	●	●	●	●	●	●	●	●
Ⓕ Option								
Blank Manual override of non-locking/locking common	●	●	●	●	●	●	●	●
M Manual override of non-locking	○	○	○	○	○	○	○	○
H With exhaust check valve *6	●	●	●	●	●	●	●	●
S Surgeless *7	●	●	●	●	●	●	●	●
E Low exoergic/energy saving circuit *7, 8	●	●	●	●	●	●	●	●
Q Reduced wiring duct	●	●	●	●	●	●	●	●
F Port A/B filter built in *9	●	●	●	●	●	●	●	●
Z1 Air supply spacer *10	●	●	●	●				
Z2 In-stop valve spacer *10	●	●	●	●				
Z3 Exhaust spacer *10	●	●	●	●				
Ⓖ Station No.								
1 1 stations	●	●	●	●				
to to								
24 24 stations (Refer to page 153 for the max. station number per model)								
Ⓗ Voltage								
3 24 VDC	●	●	●	●	●	●	●	●
4 12 VDC	●	●	●	●	●	●	●	●

■ is not available. ○ indicates made to order.

Refer to the MN4GA1/2-T* Series in "Pneumatic Valves (CB-023SA)" for dimensions.

			Ⓐ Model No.							
			Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
			3-port valve		5-port valve					
			MN3GA1	MN3GA2	MN4GA1	MN4GA2	(N)3GA1	(N)3GA2	(N)4GA1	(N)4GA2
Ⓓ 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	●	●	●	●				
T8EF1	CC-Link IE Field	NPN 16 points	●	●	●	●				
T8EF2		NPN 32 points	●	●	●	●				
T8EFP1		PNP 16 points	●	●	●	●				
T8EFP2		PNP 32 points	●	●	●	●				
T8EP1	PROFINET	NPN 16 points	●	●	●	●				
T8EP2		NPN 32 points	●	●	●	●				
T8EPP1		PNP 16 points	●	●	●	●				
T8EPP2		PNP 32 points	●	●	●	●				
T8KC1	IO-Link	NPN 16 points	●	●	●	●				
T8KC2		NPN 32 points	●	●	●	●				
T8KCP1		PNP 16 points	●	●	●	●				
T8KCP2		PNP 32 points	●	●	●	●				
A2N	Without lead wire (without socket)	with surge suppressor, lamp					●	●	●	●



Pneumatic Valves
Catalog No. CB-023SA

Reduced wiring block manifold
Base piping

MN4GB1, 2-T*-FP1 Series

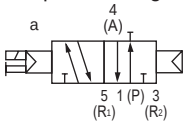
● Cylinder bore size: ø20 to ø80

RoHS CAD

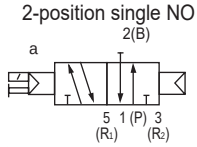
JIS symbol

● 3-port valve

2-position single NC

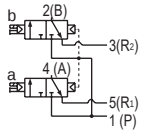


2-position single NO

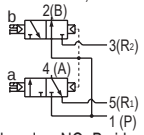


● Two 3-port valves integrated

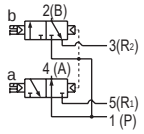
(A side valve: NC, B side valve: NC)



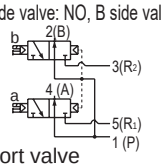
(A side valve: NC, B side valve: NO)



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

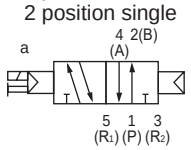


(A side valve: NO, B side valve: NO)

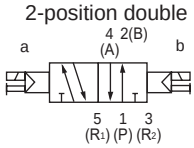


● 5-port valve

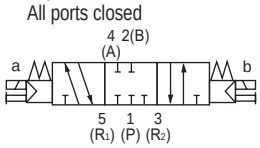
2 position single



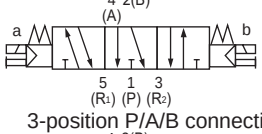
2-position double



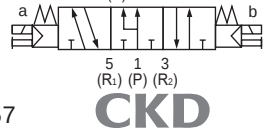
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item	Description
Manifold	Block manifolds
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
Min. working pressure MPa	0.2 (*2)
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual override	Non-locking/locking common (standard)
Degree of protection (*1)	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□		T6□, T7□, T8□
		24 DC	12 DC	24 DC
Voltage fluctuation range (*3)		±10%		+10%, -5%
Holding current A	Standard	0.017	0.034	0.017
	With low exoergic/ energy saving circuit	0.005	0.010	0.005
Power consumption W	Standard	0.4		
	With low exoergic/ energy saving circuit	0.1		
Thermal class		B		
Surge suppressor (*4)		Zener diode		
Indicator		LED		

*1: Dust-proof degree of protection. Not drip-proof. Avoid dripping water or oil, etc., during use.
*2: 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.
*3: T6□, T7□ and T8□ (serial transmission) may experience voltage drops due to internal circuitry, so care should be taken when regulating voltages.
*4: If low exoergic/energy circuit or surgeless types are selected then there will be a diode.

Individual specifications

Item			MN3GB/MN4GB1									
			T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station No.		Standard wiring	16 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	8/16 stations	8/16 stations	16/24 stations
		Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations	8/16 stations
Max. number of solenoids			16 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points	16/32 points
Port size	Metric fitting	Port A/B	Push-in fitting ø4, ø6									
		P/R Port	Push-in fittingø6,ø8									

Item			MN3GB2/MN4GB2									
			T10	T11	T30	T50	T51	T52	T53	T6*0/1	T7*0/1	T8*1/2
Max. station No.		Standard wiring	16 stations	20 stations	20 stations	16 stations	18 stations	8 stations	20 stations	8/16 stations	8/16 stations	16/20 stations
		Double wiring	8 stations	12 stations	12 stations	8 stations	9 stations	4 stations	12 stations	4/8 stations	4/8 stations	8/16 stations
Max. number of solenoids			16 points	24 points	24 points	16 points	18 points	8 points	24 points	8/16 points	8/16 points	16/32 points
Port size	Metric fitting	Port A/B	Push-in fitting ø4,ø6,ø8									
		P/R Port	Push-in fitting ø8,ø10									

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B → R1/R2	
			C[dm^3/(s·bar)]	b	C[dm^3/(s·bar)]	b
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: Formula to calculate sonic conductance C from effective cross-sectional area S is 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	20P flat cable connectorWith power supply terminal	20P flat cable connectorWithout power supply terminal	10P flat cable connectorWithout power supply terminal	26P flat cable connectorWithout power supply terminal
Connector	-	-	D-sub-connector 25-pin	MIL-C-83503 standard compliant Pressure welding socket 20-pin	MIL-C-83503 standard compliantPressure welding socket 20-pin	MIL-C-83503 standard compliantPressure welding socket 10-pin	MIL-C-83503 standard compliantPressure welding socket 26-pin

Serial transmission slave unit specifications

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

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

Item		T7G1	T7L1*1	T7D1	T7S1	T7SP1
Network name		CC-Link ver. 1.10	SAVE NET	DeviceNet*2	CompoNet	
Power supply voltage	Unit side	24 VDC 10%, −5% Common power supply terminal				
	Valve side					
	Communication side	-	-	11 to 25 VDC *3	14.0 to 26.4 VDC	
Current consumption	Unit side	110 mA or less (when all output points are ON) Load current is not included			40 mA or less (when all output points are ON) Load current is not included	
	Valve side					
	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 slave 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 / T8ECP1 / T8EC2 / T8ECP2	T8EN1 / T8ENP1 / T8EN2 / T8ENP2	T8D1 / T8D2	T8DP1 / T8DP2	T8EB1 / T8EB2	T8EBP1 / T8EBP2	T8EF1 / T8EF2	T8EFP1 / T8EFP2	T8EP1 / T8EP2	T8EPP1 / T8EPP2	T8EP1 / T8EP2	T8KCP1 / T8KCP2
Communication protocol		CC-Link ver. 1.10		PROFIBUS-DP (V0)		EtherCAT	EtherNet/IP	DeviceNet		CC-Link IEF Basic		CC-Link IE Field		PROFINET		IO-Link	
Power supply voltage	Unit side	24 VDC±10% (11 to 25 VDC for T8D* only)															
	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)		120 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)		140 mA or less (when all output points are ON)		130 mA or less (when all output points are ON)		50 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	NPN output	PNP output

*1 Transmission bit rate of 128 bits and half-duplex transmission method are supported. Contact CKD for other specifications.
*2 Compatible with DeviceNet compliant networks (DLNK, etc.) as well.
*3 The communication power supply (V+, V- on the DeviceNet cable) is insulated from the power supply terminal (unit power supply/valve power supply).

MN4GB1/2-T*-FP1 Series

Reduced wiring block manifold; Base piping

How to order

● Manifold model No.

MN4GB1 **1** **0 R** - **C6** - **T30** **W** **H** - **10** - **3** - **FP1**

● 3-port manifold model No.

MN3GB1 **66** **0 R** - **C6** - **T30** **W** **H** - **10** - **3** - **FP1**

● Discrete valve block with solenoid valve

N4GB1 **1** **0 R** - **C6** - A2N *1 **H** — **3** - **FP1**

● Discrete 3-port valve block with solenoid valve

N3GB1 **66** **0 R** - **C6** - A2N *1 **H** — **3** - **FP1**

* If a cable is required, refer to page 165 and specify the cable length of *1. When not required, leave the space blank.

● Single solenoid valve

4GB1 **1** **9 R** - **00** - **A2N** **H** — **3** - **FP1**

● Discrete 3-port solenoid valve

3GB1 **66** **9 R** - **00** - **A2N** **H** — **3** - **FP1**

Ⓐ Model No.
Ⓑ Solenoid position
Ⓒ Port size *1 *2 *3
Ⓓ Reduced wiring connection
Ⓔ Terminal/connector pin array
Ⓕ 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. in the manifold specifications sheet.
*2: Ports A and B are the same size for radial push-in fitting mix (CX).
*3: For a discrete solenoid valve, select 00 for Port size.
*4: This will be MN4GA*80R for a mix with 4, 5-port valves. Further, select MN3GB*80R when mixing with masking plate.
*5: The push-in fitting cannot be mixed with the single valve's 4(A) or 2(B) port.
*6: 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.
*7: 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).
*8: The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H).
*9: Surgeless "S" and low exoergic/energy circuit "E" cannot be selected together.
*10: Surgeless specifications.
*11: A filter is built into port P as standard.
*12: Specify the spacer mounting position/quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 167 to 168 for details.

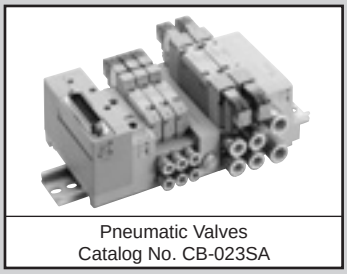
Code	Description		Ⓐ Model No. Manifold: 3-port valve Two valves integrated: MN3GB1	MN3GB2	5-port valve: MN4GB1	MN4GB2	Discrete valve block with solenoid valve / Single solenoid valve: (N)3GB1	(N)3GB2	(N)4GB1	(N)4GB2
Ⓑ Solenoid position										
1	2 position single				●	●			●	●
2	2-position double				●	●			●	●
3	3-position all ports closed				●	●			●	●
4	3-position ABR connection				●	●			●	●
5	3-position PAB connection				●	●			●	●
66	3-port valve Two valves integrated *4	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 fitting/Rc thread**									
C4	ø4 push-in fitting		●		●		●		●	
C6	ø6 push-in fitting		●	●	●	●	●	●	●	●
C8	ø8 push-in fitting			●		●		●		●
CX	Push-in fitting mix *5		●	●	●	●				
Single side plug specifications	Port A	Port B								
C4NC	ø4 push-in fitting	Plug			●				●	
C6NC	ø6 push-in fitting				●	●			●	●
C8NC	ø8 push-in fitting					●				●
C4NO	Plug	ø4 push-in fitting			●	●			●	●
C6NO		ø6 push-in fitting			●	●			●	●
C8NO		ø8 push-in fitting				●				●
00	Discrete valve for integrated base						●	●	●	●
Ⓓ Terminal/connector pin array										
Refer to the next page for electrical connections.										
Ⓔ Terminal/connector pin array										
Blank	Standard wiring *6		●	●	●	●	●	●	●	●
W	Double wiring *6		●	●	●	●	●	●	●	●
W 1	Double wiring (with single spare wiring) *6, *7		●	●	●	●	●	●	●	●
Ⓕ Option										
Blank	Manual override of non-locking/locking common		●	●	●	●	●	●	●	●
M	Manual override of non-locking		○	○	○	○	○	○	○	○
H	With exhaust check valve *8		●	●	●	●	●	●	●	●
S	Surgeless *9		●	●	●	●	●	●	●	●
E	Low exoergic/energy saving circuit *9, *10		●	●	●	●	●	●	●	●
Q	Reduced wiring duct		●	●	●	●	●	●	●	●
F	Port A/B filter built in *11		●	●	●	●	●	●	●	●
Z1	Air supply spacer *12		●	●	●	●				
Z2	In-stop valve spacer *12		●	●	●	●				
Z3	Exhaust spacer *12		●	●	●	●				
Ⓖ Station No.										
1	1 stations		●	●	●	●				
to	to									
24	24 stations (Max. station number for MN4GB2 is 20.)									
Ⓗ Voltage										
3	24 VDC		●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●	●

is not available.
○ indicates made to order.

[Wiring method list]

Code	Description		Ⓐ Model No. Manifold: Two 3-port valves integrated MN3GB1	MN3GB2	5-port valve MN4GB1	MN4GB2	PValve block with solenoid valve Discrete/ Single 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	●	●	●	●				
T8EF1	CC-Link IE Field	NPN 16 points	●	●	●	●				
T8EF2		NPN 32 points	●	●	●	●				
T8EFP1		PNP 16 points	●	●	●	●				
T8EFP2		PNP 32 points	●	●	●	●				
T8EP1	PROFINET	NPN 16 points	●	●	●	●				
T8EP2		NPN 32 points	●	●	●	●				
T8EPP1		PNP 16 points	●	●	●	●				
T8EPP2		PNP 32 points	●	●	●	●				
T8KC1	IO-Link	NPN 16 points	●	●	●	●				
T8KC2		NPN 32 points	●	●	●	●				
T8KCP1		PNP 16 points	●	●	●	●				
T8KCP2		PNP 32 points	●	●	●	●				
A2N	Without lead wire (without socket)	with surge suppressor, lamp					●	●	●	●

Refer to the MN4GB1, 2-T* Series in "Pneumatic Valves (CB-023SA)" for dimensions.



Pneumatic Valves
Catalog No. CB-023SA

NSF H1

4G1/2 mix manifold

MN3GAX12,MN4GAX12 MN4GBX12-FP1 Series

● Cylinder bore size: ø20 to ø80

RoHS CAD

Specifications

Common with all series.

For individual wiring, refer to page 145 (body piping) or page 149 (base piping), and for reduced wiring, refer to page 153 (body piping) or page 157 (base piping).

How to order

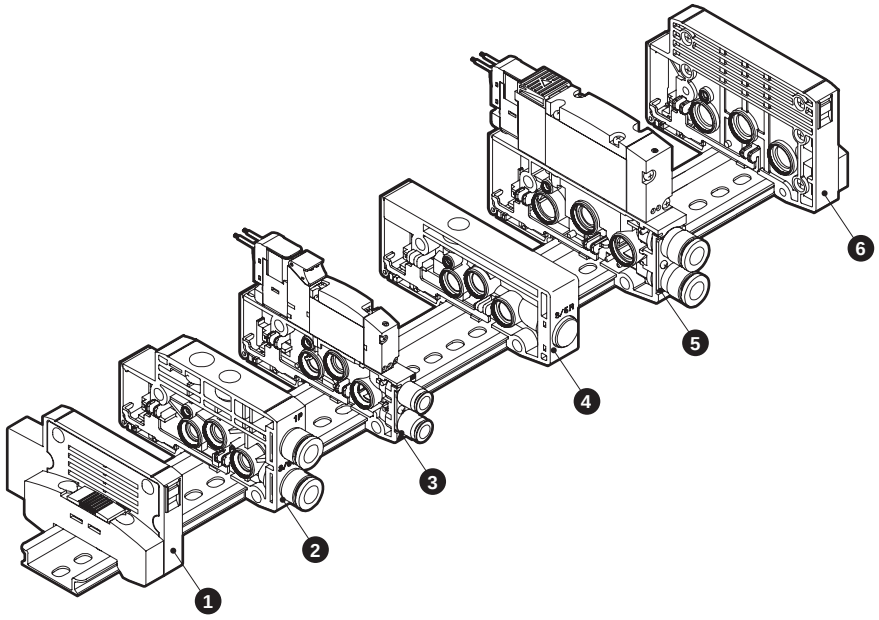
MN3G$^{A}_{B}$X12R - ○ - ○ ○ ○ - ○ - ○ - FP1

MN4G$^{A}_{B}$X12R - ○ - ○ ○ ○ - ○ - ○ - FP1

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

* Model No. is "MN□G□X12R-". Other items are common with the example of model No. for each series. For individual wiring, refer to page 147 (body piping) or page 151 (base piping), and for reduced wiring, refer to page 155 (body piping) or page 159 (base piping).

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.)

Main configuration parts list (Refer to pages 163 to 168 for details)

Part number	Configuration parts name	Model No. (example)
1	End block L	N4G1R-EL-FP1
2	Supply and exhaust block	N4G1R-Q-8-FP1
3	Discrete valve block with solenoid valve	N4GB110R-C6-H-3-FP1
4	Mixed block	N4G12R-MIX-FP1
5	Discrete valve block with solenoid valve	N4GB210R-C8-H-3-FP1
6	End block R	N4G2R-ER-FP1

Weight

N4G12R-MIX: 49g

Refer to the specifications of each series for other components.

MEMO

MN4GA/4GB-FP1 Series

Block manifold: piping section

Piping

A. Discrete valve block with solenoid valve

Block assembled from solenoid valve body and valve block (split resin base). For model selection, refer to the following pages.
Body piping individual wiring:Page 147, base piping individual wiring:Page 151, Body piping reduced wiring:Page 155,
Base piping reduced wiring:Page 159

B. Discrete valve block with masking plate

Block assembled from masking plate and valve block (split resin base).

N4GA1 R - MP ——— 3 —— FP1

N4GB1 R - MPD - C4 - 3 F - FP1

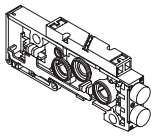
Ⓐ Model No.
Ⓑ Type
Ⓒ Bore size
Ⓓ Cable length *1
Ⓔ Option

*1: A socket assembly is attached with purchases for reduced wiring station expansion, so select "2 to 10". Select a cable length from page 165 and fill it into the Ⓓ cable length field. If ordering with the manifold specifications sheet, the cable length can be omitted.

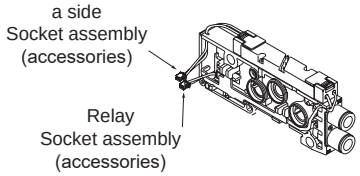
Code	Description	Ⓐ Model No. N4GA1	N4GA2	N4GB1	N4GB2
Ⓑ Type					
MP	For individual wiring	●	●	●	●
MPS	For reduced wiring single	●	●	●	●
MPD	For reduced wiring double/3-position	●	●	●	●
Ⓒ Port size (for base piping, this must be configured.)					
Type	Metric fitting/Rc thread				
C4	ø4 push-in fitting			●	
C6	ø6 push-in fitting			●	●
C8	ø8 push-in fitting				●
Single side plug specifications	Port A / Port B				
C4NC	ø4 push-in fitting / Plug			●	●
C6NC	ø6 push-in fitting / Plug			●	●
C8NC	ø8 push-in fitting / Plug				●
C4NO	Plug / ø4 push-in fitting			●	●
C6NO	Plug / ø6 push-in fitting			●	●
C8NO	Plug / ø8 push-in fitting				●
Ⓓ Cable length *4					
Blank	For individual wiring	●	●	●	●
2 to 10	Select the length from page 165 .	●	●	●	●
Ⓔ Option					
Blank	No option			●	●
L	With pipe adaptor			●	●
F	Port A/B filter built in			●	●

is not available.
○ indicates made to order.

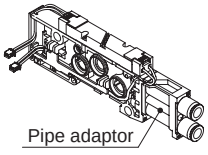
N4GA1R-MP-FP1



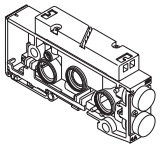
N4GB1R-MPD-C4-3-FP1



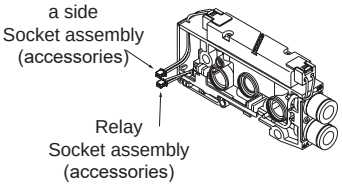
N4GB1R-MPD-C4-3L-FP1



N4GA2R-MP-FP1



N4GB2R-MPD-C6-5-FP1



Piping

C. Discrete valve block (separate item only)

Discrete valve block (split resin base).

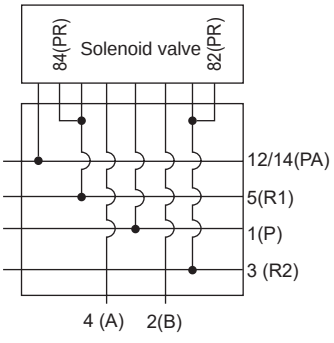
N4GA1 R - V1 —— 3 —— FP1
N4GB1 R - V2 - C4 - 3 F - FP1

Ⓐ Model No.
Ⓑ Type
Ⓒ Bore size
Ⓓ Cable length *1
Ⓔ Option

Code	Description	Ⓐ Model No. N4GA1	N4GA2	N4GB1	N4GB2
Ⓑ Type					
V1	For individual wiring For reduced wiring single	●	●	●	●
V2	For reduced wiring double/3-position	●	●	●	●
Ⓒ Port size (for base piping, this must be configured.)					
Type	Metric fitting/Rc thread				
C4	ø4 push-in fitting			●	
C6	ø6 push-in fitting			●	●
C8	ø8 push-in fitting				●
Single side plug specifications	Port A / Port B				
C4NC	ø4 push-in fitting / Plug			●	●
C6NC	ø6 push-in fitting / Plug			●	●
C8NC	ø8 push-in fitting / Plug				●
C4NO	Plug / ø4 push-in fitting			●	●
C6NO	Plug / ø6 push-in fitting			●	●
C8NO	Plug / ø8 push-in fitting				●
Ⓓ Cable length *4					
Blank	For individual wiring	●	●	●	●
2 to 10	Select the length from page 165 .	●	●	●	●
Ⓔ Option					
Blank	No option			●	●
L	With pipe adaptor			●	●
F	Port A/B filter built in			●	●

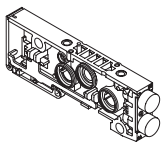
is not available.
○ indicates made to order.

*1: A socket assembly is attached with purchases for reduced wiring station expansion, so select "2 to 10". Select a cable length from page 165 and fill it into the Ⓓ cable length field. If ordering with the manifold specifications sheet, the cable length can be omitted.

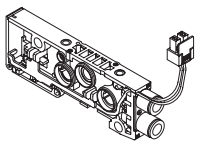


Discrete valve block circuit diagram

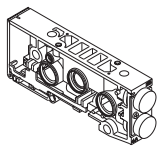
N4GA1R-V1-FP1



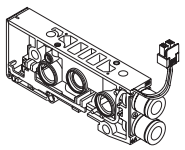
N4GB1R-V2-C4-FP1



N4GA2R-V1-FP1



N4GB2R-V2-C6-FP1



Piping

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

C. Discrete valve block (separate item only)

Valve block for expansion Cable length

Calculate the distance W between the expansion position and the wiring block (Fig. 1), and select an appropriate cable length from [Table 1]. Note that the required socket assembly differs between the a side solenoid and b side solenoid. While Fig. 1 shows the wiring block with left side specifications, similarly calculate the distance W between the expansion position and the wiring block for the right side specifications.

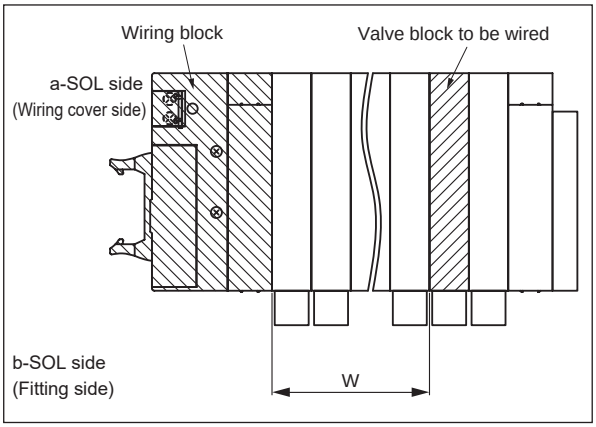
Calculation of W

- For MN4G1
  W=(10.5xn)+(16xm)+(10.5xl)
- For MN4G2
  W=(16xn)+(18xm)+(10.5xl)
  n/m/l: No. of valve blocks/supply and exhaust blocks/partition blocks
- For MN4GX
  Calculate W using the mix block width of 16.

[Table 1] W length - selection No. compatibility table

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

Fig. 1



D. Supply 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 necessary for combinations with partition blocks or in order to increase the flow rate for supply and exhaust. In order to prevent foreign matter from entering, port P is equipped with a filter.

N4G1 R - Q - 8 X - FP1

Model No. — Ⓐ Bore size — Ⓑ Exhaust

Ⓐ Bore size		Ⓑ Exhaust	
6	ø6 push-in fitting	Blank	Common exhaust
8	ø8 push-in fitting	X *1	Atmospheric release

*1 : Select atmosphere release (EX) for the end block for X.

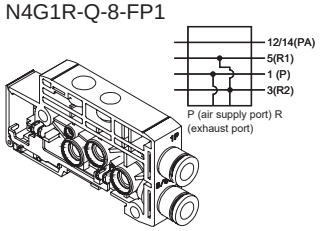
N4G2 R - Q - 10 X - FP1

Model No. — Ⓐ Bore size — Ⓑ Exhaust

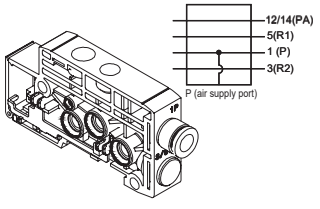
Ⓐ Bore size		Ⓑ Exhaust	
8	ø8 push-in fitting	Blank	Common exhaust
10	ø10 push-in fitting	X *1	Atmospheric release

*2: Select 6*M or 8*M when using a silencer with inch fitting specification types.
*3: For X, select atmosphere release (EX) for the end block.

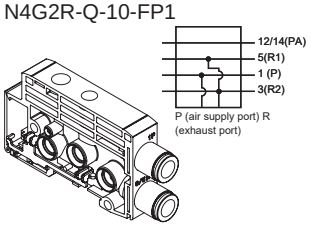
N4G1R-Q-8-FP1



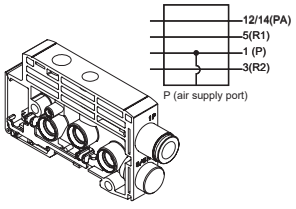
N4G1R-Q-8X-FP1



N4G2R-Q-10-FP1



N4G2R-Q-10X-FP1



Piping

E. End block

Install on both ends of the manifold for individual wiring. Install on opposite sides of the wiring block for reduced wiring.
An exhaust muffler is built into the atmosphere release type.

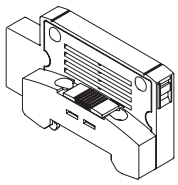
N4G1 R - E R - FP1

Model No. Ⓐ Type Ⓑ Installation position

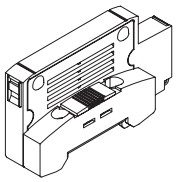
Common exhaust: 12/14(PA), 5(R1), 1 (P), 3(R2)
Atmosphere release: 12/14(PA), 5(R1), 1 (P), 3(R2)

Ⓐ Type		Ⓑ Installation position	
E	Common exhaust	L	For left side
EX	Atmospheric release	R	For right side

N4G1R-EL-FP1



N4G1R-ER-FP1



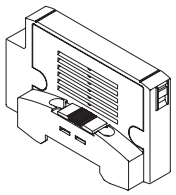
N4G2 R - EX L - FP1

Model No. Ⓐ Type Ⓑ Installation position

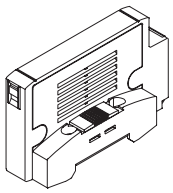
Common exhaust: 12/14(PA), 5(R1), 1 (P), 3(R2)
Atmosphere release: 12/14(PA), 5(R1), 1 (P), 3(R2)

Ⓐ Type		Ⓑ Installation position	
E	Common exhaust	L	For left side
EX	Atmospheric release	R	For right side

N4G2R-EL-FP1



N4G2R-ER-FP1



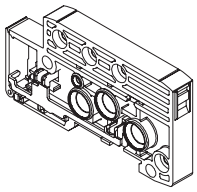
F. Partition block

Multi-pressure mixing and measures for back pressure increase prevention can be achieved by combining partition blocks and supply and exhaust blocks.

N4G1 R - S - FP1

Model No. Ⓐ Type

N4G1-S

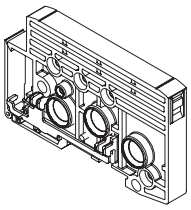


Ⓐ Type	
SA	P/R/PA blocked
S	P/R blocked PA through
SP	P blocked R/PA through
SE	R blocked P/PA through

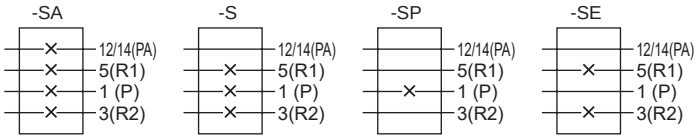
N4G2 R - SA - FP1

Model No. Ⓐ Type

N4G2-S



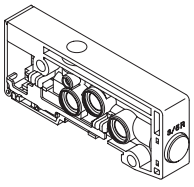
Ⓐ Type	
SA	P/R/PA blocked
S	P/R blocked PA through
SP	P blocked R/PA through
SE	R blocked P/PA through

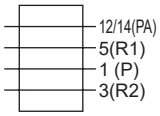


G. Mixed block

Install when 4G1 and 4G2 will be mixed within the same manifold.
Installation positions are 4G1 on the left side of the mixed block and 4G2 on the right side.

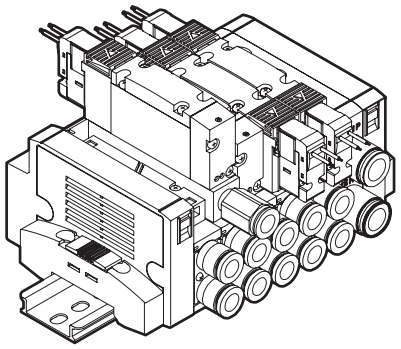
N4G12 R - MIX - FP1





Related products

● 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

*1: Values are when a valve is mounted.
*2: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

How to order discrete units

4G 2 R − P − GWS6 − FP1

Ⓐ Air supply spacer model No.
Ⓑ Port size *1, *2

Code	Description	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	ø4 fitting	●			
GWS6	ø6 fitting	●		●	
GWS8	ø8 fitting			●	

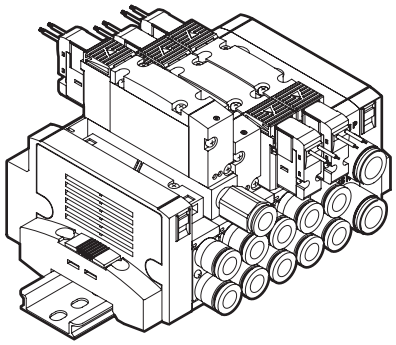
is not available.

Accessories: 4G1 2 mounting screws, 1 specially designed gasket 4G2 2 mounting screws, 2 PR check valves, 1 body gasket

⚠ Precautions for model selection

*1 Blank ①M5, ②Rc1/8.
*2 Blank indicates the FP1 specifications or equivalent as standard, and thus does not require "FP1" at the end of the model number.
*3 Air supply spacer built-in position /Specify the quantity in the manifold specifications sheet.
*4 Combination with the masking plate is not supported.

● Exhaust spacer



Specifications

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

*1: Values are when a valve is mounted.
*2: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

How to order discrete units

4G 2 R − R − GWS6 − FP1

Ⓐ Exhaust spacer model No.
Ⓑ Port size *1, *2

Code	Description	Model No. 4GA1	4GB1	4GA2	4GB2
Ⓐ Exhaust spacer model No.					
1	For 4G1	●			
2	For 4G2			●	
Ⓑ Port size					
Blank	M5 thread (4G1), Rc thread (4G2)	①		②	
GWS4	ø4 fitting	●			
GWS6	ø6 fitting	●		●	
GWS8	ø8 fitting			●	

is not available.

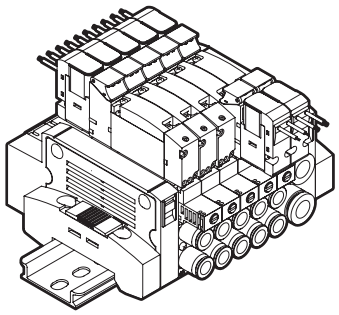
Accessories: 4G1 2 mounting screws, 1 specially designed gasket
4G2 2 mounting screws, 2 PR check valves, 1 body gasket

⚠ Precautions for model selection

*1 Blank①M5, ②Rc1/8.
*2 Blank indicates the FP1 specifications or equivalent as standard, and thus does not require "FP1" at the end of the model number.
*3 Air supply spacer built-in position /Specify the quantity in the manifold specifications sheet.
*4 Combination with the masking plate is not supported.

Related products

● In-stop valve spacer



Specifications

Model No.	P → A/B		A/B → R		Weight g
	C(dm³/(s·bar))	b	C(dm³/(s·bar))	b	
4G1	0.54	0.03	0.82	0.27	17
4G2	1.5	0.17	1.6	0.20	63

*1: Values with base piping and 2-position valve built-in.
*2: The effective cross-sectional area when discharging residual pressure1.0 mm²is a reference value.
*3: EffectiveFormula to calculate sonic conductance C from cross-sectional area S is S≈5.0×C.
Attachments: PR check valve 2, body gasket 1

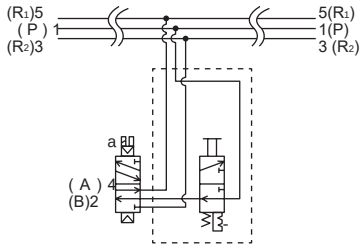
How to order discrete units

4G1 R - IS - FP1

4G2 R - IS - FP1

In-stop valve spacer

JIS symbol

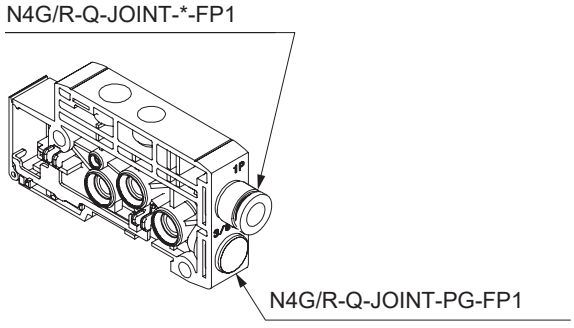


Precautions for model No. selection

*1: Specify the built-in position and quantity of spacersSpecify on the hold specifications sheet.
*2: When retrofitting to the reduced wiring manifold, the existing electric wire may be too short. Contact CKD for details.

Related parts

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



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

Bore size	Part model No.
ø6 straight	N4G1R-Q-JOINT-6-FP1
ø8 straight	N4G1R-Q-JOINT-8-FP1
Plug cartridge	N4G1R-Q-JOINT-PG-FP1

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

Bore size	Part model No.
ø8 straight	N4G2R-Q-JOINT-8-FP1
ø10 straight	N4G2R-Q-JOINT-10-FP1
Plug cartridge	N4G2R-Q-JOINT-PG-FP1