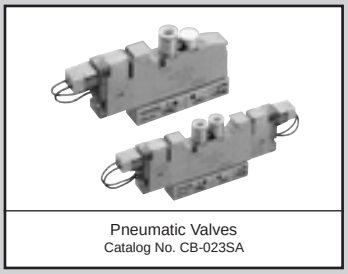


Pneumatic Valves
Catalog No. CB-023SA

Discrete valve
Body piping

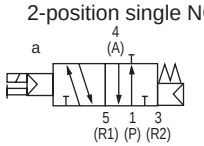
3GD1, 2, 3 /4GD1, 2, 3 Series

● Applicable cylinder bore size: ø20 to ø100

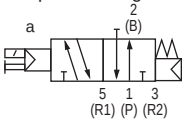
JIS symbol

● 3-port valve

2-position single NC

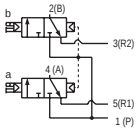


2-position single NO



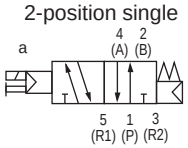
● Two 3-port valves integrated

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

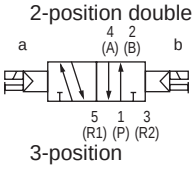


● 5-port valve

2-position single

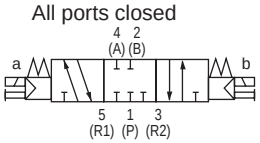


2-position double

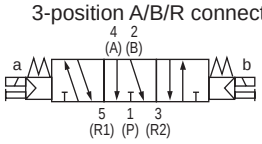


3-position

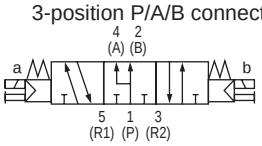
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Item	Description
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressure MPa	0.7
Min. working pressure MPa	0.2
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
Pilot exhaust method	Main valve/pilot valve common exhaust
Lubrication (*1)	Not required
Degree of protection (*2)	Dust-proof
Vibration resistance m/s^2	50 or less
Shock resistance m/s^2	300 or less
Atmosphere	Cannot be used in corrosive gas environments

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

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

Electrical specifications

Item	Description			
Rated voltage V	24 DC	12 DC	100 AC	200 AC
Voltage fluctuation range	±10%			
Holding current A (*3)	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W (*3)	0.35 (0.40)		–	
Apparent power VA (*3)(*4)	–		0.93 (0.98)	1.40
Thermal class	B			
Surge suppressor	Option			
Indicator	Lamp (option)			

*3: Values in ( ) apply when lamp is included.

*4: 200 VAC is the value of DIN terminal box (with lamp).

Individual specifications

Item		3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Port size	Port A/B	Push-in fitting ø4, ø6 M5	Push-in fitting ø4, ø6, ø8 Rc1/8	Push-in fitting ø8, ø10 Rc1/4	Push-in fitting ø4, ø6 M5	Push-in fitting ø4, ø6, ø8 Rc1/8	Push-in fitting ø8, ø10 Rc1/4
	Port P/R1/R2	M5	Rc1/8	Rc1/4	M5	Rc1/8	Rc1/4

Performance/characteristics by model

Item			3GD1		3GD2		3GD3		4GD1		4GD2		4GD3	
			ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Response time ms	Two 3-port valves integrated		12	15	15	30	-	-	-	-	-	-	-	-
	2-position	Single	15	25	20	30	25	40	15	25	20	30	25	40
		Double	-	-	-	-	-	-	15	-	20	-	25	-
	3-position	A/B/R connection	-	-	-	-	-	-	20	30	25	35	35	50

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

Item				3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Weight g	2-position	Single	Grommet lead wire	48 (41)	110 (80)	144 (102)	48 (41)	115 (85)	153 (111)
			E-connector	50 (43)	112 (82)	146 (104)	50 (43)	117 (87)	155 (113)
			DIN terminal box	-	147 (117)	178 (136)	-	152 (122)	187 (145)
		Double	Grommet lead wire	-	-	-	65 (58)	133 (103)	175 (129)
			E-connector	-	-	-	69 (62)	137 (107)	179 (133)
			DIN terminal box	-	-	-	-	176 (146)	215 (169)
	3-position	All ports closed	Grommet lead wire	-	-	-	67 (60)	145 (115)	184 (142)
			E-connector	-	-	-	71 (64)	149 (119)	188 (146)
			DIN terminal box	-	-	-	-	188 (158)	224 (182)

• Values in ( ) do not include the pipe adaptor. Values for the E-connector include the socket assembly (with 300 mm lead wire). For the EJ-connector, add 16 g/connector to the E-connector weight.
• The weight of the two 3-port valves integrated type is the same as that of 2-position double.

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B→R1/R2	
			C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b
3GD1 4GD1	Two 3-port valves integrated		0.98	0.45	0.71	0.34
	2-position		1.2	0.47	0.72	0.37
	3-position	All ports closed	1.1	0.39	0.70	0.34
		A/B/R connection	1.1	0.33	0.72	0.34
		P/A/B connection	1.3	0.61	0.72	0.36
3GD2 4GD2	Two 3-port valves integrated		1.8	0.29	2.3	0.32
	2-position		2.4	0.33	2.8	0.30
	3-position	All ports closed	2.2	0.28	2.5	0.28
		A/B/R connection	2.3	0.26	2.8	0.27
		P/A/B connection	2.5	0.38	2.4	0.30
3GD3 4GD3	2-position		3.4	0.29	4.0	0.24
	3-position	All ports closed	3.1	0.27	3.4	0.28
		A/B/R connection	3.1	0.33	4.1	0.20
		P/A/B connection	3.5	0.43	3.4	0.32

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

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓔ option "A" on page 280.

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".

3GD1, 2, 3/4GD1, 2, 3 Series

How to order

4GD1 1 0 R - C6 - E2 [ ] - 1 - P4

3GD1 1 0 R - C6 - E2 [ ] - 1 - P4

● Single valve for mounting base

4GD1 1 9 R - C6 - E2 H - 3 - P4

● Discrete 3-port valve for base mounting

3GD1 1 9 R - C6 - E2 H - 3 - P4

Ⓐ Model No.
Ⓑ Solenoid position
Ⓒ Port size
Ⓓ Electrical connections
Ⓔ Option
Ⓕ Voltage

*3
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Refer to "Pneumatic Valves No.CB-023SA" for the circuit diagram with surge suppressor/lamp.

Code	Description	Ⓐ Model No. 3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Ⓑ 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 (*1)	●	●	●			
11	2-position single: Normally Open (*1)	●	●	●			
66	3-port valve Two valves integrated (*2) — A side valve: Normally closed	●	●				
	3-port valve Two valves integrated (*2) — B side valve: Normally closed						

Port	4(A)/2(B) port	*3	Port P/R1/R2 ①=M5 ②=Rc1/8 ③=Rc1/4					
Ⓒ Port size								
C4	ø4 push-in fitting	○	①	②		①	②	
C6	ø6 push-in fitting	○	①	②		①	②	
C8	ø8 push-in fitting	○		②	③		②	③
C10	ø10 push-in fitting	○			③			③
M5	M5	●	①			①		
06	Rc1/8	●		②			②	
08	Rc1/4	●			(3)			(3)

Ⓓ Electrical connections	
Refer to the electrical connection list on next page.	

Code	Description	3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Ⓔ Option							
Blank	Manual override of non-locking/locking common	●	●	●	●	●	●
H	With exhaust check valve (*4)	●	●	●	●	●	●
P	With mounting plate	●	●	●	●	●	●
A	Ozone/Coolant proof	●	●	●	●	●	●
F	Port A/B filter integrated (*5)	●	●	●	●	●	●
Ⓕ Voltage							
1	100 VAC (rectifier integrated)	●	●	●	●	●	●
2	200 VAC (rectifier integrated) (*6)		●	●		●	●
3	24 VDC	●	●	●	●	●	●
4	12 VDC	●	●	●	●	●	●

is not available.

⚠ Precautions for model No. selection

*1 3GDNFor the Normally Closed, the piping connection 2 (B) and 3 (R2) ports are plugged. and, 3GDN- Normally Open type, 5 (R1) Avoid plugging the port. This may cause malfunction.
*2 Dimensions are the same as the respective 2-position double solenoid.
*4 3-position all ports closed and PAB connection are not provided with the exhaust check valve. Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.
*5 A filter is built into port P as standard.
*6 DIN terminal box only is supported.

[Electrical connections list]

		Ⓐ Model No.					
		3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Ⓓ Electrical connections							
Blank	Grommet Lead wire(300 mm) (*7)	●	●	●	●	●	●
B	DIN terminal box (Pg7) with surge suppressor/lamp (*8)(*10)		●	●		●	●
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor (*8)(*10)		●	●		●	●
E-connector (upward/lateral common)							
E0	Lead wire (300 mm) (*9)	●	●	●	●	●	●
E00	Lead wire (500 mm) (*9)	●	●	●	●	●	●
E01	Lead wire (1000 mm) (*9)	●	●	●	●	●	●
E02	Lead wire (2000 mm) (*9)	●	●	●	●	●	●
E03	Lead wire (3000 mm) (*9)	●	●	●	●	●	●
E0N	Without lead wire (Without socket) (*9)	●	●	●	●	●	●
E1	Without lead wire (socket/terminal attached) (*9)	●	●	●	●	●	●
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 (socket/terminal attached) with surge suppressor/lamp	●	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral common)							
E01J	Lead wire (1000 mm) (*9)	●	●	●	●	●	●
E02J	Lead wire (2000 mm) (*9)	●	●	●	●	●	●
E03J	Lead wire (3000 mm) (*9)	●	●	●	●	●	●
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	●	●	●	●	●	●

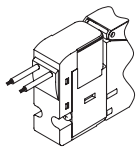
*7: The grommet lead wire specifications are compatible with DC voltage only.
*8: A lamp comes with the terminal box.
*9: AC voltage is with a rectifier circuit.
*10: The terminal box conforms to EN175301-803 Type C (former DIN 43650-C).
Refer to "Pneumatic Valves No.CB-023SA" for details.

Electrical connections

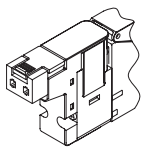
Discrete valve/individual wiring manifold

Blank Grommet lead wire

● **Lead wire length**
300 mm

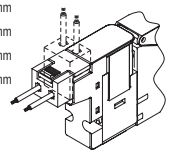


E1 E3 E-connector with socket/terminal

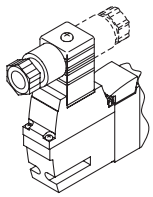


E0 E2 E-connector

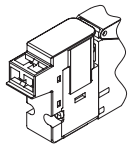
● **Lead wire length**
300 mm
500 mm
1000 mm
2000 mm
3000 mm



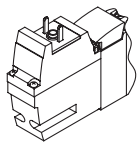
B DIN terminal box



E0N E2N E-connector without socket

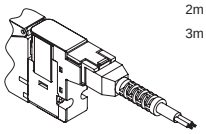


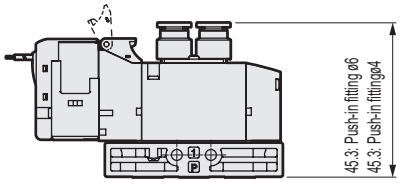
BN DIN terminal box Without terminal box

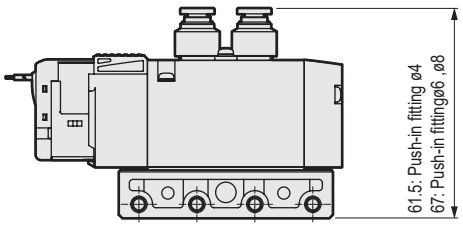


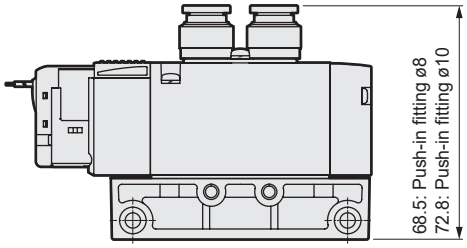
E0*J E2*J EJ type connector

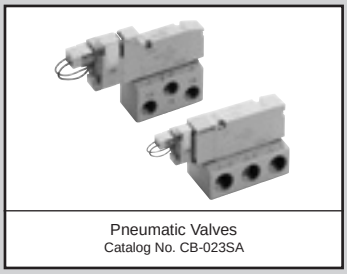
● **Lead wire length**
1m
2m
3m











Pneumatic Valves
Catalog No. CB-023SA

Discrete valve
Base piping

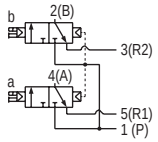
3GE1, 2/4GE1, 2, 3 Series

● Applicable cylinder bore size: ø20 to ø100

P4 compliant as standard

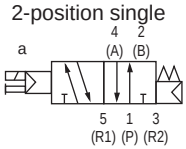
JIS symbol

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

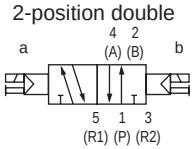


● 5-port valve

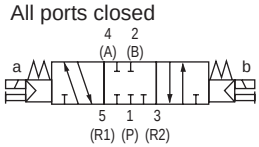
2-position single



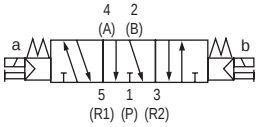
2-position double



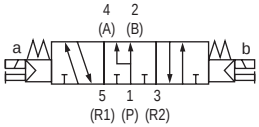
3 position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

Item		Description
Valve and operation		Pilot operated soft spool valve
Working fluid		Compressed air
Max. working pressure	MPa	0.7
Min. working pressure	MPa	0.2
Proof pressure	MPa	1.05
Ambient temperature	°C	-5 to 55 (no freezing)
Fluid temperature	°C	5 to 55
Manual override		NNlock/lock common (standard)
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust
Lubrication	(*1)	Not required
Degree of protection	(*2)	Dust-proof
Vibration resistance	m/s²	50 or less
Shock resistance	m/s²	300 or less
Atmosphere		Cannot be used in corrosive gas environments

*1 Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.
*2 Avoid dripping water or oil, etc., during use.IP65 (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.

Electrical specifications

Item	Description			
Rated voltage V	24 DC	12 DC	100 AC	200 AC
Voltage fluctuation range	±10%			
Holding current A (*3)	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W (*3)	0.35(0.40)		-	
Apparent power VA (*3)(*4)	-		0.93 (0.98)	1.40
Thermal class	B			
Surge suppressor	Option			
Indicator	Lamp (Option)			

*3: Values in ( ) apply when lamp is included.
*4: 200 VAC is the value of DIN terminal box (with lamp).

Individual specifications

Item		3GE1/4GE1	3GE2/4GE2	4GE3
Port size	Port A/B	Rc1/8	Rc1/4	Rc1/4, Rc3/8
	Port P/R1/R2	Rc1/8	Rc1/4	Rc1/4, Rc3/8

Performance/characteristics by model

Item			3GE1/4GE1		3GE2/4GE2		4GE3	
			ON	OFF	ON	OFF	ON	OFF
Response time ms	Two 3-port valves integrated		12	15	15	30	—	—
	2-position	Single	15	25	20	30	25	40
		Double	15	—	20	—	25	—
	3-position	ABR connection	20	30	25	35	35	50

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

Weight

Item				3GE1/4GE1	3GE2/4GE2	4GE3
Weight g	2-position	Single	Grommet lead wire	80 (38)	158 (76)	221 (102)
			E-connector	82 (40)	160 (78)	223 (104)
			DIN terminal box	-	195 (113)	255 (136)
		Double	Grommet lead wire	97 (55)	175 (93)	240 (121)
			E-connector	101 (59)	179 (97)	244 (125)
			DIN terminal box	-	218 (136)	280 (161)
	3-position	All ports closed	Grommet lead wire	98 (56)	186 (104)	249 (130)
			E-connector	102 (60)	190 (108)	253 (134)
			DIN terminal box	-	229 (147)	289 (170)

- Values in ( ) do not include the pipe adaptor. Values for the E-connector include the socket assembly (with 300 mm lead wire). For the EJ-connector, add 16 g/connector to the E-connector weight.
- The weight of the two 3-port valves integrated type is the same as that of 2-position double.

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B→R1/R2	
			C[dm³/(s·bar)"]	b	C[dm³/(s·bar)"]	b
3GE1 4GE1	Two 3-port valves integrated		0.92	0.08	1.1	0.26
	2-position		1.3	0.27	1.2	0.22
	3-position	All ports closed	1.1	0.31	1.1	0.27
		A/B/R connection	1.1	0.31	1.3	0.29
		P/A/B connection	1.4	0.30	1.1	0.26
3GE2 4GE2	Two 3-port valves integrated		1.7	0.42	2.1	0.26
	2-position		2.6	0.20	2.6	0.19
	3-position	All ports closed	2.3	0.32	2.2	0.22
		A/B/R connection	2.2	0.23	2.6	0.16
		P/A/B connection	2.4	0.10	2.4	0.22
4GE3	2-position		4.3	0.24	4.2	0.24
	3-position	All ports closed	3.3	0.40	3.4	0.27
		A/B/R connection	3.3	0.36	4.2	0.18
		P/A/B connection	4.5	0.28	3.4	0.30

*1: Formula to calculate sonic conductance C from effective cross-sectional area S is S≈5.0xC.

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓔ option "A" on page 284.

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".

How to order

● Discrete valve

4GE1 1 0 R - 06 - E2 ○ - 3

3GE1 66 0 R - 06 - E2 ○ - 3

● Single valve for mounting base

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

3GE1 66 9 R - 00 - E2 H - 3

Ⓑ Solenoid position

Ⓐ Model No.

Ⓒ Port size

Ⓓ Electrical connections
Refer to "Pneumatic Valves No.CB-023SA" for the circuit diagram with surge suppressor/ lamp.

Ⓔ Option

Ⓕ Voltage

P4 compliant as standard

Code	Description	Ⓐ Model No. 3GE1	3GE2	4GE1	4GE2	4GE3
Ⓑ 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 (*1) — A side valve:Normally Closed, B side valve:Normally Closed	●	●			
Ⓒ Port size						
Port	4(A)/2(B) port	Port P/R1/R2 ②=Rc1/8 ③=Rc1/4 ④=Rc3/8				
06	Rc1/8	②		②		
08	Rc1/4		③		③	③
10	Rc3/8					④
00	Discrete valve for integrated base	●	●	●	●	●
Ⓓ Electrical connections						
Blank	Grommet lead wire (300 mm) (*5)	●	●	●	●	●
B	DIN terminal box (Pg7) With surge suppressor and indicator lamp (*6)(*8)		●		●	●
BN	DIN terminal box(Pg7)(Without terminal box)With surge suppressor(*6)(*8)		●		●	●
E-connector (upward/lateral common)						
E0	Lead wire (300 mm) (*7)	●	●	●	●	●
E00	Lead wire (500 mm) (*7)	●	●	●	●	●
E01	Lead wire (1000 mm) (*7)	●	●	●	●	●
E02	Lead wire (2000 mm) (*7)	●	●	●	●	●
E03	Lead wire (3000 mm) (*7)	●	●	●	●	●
E0N	Without lead wire(Without socket) (*7)	●	●	●	●	●
E1	Without lead wire(socket/terminal attached) (*7)	●	●	●	●	●
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 (socket/terminal attached) With surge suppressor and indicator lamp	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral common)						
E01J	Lead wire (1000 mm) (*7)	●	●	●	●	●
E02J	Lead wire (2000 mm) (*7)	●	●	●	●	●
E03J	Lead wire (3000 mm) (*7)	●	●	●	●	●
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	●	●	●	●	●
Ⓔ Option						
Blank	Manual override of non-locking/locking common	●	●	●	●	●
H	With exhaust check valve (*2)	●	●	●	●	●
A	Ozone/coolant proof	●	●	●	●	●
F	Port A/B filter built in (*3)	●	●	●	●	●
Ⓕ Voltage						
1	100 VAC (rectifier integrated)	●	●	●	●	●
2	200 VAC (rectifier integrated) (*4)		●		●	●
3	24 VDC	●	●	●	●	●
4	12 VDC	●	●	●	●	●

is not available.

⚠ Precautions for model No. selection

*1: Dimensions is the same dimensions as the respective 2-position double solenoid.

***2: 3-position all ports closed and PAB connection are not provided with the exhaust check valve. Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.**

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

*4: Only the DIN terminal box is supported.

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

*6: A lamp comes with the terminal box.

*7: AC voltage is with a rectifier circuit.

*8: The terminal box conforms to EN175301-803 Type C (former DIN 43650-C). Refer to "Pneumatic Valves No.CB-023SA" for details.

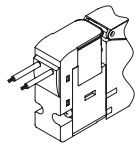
Electrical connections

Discrete valve/individual wiring manifold

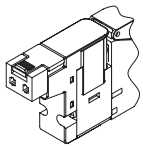
Blank Grommet lead wire

● **Lead wire length**

300 mm



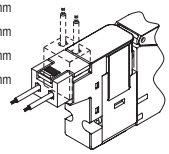
E1 E3 E-connector with socket/terminal



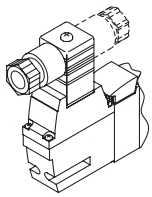
E0 E2 E-connector

● **Lead wire length**

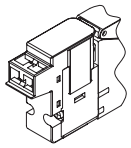
300 mm
500 mm
1000 mm
2000 mm
3000 mm



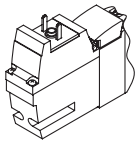
B DIN terminal box



E0N E2N E-connector without socket



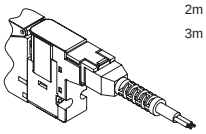
BN DIN terminal box Without terminal box

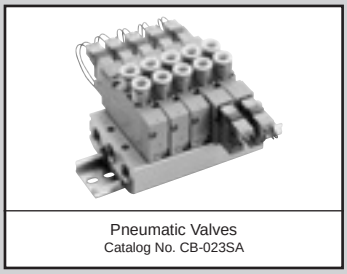


E0*J E2*J EJ type connector

● **Lead wire length**

1m
2m
3m





Pneumatic Valves
Catalog No. CB-023SA

Individual wiring manifold
Body piping
Direct mount/DIN rail mount

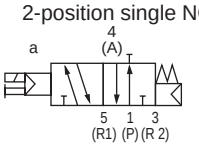
M3GD1, 2, 3 -(D) /M4GD1, 2, 3 -(D) Series

● Applicable cylinder bore size: ø20 to ø100

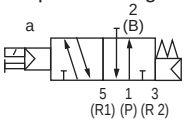
JIS symbol

● 3-port valve

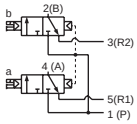
2-position single NC



2-position single NO

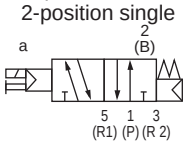


● Two 3-port valves integrated
(A side valve: NC, B side valve: NC)

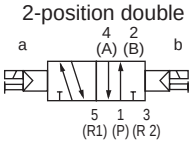


● 5-port valve

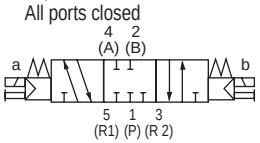
2-position single



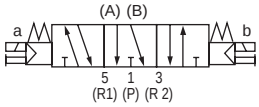
2-position double



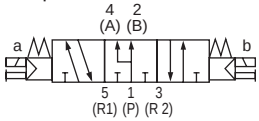
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item		Description
Manifold		Integrated base
Mounting method		Direct mount/DIN rail mount
Air supply and exhaust method		Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust (Standard) (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
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
Lubrication (*1)		Not required
Degree of protection (*2)		Dust-proof
Vibration resistance m/s^2		50 or less
Shock resistance m/s^2		300 or less
Atmosphere		Cannot be used in corrosive gas environments

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

*2 Avoid dripping water or oil, etc., during use. IP65 (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.

Electrical specifications

Item	Description			
Rated voltage V	24 DC	12 DC	100 VAC	200 VAC
Voltage fluctuation range	±10%			
Holding current A (*3)	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W (*3)	0.35 (0.40)		-	
Apparent power VA (*3) (*4)	-		0.93 (0.98)	1.40
Thermal class	B			
Surge suppressor	Option			
Indicator	Lamp (option)			

*3: Values in ( ) apply when lamp is included.
*4: 200 VAC is the value of DIN terminal box (with lamp).

Individual specifications

Item		M3GD1/M4GD1		M3GD2/M4GD2		M3GD3/M4GD3	
		Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount
Max. station No.	Standard (Internal pilot)	20 stations	16 stations	20 stations	16 stations	20 stations	16 stations
Port size	Port A/B	Push-in fitting ø4, ø6 M5		Push-in fitting ø4, ø6, ø8 Rc1/8		Push-in fitting ø8, ø10 Rc1/4	
	Port P/R1/R2	Rc1/8		Rc1/4		Rc3/8	
Manifold base Weight calculation formula (n: station No.) g		23n+52	25n+60	47n+64	49n+92	74n+88	76n+117

Refer to "Cautions for mounting the DIN rail" and "Pneumatic Valves No.CB-023SA", and select the manifold. For 10 or more manifold station No. (5 stations for 4G3), use ports on both sides for air supply and exhaust. The manifold base weight is the value for screw specifications.

Performance/characteristics by model

Item			M3GD1		M3GD2		M3GD3		M4GD1		M4GD2		M4GD3	
			ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Response time ms	Two 3-port valves integrated		12	15	15	30	-	-	-	-	-	-	-	-
	2-position	Single	15	25	20	30	25	40	15	25	20	30	25	40
		Double	-	-	-	-	-	-	15	-	20	-	25	-
	3-position	A/B/R connection	-	-	-	-	-	-	20	30	25	35	35	50

Values with lamp/surge suppressor are shown. The response times are values with working pressure of 0.5 MPa at 20°C, 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	
M3GD1 M4GD1	Two 3-port valves integrated		0.86	0.31	1.1	(0.66)	0.19	(0.22)
	2-position		0.99	0.20	1.2	(0.70)	0.20	(0.12)
	3-position	All ports closed	0.94	0.23	1.1	—	0.20	—
		A/B/R connection	0.93	0.18	1.3	(0.70)	0.23	(0.02)
		P/A/B connection	1.1	0.28	1.1	—	0.23	—
M3GD2 M4GD2	Two 3-port valves integrated		1.7	0.40	2.3	(1.7)	0.29	(0.32)
	2-position		2.3	0.36	2.9	(1.7)	0.24	(0.33)
	3-position	All ports closed	2.1	0.35	2.5	—	0.32	—
		A/B/R connection	2.2	0.37	2.9	(1.8)	0.32	(0.29)
		P/A/B connection	2.4	0.34	2.5	—	0.33	—
M3GD3 M4GD3	2-position		3.2	0.37	3.8	(2.5)	0.13	(0.28)
	3-position	All ports closed	2.9	0.35	3.3	—	0.35	—
		A/B/R connection	3.0	0.34	3.8	(2.6)	0.12	(0.27)
		P/A/B connection	3.3	0.30	3.3	—	0.32	—

*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.

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓔ option "A" on page 288.

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".

M4GD1/2/3 Series

Individual wiring manifold; Body piping

How to order

Manifold model No.

M 4GD1 1 0 R - C6 - E2 H D - ○ - 3 - P4

3-port manifold model No.

M 3GD1 1 0 R - C6 - E2 H D - ○ - 3 - P4

Discrete valve for integrated base

4GD1 1 9 R - C6 - E2 H —— 3 - P4

Discrete 3-port valve for base mounting

3GD1 1 9 R - C6 - E2 H —— 3 - P4

Ⓑ Solenoid position

Ⓐ Model No.

Ⓒ Port size

*3
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Ⓓ Electrical connections

Ⓔ Option

Ⓕ Mount type

Ⓖ Station No.

Ⓗ Voltage

* Be sure to fill in the "Manifold specifications sheet" (pages 312 to 314).

Code	Description	Ⓐ Model No. 3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Ⓑ 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 (*1)	●	●	●			
11	2-position single: Normally Open (*1)	●	●	●			
66	3-port valve Two valves integrated (*1) (*2) — A valve side: Normally Closed; B valve side: Normally Closed	●	●				
8	Mix manifold (when there are multiple solenoid positions)	●	●	●	●	●	●
Ⓒ Port size							
Port	4(A), 2(B) port *3		Port P/R1/R2 (2) = Rc1/8 (3) = Rc1/4 (4) = Rc3/8				
C4	ø4 push-in fitting	○	②	③		②	③
C6	ø6 push-in fitting	○	②	③		②	③
C8	ø8 push-in fitting	○		③	④		③ ④
C10	ø10 push-in fitting	○			④		④
CX	Push-in fitting mix (*4)	○	②	③	④	②	③ ④
M5	M5	●	②			②	
06	Rc1/8	●		③			③
08	Rc1/4	●			④		④
Ⓓ Electrical connections							
Refer to the next page for electrical connections.							
Ⓔ Option							
Blank	Manual override of non-locking/locking common	●	●	●	●	●	●
H	With exhaust check valve (*5)	●	●	●	●	●	●
A	Ozone/coolant proof	●	●	●	●	●	●
F	Port A/B filter built in (*6)	●	●	●	●	●	●
Z1	Air supply spacer (*7)	●	●	●	●	●	●
Z3	Exhaust spacer (*7)	●	●	●	●	●	●
Ⓕ Mount type							
Blank	Direct mount	●	●	●	●	●	●
D	DIN rail mount	●	●	●	●	●	●
Ⓖ Station No.							
2 to 20	2 stations to Refer to page 286 for the max. station number per model.	●	●	●	●	●	●
Ⓗ Voltage							
1	100 VAC (rectifier integrated)	●	●	●	●	●	●
2	200 VAC (rectifier integrated) (*8)		●	●		●	●
3	24 VDC	●	●	●	●	●	●
4	12 VDC	●	●	●	●	●	●

is not available.

Precautions for model No. selection

*1 M4GD*80R when using a mixture of 3, 5-port valves. When using a mixture with the masking plate, M3GD*80R.

*2 Dimensions are the same as the respective 2-position double solenoid.

*4 Push-in fitting cannot be mixed with the single valve 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). Refer to "Pneumatic Valves No.CB-023S" for details on the exhaust check valve.**

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

***7 Specify the spacer mounting position and quantity on the manifold specifications sheet. Stacking of spacers is not possible. Combination with a masking plate is not possible. Refer to pages 302 to 303 for details.**

*8 DIN terminal box only is supported. Two 3-port valves integrated type is not available.

[Electrical connections list]

Ⓓ Electrical connections			Ⓐ Model No. 3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Blank	Grommet Lead wire(300 mm)	(*9)	●	●	●	●	●	●
B	DIN terminal box (Pg 7) With surge suppressor and indicator lamp	(*10)(*12)		●	●		●	●
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor	(*10)(*12)		●	●		●	●
E-connector (upward/lateral direction common)								
E0	Lead wire (300 mm)	(*11)	●	●	●	●	●	●
E00	Lead wire (500 mm)	(*11)	●	●	●	●	●	●
E01	Lead wire (1000 mm)	(*11)	●	●	●	●	●	●
E02	Lead wire (2000 mm)	(*11)	●	●	●	●	●	●
E03	Lead wire (3000 mm)	(*11)	●	●	●	●	●	●
E0N	Without lead wire (without socket)	(*11)	●	●	●	●	●	●
E1	Without lead wire (with socket/terminal)	(*11)	●	●	●	●	●	●
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)	(*11)	●	●	●	●	●	●
E02J	Lead wire (2000 mm)	(*11)	●	●	●	●	●	●
E03J	Lead wire (3000 mm)	(*11)	●	●	●	●	●	●
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	●	●	●	●	●	●

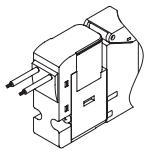
*9: The grommet lead wire specifications are compatible with DC voltage only.
*10: A lamp comes with the terminal box.
*11: AC voltage is with a rectifier circuit.
*12 The terminal box conforms to EN175301-803Type C (former DIN 43650-C). Refer to "Pneumatic Valves No.CB-023SA" for details.

Electrical connections

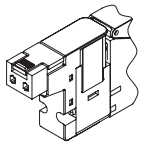
Discrete valve/individual wiring manifold

Blank Grommet lead wire

● Lead wire length
300 mm

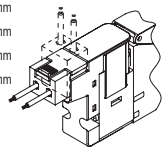


E1 E3 E-connector with socket/terminal

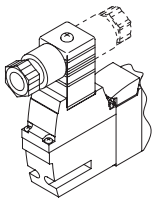


E0 E2 E-connector

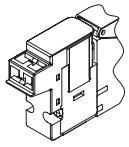
● Lead wire length
300 mm
500 mm
1000 mm
2000 mm
3000 mm



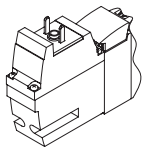
B DIN terminal box



E0N E2N E-connector without socket

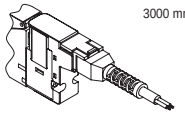


BN DIN terminal box (without terminal box)



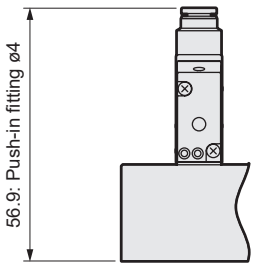
E0*J E2*J EJ type connector

● Lead wire length
1000 mm
2000 mm
3000 mm

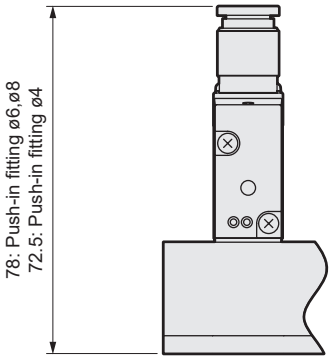


Dimensions

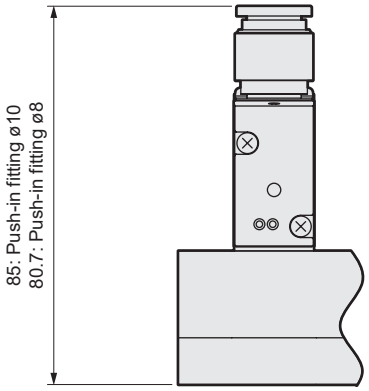
● M4GD1-P4



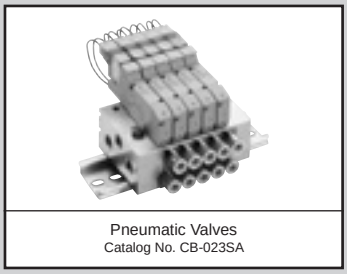
● M4GD2-P4



● M4GD3-P4



*Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, refer to the M4GD1 to 3 Series in "Pneumatic Valves (No. CB-023SA)".



Pneumatic Valves
Catalog No. CB-023SA

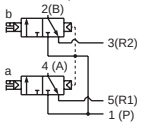
Individual wiring manifold
Base piping
Direct mount/DIN rail mount

M3GE1, 2/M4GE1, 2, 3-(D) Series

● Applicable cylinder bore size: ø20 to ø100

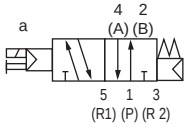
JIS symbol

● Two 3-port valves integrated
(A side valve: NCB side valve: NC)

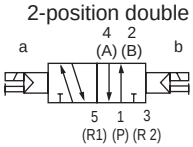


● 5-port valve

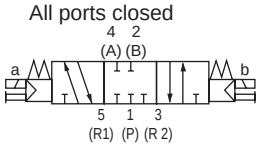
2-position single



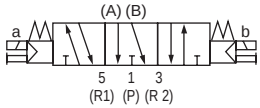
2-position double



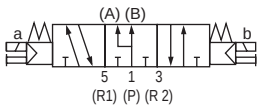
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item		Description
Manifold		Integrated base
Mounting method		Direct mount/DIN rail mount
Air supply and exhaust method		Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust (Standard) (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
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
Lubrication (*1)		Not required
Degree of protection (*2)		Dust-proof
Vibration resistance m/s^2		50 or less
Shock resistance m/s^2		300 or less
Atmosphere		Cannot be used in corrosive gas environments

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

*2 Avoid dripping water or oil, etc., during use. IP65 (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.

Electrical specifications

Item	Description			
Rated voltage V	24 DC	12 DC	100 AC	200 AC
Voltage fluctuation range	±10%			
Holding current A(*3)	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W(*3)	0.35 (0.40)		-	
Apparent power VA (*3) (*4)	-		0.93 (0.98)	1.40
Thermal class	B			
Surge suppressor	Option			
Indicator	Lamp (option)			

*3: Values in ( ) apply when lamp is included.
*4: 200 VAC is the value of DIN terminal box (with lamp).

Individual specifications

Item		M3GE1/M4GE1		M3GE2/M4GE2		M4GE3	
		Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount
Max. station No.	Standard (Internal pilot)	20 stations	16 stations	20 stations	16 stations	20 stations	16 stations
Port size	Port A/B	Push-in fitting ø4, ø6 M5		Push-in fitting ø4, ø6, ø8 Rc1/8		Push-in fitting ø8, ø10 Rc1/4	
	Port P/R1/R2	Rc1/8		Rc1/4		Rc3/8	
Manifold base Weight calculation formula (n: station No.)		35n+61	36n+115	71n+106	73n+134	113n+170	115n+119

Refer to "Cautions for mounting the DIN rail" and "Pneumatic Valves No.CB-023SA", and select the manifold. For 10 or more manifold station No. (5 stations for 4G3), use ports on both sides for air supply and exhaust. The manifold base weight is the value for screw specifications.

Performance/characteristics by model

Item			M3GE1/M4GE1		M3GE2/M4GE2		M4GE3	
			ON	OFF	ON	OFF	ON	OFF
Response time ms	Two 3-port valves integrated		12	15	15	30	-	-
	2-position	Single	15	25	20	30	25	40
		Double	15	-	20	-	25	-
	3-position	A/B/R connection	20	30	25	35	35	50

Values with a lamp/surge suppressor are shown. The response times are values with working pressure of 0.5 MPa at 20°C, 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	
M3GE1 M4GE1	Two 3-port valves integrated		0.86	0.35	1.1	(0.67)	0.22	(0.23)
	2-position		1.1	0.22	1.2	(0.70)	0.20	(0.10)
	3-position	All ports closed	0.98	0.22	1.1	—	0.24	—
		A/B/R connection	0.97	0.35	1.3	(0.68)	0.22	(0.24)
		P/A/B connection	1.1	0.38	1.1	—	0.21	—
M3GE2 M4GE2	Two 3-port valves integrated		1.7	0.44	2.1	(1.6)	0.32	(0.30)
	2-position		2.4	0.34	2.7	(1.7)	0.24	(0.31)
	3-position	All ports closed	2.2	0.34	2.4	—	0.29	—
		A/B/R connection	2.2	0.34	2.8	(1.8)	0.24	(0.27)
		P/A/B connection	2.4	0.29	2.4	—	0.29	—
M4GE3	2-position		3.5	0.34	3.8	(2.6)	0.11	(0.27)
	3-position	All ports closed	3.1	0.33	3.3	—	0.22	—
		A/B/R connection	3.0	0.30	3.8	(2.7)	0.11	(0.22)
		P/A/B connection	3.6	0.36	3.3	—	0.28	—

*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.

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓔ option "A" on page 292.

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".

M4GE1/2/3 Series

Individual wiring manifold; Base piping

How to order

Manifold model No.

M 4GE1 1 0R - C6 - E2 H D - ○ - 3 - P4

3-port manifold model No.

M 3GE1 66 0R - C6 - E2 H D - ○ - 3 - P4

Discrete valve for integrated base

4GE1 1 9R - 00 - E2 H —— 3 - P4

3-port discrete valve for integrated base

3GE1 66 9R - 00 - E2 H —— 3 - P4

Ⓐ Model No.
Ⓑ Solenoid position
Ⓒ Port size (*3)
Ⓓ Electrical connections
Ⓔ Option
Ⓕ Mount type
Ⓖ Station No.
Ⓗ Voltage

*3
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

*Be sure to fill in the "Manifold specifications sheet" (pages 312 to 314).

Code	Description		Ⓐ Model No. 3GE1	3GE2	4GE1	4GE2	4GE3
Ⓑ 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 (*1) (*2)	A side valve: Normally Closed	●	●			
		B side valve: Normally Closed					
8	Mix manifold (when there are multiple solenoid positions)		●	●	●	●	●

Port	4(A), 2(B) port	*3	P/R1/Port R2 ②= Rc1/8 ③=Rc1/4 ④=Rc3/8				
Ⓒ Port size							
C4	ø4 push-in fitting	○	②	③	②	③	
C6	ø6 push-in fitting	○	②	③	②	③	
C8	ø8 push-in fitting	○		③		③	④
C10	ø10 push-in fitting	○					④
CX	Push-in fitting mix	○	②	③	②	③	④
M5	M5	●	②		②		
06	Rc1/8	●		③		③	
08	Rc1/4	●					④
00	Discrete valve for integrated base	●	●	●	●	●	●

Ⓓ Electrical connections							
Refer to the next page for electrical connections.							
Ⓔ Option							
Blank	Manual override of non-locking/locking common		●	●	●	●	●
H	With exhaust check valve	(*4)	●	●	●	●	●
A	Ozone/coolant proof		●	●	●	●	●
F	Port A/B filter built in	(*5)	●	●	●	●	●
Z1	Air supply spacer	(*6)	●	●	●	●	●
Z3	Exhaust spacer	(*6)	●	●	●	●	●
Ⓕ Mount type							
Blank	Direct mount (*7))		●	●	●	●	●
D	DIN rail mount		●	●	●	●	●
Ⓖ Station No.							
2	2 stations		●	●	●	●	●
to	to						
20	Refer to page 290 for the max. station number per model.						
Ⓗ Voltage							
1	100 VAC (rectifier integrated)		●	●	●	●	●
2	200 VAC (rectifier integrated) (*8)			●		●	●
3	24 VDC		●	●	●	●	●
4	12 VDC		●	●	●	●	●

is not available.

⚠ Precautions for model No. selection

*1: M4GE*80R when using a mixture of 3, 5-port valves. When using a mixture with the masking plate, M3GE*80R.
*2 Dimensions is the same dimensions as the respective 2-position double solenoid.
***4: The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.**
*5: A filter is built into port P as standard.
***6: Specify the spacer mounting position/ quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with masking plates is not possible. Refer to pages 302 to 303 for details.**
*7: Direct mount M4GE1 cannot be changed to DIN rail mount after purchase.
*8: Only the DIN terminal box is supported. Two 3-port valves integrated type is not available.

[Electrical connection list]

Ⓓ Electrical connections		Ⓐ Model No. 3GE1	3GE2	4GE1	4GE2	4GE3
Blank	Grommet lead wire (300 mm) (*9)	●	●	●	●	●
B	DIN terminal box (Pg7) With surge suppressor and indicator lamp (*10)(*12)		●		●	●
BN	DIN terminal box (Pg7)(without terminal box) With surge suppressor (*10)(*12)		●		●	●
E-connector (upward/lateral common)						
E0	Lead wire (300 mm) (*11)	●	●	●	●	●
E00	Lead wire (500 mm) (*11)	●	●	●	●	●
E01	Lead wire (1000 mm) (*11)	●	●	●	●	●
E02	Lead wire (2000 mm) (*11)	●	●	●	●	●
E03	Lead wire (3000 mm) (*11)	●	●	●	●	●
E0N	Without lead wire (without socket) (*11)	●	●	●	●	●
E1	Without lead wire (with socket/terminal) (*11)	●	●	●	●	●
E2	Lead wire (300 mm) Surge suppressor·With indicator lamp	●	●	●	●	●
E20	Lead wire (500 mm) Surge suppressor·With indicator lamp	●	●	●	●	●
E21	Lead wire (1000 mm) Surge suppressor·With indicator lamp	●	●	●	●	●
E22	Lead wire (2000 mm) Surge suppressor·With indicator lamp	●	●	●	●	●
E23	Lead wire (3000 mm) Surge suppressor·With indicator lamp	●	●	●	●	●
E2N	Without lead wire (without socket) Surge suppressor·With indicator lamp	●	●	●	●	●
E3	Without lead wire (socket/terminal included) surge suppressor·With indicator lamp	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral common)						
E01J	Lead wire (1000 mm) (*11)	●	●	●	●	●
E02J	Lead wire (2000 mm) (*11)	●	●	●	●	●
E03J	Lead wire (3000 mm) (*11)	●	●	●	●	●
E21J	Lead wire (1000 mm) Surge suppressor·With indicator lamp	●	●	●	●	●
E22J	Lead wire (2000 mm) Surge suppressor·With indicator lamp	●	●	●	●	●
E23J	Lead wire (3000 mm) Surge suppressor·With indicator lamp	●	●	●	●	●

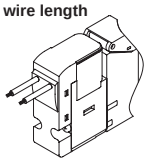
*9: The grommet lead wire specifications are compatible with DC voltage only.
*10: A lamp comes with the terminal box.
*11: AC voltage includes a rectifier circuit.
*12: The terminal box conforms to EN175301-803Type C (former DIN 43650-C). Refer to "Pneumatic Valves No.CB-023SA" for details.

Electrical connections

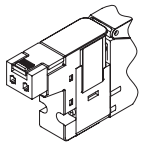
Discrete valve/individual wiring manifold

Blank Grommet lead wire

● Lead wire length
300 mm

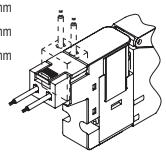


E1 E3 E-connector with socket/terminal

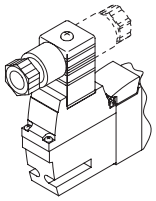


E0 E2 E-connector

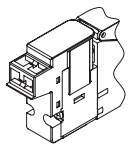
● Lead wire length
300 mm
500 mm
1000 mm
2000 mm
3000 mm



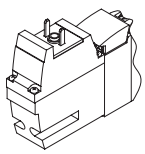
B DIN terminal box



E0N E2N E-connector without socket

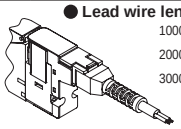


BN DIN terminal box (without terminal box)



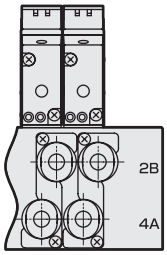
E0*J E2*J EJ type connector

● Lead wire length
1000 mm
2000 mm
3000 mm



Dimensions

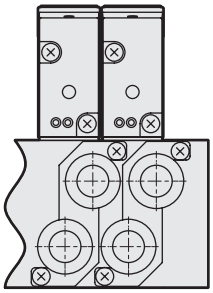
● M4GE1-P4



●Fitting straight
●ø4 (C4)

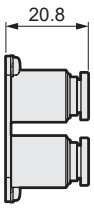
●ø6 (C6)

● M4GE2-P4

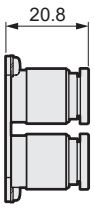


●Fitting straight
●ø4 (C4)

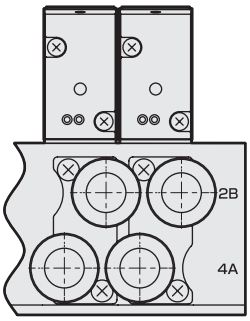
●ø6 (C6)



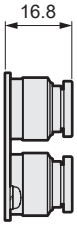
●ø8 (C8)



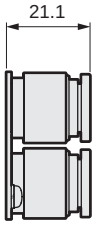
● M4GE3-P4



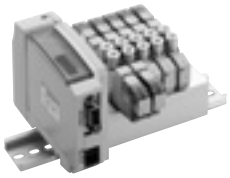
●Fitting straight
●ø8 (C8)



●ø10 (C10)



*Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, "Pneumatic Valves (No.CB-023SA) M4GE1 to 3 series.



Pneumatic Valves
Catalog No. CB-023SA

Reduced wiring manifold body piping
Direct mount/DIN rail mount

M3GD1/2/3-T*(D) Series
M4GD1/2/3-T*(D) Series

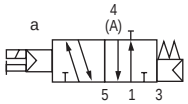
● Cylinder bore size: ø20 to ø100

RoHS CAD

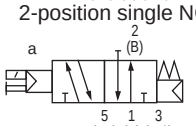
JIS symbol

● 3-port valve

2-position single NC

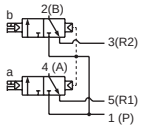


2-position single NO



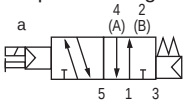
● Two 3-port valves integrated

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

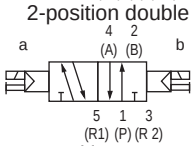


● 5-port valve

2-position single

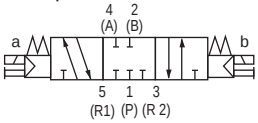


2-position double

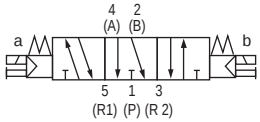


3-position

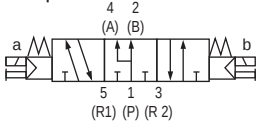
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item		Description
Manifold		Reduced wiring integrated base
Mounting method		Direct mount/DIN rail mount
Air supply and exhaust method		Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust (Standard) (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
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
Lubrication (*1)		Not required
Degree of protection (*2)		Dust-proof
Vibration resistance m/s^2		50 or less
Shock resistance m/s^2		300 or less
Atmosphere		Cannot be used in corrosive gas environments

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

*2 Avoid dripping water or oil, etc., during use.

Electrical specifications

Item	Description		
	T1□, T30□, T5□		T6G1, T8□
Rated voltage V	24 DC	12 DC	24 DC
Voltage fluctuation range(*3)	±10%		+10%, -5%
Holding current A	0.017	0.034	0.017
Power consumption W	0.4		
Thermal class	B		
Surge suppressor	Zener diode		
Indicator	LED		

*3 T6G1, T8□As the voltage drop occurs due to the internal circuit of the (serial transmission), pay attention to the voltage fluctuation range.

Individual specifications

Common specifications

Item		M3GD1/M4GD1	M3GD2/M4GD2	M3GD3/M4GD3
Port size	Port A/B	Push-in fitting ø4, ø6 M5	Push-in fitting ø4, ø6, ø8 Rc1/8	Push-in fitting ø8,ø10 Rc1/4
	Port P/R1/R2	Rc1/8	Rc1/4	Rc3/8

T1□, T30□, T5□

Item	M3GD1/M4GD1		M3GD2/M4GD2		M3GD3/M4GD3	
	Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount
Max. station No.	20 stations	16 stations	20 stations	16 stations	16 stations	
Manifold base weight calculation formula (n: station No.) g	29n+215	31n+228	54n+264	56n+297	84n+320	86n+354

T6G1

Item	M3GD1/M4GD1	M3GD2/M4GD2	M3GD3/M4GD3
	DIN rail mount	DIN rail mount	DIN rail mount
Max. station No.	16 stations	16 stations	16 stations
Manifold base weight calculation formula (n: station No.) g	31n+375	56n+444	86n+501

T8□

Item	M3GD1/M4GD1		M3GD2/M4GD2		M3GD3/M4GD3	
	Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount
Max. station No.	20 stations	16 stations	20 stations	16 stations	16 stations	
Manifold base weight calculation formula (n: station No.) g	50n+305	52n+332	57n+259	60n+290	150n+384	153n+416

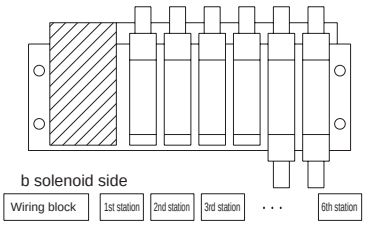
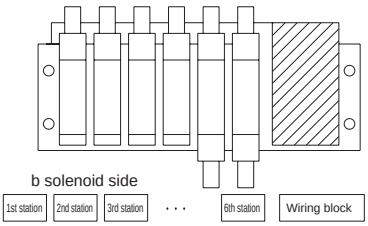
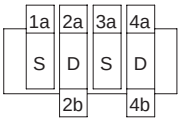
The manifold base weight is the value for screw connection specifications with DIN rail, wiring block or slave unit. Note that the maximum number of stations in the manifold is also limited by the maximum number of solenoid points per wiring specification as shown on the right.

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B→R1/R2			
			C[dm³/(s·bar)]	b	C[dm³/(s·bar)]		b	
M3GD1 M4GD1	Two 3-port valves integrated		0.86	0.31	1.1	(0.66)	0.19	(0.22)
	2-position		0.99	0.20	1.2	(0.70)	0.20	(0.12)
	3-position	All ports closed	0.94	0.23	1.1	—	0.20	—
		A/B/R connection	0.93	0.18	1.3	(0.70)	0.23	(0.02)
		P/A/B connection	1.1	0.28	1.1	—	0.23	—
M3GD2 M4GD2	Two 3-port valves integrated		1.7	0.40	2.3	(1.7)	0.29	(0.32)
	2-position		2.3	0.36	2.9	(1.7)	0.24	(0.33)
	3-position	All ports closed	2.1	0.35	2.5	—	0.32	—
		A/B/R connection	2.2	0.37	2.9	(1.8)	0.32	(0.29)
		P/A/B connection	2.4	0.34	2.5	—	0.33	—
M3GD3 M4GD3	2-position		3.2	0.37	3.8	(2.5)	0.13	(0.28)
	3-position	All ports closed	2.9	0.35	3.3	—	0.35	—
		A/B/R connection	3.0	0.34	3.8	(2.6)	0.12	(0.27)
		P/A/B connection	3.3	0.30	3.3	—	0.32	—

*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.

Wiring specifications

Item	T10□ Common terminal block	T11□ Common terminal block	T30□ D-sub-connector	T50□ Flat cable 20-pin	T51□ Flat cable 20-pin	T52□ Flat cable 10-pin	T53□ Flat cable 26-pin
Connector and terminal block specifications	M3 thread fastening 18 terminals	Clamping 26 terminals	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
Max. number of solenoids	16 points	24 points	24 points	16 points	18 points	8 points	24 points
Manifold internal wiring	Refer to "Pneumatic Valves No.CB-023SA" for details.						
Wiring block position Blank: Left side R: Right side	**Left side: T □** a solenoid side  				**Right side: T □ R** a solenoid side  		
Array method Blank: Standard sequential W: Double wiring	**(Example) For T50□** Manifold specifications  						

Standard wiring (sequential) :Blank

Connector pin No.	1	2	3	4	5	6
Valve solenoid No.	1a	2a	2b	3a	4a	4b

Double wiring: W

Connector pin No.	1	2	3	4	5	6	7	8
Valve solenoid No.	1a	Blank	2a	2b	3a	Blank	4a	4b

Serial transmission slave unit specifications

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

Item		T6G1 *1
Network name		CC-Link ver1.10
Power supply voltage	Unit side	24 VDC ±10%
	Valve side	24 VDC +10% -5%
Current consumption	Unit side	100mA 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)

*1: CC-Link is ver. 1.10.

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-point 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

M3/4GD1/2/3-T*(D) Series

Reduced wiring manifolds; Body piping

How to order

Manifold model No.

M 4GD1 1 0 R - C6 - T30 W H D - ○ - 3 - P4

3-port manifold model No.

M 3GD1 1 0 R - C6 - T30 W H D - ○ - 3 - P4

Discrete valve for integrated base

4GD1 1 9 R - C6 - A2N H — 3 - P4

3-port discrete valve for integrated base

3GD1 1 9 R - C6 - A2N H — 3 - P4

Ⓑ Solenoid position

Ⓐ Model No.

A2N indicates the A-connector (downward), with lamp/surge suppressor and no lead wire.

Ⓒ Port size

Ⓓ Reduced wiring connection
Zener diode is used as a surge suppressor.

*3
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Ⓔ Terminal/Connector pin array method

Ⓕ Option

Ⓖ Mount type

Ⓗ Station No.

Ⓘ Voltage

* Be sure to fill in the "Manifold specifications sheet" (pages 315 to 326).

Code	Description		Ⓐ Model No. 3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Ⓑ 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	(*1)	●	●	●			
11	2-position single Normally Open	(*1)	●	●	●			
66	Two 3-port valves integrated (*1)(*2)	A side valve: Normally Closed	●	●				
		B side valve: Normally Closed						
8	Mix manifold (when there are multiple solenoid positions)		●	●	●	●	●	●

Ⓒ Port size Port	4(A), 2(B) port	*3	Port P/R1/R2 ②=Rc1/8 ③=Rc1/4 ④=Rc3/8					
C4	ø4 push-in fitting	○	②	③		②	③	
C6	ø6 push-in fitting	○	②	③		②	③	
C8	ø8 push-in fitting	○		③	④		③	④
C10	ø10 push-in fitting	○			④			④
CX	Push-in fitting mix (*4)	○	②	③	④	②	③	④
M5	M5	●	②			②		
06	Rc1/8	●		③			③	
08	Rc1/4	●			④			④

Ⓓ Reduced wiring (lamp and surge suppressor provided as standard)
Refer to the next page for electrical connections.

Ⓔ Terminal/Connector pin array								
Blank	Standard wiring (*5)	●	●	●	●	●	●	
W	Double wiring (*5)	●	●	●	●	●	●	

Ⓕ Option								
Blank	Non-locking/Locking common manual override	●	●	●	●	●	●	
H	With exhaust check valve (*6)	●	●	●	●	●	●	
A	Ozone/Coolant proof	●	●	●	●	●	●	
F	Port A/B filter built in (*7)	●	●	●	●	●	●	
Z1	Air supply spacer (*8)	●	●	●	●	●	●	
Z3	Exhaust spacer (*8)	●	●	●	●	●	●	

Ⓖ Mount type								
Blank	Direct mount	●	●	●	●	●	●	
D	DIN rail mount	●	●	●	●	●	●	

Ⓗ Station No.								
2	2 stations	●	●	●	●	●	●	
to	to							
20	Refer to page 294 for the max. station number per model.							

Ⓘ Voltage								
3	24 VDC	●	●	●	●	●	●	
4	12 VDC	●	●	●	●	●	●	

● Refer to "Pneumatic Valves No.CB-023SA" for the model No. of cables with D-sub-connector.
● Refer to "Pneumatic Valves No.CB-023SA" for the model No. of cables for flat cable connector.

⚠ Precautions for model No. selection

*1 M4GD*80R when using a mixture of 3, 5-port valves. When using a mixture with the masking plate, M3GD*80R.
*2 Dimensions are the same as the respective 2-position double solenoid.
*4 Push-in fitting cannot be mixed with the single valve 4(A) or 2(B) port.
*5 Blank…The wiring will be based on the type of valve mounted.
W*...All wired as double solenoid regardless of the type of valve used.
***6 The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.**
*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 masking plates is not possible. Refer to pages 302 to 303 for details.**

Code	Description		Ⓐ Model No. 3GD1	3GD2	3GD3	4GD1	4GD2	4GD3
Ⓓ Reduced wiring (lamp and surge suppressor provided as standard) 12/24 VDC								
T10	Common terminal block (M3 thread)	Left-sided specs.	●	●	●	●	●	●
T10R		Right-sided specs.	●	●	●	●	●	●
T11	Common terminal block (clamping)	Left-sided specs.	●	●	●	●	●	●
T11R		Right-sided specs.	●	●	●	●	●	●
T30	D-sub-connector	Left-sided specs.	●	●	●	●	●	●
T30R		Right-sided specs.	●	●	●	●	●	●
T50	20-pin flat cable connector (with power supply terminal)	Left-sided specs.	●	●	●	●	●	●
T50R		Right-sided specs.	●	●	●	●	●	●
T51	20-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●	●	●
T51R		Right-sided specs.	●	●	●	●	●	●
T52	10-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●	●	●
T52R		Right-sided specs.	●	●	●	●	●	●
T53	26-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●	●	●
T53R		Right-sided specs.	●	●	●	●	●	●
Ⓓ Serial transmission (lamp/surge suppressor provided as standard) 24 VDC								
T6G1	CC-Link (connector)	NPN 16 points	●	●	●	●	●	●
T8G1	CC-Link (thin type)	NPN 16 points	●	●	●	●	●	●
T8G2		NPN 32 points	●	●	●	●	●	●
T8GP1		PNP 16 points	●	●	●	●	●	●
T8GP2		PNP 32 points	●	●	●	●	●	●
T8P1	PROFIBUS-DP (thin type)	NPN 16 points	●	●	●	●	●	●
T8P2		NPN 32 points	●	●	●	●	●	●
T8PP1		PNP 16 points	●	●	●	●	●	●
T8PP2		PNP 32 points	●	●	●	●	●	●
T8EC1	EtherCAT (thin type)	NPN 16 points	●	●	●	●	●	●
T8EC2		NPN 32 points	●	●	●	●	●	●
T8ECP1		PNP 16 points	●	●	●	●	●	●
T8ECP2		PNP 32 points	●	●	●	●	●	●
T8EN1	EtherNet/IP (thin type)	NPN 16 points	●	●	●	●	●	●
T8EN2		NPN 32 points	●	●	●	●	●	●
T8ENP1		PNP 16 points	●	●	●	●	●	●
T8ENP2		PNP 32 points	●	●	●	●	●	●
T8D1	DeviceNet (thinType)	NPN 16 points	●	●	●	●	●	●
T8D2		NPN 32 points	●	●	●	●	●	●
T8DP1		PNP 16 points	●	●	●	●	●	●
T8DP2		PNP 32 points	●	●	●	●	●	●
T8EB1	CC-Link IEF Basic (thinType)	NPN 16 points	●	●	●	●	●	●
T8EB2		NPN 32 points	●	●	●	●	●	●
T8EBP1		PNP 16 points	●	●	●	●	●	●
T8EBP2		PNP 32 points	●	●	●	●	●	●
T8EP1	PROFINET (thinType)	NPN 16 points	●	●	●	●	●	●
T8EP2		NPN 32 points	●	●	●	●	●	●
T8EPP1		PNP 16 points	●	●	●	●	●	●
T8EPP2		NPN 32 points	●	●	●	●	●	●
A2N	Without lead wire (without socket) With surge suppressor and indicator lamp		●	●	●	●	●	●

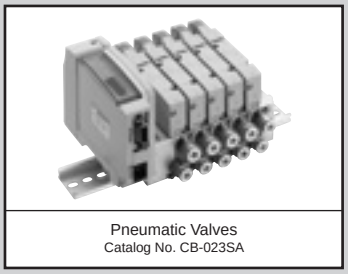
Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓕ option "A" on page 296.

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".



Pneumatic Valves
Catalog No. CB-023SA

Reduced wiring manifolds
Base piping
Direct mount/DIN rail mount

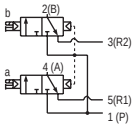
M3GE1/2-T*(D) Series
M4GE1/2/3-T*(D) Series

● Cylinder bore size: ø20 to ø100

RoHS CAD

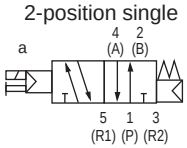
JIS symbol

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

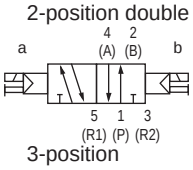


● 5-port valve

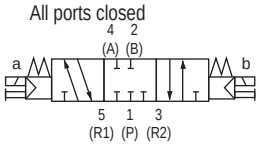
2-position single



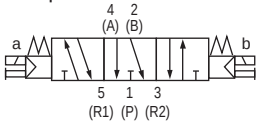
2-position double



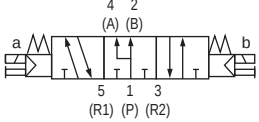
3-position
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Manifold common specifications

Item		Item
Manifold		Reduced wiring integrated base
Mounting method		Direct mount/DIN rail mount
Air supply and exhaust method		Common supply/common exhaust (With internal exhaust check valve)
Pilot exhaust method	Internal pilot	Main valve/pilot valve common exhaust (Standard) (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
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
Lubrication (*1)		Not required
Degree of protection (*2)		Dust-proof
Vibration resistance m/s²		50 or less
Shock resistance m/s²		300 or less
Atmosphere		Cannot be used in corrosive gas environments

*1 Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.
*2 Avoid dripping water or oil, etc., during use.

Electrical specifications

Item	Item		
	T1□, T30□, T5□		T6G1, T8□
Rated voltage V	24 DC	12 DC	24 DC
Voltage fluctuation range (*3)	±10%		+10%, -5%
Holding current A	0.017	0.034	0.017
Power consumption W	0.4		
Thermal class	B		
Surge suppressor	Zener diode		
Indicator	LED		

*3 T6G1, T8□As the voltage drop occurs due to the internal circuit of the (serial transmission), pay attention to the voltage fluctuation range.

Manifold individual specifications

Common specifications

Item		M3GE1/M4GE1	M3GE2/M4GE2	M3GE3/M4GE3
Port size	Port A/B	Push-in fitting ø4, ø6 M5	Push-in fitting ø4 , ø6 , ø8 Rc1/8	Push-in fitting ø8,ø10 Rc1/4
	Port P/R1/R2	Rc1/8	Rc1/4	Rc3/8

T1□, T30□, T5□

Item	M3GE1/M4GE1		M3GE2/M4GE2		M3GE3/M4GE3	
	Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount
Max. station No.	20 stations	16 stations	20 stations	16 stations	16 stations	
Manifold base weight calculation formula (n: station No.) g	43n+335	45n+348	80n+398	82n+431	124n+548	126n+562

T6G1

Item	M3GE1/M4GE1	M3GE2/M4GE2	M3GE3/M4GE3
	DIN rail mount	DIN rail mount	DIN rail mount
Max. station No.	16 stations	16 stations	16 stations
Manifold base weight calculation formula (n: station No.) g	45n+495	82n+578	126n+729

T8□

Item	M3GE1/M4GE1		M3GE2/M4GE2		M3GE3/M4GE3	
	Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount
Max. station No.	20 stations	16 stations	20 stations	16 stations	16 stations	
Manifold base weight calculation formula (n: station No.) g	46n+305	49n+332	83n+318	86n+350	128n+384	132n+416

The manifold base weight is the value for screw connection specifications with DIN rail, wiring block or slave unit. Note that the maximum number of stations in the manifold is also limited by the maximum number of solenoid points per wiring specification as shown on the right.

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B→R1/R2			
			C[dm³/(s·bar)]	b	C[dm³/(s·bar)]		b	
M3GE1 M4GE1	Two 3-port valves integrated		0.86	0.35	1.1	(0.67)	0.22	(0.23)
	2-position		1.1	0.22	1.2	(0.70)	0.20	(0.10)
	3-position	All ports closed	0.98	0.22	1.1	—	0.24	—
		A/B/R connection	0.97	0.35	1.3	(0.68)	0.22	(0.24)
		P/A/B connection	1.1	0.38	1.1	—	0.21	—
M3GE2 M4GE2	Two 3-port valves integrated		1.7	0.44	2.1	(1.6)	0.32	(0.30)
	2-position		2.4	0.34	2.7	(1.7)	0.24	(0.31)
	3-position	All ports closed	2.2	0.34	2.4	—	0.29	—
		A/B/R connection	2.2	0.34	2.8	(1.8)	0.24	(0.27)
		P/A/B connection	2.4	0.29	2.4	—	0.29	—
M4GE3	2-position		3.5	0.34	3.8	(2.6)	0.11	(0.27)
	3-position	All ports closed	3.1	0.33	3.3	—	0.22	—
		A/B/R connection	3.0	0.30	3.8	(2.7)	0.11	(0.22)
		P/A/B connection	3.6	0.36	3.3	—	0.28	—

*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.

Wiring specifications

Item	T10□ Common terminal block	T11□ Common terminal block	T30□ D-sub-connector	T50□ Flat cable 20-pin	T51□ Flat cable 20-pin	T52□ Flat cable 10-pin	T53□ Flat cable 26-pin
Connector and terminal block specifications	M3 thread fastening 18 terminals	Clamping 26 terminals	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
Max. number of solenoids	16 points	24 points	24 points	16 points	18 points	8 points	24 points
Manifold internal wiring	Refer to "Pneumatic Valves No.CB-023SA" for details.						
Wiring block position Blank: Left side R: Right side	**Left side: T□** a solenoid side / b solenoid side; Wiring block, 1st station, 2nd station, 3rd station, …, 6th station				**Right side: T□R** a solenoid side / b solenoid side; 1st station, 2nd station, 3rd station, …, 6th station, Wiring block		
Array method Blank: Standard sequential W: Double wiring	**(Example) For T50□** Manifold specifications: 1a 2a 3a 4a / S D S D / 2b 4b; 1st station 3rd station 2nd station 4th station						

Standard wiring (sequential): Blank

Connector pin No.	1	2	3	4	5	6
Valve solenoid No.	1a	2a	2b	3a	4a	4b

Double wiring: W

Connector pin No.	1	2	3	4	5	6	7	8
Valve solenoid No.	1a	Blank	2a	2b	3a	Blank	4a	4b

Serial transmission slave unit specifications

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

Item		T6G1 *1
Network name		CC-Link ver1.10
Power supply voltage	Unit side	24 VDC ±10%
	Valve side	24 VDC +10% -5%
Current consumption	Unit side	100mA 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)

*1: CC-Link is ver. 1.10.

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-point 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

M4GE1/2/3-T*(D) Series

Reduced wiring manifolds; Base piping

How to order

Manifold model No.

M 4GE1 1 0R - C6 - T30 W H D - ○ - 3 - P4

3-port manifold model No.

M 3GE1 66 0R - C6 - T30 H D - ○ - 3 - P4

Discrete valve for integrated base

4GE1 1 9R - 00 - A2N H — 3 - P4

3-port discrete valve for integrated base

3GE1 66 9R - 00 - A2N H — 3 - P4

A2N indicates the A-connector (downward), with lamp/surge suppressor and no lead wire.

Ⓑ Solenoid position

Ⓐ Model No.

Ⓒ Port size

*3
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Ⓔ Terminal/connector pin array

Ⓓ Reduced wiring connection
Zener diode is used as a surge suppressor.

Ⓕ Option

Ⓖ Mount type

Ⓗ Station No.

Ⓘ Voltage

● **Refer to "Pneumatic Valves No.CB-023SA" for the model No. of cables with D-sub-connector.**
● **Refer to "Pneumatic Valves No.CB-023SA" for the model No. of cables for flat cable connector.**

Precautions for model No. selection

*1 M4GE*80R when using a mixture of 3, 5-port valves. When using a mixture with the masking plate, M3GE*80R.
*2 Dimensions are the same as the respective 2-position double solenoid.
*4 Blank...The wiring will be based on the type of valve mounted.
W*...All wired as double solenoid regardless of the type of valve used.
***5 3-position all ports closed and P A B connection are not provided with the exhaust check valve specifications (H). Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.**
*6 A filter is built into port P as standard.
***7 Specify the spacer mounting position/ quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with masking plates is not possible. Refer to pages 302 to 303 for details.**
*8 Direct mount M4GE1 is available after purchaseThis cannot be changed to the DIN rail mount type.

* Be sure to fill in the "Manifold specifications sheet" (pages 315 to 326).

Code	Description	Ⓐ Model No. 3GE1	3GE2	4GE1	4GE2	4GE3
Ⓑ 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 (*1) (*2) — A side valve: Normally Closed	●	●			
	Two 3-port valves integrated (*1) (*2) — B side valve: Normally Closed	●	●			
8	Mix manifold (when there are multiple solenoid positions)	●	●	●	●	●

Ⓒ Port size							
Port	4(A), 2(B) port	*3	Port P/R1/R2 ②=Rc1/8 ③=Rc1/4 ④=Rc3/8				
C4	ø4 push-in fitting	○	②	③	②	③	
C6	ø6 push-in fitting	○	②	③	②	③	④
C8	ø8 push-in fitting	○		③		③	④
C10	ø10 push-in fitting	○					④
CX	Push-in fitting mix	○	②	③	②	③	④
M5	M5	●	②		②		
06	Rc1/8	●		③		③	
08	Rc1/4	●					④
00	Discrete valve for integrated base	●	●	●	●	●	●

Ⓓ Reduced wiring (lamp and surge suppressor provided as standard)
Refer to the next page for electrical connections.

Ⓔ Terminal/connector pin array							
Blank	Standard wiring	(*4)	●	●	●	●	●
W	Double wiring	(*4)	●	●	●	●	●

Ⓕ Option							
Blank	Manual override of non-locking/locking common		●	●	●	●	●
H	With exhaust check valve	(*5)	●	●	●	●	●
A	Ozone/coolant proof		●	●	●	●	●
F	Port A/B filter built in	(*6)	●	●	●	●	●
Z1	Air supply spacer	(*7)	●	●	●	●	●
Z3	Exhaust spacer	(*7)	●	●	●	●	●

Ⓖ Mount type							
Blank	Direct mount	(*8)	●	●	●	●	●
D	DIN rail mount		●	●	●	●	●

Ⓗ Station No.							
2	2 stations		●	●	●	●	●
to	to						
20	Refer to page 298 for the max. station number per model.						

Ⓘ Voltage							
3	24 VDC		●	●	●	●	●
4	12 VDC		●	●	●	●	●

is not available.

Code	Description		Ⓐ Model No. 3GE1	3GE2	4GE1	4GE2	4GE3
Ⓓ Reduced wiring (lamp and surge suppressor provided as standard) 12/24 VDC							
T10	Common terminal block (M3 thread)	Left-sided specs.	●	●	●	●	●
T10R		Right-sided specs.	●	●	●	●	●
T11	Common terminal block (clamping)	Left-sided specs.	●	●	●	●	●
T11R		Right-sided specs.	●	●	●	●	●
T30	D-sub-connector	Left-sided specs.	●	●	●	●	●
T30R		Right-sided specs.	●	●	●	●	●
T50	20-pin flat cable connector (with power supply terminal)	Left-sided specs.	●	●	●	●	●
T50R		Right-sided specs.	●	●	●	●	●
T51	20-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●	●
T51R		Right-sided specs.	●	●	●	●	●
T52	10-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●	●
T52R		Right-sided specs.	●	●	●	●	●
T53	26-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●	●
T53R		Right-sided specs.	●	●	●	●	●
Ⓓ Serial transmission (lamp/surge suppressor provided as standard) 24 VDC							
T6G1	CC-Link(Connector)	NPN 16 points	●	●	●	●	●
T8G1	CC-Link (thin type)	NPN 16 points	●	●	●	●	●
T8G2		NPN 32 points	●	●	●	●	●
T8GP1		PNP 16 points	●	●	●	●	●
T8GP2		PNP 32 points	●	●	●	●	●
T8P1	PROFIBUS-DP (thin type)	NPN 16 points	●	●	●	●	●
T8P2		NPN 32 points	●	●	●	●	●
T8PP1		PNP 16 points	●	●	●	●	●
T8PP2		PNP 32 points	●	●	●	●	●
T8EC1	EtherCAT (thin type)	NPN 16 points	●	●	●	●	●
T8EC2		NPN 32 points	●	●	●	●	●
T8ECP1		PNP 16 points	●	●	●	●	●
T8ECP2		PNP 32 points	●	●	●	●	●
T8EN1	EtherNet/IP (thin type)	NPN 16 points	●	●	●	●	●
T8EN2		NPN 32 points	●	●	●	●	●
T8ENP1		PNP 16 points	●	●	●	●	●
T8ENP2		PNP 32 points	●	●	●	●	●
T8D1	DeviceNet (Thin)	NPN 16 points	●	●	●	●	●
T8D2		NPN 32 points	●	●	●	●	●
T8DP1		PNP 16 points	●	●	●	●	●
T8DP2		PNP 32 points	●	●	●	●	●
T8EB1	CC-Link IEF Basic (Thin)	NPN 16 points	●	●	●	●	●
T8EB2		NPN 32 points	●	●	●	●	●
T8EBP1		PNP 16 points	●	●	●	●	●
T8EBP2		PNP 32 points	●	●	●	●	●
T8EP1	PROFINET (Thin)	NPN 16 points	●	●	●	●	●
T8EP2		NPN 32 points	●	●	●	●	●
T8EPP1		PNP 16 points	●	●	●	●	●
T8EPP2		PNP 32 points	●	●	●	●	●
A2N	Without lead wire (without socket) With surge suppressor and indicator lamp		●	●	●	●	●

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓕ option "A" on page 300.

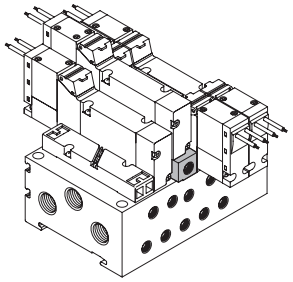
CE marking specifications

** - Voltage - **ST**

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

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
4G3	2.6	0.22	3.1	0.14	56

*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

● Air supply spacer

Air supply spacer model No.

4G 3 R - P - GWS10 - P4

Ⓐ Air supply spacer model No.

Ⓑ Port size

*1
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Code	Description	Valve model No. 4GD1	4GE1	4GD2	4GE2	4GD3	4GE3
Ⓐ **Air supply spacer model No.**							
1	For 4G1	●					
2	For 4G2			●			
3	For 4G3					●	
Ⓑ **Port size**							
Blank	M5(4G1), Rc1/8(4G2), Rc1/4(4G3)	●		●		●	
GWS4	ø4 push-in fitting	○					
GWS6	ø6 push-in fitting	○		○			
GWS8	ø8 push-in fitting			○		○	
GWS10	ø10 push-in fitting					○	

is not available.

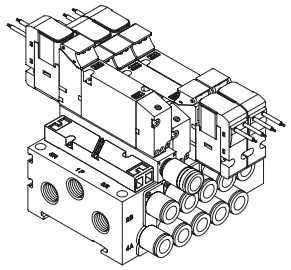
Accessories: 2 Mounting screws, 2 PR check valves, 1 body gasket

⚠ Precautions for model No. selection

*2: Specify the air supply spacer mounting position and quantity on the manifold specifications sheet of each catalog.
*3: Combination with the masking plate is not supported.

Related products

● 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
4G3	3.4	0.21	2.9	0.27	58

*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

● Exhaust spacer

Exhaust spacer model No.

4G (3) R - R - (GWS10) - P4

Ⓐ Exhaust spacer model No.

Ⓑ Port size

*1
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Code	Description	Valve model No. 4GD1	4GE1	4GD2	4GE2	4GD3	4GE3
Ⓐ Exhaust spacer model No.							
1	For 4G1	●					
2	For 4G2			●			
3	For 4G3					●	
Ⓑ Port size							
Blank	M5(4G1), Rc1/8(4G2), Rc1/4(4G3)	●		●		●	
GWS4	ø4 push-in fitting	○					
GWS6	ø6 push-in fitting	○		○			
GWS8	ø8 push-in fitting			○		○	
GWS10	ø10 push-in fitting					○	

is not available.

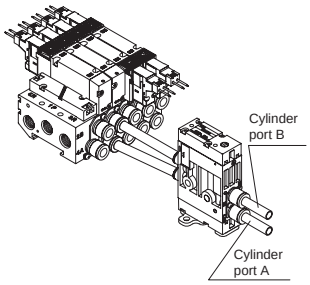
Accessories: 2 Mounting screws, 2 PR check valves, 1 body gasket

⚠ Precautions for model No. selection

*2: Specify the exhaust spacer mounting position and quantity on the manifold specifications sheet of each catalog.
*3: Combination with the masking plate is not supported.

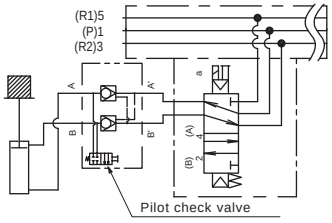
Related products

● Pilot check valve

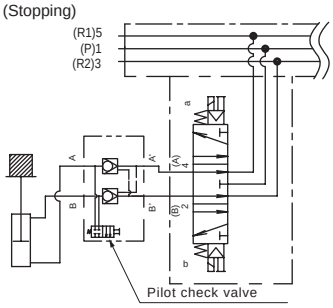


JIS symbol

(Position locking)



(Stopping)



Example of leak comparison
All ports closed (solenoid) valve
10 cm³/min or less
Pilot check valve (4G2R-PCS)
0 to 0.3 cm³/min

Specifications

Item	4G2R-PCS-*-*
Effective cross-sectional area mm²	11
Weight g	200

How to order

● Discrete model No.

4G2R – PCS – C4 – ○ ——— P4

● Manifold model No.

M4G2R – PCS – C4 – ○ – 5 – P4

Model No.

Pilot check valve

Ⓐ Port size (*1)

Ⓑ Option (*2)

Ⓒ Station No.

Code	Description	
Ⓐ Port size		
	Valve side port	Cylinder side port
C4	ø4 push-in fitting	ø4 push-in fitting
C6	ø6 push-in fitting	ø6 push-in fitting
C8	ø8 push-in fitting	ø8 push-in fitting

Ⓑ Option	
Blank	No
F	Port A/B filter built in
M	Manual non-locking
D	DIN rail mount

Ⓒ Station No.	
2	2 stations
to	to
10	10 stations

⚠ Depending on use conditions, the pilot check valve body may emit resonance noise due to the air flow when the cylinder operates, but this is not an abnormality. Adjust the pipe length and bore size in that case.

⚠ Precautions for model No. selection

*1: Contact CKD for information on mixing port sizes.

*2: The following applies when blank is selected as an option. Manual override: Non-locking/locking common Mounting method: Direct mounting

Related parts

⑤ Sub-plate

How to order

● 4GD piping adapter

4G1 R-ADAPTOR-M5-○

Ⓐ Model No.
Ⓑ Port size
Ⓒ Option

P4 compliant as standard

Code	Description	Ⓐ Model No. 4G1	4G2	4G3
Ⓑ Port size (Port P/R1/R2)				
M5	M5	●		
06	Rc1/8		●	
08	Rc1/4			●
Ⓒ Option				
P	With mounting plate (included)	●	●	●

is not available.

● 4GE discrete sub-plate

4G1 R-SUB-BASE-06-○

Ⓐ Model No.
Ⓑ Port size
Ⓒ Option

P4 compliant as standard

Code	Description	Ⓐ Model No. 4G1	4G2	4G3
Ⓑ Port size (Port A/B/P/RI/R2)				
06	Rc1/8	●		
08	Rc1/4		●	●
10	Rc3/8			●
Ⓒ Option				
F	A/B port filter integrated *1	●	●	●

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

is not available.

Related parts

⑥ Manifold sub-plate kit individual wiring

● M4GD sub-plate

M4GD1 R - 00 - 2

P4 compliant as standard

Ⓐ Model No.

Code	Description
Ⓐ Model No.	
M4GD1	Metal base, 4G1 size, body piping
M4GD2	Metal base, 4G2 size, body piping
M4GD3	Metal base, 4G3 size, body piping

Ⓑ Station No.

Ⓑ Station No.	
2	2 stations
to	to
20	Refer to the specifications page for the max. station number.

● M4GE1 sub-plate

M4GE1R - C4 - D - 2 - P4

Ⓐ Port size

*1
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Ⓑ Option

Ⓒ Mount type

Ⓓ Station No.

Code	Description		
Ⓐ Port size			
Port	**4(A), 2(B) port**	***1**	**Port P/R1/R2**
C4	ø4 push-in fitting	○	Rc1/8
C6	ø6 push-in fitting	○	
M5	M5	●	
Ⓑ Option			
Blank			
F	Port A/B filter built in(*2)		
Ⓒ Mount type			
Blank	Direct mount		
D	DIN rail mount (*3)		
Ⓓ Station No.			
2	2 stations		
to	to		
20	Refer to the specifications page for the max. station number.		

*2: A filter is built into port P as standard.
*3: The DIN rail kit needs to be prepared separately.

Related parts

⑥ Manifold sub-plate kit individual wiring

● M4GE2/3 sub-plate

M4GE2 R - C4 - [ ] - 2 - P4

Ⓐ Model No.

Ⓑ Port size

*1
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Ⓒ Option

Ⓓ Station No.

Code	Description
Ⓐ Model No.	
M4GE2	Metal base 4G2 size base piping
M4GE3	Metal base 4G3 size base piping

Ⓑ Port size				
Port	**4(A), 2(B) port**	***1**	**Port P/R1/R2 ①=Rc1/4 ②=Rc3/8**	
			Ⓐ Model No. M4GE2	**M4GE3**
C4	ø4 push-in fitting	○	①	
C6	ø6 push-in fitting	○	①	
C8	ø8 push-in fitting	○	①	②
C10	ø10 push-in fitting	○		②
06	Rc1/8	●	①	
08	Rc1/4	●		③

Ⓒ Option	
Blank	
F	Port A/B filter built in (*2)

Ⓓ Station No.	
2	2 stations
to	to
20	Refer to the specifications page for the max. station number.

*2: A filter is built into port P as standard.
*3: Direct mount and DIN rail mount are common.
*4: The DIN rail kit needs to be prepared separately.

Related parts

⑦ Manifold sub-plate kit reduced wiring

● M4GD sub-plate

M4GD1 R -00- T* - ○ - 2

P4 compliant as standard

Code	Description	
Ⓐ Model No.		
M4GD1	Metal base, 4G1 size, body piping	
M4GD2	Metal base, 4G2 size, body piping	
M4GD3	Metal base, 4G3 size, body piping	
Ⓑ Reduced wiring connection		
T10	Common terminal block (M3 thread)	Left-sided specs.
T10R		Right-sided specs.
T11	Common terminal block (clamping)	Left-sided specs.
T11R		Right-sided specs.
T30	D-sub-connector	Left-sided specs.
T30R		Right-sided specs.
T50	20-pin flat cable connector (with power supply terminal)	Left-sided specs.
T50R		Right-sided specs.
T51	20-pin flat cable connector (without power supply terminal)	Left-sided specs.
T51R		Right-sided specs.
T52	10-pin flat cable connector (without power supply terminal)	Left-sided specs.
T52R		Right-sided specs.
T53	26-pin flat cable connector (without power supply terminal)	Left-sided specs.
T53R		Right-sided specs.
T56	20-pin flat cable connector (without power supply terminal) For serial transmission slave unit OPP3 connection	Left-sided specs.
T81	For serial transmission slave (adapter) station OPP7 connection (16-point output)	Left-sided specs.
T82	For serial transmission slave (adapter) station OPP7 connection (32-point output)	Left-sided specs.
Ⓒ Mount *1		
Blank	Direct mount	
D	DIN rail mount	(*2)
Ⓓ Station No.		
2	2 stations	
to	to	
20	Refer to the specifications page for the max. station number.	

1: For T8, select either mount type. Blank only for items other than T8*.
*2: The DIN rail kit needs to be prepared separately.

Related parts

⑦ Manifold sub-plate kit reduced wiring

● M4GE sub-plate

M4GE1R - C4 - T10 - ○○ - 2 - P4

Ⓐ Model No.

Code	Description
Ⓐ Model No.	
M4GE1	Metal base 4G1 size base piping
M4GE2	Metal base 4G2 size base piping
M4GE3	Metal base 4G3 size base piping

Ⓑ Port size

Port	4(A), 2(B) port	*1	Ⓐ Model No. M4GE1	M4GE2	M4GE3
Ⓑ Port size			**Port P/R1/R2 (1) = Rc1/8 (2) = Rc1/4 (3) = Rc3/8**		
C4	ø4 push-in fitting	○	(1)	(2)	
C6	ø6 push-in fitting	○	(1)	(2)	
C8	ø8 push-in fitting	○		(2)	(3)
C10	ø10 push-in fitting	○			(3)
M5	M5	●	(1)		
06	Rc1/8	●		(2)	
08	Rc1/4	●			(3)

*1
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Ⓒ Reduced wiring connection

Ⓒ Reduced wiring connection		
T10	Common terminal block (M3 thread)	Left-sided specs.
T10R		Right-sided specs.
T11	Common terminal block (clamping)	Left-sided specs.
T11R		Right-sided specs.
T30	D-sub-connector	Left-sided specs.
T30R		Right-sided specs.
T50	20-pin flat cable connector (with power supply terminal)	Left-sided specs.
T50R		Right-sided specs.
T51	20-pin flat cable connector (without power supply terminal)	Left-sided specs.
T51R		Right-sided specs.
T52	10-pin flat cable connector (without power supply terminal)	Left-sided specs.
T52R		Right-sided specs.
T53	26-pin flat cable connector (without power supply terminal)	Left-sided specs.
T53R		Right-sided specs.
T56	20-pin flat cable connector (without power supply terminal) For serial transmission slave unit OPP3 connection	Left-sided specs.
T81	For serial transmission slave (adapter) station OPP7 connection (16-point output)	Left-sided specs.
T82	For serial transmission slave (adapter) station OPP7 connection (32-point output)	Left-sided specs.

Ⓓ Option

Ⓓ Option	
Blank	
F	Port A/B filter built in *2

Ⓔ Mount type

Ⓔ Mount *3	
Blank	Direct mount
D	DIN rail mount (*4)

Ⓕ Station No.

Ⓕ Station No.	
2	2 stations
to	to
20	Refer to the specifications page for the max. station number.

*2: A filter is built into port P as standard.
3: For T8, select either mount type. Blank only for items other than T8*.
*4: The DIN rail kit needs to be prepared separately.

How to fill out metal base M4G Series manifold specifications sheet

● Manifold model No. (example)

M 4 G(D/E) 1 8 0R- CX - T30 [ ] - 9 - 3 - P4

Solenoid valves · Solenoid position · Port size · Electrical connections · Terminal connector pin array method · Station No. · Voltage

Precautions for fitting mix CX

The port A/B fitting can be selected freely by indicating "CX" in the port size area.

Selectable cartridge fittings

4G1	C4, C6, x (plug)
4G2	C4, C6, C8, × (plug)
4G3	C8, C10, × (plug)

*Port A/B fitting mix is not available for body piping

How to use base piping M4GE*10 as a 3-port valve

This can be used as NO/NC by attaching a plug cartridge on one side of port A/B. Indicate "X" in the fitting CX column.

Switching method	Plug mounting port
NC (Normally Closed)	B
NO (Normally Open)	A

For female thread specifications, indicate the required number of plugs in the "Thread plug" area at the end. Female threads and cartridge fitting cannot be used together in one manifold set.

Solenoid valve model No.	Fitting CX A	Fitting CX B	Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Quantity
4G E 1 1 9R- CX	C6	X	○	○																							2
4G E 1 1 9R- C6					○	○																					2
4G E 1 2 9R- C6							○	○																			2
4G E 1 5 9R- CX	C6	C4							○	○																	2
4G 1 9R-																											
3G D 1 9R-																											
3G D 1 9R-																											
Masking plate 4G1R-MP(S)																											
Masking plate 4G1R-MP(D)											○																1

Indicate X for a plug

Fill in "CX" when changing the fitting combination

Mounting rail	L=	Included part	Blanking plug		Threaded plug	
			GWP 4-B	GWP 6-B	4G1R-M5P	
			Cable with D-sub-connector	4GR-CABLE-D0□-□	Push-in fitting tube remover (attached as standard) ☑ Not required (check the box)	

If the tube remover (standard accessory) is not required, place a check.

* A reference circuit diagram for the above manifold (example) is shown on the next page.

From the manifold specifications for each model, select and fill out the appropriate form.

● Individual wiring…M4G(D/E)1 (Page 312), M4G(D/E)2 (Page 313), M4G(D/E)3 (Page 314)

● Reduced wiring

- Common terminal block (T1*), D-sub-connector (T30) : M4G(D/E)1 (Page 315), M4G(D/E)2 (Page 316), M4G(D/E)3 (Page 317)
- Flat cable connector (T5*) : M4G(D/E)1 (Page 318), M4G(D/E)2 (Page 319), M4G(D/E)3 (Page 320)
- Serial transmission (T6G1) : M4G(D/E)1 (Page 321), M4G(D/E)2 (Page 322), M4G(D/E)3 (Page 323)
- Serial transmission (T8*) : M4G(D/E)1 (Page 324), M4G(D/E)2 (Page 325), M4G(D/E)3 (Page 326)

How to fill out wiring specifications sheet

Not required for standard wiring and double wiring.

● Wiring specifications sheet (example)

Complete these specifications when specifying the wiring order and additional cables.

Connector pinNO.		Installation position															
T30/T30R	T50/T50R/T6*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	1	a																
14	2		a															
2	3			a														
15	4																	
3	5				a													
16	6																	
4	7					a												
17	8					b												
5	9 -Power supply						a											
18	10 +(COM) Power supply						b											
6	11							a										
19	12							b										
7	13								a									
20	14								b									
8	15									(a)								
21	16									(b)								
9	17																	
22	18																	
10	19 -Power supply																	
23	20 +(COM) Power supply																	
11																		
24																		
12																		
25																		
13 (COM)																		

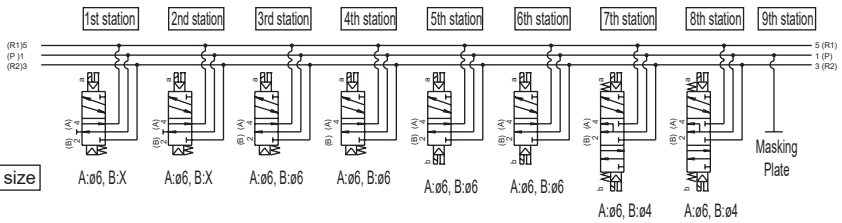
Spare cable wiring Precautions①

* Note that when T50 wiring is used, the COM polarity is + (plus).
* When T50 wiring is used, connector pin numbers 9, 10, 19, and 20 cannot be specified, because they are used for the external input power supply.
* Wiring is sequential from connector pin No. 1 in standard wiring. Contact CKD for special wiring order.

Precautions regarding spare wiring

①Spare wires are provided on the masking plate for the reduced wiring manifold. (Refer to "Pneumatic Valves No.CB-023SA")
The number of wires for spare wiring can be specified by selecting the masking plate within the specifications.
4G *R -MP(S)...1 pc.
4G *R -MP(D)...2 pcs.
Indicate (a) or (b) in manifold specifications sheet for masking plate reserved wires.

Reference circuit diagram Manifold on the previous page No. (Example of description) simplified circuit diagram.



Port size

1st station	2nd station	3rd station	4th station	5th station	6th station	7th station	8th station	9th station
A:ø6, B:X	A:ø6, B:X	A:ø6, B:ø6	A:ø6, B:ø6	A:ø6, B:ø6	A:ø6, B:ø6	A:ø6, B:ø4	A:ø6, B:ø4	

* The manifold station numbers are set in order from the left with the piping port facing forward.

M4G$^{D}_{E}$1 Manifold specifications sheet

Date issued / /
Company
Contact
Order No.

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

Slip No.	Order No.

● Manifold model No.

M ☐ G$^{D}_{E}$1 ☐ 0R- ☐ - ☐ ☐ ☐ - ☐ - ☐ - P4

Solenoid valves | Solenoid position | Port size | Electrical connections | Other options | Mount type | Station No. | Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Quantity
4G ☐ 1 ☐ 9R- ☐																											
4G ☐ 1 ☐ 9R- ☐																											
4G ☐ 1 ☐ 9R- ☐																											
4G ☐ 1 ☐ 9R- ☐																											
4G ☐ 1 ☐ 9R- ☐																											
3G ☐ 1 ☐ 9R- ☐																											
3G ☐ 1 ☐ 9R- ☐																											
Masking plate 4G1R-MP- ☐																											
Air supply spacer 4 G1R-P- ☐																											
Exhaust spacer 4G1R-R- ☐																											

Mounting rail	L_2= ☐ * Write an integer multiple of 12.5.	Included part	Blanking plug				Threaded plug	
			GWP 4-B		GWP 6-B		4G1R-M5P	
			Push-in fitting tube remover (attached as standard) Not required (check the box) ☐					

M4G$^{D}_{E}$2Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M G$^{D}_{E}$2 [ ] 0R- [ ] - [ ] [ ] [ ] - [ ] - [ ] - P4

Solenoid valves / Solenoid position / Port size / Electrical connections / Other options / Mount type / Station No. / Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Qty.
4G [ ] 2 [ ] 9R- [ ]																											
4G [ ] 2 [ ] 9R- [ ]																											
4G [ ] 2 [ ] 9R- [ ]																											
4G [ ] 2 [ ] 9R- [ ]																											
4G [ ] 2 [ ] 9R- [ ]																											
3G [ ] 2 [ ] 9R- [ ]																											
3G [ ] 2 [ ] 9R- [ ]																											
Masking plate 4G2R-MP- [ ]																											
Air supply spacer 4G2R-P- [ ]																											
Exhaust spacer 4G2R-R- [ ]																											

Mounting rail	L_2= [ ] * Write an integer multiple of 12.5.	Included part	Blanking plug						Threaded plug	
			GWP 4-B		GWP 6-B		GWP 8-B		4G2R-06P	

M4G$^{D}_{E}$3Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M □ G$^{D}_{E}$3 □ 0R- □ - □ □ □ - □ - □ - P4

Solenoid valves / Solenoid position / Port size / Electrical connections / Other options / Mount type / Station No. / Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Quantity
4G□3□9R-□																											
4G□3□9R-□																											
4G□3□9R-□																											
4G□3□9R-□																											
4G□3□9R-□																											
3GD3□9R-□																											
3GD3□9R-□																											
Masking plate 4G3R-MP-□																											
Air supply spacer 4G3R-P-□																											
Exhaust spacer 4G3R-R-□																											

Mounting rail	L_2= □ * Write an integer multiple of 12.5.	Included part	Blanking plug				Threaded plug	
			GWP 8-B		GWP 10-B		4G3R-08P	

M4G $^{D}_{E}$1-T1·3 Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M □ G $^{D}_{E}$1 □ 0R- □ - □ □ □ □ - □ - □ - P4

Solenoid valves · Solenoid position · Port size · Reduced wiring connection · Terminal/connector pin Array method · Option · Mount type · Station No. · Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Quantity
4G □ 1 □ 9R- □																											
4G □ 1 □ 9R- □																											
4G □ 1 □ 9R- □																											
4G □ 1 □ 9R- □																											
4G □ 1 □ 9R- □																											
3G □ 1 □ 9R- □																											
3G □ 1 □ 9R- □																											
Masking plate 4G1R-MP(S)- □																											
Masking plate 4G1R-MP(D)- □																											
Air supply spacer 4 G1R-P- □																											
Exhaust spacer 4G1R-R- □																											

Mounting rail: L_2= □ * Write an integer multiple of 12.5.

Included parts:

Blanking plug				Threaded plug	
GWP 4-B		GWP 6-B		4G1R-M5P	
Cable with D-sub-connector		4GR-CABLE-D0□-□		Push-in fitting tube remover bracket (Included as standard)	□ Non required (Check)

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No. T10/T10R	T11/T11R	T30/T30R	Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1																								
2	2	14																								
3	3	2																								
4	4	15																								
5	5	3																								
6	6	16																								
7	7	4																								
8	8	17																								
9	9	5																								
10	10	18																								
11	11	6																								
12	12	19																								
13	13	7																								
14	14	20																								
15	15	8																								
16	16	21																								
COM	17	9																								
COM	18	22																								
	19	10																								
	20	23																								
	21	11																								
	22	24																								
	23	12																								
	24	25																								
	COM	13 (COM)																								
	COM																									

M4G$^{D}_{E}$2-T1·3 Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M ☐ G$^{D}_{E}$2 ☐ 0R- ☐ - ☐ ☐ ☐ ☐ - ☐ - ☐ - P4

Solenoid valves · Solenoid position · Port size · Reduced wiring connection · Terminal/connector pin array method · Option · Mount type · Station No. · Voltage

Solenoid valve model No.	Fitting CX		Valve installation position																						Quantity
	A	B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
4G☐2☐9R-☐																											
4G☐2☐9R-☐																											
4G☐2☐9R-☐																											
4G☐2☐9R-☐																											
4G☐2☐9R-☐																											
3G☐2☐9R-☐																											
3G☐2☐9R-☐																											
Masking plate 4G2R-MP(S)-☐																											
Masking plate 4G2R-MP(D)-☐																											
Air supply spacer 4G2R-P-☐																											
Exhaust spacer 4G2R-R-☐																											

Mounting rail	Included parts	Blanking plug						Threaded plug	
L_2= ☐ * Write an integer multiple of 12.5.		GWP 4-B		GWP 6-B		GWP 8-B		4G2R-06P	
		Cable with D-sub-connector		4GR-CABLE-D0☐-☐					

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No.			Installation position																							
T10/T10R	T11/T11R	T30/T30R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1																								
2	2	14																								
3	3	2																								
4	4	15																								
5	5	3																								
6	6	16																								
7	7	4																								
8	8	17																								
9	9	5																								
10	10	18																								
11	11	6																								
12	12	19																								
13	13	7																								
14	14	20																								
15	15	8																								
16	16	21																								
COM	17	9																								
COM	18	22																								
	19	10																								
	20	23																								
	21	11																								
	22	24																								
	23	12																								
	24	25																								
	COM	13 (COM)																								
	COM																									

M4G$^{D}_{E}$3-T1·3 Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M □ G$^{D}_{E}$3 □ 0R- □ - □ □ □ □ - □ - □ - P4

Solenoid valves · Solenoid position · Port size · Reduced wiring connection · Terminal/connector pin Array method · Option · Mount type · Station No. · Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Q'ty
4G □ 3 □ 9R- □																											
4G □ 3 □ 9R- □																											
4G □ 3 □ 9R- □																											
4G □ 3 □ 9R- □																											
4G □ 3 □ 9R- □																											
3GD3 □ 9R- □																											
3GD3 □ 9R- □																											
Masking plate 4G3R-MP(S)- □																											
Masking plate 4G3R-MP(D)- □																											
Air supply spacer 4G3R-P- □																											
Exhaust spacer 4G3R-R- □																											

Mounting rail: L_2 = □ (* Write an integer multiple of 12.5.)

Included parts:

Blanking plug				Threaded plug	
GWP 8-B		GWP 10-B		4G3R-08P	
Cable with D-sub-connector		4GR-CABLE-D0□-□			

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No. T10/T10R	T11/T11R	T30/T30R	Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1																								
2	2	14																								
3	3	2																								
4	4	15																								
5	5	3																								
6	6	16																								
7	7	4																								
8	8	17																								
9	9	5																								
10	10	18																								
11	11	6																								
12	12	19																								
13	13	7																								
14	14	20																								
15	15	8																								
16	16	21																								
COM	17	9																								
COM	18	22																								
	19	10																								
	20	23																								
	21	11																								
	22	24																								
	23	12																								
	24	25																								
	COM	13 (COM)																								
	COM																									

M4G$^{D}_{E}$1-T5Manifold specifications sheet

Date issued / /
Company
Contact
Order No.

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

Slip No.	Order No.

● Manifold model No.

M G$^{D}_{E}$1 0R- - - - - - P4

Solenoid valves | Solenoid position | Port size | Reduced wiring connection | Terminal/connector pin array method | Option | Mount type | Station No. | Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Quantity
4G 1 9R-																											
4G 1 9R-																											
4G 1 9R-																											
4G 1 9R-																											
4G 1 9R-																											
3G 1 9R-																											
3G 1 9R-																											
Masking plate 4G1R-MP(S)-																											
Masking plate 4G1R-MP(D)-																											
Air supply spacer 4 G1R-P-																											
Exhaust spacer 4G1R-R-																											

Mounting rail: L_2= * Write an integer multiple of 12.5.

Included part:

Blanking plug				Threaded plug	
GWP 4-B		GWP 6-B		4G1R-M5P	

Push-in fitting tube remover (attached as standard) Not required (check the box) ☐

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

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

* Note that when T50 wiring is used, the COM polarity is + (plus).
* When T50 wiring is used, connector pin numbers 9, 10, 19, and 20 cannot be specified, because they are used for the external input power supply.

M4G$^{D}_{E}$2-T5Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M □ G$^{D}_{E}$2 □ 0R- □ - □ □ □ □ - □ - □ - P4

Solenoid valves | Solenoid position | Port size | Reduced wiring connection | Terminal/connector pin array method | Option | Mount type | Station No. | Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Quantity
4G □ 2 □ 9R- □																											
4G □ 2 □ 9R- □																											
4G □ 2 □ 9R- □																											
4G □ 2 □ 9R- □																											
4G □ 2 □ 9R- □																											
3G □ 2 □ 9R- □																											
3G □ 2 □ 9R- □																											
Masking plate 4G2R-MP(S)- □																											
Masking plate 4G2R-MP(D)- □																											
Air supply spacer 4G2R-P- □																											
Exhaust spacer 4G2R-R- □																											

Mounting rail	L_2 = □ * Write an integer multiple of 12.5.	Included part	Blanking plug						Threaded plug	
			GWP 4-B		GWP 6-B		GWP 8-B		4G2R-06P	

● Wiring specifications sheet (Not required for standard wiring/double wiring. Wiring order, Complete these specifications when specifying the expansion cables)

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

* Note that when T50 wiring is used, the COM polarity is + (plus).
* When T50 wiring is used, connector pin numbers 9, 10, 19, and 20 cannot be specified, because they are used for the external input power supply.

M4G3-T5Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M □ G 3 □ 0R- □ - □ □ □ □ - □ - □ - P4

Solenoid valves | Solenoid position | Port size | Reduced wiring connection | Terminal/connector pin array method | Option | Mount type | Station No. | Voltage

Solenoid valve model No.	Fitting CX		Valve installation position																								Quantity
	A	B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
4G □ 3 □ 9R- □																											
4G □ 3 □ 9R- □																											
4G □ 3 □ 9R- □																											
4G □ 3 □ 9R- □																											
4G □ 3 □ 9R- □																											
3GD3 □ 9R- □																											
3GD3 □ 9R- □																											
Masking plate **4G3R-MP(S)-** □																											
Masking plate **4G3R-MP(D)-** □																											
Air supply spacer **4G3R-P-** □																											
Exhaust spacer **4G3R-R-** □																											

Mounting rail	L_2= □ * Write an integer multiple of 12.5.	Included part	Blanking plug				Threaded plug	
			GWP 8-B		GWP 10-B		4G3R-08P	

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

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

* When T50 wiring is used, the COM polarity is + (positive).
* When T50 wiring is used, connector pin numbers 9, 10, 19, and 20 cannot be specified, because they are used for the external input power supply.

M4G$^{D}_{E}$1-T6G1 Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M ☐ G $^{D}_{E}$1 ☐ 0R- ☐ - T6G1 ☐ ☐ D - ☐ - 3 - P4

Solenoid valves | Solenoid position | Port size | Serial transmission | Terminal/connector pin array | Option | Station No. | Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Qty.
4G ☐ 1 ☐ 9R- ☐																			
4G ☐ 1 ☐ 9R- ☐																			
4G ☐ 1 ☐ 9R- ☐																			
4G ☐ 1 ☐ 9R- ☐																			
4G ☐ 1 ☐ 9R- ☐																			
3G ☐ 1 ☐ 9R- ☐																			
3G ☐ 1 ☐ 9R- ☐																			
Masking plate **4G1R-MP(S)-** ☐																			
Masking plate **4G1R-MP(D)-** ☐																			
Air supply spacer **4 G1R-P-** ☐																			
Exhaust spacer **4G1R-R-** ☐																			

Mounting rail: L_2= ☐ * Write an integer multiple of 12.5.

Included part: Blanking plug — GWP 4-B ☐ GWP 6-B ☐ — Threaded plug — 4G1R-M5P ☐

Push-in fitting tube remover (attached as standard) Not required (check the box) ☐

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No.		Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T6G1																	
T6G1: CC-Link 16 points	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
	10 COM																
	11																
	12																
	13																
	14																
	15																
	16																
	17																
	18																
	19																
	20 COM																

M4G$^{D}_{E}$2-T6G1 Manifold specifications sheet

Date issued / /
Company
Contact
Order No.

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

Slip No.	Order No.

● Manifold model No.

M [ ] G$^{D}_{E}$2 [ ] 0R- [ ] - T6G1 [ ] [ ] D - [ ] - 3 - P4

Solenoid valves / Solenoid position / Port size / Serial transmission / Terminal/connector pin array / Option / Station No. / Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Quantity
4G [ ] 2 [ ] 9R- [ ]																			
4G [ ] 2 [ ] 9R- [ ]																			
4G [ ] 2 [ ] 9R- [ ]																			
4G [ ] 2 [ ] 9R- [ ]																			
4G [ ] 2 [ ] 9R- [ ]																			
3G [ ] 2 [ ] 9R- [ ]																			
3G [ ] 2 [ ] 9R- [ ]																			
Masking plate **4G2R-MP(S)-** [ ]																			
Masking plate **4G2R-MP(D)-** [ ]																			
Air supply spacer **4G2R-P-** [ ]																			
Exhaust spacer **4G2R-R-** [ ]																			

Mounting rail	L_2= [ ] * Write an integer multiple of 12.5.	Included part	Blanking plug						Threaded plug	
			GWP 4-B		GWP 6-B		GWP 8-B		4G2-06P	

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No.		Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T6G1																	
T6G1: CC-Link 16 points	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
	10 COM																
	11																
	12																
	13																
	14																
	15																
	16																
	17																
	18																
	19																
	20 COM																

M4G$^{D}_{E}$3-T6G1 Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M G$^{D}_{E}$3 - 0R- - T6G1 D - - 3 - P4

Solenoid valves / Solenoid position / Port size / Serial transmission / Terminal/connector pin array / Option / Station No. / Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Quantity
4G 3 9R-																			
4G 3 9R-																			
4G 3 9R-																			
4G 3 9R-																			
4G 3 9R-																			
3GD3 9R-																			
3GD3 9R-																			
Masking plate 4G3R-MP(S)-																			
Masking plate 4G3R-MP(D)-																			
Air supply spacer 4G3R-P-																			
Exhaust spacer 4G3R-R-																			

Mounting rail	Included part	Blanking plug				Threaded plug	
L_2= (* Write an integer multiple of 12.5.)		GWP 8-B		GWP 10-B		4G3R-08P	

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No.		Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T6G1																	
T6G1: CC-Link 16 points	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
	10 COM																
	11																
	12																
	13																
	14																
	15																
	16																
	17																
	18																
	19																
	20 COM																

M4G$^{D}_{E}$1-T8Manifold specifications sheet

Date issued / /
Company
Contact
Order No.

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

Slip No.	Order No.

● Manifold model No.

M ☐ G $^{D}_{E}$1 ☐ 0R- ☐ - ☐ ☐ ☐ ☐ - ☐ - 3 - P4

Solenoid valves / Solenoid position / Port size / Serial transmission / Terminal/connector pin array / Option / Mount type / Station No. / Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Quantity
4G ☐ 1 ☐ 9R- ☐																							
4G ☐ 1 ☐ 9R- ☐																							
4G ☐ 1 ☐ 9R- ☐																							
4G ☐ 1 ☐ 9R- ☐																							
4G ☐ 1 ☐ 9R- ☐																							
3G ☐ 1 ☐ 9R- ☐																							
3G ☐ 1 ☐ 9R- ☐																							
Masking plate **4G1R-MP(S)-** ☐																							
Masking plate **4G1R-MP(D)-** ☐																							
Air supply spacer **4 G1R-P-** ☐																							
Exhaust spacer **4G1R-R-** ☐																							

Mounting rail: L_2= ☐ * Write an integer multiple of 12.5.

Included part:

Blanking plug				Threaded plug	
GWP 4-B		GWP 6-B		4G1R-M5P	

Push-in fitting tube remover (attached as standard) Not required (check the box) ☐

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No. T 8*				Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
T8G1	CC-Link	NPN	16 points	1																			
T8G2			32 points	2																			
T8GP1		PNP	16 points	3																			
T8GP2			32 points	4																			
T8P1	PROFIBUS-DP	NPN	16 points	5																			
T8P2			32 points	6																			
T8PP1		PNP	16 points	7																			
T8PP2			32 points	8																			
T8EC1	EtherCAT	NPN	16 points	9																			
T8EC2			32 points	10																			
T8ECP1		PNP	16 points	11																			
T8ECP2			32 points	12																			
T8EN1	EtherNet/IP	NPN	16 points	13																			
T8EN2			32 points	14																			
T8ENP1		PNP	16 points	15																			
T8ENP2			32 points	16																			
T8D1	DeviceNet	NPN	16 points	17																			
T8D2			32 points	18																			
T8DP1		PNP	16 points	19																			
T8DP2			32 points	20																			
T8EB1	CC-Link IEF Basic	NPN	16 points	21																			
T8EB2			32 points	22																			
T8EBP1		PNP	16 points	23																			
T8EBP2			32 points	24																			
T8EP1	PROFINET	NPN	16 points	25																			
T8EP2			32 points	26																			
T8EPP1		PNP	16 points	27																			
T8EPP2			32 points	28																			
				29																			
				30																			
				31																			
				32																			

M4G[D/E]2-T8Manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

M □ G[D/E]2 □ 0R- □ - □ □ □ □ - □ - 3 - P4

Solenoid valves | Solenoid position | Port size | Serial transmission | Terminal/connector pin array | Option | Mount type | Station No. | Voltage

Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Quantity
4G □ 2 □ 9R- □																							
4G □ 2 □ 9R- □																							
4G □ 2 □ 9R- □																							
4G □ 2 □ 9R- □																							
4G □ 2 □ 9R- □																							
3G □ 2 □ 9R- □																							
3G □ 2 □ 9R- □																							
Masking plate **4G2R-MP(S)-**																							
Masking plate **4G2R-MP(D)-**																							
Air supply spacer **4G2R-P-**																							
Exhaust spacer **4G2R-R-**																							

Mounting rail	L_2= * Write an integer multiple of 12.5.	Included part	Blanking plug						Threaded plug	
			GWP 4-B		GWP 6-B		GWP 8-B		4G2R-06P	

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No. T 8*				Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
T8G1	CC-Link	NPN	16 points	1																			
T8G2			32 points	2																			
T8GP1		PNP	16 points	3																			
T8GP2			32 points	4																			
T8P1	PROFIBUS-DP	NPN	16 points	5																			
T8P2			32 points	6																			
T8PP1		PNP	16 points	7																			
T8PP2			32 points	8																			
T8EC1	EtherCAT	NPN	16 points	9																			
T8EC2			32 points	10																			
T8ECP1		PNP	16 points	11																			
T8ECP2			32 points	12																			
T8EN1	EtherNet/IP	NPN	16 points	13																			
T8EN2			32 points	14																			
T8ENP1		PNP	16 points	15																			
T8ENP2			32 points	16																			
T8D1	DeviceNet	NPN	16 points	17																			
T8D2			32 points	18																			
T8DP1		PNP	16 points	19																			
T8DP2			32 points	20																			
T8EB1	CC-Link IEF Basic	NPN	16 points	21																			
T8EB2			32 points	22																			
T8EBP1		PNP	16 points	23																			
T8EBP2			32 points	24																			
T8EP1	PROFINET	NPN	16 points	25																			
T8EP2			32 points	26																			
T8EPP1		PNP	16 points	27																			
T8EPP2			32 points	28																			
				29																			
				30																			
				31																			
				32																			

M4G$^{D}_{E}$3-T8Manifold specifications sheet

Date issued / /
Company
Contact
Order No.

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

Slip No.	Order No.

● Manifold model No.

M G$^{D}_{E}$3 0R- - - - - - - - 3 - P4

Solenoid valves | Solenoid position | Port size | Serial transmission | Terminal/connector pin array | Option | Mount type | Station No. | Voltage

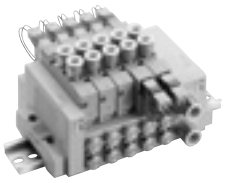
Solenoid valve model No.	Fitting CX A	Fitting CX B	Valve installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Quantity
4G 3 9R-																			
4G 3 9R-																			
4G 3 9R-																			
4G 3 9R-																			
4G 3 9R-																			
3GA3 9R-																			
3GA3 9R-																			
Masking plate 4G3R-MP(S)-																			
Masking plate 4G3R-MP(D)-																			
Air supply spacer 4G3R-P-																			
Exhaust spacer 4G3R-R-																			

Mounting rail	L_2= * Write an integer multiple of 12.5.	Included part	Blanking plug				Threaded plug	
			GWP 8-B		GWP 10-B		4G3R-08P	

● Wiring specifications sheet (Not required for standard wiring/double wiring. Complete these specifications when specifying the wiring order and additional cables)

Connector pin No. T 8*				Installation position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T8G1	CC-Link	NPN	16 points	1															
T8G2			32 points	2															
T8GP1		PNP	16 points	3															
T8GP2			32 points	4															
T8P1	PROFIBUS-DP	NPN	16 points	5															
T8P2			32 points	6															
T8PP1		PNP	16 points	7															
T8PP2			32 points	8															
T8EC1	EtherCAT	NPN	16 points	9															
T8EC2			32 points	10															
T8ECP1		PNP	16 points	11															
T8ECP2			32 points	12															
T8EN1	EtherNet/IP	NPN	16 points	13															
T8EN2			32 points	14															
T8ENP1		PNP	16 points	15															
T8ENP2			32 points	16															
T8D1	DeviceNet	NPN	16 points	17															
T8D2			32 points	18															
T8DP1		PNP	16 points	19															
T8DP2			32 points	20															
T8EB1	CC-Link IEF Basic	NPN	16 points	21															
T8EB2			32 points	22															
T8EBP1		PNP	16 points	23															
T8EBP2			32 points	24															
T8EP1	PROFINET	NPN	16 points	25															
T8EP2			32 points	26															
T8EPP1		PNP	16 points	27															
T8EPP2			32 points	28															
				29															
				30															
				31															
				32															

MEMO



Pneumatic Valves
Catalog No. CB-023SA

Individual wiring block manifold
Body piping

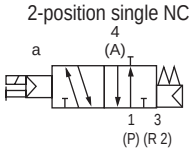
MN4GD1, 2 Series

● Cylinder bore size: ø20 to ø80

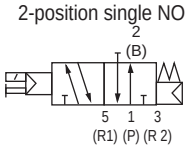
JIS symbol

● 3-port valve

2-position single NC

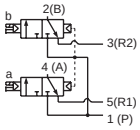


2-position single NO



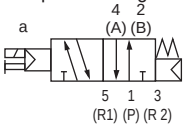
● Two 3-port valves integrated

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

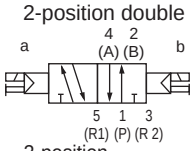


● 5-port valve

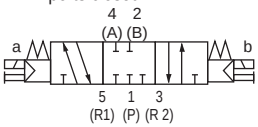
2-position single



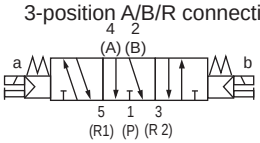
2-position double



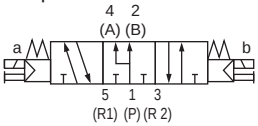
3-position
All ports closed



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
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
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 ISOVG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.

*2 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.

Electrical specifications

Item	Description			
Rated voltage V	24 DC	12 DC	100 VAC	200 VAC
Voltage fluctuation range	±10%			
Holding current A (*3)	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumption W (*3)	0.35 (0.40)		-	
Apparent power VA (*3) (*4)	-		0.93 (0.98)	1.40
Thermal class	B			
Surge suppressor	Option			
Indicator	Lamp (option)			

*3: Values in ( ) apply when lamp is included. *4: 200 VAC is the value of DIN terminal box (with lamp).

Individual specifications

Item		MN3GD1/MN4GD1	MN3GD2/MN4GD2
Max. station No.		24 stations	20 stations
Port size	Port A/B	Push-in fitting ø4 M5	Push-in fitting ø4, ø6, ø8 Rc1/8
	P/R Port	Push-in fitting ø6, ø8	Push-in fitting ø8, ø10

• For DIN rail mounting, refer to "Mounting orientation" in "Pneumatic Valves No.CB-023SA".

• For weight, refer to "Pneumatic Valves No.CB-023SA".

Performance/characteristics by model

Item			MN3GD1/MN4GD1		MN3GD2/MN4GD2	
			ON	OFF	ON	OFF
Response time ms	Two 3-port valves integrated		12	15	15	30
	2-position	Single	15	25	20	30
		Double	15	-	20	-
	3-position	A/B/R connection	20	30	25	35

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→R			
			C[dm³/(s·bar)]	b	C[dm³/(s·bar)]		b	
MN3GD1 MN4GD1	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	-
		A/B/R connection	0.92	0.29	1.1	(0.69)	0.13	(0.22)
		P/A/B connection	1.1	0.35	1.1	-	0.17	-
MN3GD2 MN4GD2	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	-
		A/B/R connection	2.0	0.27	2.5	(1.7)	0.18	(0.12)
		P/A/B 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.

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓔ option "A" on page 330.

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".

MN4GD1, 2 Series

Individual wiring block manifold; Body piping

How to order

Manifold model No.

MN4GD1 1 0 R- C6 - E2 H - 10 - 3 - P4

3-port manifold model No.

MN3GD1 1 0 R- C6 - E2 H - 10 - 3 - P4

Discrete valve block with solenoid valve

N4GD1 1 0 R- C6 - E2 H — 3 - P4

Discrete 3-port valve block with solenoid valve

N3GD1 1 0 R- C6 - E2 H — 3 - P4

Discrete solenoid valve

4GD1 1 9 R- C6 - E2 H — 3 - P4

Discrete 3-port solenoid valve

3GD1 1 9 R- C6 - E2 H — 3 - P4

B Solenoid position

A Model No.

C Port size(*1)

*4
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

D Electrical connections

E Option

F Station No.

G Voltage

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

B Solenoid position									
1	2-position single			●	●			●	●
2	2-position double			●	●			●	●
3	3-position all ports closed			●	●			●	●
4	3-position ABR connection			●	●			●	●
5	3-position PAB connection			●	●			●	●
1	2-position single: Normally Closed (*2)	●	●			●	●		
11	2-position single: Normally Open (*2)	●	●			●	●		
66	Two 3-port valves integrated (*2)(*3) — A side valve: Normally Closed / B side valve: Normally Closed	●	●			●	●		
8	Mix manifold (when there are multiple solenoid positions)	●	●	●	●	●	●	●	●

C Port siza (port A/B)		*4							
Type									
C4	ø4 push-in fitting	○	○	○	○	○	○	○	○
C6	ø6 push-in fitting		○		○		○		○
C8	ø8 push-in fitting		○		○		○		○
CX	Push-in fitting mix (*5)	○	○	○	○				
M5	M5	●		●		●		●	
06	Rc1/8		●		●		●		●

D Electrical connections
Refer to the following page for electrical connections

E Option									
Blank	Manual override of non-locking/locking common	●	●	●	●	●	●	●	●
H	With exhaust check valve (*6)	●	●	●	●	●	●	●	●
A	Ozone/coolant proof	●	●	●	●	●	●	●	●
F	Port A/B filter built in (*7)	●	●	●	●	●	●	●	●
Z1	Air supply spacer (*8)	●	●	●	●				
Z3	Exhaust spacer (*8)	●	●	●	●				

F Station No.									
1	1 station								
to	to	●	●	●	●				
24	24 stations (Max. station number for MN3GD2/MN4GD2 is 20.)								

G Voltage									
1	100 VAC (rectifier integrated)	●	●	●	●	●	●	●	●
2	200 VAC (rectifier integrated) (*9)		●		●		●		●
3	24 VDC	●	●	●	●	●	●	●	●
4	12 VDC		●	●	●	●	●	●	●

is not available.

⚠ 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: MN4GD*80R when using a mixture of 4, 5-port valves. MN3GD*80R when used with a masking plate.
*3: Dimensions is the same dimensions as the respective 2-position double solenoid.
*5: The push-in fitting cannot be mixed with the single valve's 4(A) or 2(B) port.
***6 The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.**
*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 masking plates is not possible. Refer to pages 347 to 348 for details.**
*9: Only the DIN terminal box is supported. Two 3-port valves integrated type is not available.

[Electrical connection list]

Ⓓ Electrical connections		Ⓐ Model No.							
		Manifold				Discrete valve block with solenoid valve/discrete solenoid valve			
		3-port valve		5-port valve					
		MN3GD1	MN3GD2	MN4GD1	MN4GD2	(N)3GD1	(N)3GD2	(N)4GD1	(N)4GD2
Blank	Grommet lead wire (300 mm) (*10)	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg 7) With surge suppressor/lamp (*11)(*13)		●		●		●		●
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor (*11)(*13)		●		●		●		●
E-connector (upward/lateral direction 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 (with socket/terminal) (*12)	●	●	●	●	●	●	●	●
E2	Lead wire (300 mm) with surge suppressor/lamp	●	●	●	●	●	●	●	●
E20	Lead wire (500 mm) with surge suppressor/lamp	●	●	●	●	●	●	●	●
E21	Lead wire (1000mm) 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 (socket/terminal attached) with surge suppressor/lamp	●	●	●	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral direction common)									
E01J	Lead wire (1000 mm) (*12)	●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm) (*12)	●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm) (*12)	●	●	●	●	●	●	●	●
E21J	Lead wire (1000mm) with surge suppressor/lamp	●	●	●	●	●	●	●	●
E22J	Lead wire (2000 mm) with surge suppressor/lamp	●	●	●	●	●	●	●	●
E23J	Lead wire (3000 mm) with surge suppressor/lamp	●	●	●	●	●	●	●	●

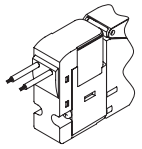
*10: The grommet lead wire specifications are compatible with DC voltage only.
*11: A lamp comes with the terminal box.
*12: AC voltage includes a rectifier circuit.
*13: The terminal box conforms to EN175301-803 Type C (former DIN 43650-C). Refer to "Pneumatic Valves No.CB-023SA" for details.

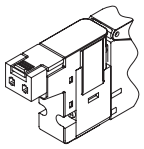
Electrical connections

Discrete valve/individual wiring manifold

Blank Grommet lead wire

● **Lead wire length**
300 mm

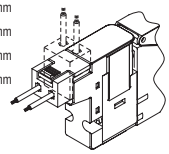


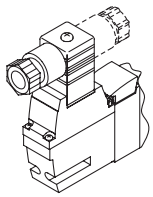


E1 E3 E-connector with socket/terminal

E0 E2 E-connector

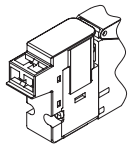
● **Lead wire length**
300 mm
500 mm
1000 mm
2000 mm
3000 mm



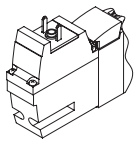


B DIN terminal box

E0N E2N E-connector without socket

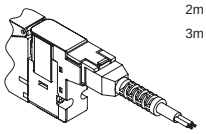


BN DIN terminal box Without terminal box



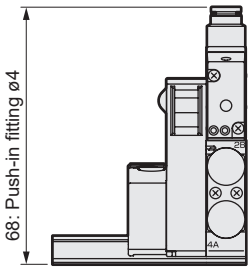
E0*J E2*J EJ type connector

● **Lead wire length**
1m
2m
3m

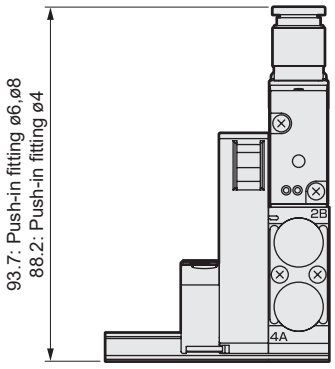


Dimensions

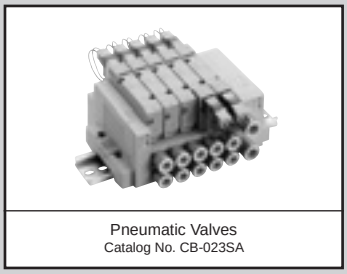
● MN4GD1-P4



● MN4GD2-P4



*Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, "Pneumatic Valves (No.CB-023SA) MN4GD1, 2 Series.



Pneumatic Valves
Catalog No. CB-023SA

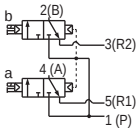
Individual wiring block manifold
Base piping

MN4GE1, 2 Series

● Cylinder bore size: ø20 to ø80

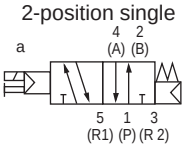
JIS symbol

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

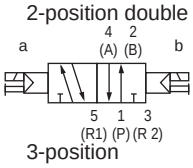


● 5-port valve

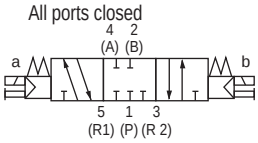
2-position single



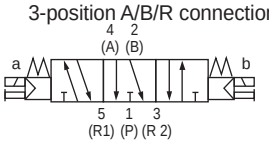
2-position double



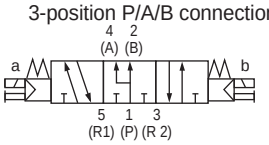
3-position
All ports closed



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
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
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 Turbine oil Class 1 ISOVG32 for lubricationfor vacuum piping.Excessive or intermittent lubrication results in unstable operation.
*2 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.

Electrical specifications

Item	Description			
Rated voltage V	24 DC	12 DC	100 VAC	200 VAC
Voltage fluctuation range	±10%			
Holding currentA (*3)	0.015 (0.017)	0.030 (0.034)	0.009 (0.009)	0.006 (0.006)
Power consumptionW (*3)	0.35 (0.40)		-	
Apparent powerVA (*3) (*4)	-		0.93 (0.98)	1.40
Thermal class	B			
Surge suppressor	Option			
Indicator	Lamp (option)			

*3: Values in ( ) apply when lamp is included.
*4: 200 VAC is the value of DIN terminal box (with lamp).

Individual specifications

Item		MN3GE1/MN4GE1	MN3GE2/MN4GE2
Max. station No.		24 stations	20 stations
Port size	Port A/B	Push-in fitting ø4, ø6	Push-in fitting ø4, ø6, ø8
	P/R Port	Push-in fitting ø6, ø8	Push-in fitting ø8, ø10

• For DIN rail mounting, refer to "Mounting orientation" in "Pneumatic Valves No.CB-023SA".
• For weight, refer to "Pneumatic Valves No.CB-023SA".

Performance/characteristics by model

Item			MN3GE1/MN4GE1		MN3GE2/MN4GE2	
			ON	OFF	ON	OFF
Response time ms	Two 3-port valves integrated		12	15	15	30
	2-position	Single	15	25	20	30
		Double	15	-	20	-
	3-position	A/B/R connection	20	30	25	35

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→R			
			C[dm³/(s·bar)]	b	C[dm³/(s·bar)]		b	
MN3GE1 MN4GE1	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	-
		A/B/R connection	0.96	0.29	1.2	(0.71)	0.11	(0.30)
		P/A/B connection	1.1	0.31	1.0	-	0.15	-
MN3GE2 MN4GE2	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	-
		A/B/R connection	2.2	0.38	2.5	(1.7)	0.18	(0.20)
		P/A/B connection	2.3	0.29	2.3	-	0.15	-

*1: Formula to calculate sonic conductance C from effective cross-sectional area S is S≈5.0xC.
*2: Values in ( ) are with the exhaust check valve.

Ozone-proof specifications ・ Coolant proof specifications

Can be selected with "How to order" Item Ⓔ option "A" on page 334.

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".

MN4GE1, 2 Series

Individual wiring block manifold; Base piping

How to order

Manifold model No.

MN4GE1 1 0 R - C6 - E2 H - 10 - 3 - P4

3-port manifold model No.

MN3GE1 66 0 R - C6 - E2 H - 10 - 3 - P4

Discrete valve block with solenoid valve

N4GE1 1 0 R - C6 - E2 H — 3 - P4

Discrete 3-port valve block with solenoid valve

N3GE1 66 0 R - C6 - E2 H — 3 - P4

Discrete solenoid valve

4GE1 1 9 R - 00 - E2 H — 3 - P4

Discrete 3-port solenoid valve

3GE1 66 9 R - 00 - E2 H — 3 - P4

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

Ⓐ Model No.	Manifold: Two 3-port valves integrated		Manifold: 5-port valve		Discrete valve block with solenoid valve/ Discrete solenoid valve			
	MN3GE1	MN3GE2	MN4GE1	MN4GE2	(N)3GE1	(N)3GE2	(N)4GE1	(N)4GE2
Ⓑ 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 (*5)(*6) — A side valve: Normally Closed, B side valve: Normally Closed	●	●			●	●		
8 Mix manifold (when there are multiple solenoid positions)	●	●	●	●	●	●	●	●
Ⓒ Port size (port A/B)								
Type								
C4 ø4 push-in fitting	●	●	●	●	●	●	●	●
C6 ø6 push-in fitting	●	●	●	●	●	●	●	●
C8 ø8 push-in fitting		●		●		●		●
CX Push-in fitting mix (*7)	●	●	●	●				
Single side plug specs. — 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				●				●
00 Discrete valve for integrated base					●	●	●	●
Ⓓ Electrical connections								
Refer to the following page for electrical connections								
Ⓔ Option								
Blank Manual override of non-locking/locking common	●	●	●	●	●	●	●	●
H With exhaust check valve (*6)	●	●	●	●	●	●	●	●
A Ozone/coolant proof	●	●	●	●	●	●	●	●
F Port A/B filter built in (*7)	●	●	●	●	●	●	●	●
Z1 Air supply spacer (*8)	●	●	●	●				
Z3 Exhaust spacer (*8)	●	●	●	●				
Ⓕ Station No.								
1 1 station	●	●	●	●				
to to								
24 24 stations (Max. station number for MN4GE2 is 20.)								
Ⓖ Voltage								
1 100 VAC (rectifier integrated)	●	●	●	●	●	●	●	●
2 200 VAC (rectifier integrated) (*9)		●		●		●		●
3 24 VDC	●	●	●	●	●	●	●	●
4 12 VDC	●	●	●	●	●	●	●	●

⚠ 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 MN4 GE*80R when using a mixture of 4, 5-port valves. MN3GE*80R when used with a masking plate.

*4 Dimensions are the same as the respective 2-position double solenoid.

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

***6 The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.**

*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 347 to 348 for details.**

*9 DIN terminal box only is supported. Two 3-port valves integrated type is not available.

[Electrical connection list]

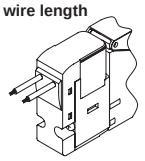
Ⓓ Electrical connections		Ⓐ Model No.							
		Manifold				Discrete valve block with solenoid valve/ Discrete solenoid valve			
		Two 3-port valves integrated		5-port valve					
		MN3GE1	MN3GE2	MN4GE1	MN4GE2	(N)3GE1	(N)3GE2	(N)4GE1	(N)4GE2
Blank	Grommet lead wire (300 mm) (*10)	●	●	●	●	●	●	●	●
B	DIN terminal box (Pg 7) With surge suppressor/lamp (*11)(*13)		●		●		●		●
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor (*11)(*13)		●		●		●		●
E-connector (upward/lateral direction 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) (*12)	●	●	●	●	●	●	●	●
E2	Lead wire (300 mm) with surge suppressor/lamp	●	●	●	●	●	●	●	●
E20	Lead wire (500 mm) with surge suppressor/lamp	●	●	●	●	●	●	●	●
E21	Lead wire (1000mm) 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 (socket/terminal attached) with surge suppressor/lamp	●	●	●	●	●	●	●	●
EJ-connector (socket with cover, upward/lateral direction common)									
E01J	Lead wire (1000 mm) (*12)	●	●	●	●	●	●	●	●
E02J	Lead wire (2000 mm) (*12)	●	●	●	●	●	●	●	●
E03J	Lead wire (3000 mm) (*12)	●	●	●	●	●	●	●	●
E21J	Lead wire (1000mm) 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 conforms to EN175301-803 Type C (former DIN 43650-C). Refer to "Pneumatic Valves No.CB-023SA" for details.

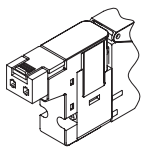
Electrical connections
Discrete valve/individual wiring manifold

Blank Grommet lead wire

● Lead wire length
300 mm

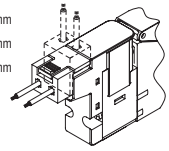


E1 E3 E-connector with socket/terminal

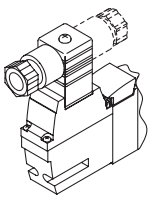


E0 E2 E-connector

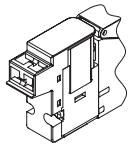
● Lead wire length
300 mm
500 mm
1000 mm
2000 mm
3000 mm



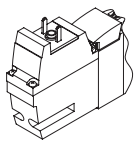
B DIN terminal box



E0N E2N E-connector without socket

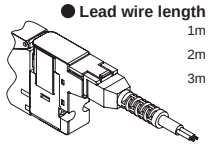


BN DIN terminal box Without terminal box



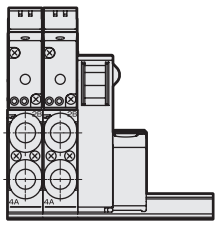
E0*J E2*J EJ type connector

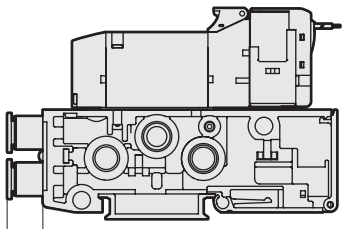
● Lead wire length
1m
2m
3m



Dimensions

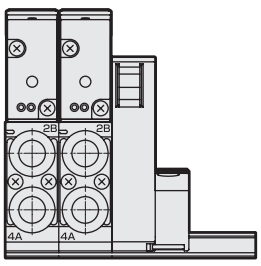
● MN4GE1-P4

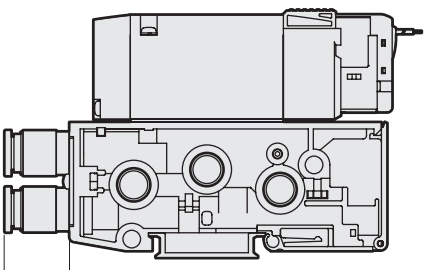




10.7: Push-in fitting ø4,ø6

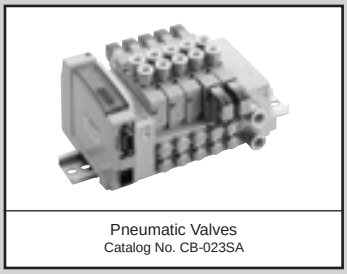
● MN4GE2-P4





19.6: Push-in fitting ø6,ø8
14.1: Push-in fitting ø4

* Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, "Pneumatic Valves (No.CB-023SA) MN4GE1, 2 Series.



Pneumatic Valves
Catalog No. CB-023SA

Reduced wiring block manifold
Body piping

MN4GD1, 2-T* Series

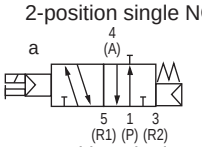
● Cylinder bore size: ø20 to ø80

RoHS CAD

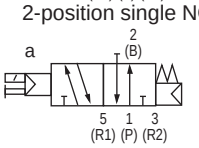
JIS symbol

● 3-port valve

2-position single NC

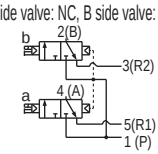


2-position single NO



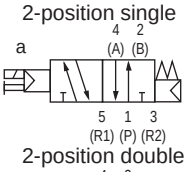
● Two 3-port valves integrated

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

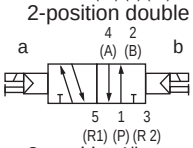


● 5-port valve

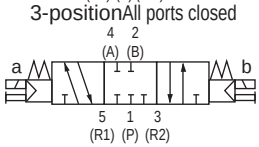
2-position single



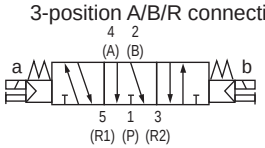
2-position double



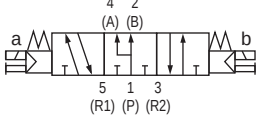
3-positionAll ports closed



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
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
Lubrication (*1)	Not required
Degree of protection (*2)	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		
	T1□, T30□, T5□		T6G1, T7□, T8□
Rated voltage V	24 DC	12 DC	24 DC
Voltage fluctuation range (*3)	±10%		+10%, -5%
Holding current A	0.017	0.034	0.017
Power consumption W	0.4		
Thermal class	B		
Surge suppressor	Zener diode		
Indicator	LED		

*3 : T6G1, T7□, T8□As the voltage drop occurs due to the internal circuit of the (serial transmission), pay attention to the voltage fluctuation range.

*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.

Individual specifications

Item		MN3GD1/MN4GD1									
		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	Port A/B	Push-in fitting ø4 M5									
	P/R Port	Push-in fitting ø6, ø8									

Item		MN3GD2/MN4GD2									
		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	Port A/B	Push-in fitting ø4, ø6, ø8 Rc1/8									
	P/R Port	Push-in fitting ø8, ø10									

• For weight, refer to "Pneumatic Valves No.CB-023SA".

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B→R			
			C[dm³/(s·bar)]	b	C[dm³(s·bar)]		b	
MN3GD1 MN4GD1	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	-
		A/B/R connection	0.92	0.29	1.1	(0.69)	0.13	(0.22)
		P/A/B connection	1.1	0.35	1.1	-	0.17	-
MN3GD2 MN4GD2	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	-
		A/B/R connection	2.0	0.27	2.5	(1.7)	0.18	(0.12)
		P/A/B 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	20-pin flat cable connector without power supply terminal	20-pin flat cable connector without power supply terminal	10-pin flat cable connector without power supply terminal	26-pin flat cable connector without power supply terminal
Connector	—	—	D-sub-connector 25-pin	MIL-C-83503 standard compliant pressure welding 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)
	Communication side	—
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	65 mA 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	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 Also compatible with DeviceNet compliant networks (DLNK, etc.)
*3 The communication power supply (V+, V- on the DeviceNet cable) is insulated from the power supply terminal (unit power supply/valve power supply).

MN4GD1, 2-T* Series

Reduced wiring block manifold; Body piping

How to order

Manifold model No.

MN4GD1 - 1 - 0R - C6 - T30 W H - 10 - 3 - P4

3-port manifold model No.

MN3GD1 - 1 - 0R - C6 - T30 W H - 10 - 3 - P4

Discrete valve block with solenoid valve

N4GD1 - 1 - 0R - C6 - A2N *1 - H - 3 - P4

Discrete 3-port valve block with solenoid valve

N3GD1 - 1 - 0R - C6 - A2N *1 - H - 3 - P4

Discrete solenoid valve

4GD1 - 1 - 9R - C6 - A2N - H - 3 - P4

Discrete 3-port solenoid valve

3GD1 - 1 - 9R - C6 - A2N - H - 3 - P4

B Solenoid position

A Model No.

C Port size (*1)

D Reduced wiring connection

E Terminal/connector pin array method

F Option

G Station No.

H Voltage

*4
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

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

B Solenoid position									
1	2-position single			●	●			●	●
2	2-position double			●	●			●	●
3	3-position all ports closed			●	●			●	●
4	3-position ABR connection			●	●			●	●
5	3-position PAB connection			●	●			●	●
1	2-position single Normally Closed (*2)	●	●			●	●		
11	2-position single Normally Open(*2)	●	●			●	●		
66	Two 3-port valves integrated (*2)(*3)	A side valve:Normally Closed	●	●			●	●	
		B side valve:Normally Closed							
8	Mix manifold (when there are multiple solenoid positions)		●	●	●	●	●	●	●

C Port size(port A/B)		*4							
Type									
C4	ø4 push-in fitting	○	○	○	○	○	○	○	○
C6	ø6 push-in fitting		○		○		○		○
C8	ø8 push-in fitting		○		○		○		○
CX	Push-in fitting mix (*5))	○	○	○	○				
M5	M5	●		●		●		●	
06	Rc1/8		●		●		●		●

D Reduced wiring connection, serial transmission

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

E Terminal/connector pin array									
Blank	Standard wiring	(*6)	●	●	●	●	●	●	●	●
W	Double wiring	(*6)	●	●	●	●	●	●	●	●

F Option									
Blank	Manual override of non-locking/locking common		●	●	●	●	●	●	●	●
H	With exhaust check valve	(*7)	●	●	●	●	●	●	●	●
A	Ozone/coolant proof		●	●	●	●	●	●	●	●
F	Port A/B filter built in	(*8)	●	●	●	●	●	●	●	●
Z1	Air supply spacer	(*9)	●	●	●	●				
Z3	Exhaust spacer	(*9)	●	●	●	●				

G Station No.									
1	1 station								
to	to		●	●	●	●				
24	24 stations (Refer to page 336 for the max. station number per model)								

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

is not available.

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: Select MN4GD*80R when mixing with 4, 5R port valves. MN3GD*80R when used mixed with a masking plate.
*3: Dimensions are the same as the respective 2-position double solenoid.
*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 mounted.
W*...All wired as double solenoid regardless of the type of valve used.
***7: The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.**
*8: A filter is built into port P as standard. Specify the spacer mounting position/quantity in the manifold specifications sheet.
***9: Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 347 to 348 for details.**

			Ⓐ Model No.							
			Manifold				Discrete valve block with solenoid valve/ Discrete solenoid valve			
			3-port valve		5-port valve					
			MN3GD1	MN3GD2	MN4GD1	MN4GD2	(N)3GD1	(N)3GD2	(N)4GD1	(N)4GD2
Ⓓ Reduced wiring (lamp and surge suppressor provided as standard) 12/24 VDC										
T10	Common terminal block (M3 thread)	Left-sided specs.	●	●	●	●				
T10R		Right-sided specs.	●	●	●	●				
T11	Common terminal block (clamping)	Left-sided specs.	●	●	●	●				
T11R		Right-sided specs.	●	●	●	●				
T30	D-sub-connector	Left-sided specs.	●	●	●	●				
T30R		Right-sided specs.	●	●	●	●				
T50	20-pin flat cable connector (with power supply terminal)	Left-sided specs.	●	●	●	●				
T50R		Right-sided specs.	●	●	●	●				
T51	20-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●				
T51R		Right-sided specs.	●	●	●	●				
T52	10-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●				
T52R		Right-sided specs.	●	●	●	●				
T53	26-pin flat cable connector (without power supply terminal)	Left-sided specs.	●	●	●	●				
T53R		Right-sided specs.	●	●	●	●				
Ⓓ 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					●	●	●	●

is not available.

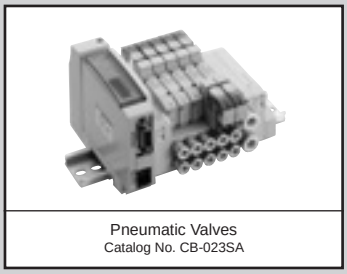
Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓕ option "A" on page 338.

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".



Pneumatic Valves
Catalog No. CB-023SA

Reduced wiring block manifold
Base piping

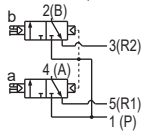
MN4GE1, 2-T* Series

● Cylinder bore size:ø20 to ø80

RoHS CAD

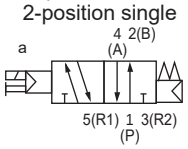
JIS symbol

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

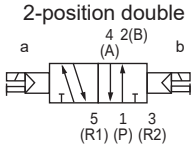


● 5-port valve

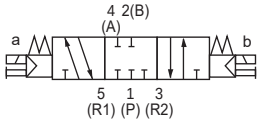
2-position single



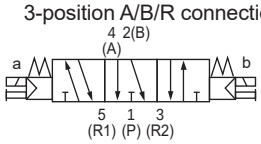
2-position double



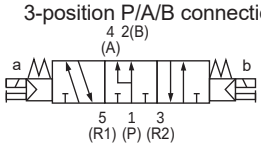
3-position
All ports closed



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
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
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		
	T1□,T30□, T5□		T6G1, T7□, T8□
Rated voltage V	24 DC	12 DC	24 DC
Voltage fluctuation range (*3)	±10%		+10%, -5%
Holding current A	0.017	0.034	0.017
Power consumption W	0.4		
Thermal class	B		
Surge suppressor	Zener diode		
Indicator	LED		

*3 : T6G1, T7□, T8□As the voltage drop occurs due to the internal circuit of the (serial transmission), pay attention to the voltage fluctuation range.

*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.

Individual specifications

Item		MN3GE1/MN4GE1									
		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	Port A/B	Push-in fitting ø4,ø6									
	P/R Port	Push-in fittingø6, ø8									

• For weight, refer to "Pneumatic Valves No.CB-023SA".

Item		MN3GE2/MN4GE2									
		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	Port A/B	Push-in fittingø4, ø6, ø8									
	P/R Port	Push-in fittingø8, ø10									

• For weight, refer to "Pneumatic Valves No.CB-023SA".

Flow characteristics

Model No.	Solenoid position		P → A/B		A/B→R			
			C[dm^3/(s·bar)]	b	C[dm^3/(s·bar)]		b	
MN3GE1 MN4GE1	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	-
		A/B/R connection	0.96	0.29	1.2	(0.71)	0.11	(0.30)
		P/A/B connection	1.1	0.31	1.0	-	0.15	-
MN3GE2 MN4GE2	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	-
		A/B/R connection	2.2	0.38	2.5	(1.7)	0.18	(0.20)
		P/A/B 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.

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 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)
	Communication side	—
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	65 mA or less (all points ON:DC24V) 95 mA or less (all points ON:DC14V)	
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	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%			
Power supply voltage: 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)	
Current consumption: Valve side	T8□1:15mA or less T8□2:20mA or less (When all output points are ON) Load current is not included								15 mA or less (When all output points are ON) Load current is not included					
No. of output points	T8□1: 16 points T8□2: 32 points													
Occupied number	1 station													
Operation display	LED (power supply and communication status)													
Output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output

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

MN4GE1, 2-T* Series

Reduced wiring block manifold; Base piping

How to order

Manifold model No.

MN4GE1 **1** 0R - C6 - T30 **W** **H** - **10** - **3** - P4

3-port manifold model No.

MN3GE1 **66** 0R - C6 - T30 **W** **H** - **10** - **3** - P4

Discrete valve block with solenoid valve

N4GE1 **1** 0R - C6 - A2N *1 **H** — **3** - P4

Discrete 3-port valve block with solenoid valve

N3GE1 **66** 0R - C6 - A2N *1 **H** — **3** - P4

Discrete solenoid valve

4GE1 **1** 9R - **00** - A2N **H** — **3** - P4

Discrete 3-port solenoid valve

3GE1 **66** 9R - **00** - A2N **H** — **3** - P4

B Solenoid position

A Model No.

E Terminal/connector pin array

C Port size (*1) (*2)

D Reduced wiring connection, serial transmission

F Option

G Station No.

H Voltage

A Model No.	Manifold: Two 3-port valves integrated		Manifold: 5-port valve		Discrete valve block with solenoid valve/ discrete solenoid valve			
	MN3GE1	MN3GE2	MN4GE1	MN4GE2	(N)3GE1	(N)3GE2	(N)4GE1	(N)4GE2

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 (*3)(*4)	A side valve: Normally Closed	●	●			●	●	
		B side valve: Normally Closed							
8	Mix manifold (when there are multiple solenoid positions)		●	●	●	●	●	●	●

C Port size(Port A/B)									
Model									
C4	ø4 push-in fitting		●	●	●	●	●	●	●
C6	ø6 push-in fitting		●	●	●	●	●	●	●
C8	ø8 push-in fitting			●		●		●	●
CX	Push-in fitting mix (*5)		●	●	●	●			
General purpose plug specs.	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						●	●	●	●

D Reduced wiring connection, serial transmission

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

E Terminal/connector pin array									
Blank	Standard wiring (*6)		●	●	●	●	●	●	●
W	Double wiring (*6)		●	●	●	●	●	●	●

F Option									
Blank	Manual override of non-locking/locking common		●	●	●	●	●	●	●
H	With exhaust check valve (*7)		●	●	●	●	●	●	●
A	Ozone/coolant proof		●	●	●	●	●	●	●
F	Port A/B filter built in (*8)		●	●	●	●	●	●	●
Z1	Air supply spacer (*9)		●	●	●	●			
Z3	Exhaust spacer (*9)		●	●	●	●			

G Station No.									
1	1 station								
to	to		●	●	●	●			
24	24 stations (Max. station number for MN4GE2 is 20.)								

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

is not available.

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: MN4GE*80R when using a mixture of 4, 5-port valves. MN3GE*80R when used with a masking plate.

*4: Dimensions is the same dimensions as the respective 2-position double solenoid.

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

*6: Blank...The wiring will be based on the type of valve mounted.
W*...All wired as double solenoid regardless of the type of valve used.

***7: The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). Refer to "Pneumatic Valves No.CB-023SA" for details on the exhaust check valve.**

*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. For details, see Pages 347 to 348.**

[Port size/wiring method list]

Ⓐ Model No.			Manifold				Discrete valve block with solenoid valve/ discrete solenoid valve			
			3-port valve Two valves integrated		5-port valve					
			MN3GE1	MN3GE2	MN4GE1	MN4GE2	(N)3GE1	(N)3GE2	(N)4GE1	(N)4GE2
Ⓒ Reduced wiring (lamp and surge suppressor provided as standard) 12/24 VDC										
T10	Common terminal block (M3 thread)	Left-sided specs.	●	●	●	●				
T10R		Right-sided specs.	●	●	●	●				
T11	Common terminal block (clamping)	Left-sided specs.	●	●	●	●				
T11R		Right-sided specs.	●	●	●	●				
T30	D-sub-connector	Left-sided specs.	●	●	●	●				
T30R		Right-sided specs.	●	●	●	●				
T50	20-pin flat cable Connector (with power supply terminal)	Left-sided specs.	●	●	●	●				
T50R		Right-sided specs.	●	●	●	●				
T51	20-pin flat cable Connector (without power supply terminal)	Left-sided specs.	●	●	●	●				
T51R		Right-sided specs.	●	●	●	●				
T52	10-pin flat cable Connector (without power supply terminal)	Left-sided specs.	●	●	●	●				
T52R		Right-sided specs.	●	●	●	●				
T53	26-pin flat cable Connector(without power supply terminal)	Left-sided specs.	●	●	●	●				
T53R		Right-sided specs.	●	●	●	●				
Ⓓ Serial transmission (lamp/surge suppressor provided as standard) 24 VDC										
T6G1	CC-Link	NPN 16 points	●	●	●	●				
T7D1	DeviceNet	NPN 16 points	●	●	●	●				
T7G1	CC-Link	NPN 16 points	●	●	●	●				
T7L1	SAVE NET	NPN 16 points	●	●	●	●				
T7S1	CompoNet	NPN 16 points	●	●	●	●				
T7SP1		PNP 16 points	●	●	●	●				
T8G1	CC-Link	NPN 16 points	●	●	●	●				
T8G2		NPN 32 points	●	●	●	●				
T8GP1		PNP 16 points	●	●	●	●				
T8GP2		PNP 32 points	●	●	●	●				
T8P1	PROFIBUS-DP	NPN 16 points	●	●	●	●				
T8P2		NPN 32 points	●	●	●	●				
T8PP1		PNP 16 points	●	●	●	●				
T8PP2		PNP 32 points	●	●	●	●				
T8EC1	EtherCAT	NPN 16 points	●	●	●	●				
T8EC2		NPN 32 points	●	●	●	●				
T8ECP1		PNP 16 points	●	●	●	●				
T8ECP2		PNP 32 points	●	●	●	●				
T8EN1	EtherNet/IP	NPN 16 points	●	●	●	●				
T8EN2		NPN 32 points	●	●	●	●				
T8ENP1		PNP 16 points	●	●	●	●				
T8ENP2		PNP 32 points	●	●	●	●				
T8D1	DeviceNet	NPN 16 points	●	●	●	●				
T8D2		NPN 32 points	●	●	●	●				
T8DP1		PNP 16 points	●	●	●	●				
T8DP2		PNP 32 points	●	●	●	●				
T8EB1	CC-Link IEF Basic	NPN 16 points	●	●	●	●				
T8EB2		NPN 32 points	●	●	●	●				
T8EBP1		PNP 16 points	●	●	●	●				
T8EBP2		PNP 32 points	●	●	●	●				
T8EP1	PROFINET	NPN 16 points	●	●	●	●				
T8EP2		NPN 32 points	●	●	●	●				
T8EPP1		PNP 16 points	●	●	●	●				
T8EPP2		PNP 32 points	●	●	●	●				
A2N	Without lead wire (without socket)	With surge suppressor and indicator lamp					●	●	●	●

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item Ⓕ option "A" on page 342.

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".

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 330, base piping individual wiring:Page 334, Body piping reduced wiring:Page 338, base piping reduced wiring:Page 342

B. Discrete valve block with masking plate

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

N4GA1 R - MP ——— 3 —— P4

N4GB1 R - MPD - C4 - 3 F - P4

Ⓐ Model No. Ⓑ Type Ⓒ Bore size Ⓔ Option
Ⓓ Cable length *4

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

Ⓒ Bore size (for base piping, this must be configured)	
C4	ø4 push-in fitting
C6	ø6 push-in fitting
C8	ø8 Push-in fitting *1

Single side plug specs	Port A	Port B
C4NC	ø4 push-in fitting	Plug
C6NC	ø6 push-in fitting	
C8NC	ø8 Push-in fitting *1	
C4NO	Plug	ø4 push-in fitting
C6NO		ø6 push-in fitting
C8NO		ø8 Push-in fitting *1

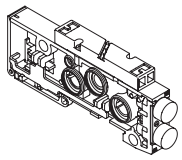
*1 Only 4GE2 is supported.

Ⓓ Cable length *2	
Blank	For individual wiring
2 to 10	Select the length from page 345 .

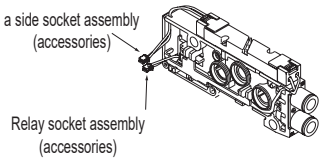
Ⓔ Option	
Blank	No option
F	Port A/B filter built in

*2 A socket assembly is included with purchases for reduced wiring station expansion.Select the cable length from the following page Ⓓ Fill in the cable length field. If ordering with the manifold specifications sheet, the cable length can be omitted.

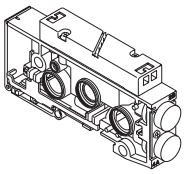
N4GA1R-MP



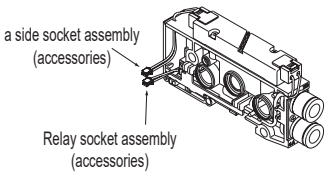
N4GB1R-MPD-C4-3



N4GA2R-MP



N4GB2R-MPD-C6-5

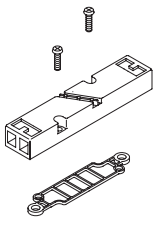


B-1. Masking plate

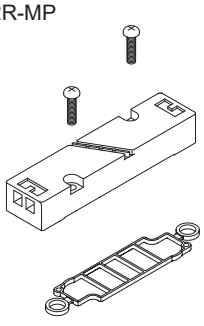
4G1 R - MP

Ⓐ Model No.

4G1R-MP



4G2R-MP



Piping

C. Discrete valve block (separate item only)

Discrete valve block (split resin base).

N4GA1 R - V1 ——— 3 ——— P4

N4GB1 R - V2 - C4 - 3 - F - P4

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

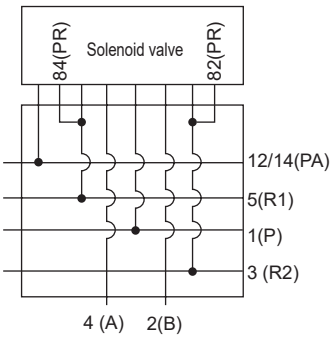
Ⓐ Model No.	Ⓑ Type	
N4GA1	V1	For individual wiring For reduced wiring single
N4GA2		
N4GB1	V2	For reduced wiring double/3-position
N4GB2		

Ⓒ Bore size (for base piping, this must be configured)	
C4	ø4 push-in fitting
C6	ø6 push-in fitting
C8	ø8 Push-in fitting *1

Single side plug specs.	Port A	Port B
C4NC	ø4 push-in fitting	Plug
C6NC	ø6 push-in fitting	
C8NC	ø8 Push-in fitting *1	
C4NO	Plug	ø4 push-in fitting
C6NO		ø6 push-in fitting
C8NO		ø8 Push-in fitting *1

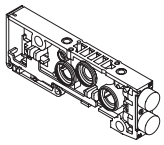
*1 Only 4GE2 is supported.

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

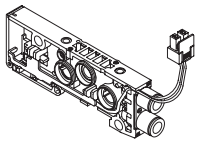


Discrete valve block circuit diagram

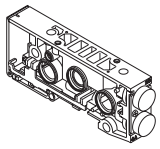
N4GA1R-V1



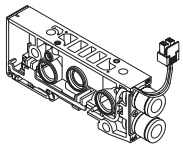
N4GB1R-V2-C4



N4GA2R-V1



N4GB2R-V2-C6



Valve block for expansion Cable length

Calculate the distance W between the expansion position and the wiring block (Fig. 1),<<Select a cable with appropriate 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.

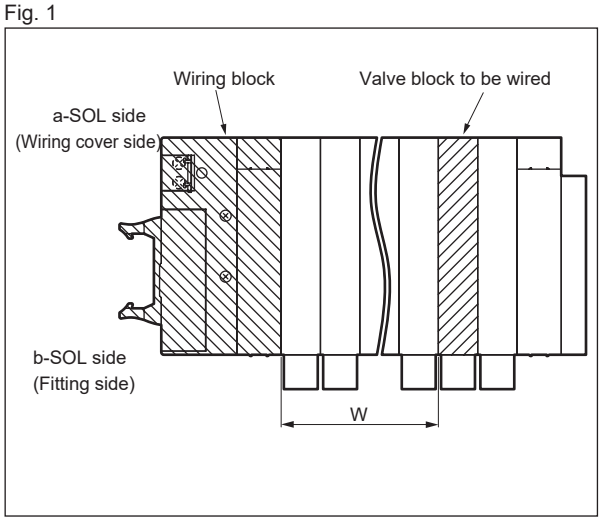
Calculation of W

- 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



Piping

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

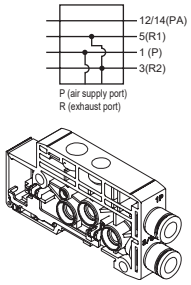
D. Supply and exhaust block

The supply and exhaust block can be installed at any position adjacent to the valve block. As there is no set number of units, install two or more units when 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.

N4G1R - Q - 8 - P4
Model No. Ⓐ Type Ⓑ Bore size

Ⓐ Type		Ⓑ Bore size	
Q	Internal pilot	6	ø6 push-in fitting
		8	ø8 push-in fitting

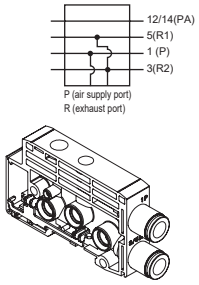
N4G1R-Q-8



N4G2R - Q - 10
Model No. Ⓐ Type Ⓑ Bore size

Ⓐ Type		Ⓑ Bore size	
Q	Internal pilot	8	ø8 push-in fitting
		10	ø10 push-in fitting

N4G2R-Q-10

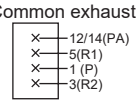


E. End block

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.

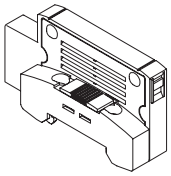
N4G1R - E R
Model No. Ⓐ Installation position

Common exhaust

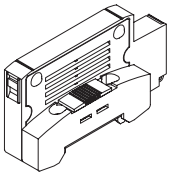


Ⓐ Installation position	
L	For left side
R	For right side

N4G1R-EL

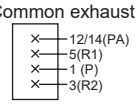


N4G1R-ER



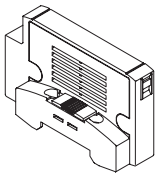
N4G2R - E L
Model No. Ⓐ Installation position

Common exhaust

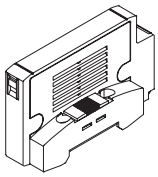


Ⓐ Installation position	
L	For left side
R	For right side

N4G2R-EL



N4G2R-ER



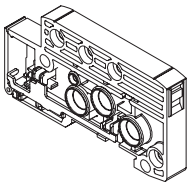
F. Partition block

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

N4G1R - S
Model No. Ⓐ Type

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

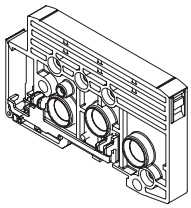
N4G1-S



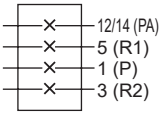
N4G2R - SA
Model No. Ⓐ Type

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

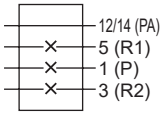
N4G2-S



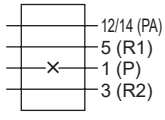
-SA



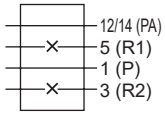
-S



-SP



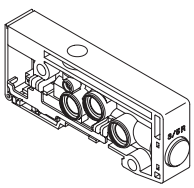
-SE

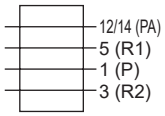


G. Mixed block

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.

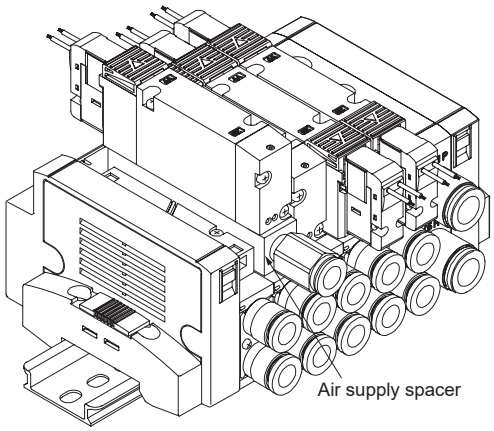
N4G12R - MIX





Related products Air supply spacer

● 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) − P4

Ⓐ Air supply spacer model No.
Ⓑ Port size

Code	Description	Model No. 4GD1	4GE1	4GD2	4GE2
Ⓐ Air supply spacer model No.					
1	For 4G1	●			
2	For 4G2			●	
Ⓑ Port size					
Blank	M5(4G1), Rc1/8(4G2) *1	●		●	
GWS4	ø4 fitting	○			
GWS6	ø6 fitting	○		○	
GWS8	ø8 fitting			○	

*1
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

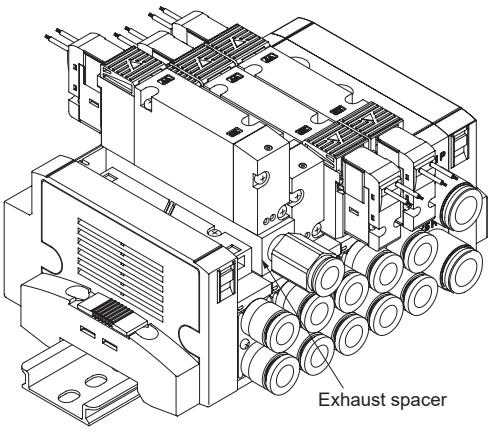
is not available.

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

⚠ Precautions for model selection

*2 Specify the positions and quantity of air supply spacers for manifold in the manifold specifications sheet.
*3 If the port A/B fitting is elbow, turn the air supply port of the air supply spacer toward the reverse side ("a" solenoid side).
*4 If the elbow (upward) port A/B fitting is used for the reduced wiring manifold, the air supply spacer cannot be selected.
*5 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) − P4

Ⓐ Exhaust spacer model No.

Ⓑ Port size

*1
The port size of "●" is a standard product and equivalent to P4 specifications. It is not necessary to add "-P4" to the model No.

Code	Description	Model No. 4GD1	4GE1	4GD2	4GE2
Ⓐ Exhaust spacer model No.					
1	For 4G1	●			
2	For 4G2			●	
Ⓑ Port size					
Blank	M5 thread (4G1), Rc thread (4G2) *1	●		●	
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

*2 Specify the positions and quantity of air supply spacers for manifold in the manifold specifications sheet.
*3 If the port A/B fitting is elbow, turn the air supply port of the air supply spacer toward the reverse side ("a" solenoid side).
*4 If elbow upward port A/B fitting is used for the reduced wiring manifold, the exhaust spacer cannot be selected.
*5 Combination with the masking plate is not supported.

How to fill out block manifold MN4G Series manifold specifications sheet

● Manifold model No. (example)

MN 4 GD1 8 0R- CX - T50 W H - 8 - 3 - P4

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

Refer to "Block configurations" (Pneumatic Valves No.CB-023SA) to select the model No.

Part name	Model No.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Wiring block	N4G1R-T 50	○																														1
With solenoid valve Valve block (344 page)	N4GD1 1 0R- C4		○	○																												2
	N4GD1 2 0R- C6					○																										1
	N4GD1 3 0R- C4				○																											1
	N4GD1 0R-																															
	N4GD1 0R-																															
	N4GD1 0R-																															
	N3GD1 1 0R- C4									○	○	○																				3
	N3GD1 0R-																															
Valve block with masking plate (344 page)	N4GA1R-MP																															
	N4GA1R-MPS																															
	N4GA1R-MPD						○																									1
Supply and exhaust block (346 page)	N4G1R-Q - 8L							○					○																			2
	N4G1R-Q -																															
	N4G1R-Q -																															
Partition block (346 page)	N4G1R-S A								○																							1
	N4G1R-S																															
	N4G1R-S																															
End block (346 page)	N4G1R-E R													○																		1
	N4G1R-E																															

Mounting rail	L_2= (How to calculate length on next page)	Blanking plug		Tag plate (included)		Included parts
		GWP 4-B		A	○	
		Cable with D-sub-connector	4GR-CABLE-D0□-□	Push-in fitting tube remover (standard attachment)	☑Not required (check)	

If the tube remover (standard accessory) is not required, place a check.

* A circuit diagram of the above manifold model No. (example) is provided on the following page. Use for reference.

Preparing manifold specifications sheet

● Complete from the left end, with the piping port facing forward.
(Block components (Pneumatic Valves No.CB-023SA) and layout.)
● Write the total number of blocks specified in the quantity field in the table far right.
● Mark a circle for attachments that are required.
● Indicate the mounting rail length. (Fill in only when a length other than the standard length is required.)
● As there are manifold specifications sheets for each of the various series, fill in the form for the corresponding specifications.

- MN4GD1: Page 352
- MN4GE1: Page 353
- MN4GD2: Page 354
- MN4GE2: Page 355
- MN4GDX1/2 (mix manifold): Page 356
- MN4GEX1/2 (mix manifold): Page 357

MN4GD/4GE Series

Manifold specifications sheet

● Mounting rail model No.: N4GR-BAA Length

Mounting rail length (L2)

①Determine the rail length using the calculation method shown below.
The obtained length is standard.
②For standard length, length (L2) is not required on the specifications sheet.
If you need a length other than the standard length, please enter it.

● How to determine the length of the mounting rail

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

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

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

Rail mounting pitch (L3) = L2 - 12.5

Block length (width) dimensions table (mm)

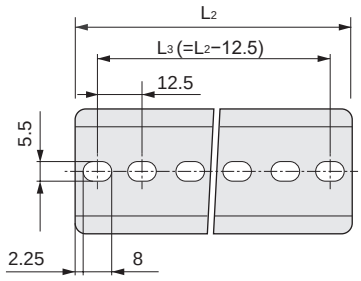
			MN4GD/E1	MN4GD/E2	MN4G1/2MIX	
					MN4GD/E1	MN4GD/E2
A	Valve block		10.5	16	10.5	16
B	Supply and exhaust block		16	18	16	18
C	Partition block		10.5	10.5	10.5	10.5
D	Individual wiring		41.2	46.2	43.7	
	For reduced wiring Wiring block	T10/T11	83.9	86.4	86.4	
		T10R/T11R	83.9	86.4	83.9	
		T30/T5*	69.4	71.9	71.9	
		T30R/T5*R	69.4	71.9	69.4	
		T6G1	143.6	146.1	146.1	
		T7*	64.4	66.9	66.9	
		T8*	64.4	66.9	66.9	
E	Mixed block				16	

* The end block is included in wiring block.

● Mounting rail length quick reference table

L1:Manifold Length	47.5 or less	47.5 Over to 60 or less	60 to 72.5	72.5 to 85	85 to 97.5	97.5 to 110	110 to 122.5	122.5 to 135	135 to 147.5	147.5 to 160	160 to 172.5	172.5 to 185	185 to 197.5	197.5 to 210	210 to 222.5	222.5 to 235	235 to 247.5	247.5 to 260	260 to 272.5	272.5 to 285	285 to 297.5	297.5 to 310	310 to 322.5	322.5 to 335	335 to 347.5	347.5 to 360
L2:Rail Length	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5	400
PitchL3	75	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5

*1: When L1 exceeds this table range, calculate according to "How to calculate mounting rail length".



How to fill out wiring specifications sheet

Not required for standard wiring and double wiring.

● Wiring specifications sheet (Example)

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

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

* When T50/T50R, the COM polarity is+(Positive) be careful.

● Notes on wiring specifications

①Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. Consult with CKD, as products will be custom made in this case.

②The valve No. is determined by counting the valve blocks only in order from the left with the ports facing forward. Note that this differs from the installation position numbers.

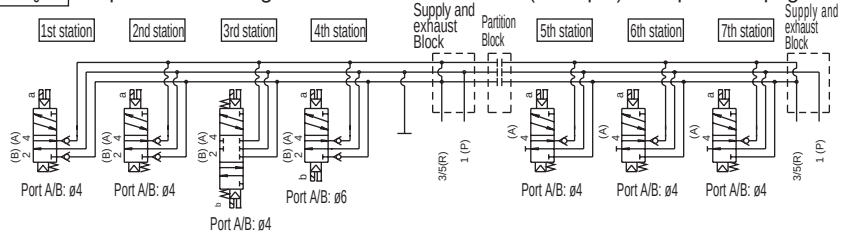
③As the connector pin No. and valve No. differ for each reduced wiring method (T1*/T30/T5*/T6G1/T7*/T8*), fill out the form upon reviewing the precautions for each reduced wiring method ("Pneumatic Valves No.CB-023SA").

④Wiring (socket assembly) is included with valve blocks with masking plates. Both A and B sides for "-MPS" and "-MPD".

⑤Double solenoids or 3-position solenoid valves cannot be assembled to "-MPS". Order valve block with solenoid valve and carry out expansion.

⑥It is not possible to install spare wires for station expansion in advance. Wire the socket assembly of the solenoid valve for station expansion. For the procedure for station expansion, refer to "Pneumatic Valves No.CB-023SA" .

Reference circuit diagram Simplified circuit diagram of manifold model No. (example) from previous page



* The manifold station numbers are set in order from the left with the piping port facing forward.
(Wiring blocks, supply and exhaust blocks, partition block, and end block are not included in the manifold station No.)

* Select a model No. from the page for block configurations (pneumatic valves No.CB-023SA) and specification model No.

* With piping port facing front, arrangement positions are set in order from the left.

MN4GD1 Block manifold specifications sheet

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

Slip No.	Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MN□GD1□□0R-□ - □ □□-□-□-P4

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

Refer to "Block configurations" (Pneumatic Valves No.CB-023SA) to select the model No.

Part name (Page)	Model No.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Wiring block	N4G1R-T□																															
Valve block with solenoid valve (344 page)	N4GD1□0R-□																															
	N4GD1□0R-□																															
	N4GD1□0R-□																															
	N4GD1□0R-□																															
	N4GD1□0R-□																															
	N4GD1□0R-□																															
	N3GD1□0R-□																															
	N3GD1□0R-□																															
Valve block with masking plate (344 page)	N4GA1R-MP																															
	N4GA1R-MPS																															
	N4GA1R-MPD																															
Air supply spacer (Page 347)	4 G1R-P-□																															
	4 G1R-P-□																															
Exhaust spacer (Page 348)	4G1R-R-□																															
	4G2R-R-□																															
Supply and exhaust block (Page 346)	N4G1R-Q□-□																															
	N4G1R-Q□-□																															
	N4G1R-Q□-□																															
Partition block (Page 346)	N4G1R-S□																															
	N4G1R-S□																															
	N4G1R-S□																															
End block (Page 346)	N4G1R-E□																															
	N4G1R-E□																															

Mounting rail	Blanking plug		Tag plate (attachment)		Included parts
L_2= □	GWP 4-B		A		
* Write an integer multiple of 12.5. (How to determine the length page 350)	Cable with D-sub-connector	4GR-CABLE-D0□-□		Push-in fitting tube remover (attached as standard) □Not required (check)	

MN4GE1 Block manifold specifications sheet

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

Slip No.	Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MN□GE1□□0R-□ - □ □ □-□-□-P4

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

Refer to "Block configurations" (Pneumatic Valves No.CB-023SA) to select the model No.

Part name (Page)	Model No.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Wiring block	N4G1R-T□																															
Valve block with solenoid valve (344 page)	N4GE1□0R-□																															
	N4GE1□0R-□																															
	N4GE1□0R-□																															
	N4GE1□0R-□																															
	N4GE1□0R-□																															
	N4GE1□0R-□																															
	N3GE1□0R-□																															
	N3GE1□0R-□																															
Valve block with masking plate (344 page)	N4GB1R-MP-□																															
	N4GB1R-MPS-□																															
	N4GB1R-MPD-□																															
Air supply spacer (347 page)	4 G1R-P-□																															
	4 G1R-P-□																															
Exhaust spacer (Page 348)	4G1R-R-□																															
	4G2R-R-□																															
Supply and exhaust block (346 page)	N4G1R-Q□-□																															
	N4G1R-Q□-□																															
	N4G1R-Q□-□																															
Partition block (346 page)	N4G1R-S□																															
	N4G1R-S□																															
	N4G1R-S□																															
End block (346 page)	N4G1R-E□																															
	N4G1R-E□																															

Mounting rail	Blanking plug				Tag plate (attachment)				Included parts
L_2= □	GWP 4-B		GWP 6-B		B1		B2		
* Write an integer multiple of 12.5. (How to determine the length page 350)	Cable with D-sub-connector		4GR-CABLE-D0□-□			Push-in fitting tube remover (attached as standard) ☐Not required (check)			

MN4GD2 Block manifold specifications sheet

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

Slip No.	Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MN□GD2□□0R-□ - □ □□□-□-□-P4

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

Refer to "Block configurations" (Pneumatic Valves No.CB-023SA) to select the model No.

Part name (Page)	Model No.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Wiring block	N4G2R-T□																															
Valve block with solenoid valve (344 page)	N4GD2□0R-□																															
	N4GD2□0R-□																															
	N4GD2□0R-□																															
	N4GD2□0R-□																															
	N4GD2□0R-□																															
	N4GD2□0R-□																															
	N3GD2□0R-□																															
	N3GD2□0R-□																															
Valve block with masking plate (344 page)	N4GA2R-MP-□																															
	N4GA2R-MPS-□																															
	N4GA2R-MPD-□																															
Air supply spacer (Page 347)	4G2R-P-□																															
	4G2R-P-□																															
Exhaust spacer (Page 348)	4G1R-R-□																															
	4G2R-R-□																															
Supply and exhaust block (Page 346)	N4G2R-Q□-□																															
	N4G2R-Q□-□																															
	N4G2R-Q□-□																															
Partition block (Page 346)	N4G2R-S□																															
	N4G2R-S□																															
	N4G2R-S□																															
End block (Page 346)	N4G2R-E□																															
	N4G2R-E□																															

Mounting rail	Blanking plug						Tag plate (attachment)		Included parts
L_2=□	GWP 4-B	□	GWP 6-B	□	GWP 8-B	□	A	□	
* Write an integer multiple of 12.5. (How to determine the length page 350)	Cable with D-sub-connector		4GR-CABLE-D0□-□						

MN4GE2 Block manifold specifications sheet

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

Slip No.	Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MN□GE2□0R-□ - □ □-□-□-P4

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

Refer to "Block configurations" (Pneumatic Valves No.CB-023SA) to select the model No.

Part name (Page)	Model No.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Wiring block	N4G2R-T□																															
Valve block with solenoid valve (344 page)	N4GE2□0R-□																															
	N4GE2□0R-□																															
	N4GE2□0R-□																															
	N4GE2□0R-□																															
	N4GE2□0R-□																															
	N4GE2□0R-□																															
	N3GE2□0R-□																															
	N3GE2□0R-□																															
Valve block with masking plate (344 page)	N4GB2R-MP-□																															
	N4GB2R-MPS-□																															
	N4GB2R-MPD-□																															
Air supply spacer (Page 347)	4G2R-P-□																															
	4G2R-P-□																															
Exhaust spacer (Page 348)	4G1R-R-□																															
	4G2R-R-□																															
Supply and exhaust block (Page 346)	N4G2R-Q□-□																															
	N4G2R-Q□-□																															
	N4G2R-Q□-□																															
Partition block (Page 346)	N4G2R-S□																															
	N4G2R-S□																															
	N4G2R-S□																															
End block (Page 346)	N4G2R-E□																															
	N4G2R-E□																															

Mounting rail	L_2= □	Blanking plug						Tag plate (attachment)		Included parts
	* Write an integer multiple of 12.5. (How to determine the length page 350)	GWP 4-B		GWP 6-B		GWP 8-B		B		
		Cable with D-sub-connector			4GR-CABLE-D0□-□					

MN4GD1/2 Mix manifold specifications sheet

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

Slip No. | Order No.

Date issued / /

Company

Contact

Order No.

● Manifold model No.

MN□GDX12R-□ - □ □□-□-□-P4

Ⓐ Model No. Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin array (Note: Fill in for reduced wiring.) Ⓕ Option Ⓖ Station No. Ⓗ Voltage

Refer to "Block configurations" (Pneumatic Valves No.CB-023SA) to select the model No.

Part name (Page)	Model No.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
Wiring block	N4G□R-T□																															
Valve block with solenoid valve (344 page)	N4GD□0R-□																															
	N4GD□0R-□																															
	N4GD□0R-□																															
	N4GD□0R-□																															
	N4GD□0R-□																															
	N4GD□0R-□																															
	N3GD□0R-□																															
	N3GD□0R-□																															
Valve block with masking plate (344 page)	N4GA□R-MP																															
	N4GA□R-MPS																															
	N4GA□R-MPD																															
Air supply spacer (Page 347)	4 G1R-P-□																															
	4G2R-P-□																															
Exhaust spacer (Page 348)	4G1R-R-□																															
	4G2R-R-□																															
Mixed block	N4G12R-MIX																															
Supply and exhaust block (Page 346)	N4G□R-Q□-□																															
	N4G□R-Q□-□																															
	N4G□R-Q□-□																															
Partition block (Page 346)	N4G□R-S□																															
	N4G□R-S□																															
	N4G□R-S□																															
End block (Page 346)	N4G□R-E□																															
	N4G□R-E□																															
Mounting rail	L2=□ * Write an integer multiple of 12.5.(How to determine the length Page 350)																															

Blanking plug

GWP□-B		GWP□-B		GWP□-B		GWP□-B	

D Cable with sub-connector	4GR-CABLE-D0□-□		Push-in fitting tube remover (standard attachment) □Not required (check)

Included parts

MN4GE1/2 Mix manifold specifications sheet

Date issued / /

Company

Contact

Order No.

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

Slip No.	Order No.

● Manifold model No.

MN GEX12R- - - - -P4

Ⓐ Model No. Ⓒ Port size Ⓓ Electrical connections (Reduced wiring connection) Ⓔ Terminal/connector pin array (Note: Fill in for reduced wiring.) Ⓕ Option Ⓖ Station No. Ⓗ Voltage

Refer to "Block configurations" (Pneumatic Valves No.CB-023SA) to select the model No.

Part name	Model No.	Layout position																													Quantity
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Wiring block	N4G R-T																															
Valve block with solenoid valve (344 page)	N4GE 0R-																															
	N4GE 0R-																															
	N4GE 0R-																															
	N4GE 0R-																															
	N4GE 0R-																															
	N4GE 0R-																															
	N3GE 0R-																															
	N3GE 0R-																															
Valve block with masking plate (Page 344)	N4GB R-MP-																															
	N4GB R-MPS-																															
	N4GB R-MPD-																															
Air supply spacer (Page 347)	4 G1R-P-																															
	4G2R-P-																															
Exhaust spacer (Page 348)	4G1R-R-																															
	4G2R-R-																															
Mixed block	N4G12R-MIX																															
Supply and exhaust block (Page 346)	N4G R-Q -																															
	N4G R-Q -																															
	N4G R-Q -																															
Partition block (Page 346)	N4G R-S																															
	N4G R-S																															
	N4G R-S																															
End block (Page 346)	N4G R-E																															
	N4G R-E																															

Mounting rail	L₂= * Write an integer multiple of 12.5. (How to determine the length 350 page)	Blanking plug								Included parts
		GWP -B		GWP -B		GWP -B		GWP -B		
		Cable with D-sub-connector	4GR-CABLE-D0□-□		Push-in fitting tube remover (attached as standard) □Not required (check)					

Common terminal block (T10/T11) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

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

D-sub-connector (T30) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

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

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

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

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

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

Serial transmission (T6G1/T7*) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

Serial transmission	Connector pin No.		Valve No.															
	T6G1	**T7***	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Connector type T6G1: CC-Link 16 points	1	1																
	2	2																
	3	3																
	4	4																
	5	5																
	6	6																
	7	7																
	8	8																
	9	9																
	10 COM	10																
	11	11																
	12	12																
Thin slot-insertion type T7D1: DeviceNet 16 points T7G1:CC-Link 16 points T7L1: SAVE NET 16 points T7S1: CompoNet 16 points (NPN) T7SP1: CompoNet 16 points (PNP)	13	13																
	14	14																
	15	15																
	16	16																
	17	17																
	18	18																
	19	19																
	20 COM	20																

Serial transmission (T8*) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
* Not required with standard wiring/double wiring.

Serial transmission			
T8G1	CC-Link	NPN	16 points
T8G2			32 points
T8GP1		PNP	16 points
T8GP2			32 points
T8P1	PROFIBUS-DP	NPN	16 points
T8P2			32 points
T8PP1		PNP	16 points
T8PP2			32 points
T8EC1	EtherCAT	NPN	16 points
T8EC2			32 points
T8ECP1		PNP	16 points
T8ECP2			32 points
T8EN1	EtherNet/IP	NPN	16 points
T8EN2			32 points
T8ENP1		PNP	16 points
T8ENP2			32 points
T8D1	DeviceNet	NPN	16 points
T8D2			32 points
T8DP1		PNP	16 points
T8DP2			32 points
T8EB1	CC-Link IEF Basic	NPN	16 points
T8EB2			32 points
T8EBP1		PNP	16 points
T8EBP2			32 points
T8EP1	PROFINET	NPN	16 points
T8EP2			32 points
T8EPP1		PNP	16 points
T8EPP2			32 points

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