Metalic actuator rung com



Discontinue Discrete valve

Body piping

4GA4 Series

Cylinder bore size: ø100 to ø140



Common specifications

Continion specifications					
Item	Description				
Valve and operation	Pilot operated soft spool valve				
Working fluid	Compressed air				
Max. working pressure MF	0.7				
Min. working pressure MF	0.2				
Proof pressure MP	a 1.05				
Ambient temperature °0	-5 to 55 (no freezing)				
Fluid temperature °C	5 to 55				
Manual override	Non-locking/locking common				
Lubrication (*	Not required				
Degree of protection (*2	2) Dust-proof [IP40 equivalent (DIN terminal box: IP65)]				
Vibration resistance m/s	50 or less				
Shock resistance m/s ²	300 or less				
Atmosphere	Cannot be used in corrosive gas environments				
*4 11 1 1: "1 01	4 100 1/000 (1 1 : /:				

- *1: Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.
- *2: Avoid water drops or oil, etc., during use. IP65 (water jet proof) or equivalent 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

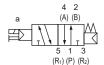
lte	em		Description		
	AC		100 (50/60Hz)		
Rated voltage V	AC		110 (50/60Hz)		
	DC		12, 24		
Voltage fluctuation range			±10%		
	AC	100V	0.056/0.044		
Starting current	AC	110V	0.051/0.040		
Α		12V	-		
	DC	24V	-		
		100V	0.028/0.022		
Holding current	AC	110V	0.025/0.020		
Α	D0	12V	0.079 (0.083)		
	DC	24V	0.040 (0.042)		
Dower	۸,	100V	1.8/1.4		
	AC	110V	(1.8/1.5)		
. W	DC	12V	0.05 (4.0)		
(3)	DC	24V	0.95 (1.0)		
Thermal class			В		
Surge suppresso	r		Option		
Indicator			Lamp (option)		
Power consumption (*3) Thermal class Surge suppresso	DC AC DC	24V 100V 110V 12V	0.040 (0.042) 1.8/1.4 (1.8/1.5) 0.95 (1.0) B Option		

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

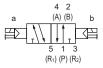
JIS symbol

5-port valve

2-position single

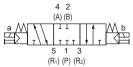


2-position double

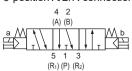


3-position

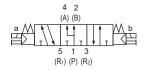
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Individual specifications

	Item	4GA4
Port size	D 44/D	Push-in fitting ø8, ø10, ø12
	Port A/B	Rc3/8, G3/8, NPT3/8
	Port P/R1/R2	Rc1/4, G1/4, NPT1/4

Performance/characteristics by model

	lto m		4G	A4
Item			ON	OFF
Response time	2-position	Single	40 (40)	40 (52)
ms		Double	40 (52)	40 (52)
	3-position	A/B/R connection	60 (72)	60 (72)

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. () shows AC value.

Weight

	5						
			Item		4GA4		
Weight	g		Single	Grommet lead wire	310 (319)		
sition			E-connector	313 (322)			
			DIN terminal box	322 (331)			
	Double		Double	Grommet lead wire	371 (380)		
		2		E-connector	377 (386)		
				DIN terminal box	395 (404)		
Sition All ports closed		All ports	Grommet lead wire	402 (411)			
		closed	E-connector	408 (417)			
		3-posi		DIN terminal box	426 (435)		

⁽⁾ includes the mounting screw and gasket. 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.

4GA4 Series

Discrete valve; Body piping

Flow characteristics

Model No.	Colonaid position		P → A/B		A/B → R1/R2	
		Solenoid position	C[dm³/(s-bar)]	b	C[dm³/(s-bar)]	b
	2-position	on	8.1	0.40	8.0	0.31
4GA4		All ports closed	6.9	0.37	7.5	0.42
4GA4	3-position	A/B/R connection	6.8	0.40	8.7	0.37
		P/A/B connection	8.9	0.37	7.6	0.27

Coolant proof specifications

Can be selected with "How to order" Item © option "A" on page 248.

CE marking specifications

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

4GA4 Series

P4 Series

Pnet

Related

Pneumatic actuator

Vacuum components

Pneumatic auxiliary components

generator

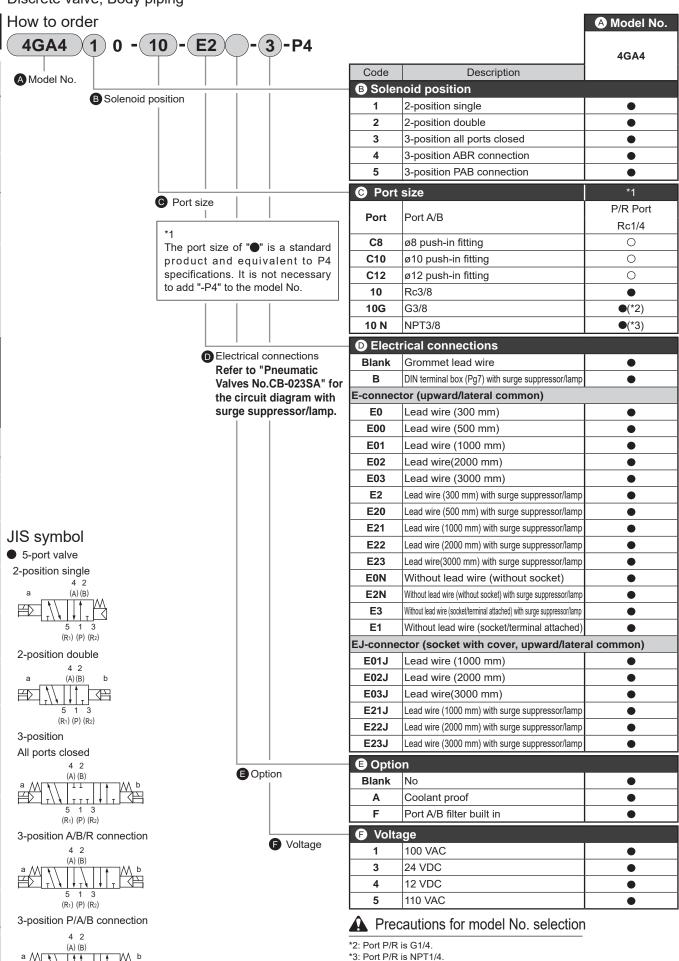
Gas

Electric actuator Fluid control components

Fitting

Auxiliary

Discrete valve; Body piping



CKD

(R₁) (P) (R₂)

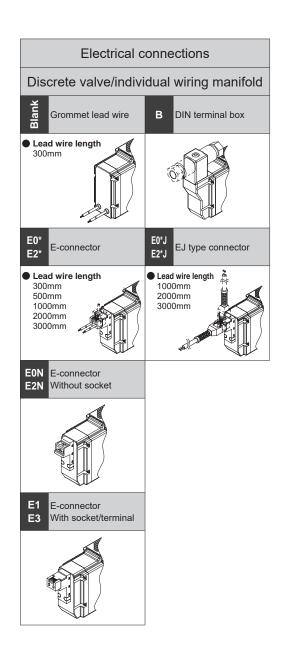
4GA4 Series

Discrete valve; Body piping



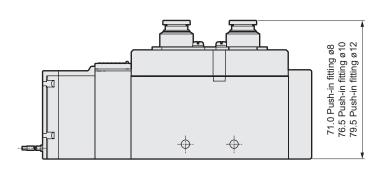
Vacuum components Pneumatic valves

Clean air Speed Fitting Auxiliary Silencer components controller Pneumatic auxiliary components



Dimensions

● 4GA4-P4



* Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, refer to the 4GA4 Series in "Pneumatic Valves (No. CB-023SA)".



Discontinue Discrete valve

Base piping

4GB4 Series

Cylinder bore size:ø125 to ø160









common specifications

Common specifications					
ŀ	tem	Description			
Valve and	operation	Pilot operated soft spool valve			
Working flu	ıid	Compressed air			
Max. workin	g pressure MPa	0.7			
Min. workin	g pressureMPa	0.2 (*3)			
Proof pres	sure MPa	1.05			
Ambient te	mperature °C	-5 to 55 (no freezing)			
Fluid temperature °C		5 to 55			
Manual override		Non-locking/locking common			
Pilot exhaust	Internal pilot	Main valve/pilot valve common exhaust			
method	External pilot	Main valve/pilot valve individual exhaust			
Lubrication	n (*1)	Not required			
Degree of	protection (*2)	Dust-proof [IP40 equivalent (DIN terminal box: IP65)]			
Vibration re	esistance m/s²	50 or less			
Shock resi	stance m/s²	300 or less			
Atmospher	re	Cannot be used in corrosive gas environments			
** ** * * * * * * * * * * * * * * * * *		001/0001 11: // 5 // // //			

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

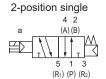
Electrical specifications

lte	em		Description		
	AC		100 (50/60Hz)		
Rated voltage V	AC		110 (50/60Hz)		
	DC		12, 24		
Voltage fluctuation range			±10%		
	AC	100V	0.056/0.044		
Starting current	AC	110V	0.051/0.040		
Α		12V	-		
	DC	24V	-		
	AC	100V	0.028/0.022		
Holding current	AC	110V	0.025/0.020		
Α	D0	12V	0.079 (0.083)		
	DC	24V	0.040 (0.042)		
Power	AC	100V	1.8/1.4		
	AC	110V	(1.8/1.5)		
consumption W	DC	12V	0.05 (4.0)		
(*4)	DC	24V	0.95 (1.0)		
Thermal class			В		
Surge suppresso	r		Option		
Indicator			Lamp (option)		

^{*4:} Values in () apply when lamp is included.

JIS symbol

5-port valve

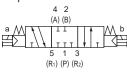




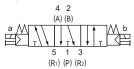


3-position

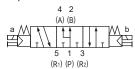
All ports closed



3-position A/B/R connection



3-position P/A/B connection



Individual specifications

	Item	4GB4
Port size	Port A/B	Rc3/8, Rc1/2, G3/8, G1/2, NPT3/8, NPT1/2
	Port P/R1/R2	Rc3/8, Rc1/2, G3/8, G1/2, NPT3/8, NPT1/2

Performance/characteristics by model

	14.	o 100	4GB4			
Item			ON	OFF		
Response	2-position	Single	40 (40)	40 (52)		
time		Double	40 (52)	40 (52)		
ms	3-position	A/B/R connection	60 (72)	60 (72)		

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. () shows AC value.

Weight

0					
			Item		4GB4
Weight	g		Single	Grommet lead wire	563 (256)
Control of the contro		ے		E-connector	566 (259)
			DIN terminal box	575 (268)	
		Double	Grommet lead wire	620 (313)	
	0,			E-connector	626 (319)
				DIN terminal box	644 (337)
1 12		All ports	Grommet lead wire	655 (348)	
		Block	E-connector	661 (354)	
		3-p		DIN terminal box	679 (372)

Values in () do not include the single sub-plate. 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.

4GB4 Series

Discrete valve; Base piping

Flow characteristics

Model No.	Calanaid nasition		P → A/B		A/B → R1/R2	
	*	Solenoid position	C[dm³/(s-bar)]	b	C[dm³/(s·bar)]	b
	2-position		11	0.19	13	0.19
4GB4		All ports closed	9.1	0.11	12	0.27
4664	3-position	A/B/R connection	9.2	0.11	15	0.22
		P/A/B connection	10	0.06	12	0.24

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

Coolant proof specifications

Can be selected with "How to order" Item © option "A" on page 252.

CE marking specifications

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

4GB4 Series

P4 Series

Pnet

Pneumatic actuator

Vacuum components

Pneumatic auxiliary components

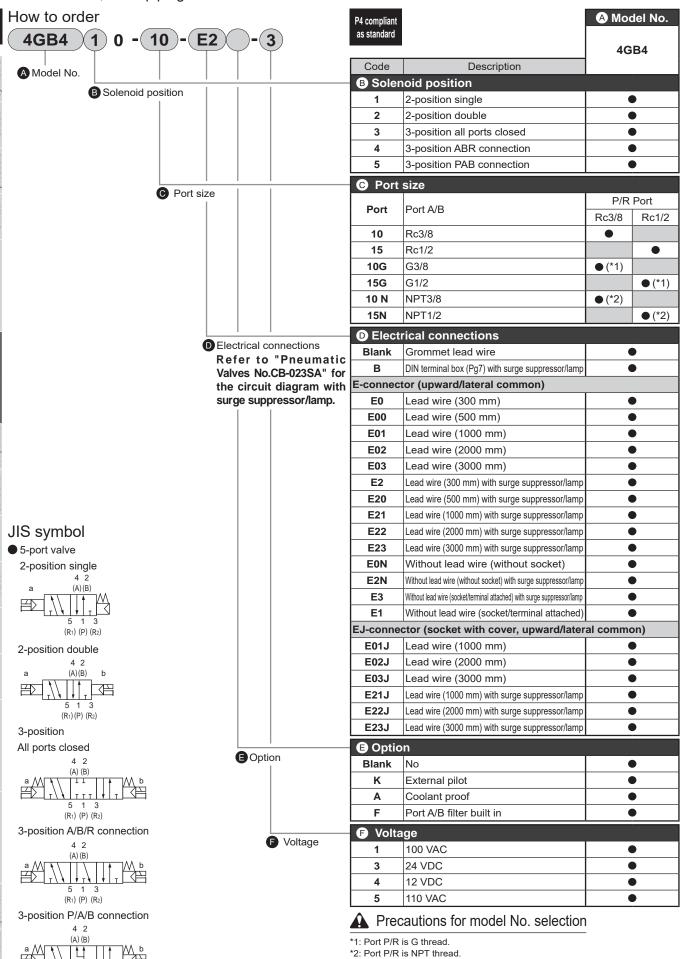
generator

Gas

Electric actuator Fluid control components

Auxiliary Fitting

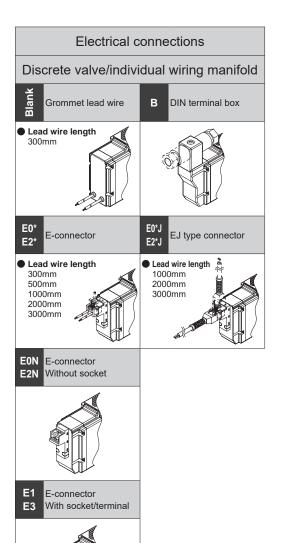
Discrete valve; Base piping



5 1 3 (R₁) (P) (R₂)

Discrete valve; Base piping







Discontinue Individual wiring manifold **Body piping** Direct mount

M4GA4 Series

Cylinder bore size:ø100 to ø140



Manifold common specifications

ivianifold common specifications				
	tem		Description	
Manifold			Integrated base	
Mounting	method		Direct mount	
Air supply an	d exhaust	method	Common supply/common exhaust	
Pilot	Internal	nilet	Main valve/pilot valve common exhaust	
exhaust	Internal	pilot	(Pilot exhaust check valve built-in)	
method	External	pilot	Main valve/pilot valve individual exhaust	
Piping dire	ection		Valve top direction	
Valve and	operatio	n	Pilot operated soft spool valve	
Working fl	uid		Compressed air	
Max. working pressure MPa		re MPa	0.7	
Min. working pressureMPa		reMPa	0.2 (*3)	
Proof pressure MPa		MPa	1.05	
Ambient temperature °C -5 to 55 (no freezing)				
Fluid temperature °C 5 to 55		5 to 55		
Manual override			Non-locking/locking common	
Lubrication (*1) Not required		Not required		
Degree of protection (*2)		on (*2)	Dust-proof [IP40 equivalent (DIN terminal box: IP65)]	
Vibration r	esistanc	e m/s²	50 or less	
Shock res	istance	m/s ²	300 or less	
Atmosphere Cannot b			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 water drops or oil, etc., during use. IP65 (jet-proof) or equivalent applies for D I N terminal box specifications. However, the specified outer diameter of the cord and tightening torque must be used for fixing in place.
- *3: The working pressure range is 0 to 0.7MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Electrical specifications

Liooti iodi o			
lte	em		Description
	AC		100 (50/60Hz)
Rated voltage V	70		110 (50/60Hz)
	DC		12, 24
Voltage fluctuation	n ra	nge	±10%
	AC	100V	0.056/0.044
Starting current	AC	110V	0.051/0.040
Α	DC	12V	-
	DC	24V	-
	AC	100V	0.028/0.022
Holding current A		110V	0.025/0.020
	DC	12V	0.079 (0.083)
	DC	24V	0.040 (0.042)
Power	AC	100V	1.8/1.4
	AC	110V	(1.8/1.5)
consumption W	DC	12V	0.05 (4.0)
(*4)	DC	24V	0.95 (1.0)
Thermal class			В
Surge suppresso	r		Option
Indicator			Lamp (option)

^{*4:} Values in () apply when lamp is included.

JIS symbol Individual specifications

	ltom		M4GA4
Item			Direct mount
Max. station No.	Standard (Inte	ernal pilot)	15 stations
	Supply and exhaust block	specs. and external pilot	12 stations
Port size	Port A/B		Push-in fitting ø8, ø10, ø12
			Rc3/8, G3/8, NPT3/8
Port P/R1/R2			Rc1/2, G1/2, NPT1/2
Manifold base		Standard	150n+199
Weight calculation formula (n: station No.) g		External pilot	379n+617

For 5 or more manifold station No., 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		M40	GA4
	itein		ON	OFF
Response time	2-position	Single	40 (40)	40 (52)
ms		Double	40 (52)	40 (52)
	3-position	A/B/R connection	60 (72)	60 (72)

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. () shows AC value.

5-port valve

2-position single 4 2 (A)(B) (R₁)(P)(R₂)

2-position double

(A) (B) b (R₁)(P)(R₂)

3-position

All ports closed

(R₁)(P)(R₂) 3-position A/B/R connection

(A)(B) 5 1 3 (R₁)(P)(R₂)

3-position P/A/B connection





Individual wiring manifold; Body piping

Flow characteristics

Model No		Colonaid position	$P \rightarrow A/B$		A/B→R1/R2	
Model No. Solenoi		Solenoid position	C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b
	2-position	on	7.3	0.12	9.0	0.17
MACAA		All ports closed	6.4	0.15	8.2	0.22
M4GA4	3-position	A/B/R connection	6.4	0.16	9.3	0.19
		P/A/B connection	8.0	0.08	8.3	0.22

Coolant proof specifications

Can be selected with "How to order" Item © option "A" on page 256.

CE marking specifications

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

Pneumatic actuator

Vacuum components Pneumatic valves

Pneumatic auxiliary components

Clean air Speed Fitting Auxiliary Silencer valve

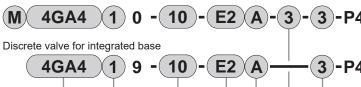


Pneumatic actuator

How to order

Manifold model No.

A Model No.



B Solenoid position

	*"Manifold specifications sheet" (Page		
274).		4GA4	
Code	Description		
B Sole	noid 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	•	
8	Mix manifold (when there are multiple solenoid positions)	•	

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

C Port size

_	Port	t size	*1
	Port	Port A/B	Port P/R1/R2
1	Port	POILA/B	Rc1/2
	C8	ø8 push-in fitting	0
	C10	ø10 push-in fitting	0
	C12	ø12 push-in fitting	0
	СХ	Push-in fitting mix (*2)	0
	10	Rc3/8	•
	10G	G3/8	● (*3)
	10 N	NPT3/8	● (*4)

D Electrical connections

Option

D Electrical connections

Refer to the next page for electrical connections.

⑤ Option			
Blank	No		
K	External pilot	(*5)	
Α	Coolant proof		
F	Port A/B filter integrated (por	rt P: Standard)	
Z 1	Air supply spacer	(*6)(*7)	
Z 3	Exhaust spacer	(*6)(*7)	
Station No.			

Statio	n No.

2 2 stations to	Stati	
to to	2	
	to	•
15 stations (The max. station number per bore size is Page 254.)	15	ation number per bore size is Page 254.)

•

-14		-9-
oltage	1	100 VAC
	3	24 VDC
	4	12 VDC

A	Precautions for model No. selection
*2: Si	ngle valve4(A). 2(B)The push-in fitting cannot be

- mixed with the port. *3: Port P/R is G1/2.
- *4: Port P/R is NPT1/2.
- *5: Consult with CKD when using a vacuum with the external pilot (K).
- *6: Specify the spacer mounting position/ quantity in the manifold specifications
- sheet. Refer to page 270 for details.

 *7: Cannot be selected with discrete valve for integrated base.

_	G Volta	age	
е	1	100 VAC	•
	3	24 VDC	•
	4	12 VDC	•
	5	110 VAC	•

M4GA4 Series

P4 Series

Pneumatic actuator

Vacuum components Pneumatic valves

Pneumatic auxiliary components

Clean air Speed Fitting Auxiliary Silencer valve

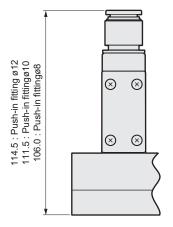
Individual wiring manifold; Body piping

[Electric	cal connections list]	A Model No.
		4GA4
D Elect	trical connections	
Blank	Grommet lead wire (300 mm)	•
В	DIN terminal box (Pg7) With surge suppressor and indicator lamp	•
E-connect	tor (upward/lateral common)	
E0	Lead wire (300 mm)	•
E00	Lead wire (500 mm)	•
E01	Lead wire (1000 mm)	•
E02	Lead wire (2000 mm)	•
E03	Lead wire (3000 mm)	•
E2	Lead wire (300 mm)With surge suppressor and indicator lamp	•
E20	Lead wire (500 mm)With surge suppressor and indicator 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	•
E0N	Without lead wire (without socket)	•
E2N	Without lead wire (without socket)With surge suppressor and indicator lamp	•
E3	Without lead wire (with socket/terminal) with surge suppressor/lamp	•
E1	Without lead wire (socket/terminal attached)	•
EJ-conne	ctor (socket with cover, upward/later	al common)
E01J	Lead wire (1000 mm)	•
E02J	Lead wire (2000 mm)	•
E03J	Lead wire (3000 mm)	•
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	•

Elec	Electrical connections			
Discrete valve	e/individ	lual v	viring manifold	
Grommet lead	d wire	В	DIN terminal box	
● Lead wire length 300mm		Ó		
E0* E2*		E0*J E2*J	EJ type connector	
● Lead wire length 300mm 500mm 1000mm 2000mm 3000mm		1000i 2000i 3000i	mm	
EON E-connector Without socke	et			
E1 E-connector E3 With socket/te	erminal			

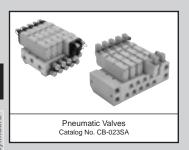
Dimensions

● M4GA4-P4



^{*} Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, refer to the 4GA4 Series in "Pneumatic Valves (No. CB-023SA)".

Gas generator Fluid control components Electric actuator



Discontinue Individual wiring manifold

Base piping Direct mount

M4GB4 Series

Cylinder bore size:ø100 to ø140



Manifold common specifications					
Item			Description		
Manifold			Integrated base		
Mounting r	nethod		Direct mount		
Air supply and	d exhaust	method	Common supply/common exhaust		
Pilot	Internal	oilet	Main valve/pilot valve common exhaust		
exhaust	Internal p	JIIOL	(Pilot exhaust check valve built-in)		
method	External	pilot	Main valve/pilot valve individual exhaust		
Piping dire	ction		Side direction of base		
Valve and	operatio	n	Pilot operated soft spool valve		
Working fluid			Compressed air		
Max. working pressure MPa		re MPa	0.7		
Min. working pressureMPa		reMPa	0.2 (*3)		
Proof pressure MPa		MPa	1.05		
Ambient te	mperatu	ıre °C	-5 to 55 (no freezing)		
Fluid temp	erature	°C	5 to 55		
Manual ov	erride		Non-locking/locking common		
Lubrication	1	(*1)	Not required		
Degree of	protection	on (*2)	Dust-proof [IP40 equivalent (DIN terminal box: IP65)]		
Vibration re	esistanc	e m/s²	50 or less		
Shock resi	stance	m/s ²	300 or less		
Atmospher	е		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) or equivalent applies for DIN terminal box specifications. However, the specified outer diameter of the cord and tightening torque must be used for fixing in place.
- *3: The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Electrical specifications

Licetifical Specifications						
lte	m		Description			
	AC		100 (50/60Hz)			
Rated voltage V	AC		110 (50/60Hz)			
	DC		12, 24			
Voltage fluctuation	n ra	nge	±10%			
		100V	0.056/0.044			
Starting current	AC	110V	0.051/0.040			
Α		12V	-			
	DC	24V	-			
	AC	100V	0.028/0.022			
Holding current		110V	0.025/0.020			
Α	DC	12V	0.079 (0.083)			
		24V	0.040 (0.042)			
Davisa		100V	1.8/1.4			
Power	AC	110V	(1.8/1.5)			
consumption W	DC	12V	0.05 (4.0)			
(*4)	DC	24V	0.95 (1.0)			
Thermal class			В			
Surge suppresso	r		Option			
Indicator			Lamp (option)			
			·			

^{*4:} Values in () apply when lamp is included.

JIS symbol

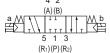
5-port valve



2-position double (A)(B) $(R_1)(P)(R_2)$

3-position

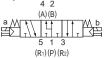
All ports closed



3-position A/B/R connection



3-position P/A/B connection



CKD

Individual specifications

	ltom	M4GB4			
ltem -		Direct mount			
Pi	lot operated	Standard (Internal pilot)		External pilot (*3)	
Ma	x. station No.	15 stations		12 stations	
Port size	Port A/B	Push-in fitting ø8, ø10, ø12		Push-in fitting ø8, ø10, ø12	
		Rc1/4, Rc3/8	Rc1/2, G1/2,	Rc1/4, Rc3/8, Rc1/2	
		G1/4, G3/8	NPT1/2	G1/4, G3/8, G1/2	
		NPT1/4, NPT3/8		NPT1/4, NPT3/8, NPT1/2	
	Port P/R1/R2	Rc3/8, G3/8, NPT3/8 (*1)	Rc1/	2, G1/2, NPT1/2(*2)	
Manifold base Weight calculation formula (n: station No.) q		273n+329	391n+560	392n+555	

Dimensions of port sizes (port P/R1/R2) Rc3/8 and Rc1/2 are different.

- *1: Refer to "Pneumatic Valves No.CB-023SA" for dimensions of port size Rc3/8.
- *2: Refer to "Pneumatic Valves No.CB-023SA" for dimensions of port size Rc1/2.
- *3: Refer to "Pneumatic Valves No.CB-023SA" for dimensions of the external pilot (option code: K).

Individual wiring manifold; Base piping

Performance/characteristics by model

Itam		am.	M40	GB4
ltem			ON	OFF
Response 2	2-position	Single	40 (40)	40 (52)
time		Double	40 (52)	40 (52)
ms	3-position	A/B/R connection	60 (72)	60 (72)

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.() shows AC value.

Flow characteristics

Model	Port size	٠	colonoid position	P →	A/B	A/B→	R1/R2
No.	P, R1, R2		Solenoid position	C[dm³/(s-bar)]	b	C[dm³/(s·bar)]	b
	(*1)Rc3/8	2-position	on	6.4	0.42	6.9	0.12
	G3/8	3-position	All ports closed	6.0	0.37	6.8	0.12
	NPT3/8		A/B/R connection	6.1	0.38	7.1	0.15
M4GB4			P/A/B connection	6.0	0.37	6.8	0.13
W4GD4	(*2)Po1/2	2-position	on	8.3	0.23	9.0	0.21
	(*2)Rc1/2	G1/2	All ports closed	7.4	0.15	8.8	0.19
			A/B/R connection	7.5	0.15	9.5	0.21
	NP11/2		P/A/B connection	7.7	0.21	8.7	0.18

Dimensions of port sizes (port P/R1/R2) Rc3/8 and Rc1/2 are different.

Coolant proof specifications

Can be selected with "How to order" Item (E) option "A" on page 260.

CE marking specifications

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

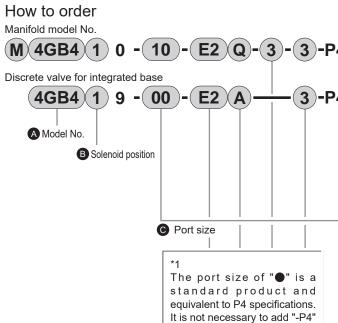
Pneumatic auxiliary components

^{*1:} Refer to "Pneumatic Valves No.CB-023SA" for dimensions of port size Rc3/8.

^{*2:} Refer to "Pneumatic Valves No.CB-023SA" for dimensions of port size Rc1/2.

^{*3:} Effective cross-sectional area S and sonic conductance C are converted as $\stackrel{\bullet}{S} \approx 5.0 \times C$.





to the model No.

*"Manifold specifications sheet" (Page A Model No. **4GB4** Code Description **B** Solenoid position 2-position single 2 2-position double 3 3-position all ports closed 4 3-position ABR connection • 5 3-position PAB connection • Mix manifold (when there are 8 multiple solenoid positions)

-	© Port	size		*1		
			Port P/R1/R2 (*2)			
	Port	Port A/B	Option: Ot	Option: K		
	Port	POLAD	Rc3/8 (Note3)	Rc1/2 (*4)	Rc1/2 (*5)	
	C8	ø8 push-in fitting	0		0	
	C10	ø10 push-in fitting	0		0	
	C12	ø12 push-in fitting	0		0	
	СХ	Push-in fitting mix	0		0	
	08	Rc1/4	•		•	
	10	Rc3/8	•		•	
	15	Rc1/2		•	•	
	08G	G1/4	● (*6)		(*6)	
	10G	G3/8	● (*6)		(*6)	
	15G	G1/2		(*6)	(*6)	
	08 N	NPT1/4	● (*7)		● (*7)	
	10 N	NPT3/8	● (*7)		● (*7)	
	15N	NPT1/2		● (*7)	● (*7)	
_	D Electi	rical connections				

D Electrical connections

Refer to the next page for electrical connections.

Option	on
tion	
differ	

Station No.

Precautions for model No. select *2: Two types of bases are available. Dimensions

- by bore size of port P/R1/R2. *3: Refer to "Pneumatic Valves No.CB-023S"
- for a Dimensions of port size R c3/8. *4: Refer to "Pneumatic Valves No.CB-023SA"
- for a Dimensions of port size R c1/2.
- *5: Refer to "Pneumatic Valves No.CB-023SA" for the Dimensions of the external pilot (option code: K).
- *6: Port P/R is G thread.
- *7: Port P/R is NPT thread.
- *8: Consult with CKD when using a vacuum with the external pilot (K).
- *9: Specify the spacer mounting position/ quantity in the manifold specifications sheet. Refer to page 270 for details.
- *10: Cannot be selected with discrete valve for integrated base.

┨	Option	n			
	Blank	No		•	
	K	External pilot	(*5)(*8)	•	
	Α	Coolant proof		•	
	F	Port A/B filter integrated (port P: Standard)		•	
	Z 1	Air supply spacer	(*9)(*10)	•	
	Z3	Exhaust spacer	(*9)(*10)	•	

_	Static	on No.		
	2	2 stations		
	to	to	•	
	15	Refer to page 258 for the max. station number per bore size.		
	A V-1(-			

A 17.11	6 Voita	ye .	
G Voltage	1	100 VAC	•
	3	24 VDC	•
	4	12 VDC	•
	5	110 VAC	•

indicates not available

Electric actuator Fluid control components Gas generator

M4GB4 Series

P4 Series

Pneumatic actuator

Vacuum components Pneumatic valves

Pneumatic auxiliary components

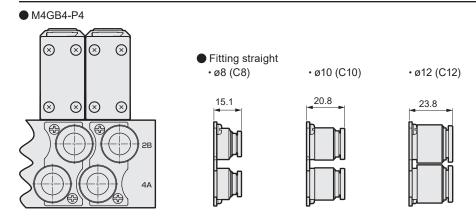
Clean air Speed Fitting Auxiliary Silencer valve

Individual wiring manifold; Base piping

[Electric	A Model No.	
		4GB4
Elect	rical connections	
Blank	Grommet lead wire (300 mm)	•
В	DIN terminal box (Pg7) With surge suppressor and indicator lamp	•
E-connec	tor (upward/lateral common)	
E0	Lead wire (300 mm)	•
E00	Lead wire (500 mm)	•
E01	Lead wire (1000 mm)	•
E02	Lead wire (2000 mm)	•
E03	Lead wire (3000 mm)	•
E2	Lead wire (300 mm)With surge suppressor 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	•
E0N	Without lead wire (without socket)	•
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	•
E1	Without lead wire (socket/terminal attached)	•
EJ-conne	ctor (socket with cover, upward/later	al common)
E01J	Lead wire (1000 mm)	•
E02J	Lead wire (2000 mm)	•
E03J	Lead wire (3000 mm)	•
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	•

Electrical c	onnections						
Discrete valve/individual wiring manifold							
Grommet lead wire	B DIN terminal box						
• Lead wire length 300mm							
E-connector	E0*J E2*J EJ type connector						
Lead wire length 300mm 500mm 1000mm 2000mm 3000mm	• Lead wire length 1000mm 2000mm 3000mm						
EON E-connector E2N Without socket							
E1 E-connector With socket/terminal							

Dimensions



^{*} Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, refer to the M4GB4 Series in "Pneumatic Valves (No. CB-023SA)".

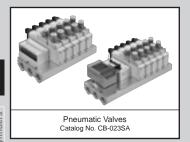
Gas generator Fluid control components Electric actuator

JIS symbol 5-port valve 2-position single 4 2 (A) (B)

 $(R_1)(P)(R_2)$

2-position double (A) (B) $(R_1)(P)(R_2)$ 3-position All ports closed (A) (B)

Electric actuator Fluid control components Gas generator



iscontinue

Reduced wiring manifold (common terminal block/D-sub-connector/flat cable connector/serial transmission) **Body piping** Direct mount

M4GA4-T* Series

Cylinder bore size:ø100 to ø140



Manifold common specifications

Marillold Corrillori Specifications					
Item			Description		
Manifold			Reduced wiring integrated base		
Mounting r	method		Direct mount		
Air supply an	d exhaust	method	Common supply/common exhaust		
Pilot	Internal p	oilot	Main valve/pilot valve common exhaust		
exhaust	IIII.emai p	JIIOL	(Pilot exhaust check valve built-in)		
method	External	pilot	Main valve/pilot valve individual exhaust		
Piping dire	ection		Valve top direction		
Valve and	operatio	n	Pilot operated soft spool valve		
Working flu	uid		Compressed air		
Max. workir	ıg pressui	re MPa	0.7		
Min. workin	g pressu	reMPa	0.2 (*3)		
Proof pressure MPa		MPa	1.05		
Ambient temperature °C		ıre °C	-5 to 55 (no freezing)		
Fluid temp	erature	°C	5 to 55		
Manual ov	erride		Non-locking/locking common		
Lubrication	า	(*1)	Not required		
Degree of protection (*2)		on (*2)	Dust-proof (IP40 equivalent)		
Vibration r	esistanc	e m/s²	50 or less		
Shock resi	stance	m/s²	300 or less		
Atmosphe	re		Cannot be used in corrosive gas environments		

Electrical specifications

lte	em	Description	
Rated voltage V	DC	12, 24	
Voltage fluctuation	n range	±10%	
Holding current	12 VDC	0.083	
A	24 VDC	0.042	
Power consumption W	12 VDC	1.0	
VV	24 VDC	1.0	
Thermal class		В	
Surge suppressor		Varistor	
Indicator		LED	

- *1: Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.
- *2: Avoid water drops or oil, etc., during use.
- *3: The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Individual specifications

T1□, T30□, T5□

ltom			M4GA4		
	ltem		Direct mount		
Max. station	Max. station No.		11 stations		
Port size	Port size Port A/B Port P/R1/R2		Push-in fitting ø8, ø10, ø12		
					Rc3/8, G3/8, NPT3/8
			Rc1/2, G1/2, NPT1/2		
Manifold base		Standard	150n+530		
Weight calculation formula (n: station No.) g Extern		External pilot	379n+1122		

T6G1

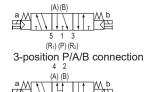
	ltem		M4GA4		
	пеш		Direct mount		
Max. station No.			8 stations		
Port size	Port size Port A/B Port P/R1/R2		Push-in fitting ø8, ø10, ø12		
			Rc3/8, G3/8, NPT3/8		
			Rc1/2, G1/2, NPT1/2		
Manifold base		Standard	150n+1016		
Weight calculation	Weight calculation formula (n: station No.) g		379n+2391		

For 5 or more manifold station No., use ports on both sides for air supply and exhaust. The manifold base weight is the value for screw specifications. 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.

Performance/characteristics by model

Item			M4GA4		
			ON	OFF	
Response time	2-position	Single	40 (40)	40 (52)	
ms		Double	40 (52)	40 (52)	
	3-position	A/B/R connection	60 (72)	60 (72)	

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. () shows AC value.



3-position A/B/R connection

TII

(R₁)(P)(R₂)

Reduced wiring manifolds; Body piping

Flow characteristics

Model No	Solenoid position		$ extsf{P} ightarrow$	A/B	A/B→R1/R2	
Model No.			C[dm³/(s-bar)]	b	C[dm³/(s-bar)]	b
2-positi		on	7.3	0.12	9.0	0.17
M4GA4		All ports closed	6.4	0.15	8.2	0.22
M4GA4	3-position	A/B/R connection	6.4	0.16	9.3	0.19
		P/A/B connection	8.0	0.08	8.3	0.22

Wiring specifications

willing specified							
Descriptions	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	M3 thread tightening	Clamping	D-sub-connectors 25	MIL-C-83503 standard compliant		MIL-C-83503 standard compliant	MIL-C-83503 standard compliant
block specifications	Terminal count 18	Terminal count 26	terminals	Pressure welding socket 20-pin	Pressure welding socket 20-pin	Pressure welding socket 10-pin	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		R	efer to "Pneumat	ic Valves No.CB-	023SA" for detail	s.	
	Left side: T			Right	side: T⊟R		
	а	solenoid side			a solenoid side		
Wiring block position Blank: Left side R: Right side	b	solenoid side ng block Ist station 2nd station	3xd station] [b solenoid side St station 2rd station 3rd station	6th station Wiring bil	O
Array method Blank: Standard sequential W: Double wiring	(Example) For Manifold specific Manifold specific Day S D S D S D S D S D S D S D S D S D S	Standard Connect Valve sol	·	2 3 4 5 6 a 2b 3a 4a 4b	Double wiring: W Connector pin No Valve solenoid No.	o. 1 2 3 4 1a Blank 2a 2b	

Serial transmission slave unit specifications

Descr	iptions	T6G1
Network nar	me	CC-Link ver. 1.10
Power	Unit side	24 VDC ±10%
supply	Valve side	24 VDC +10%, -5%
voltage	Communication side	-
Current	Unit side	100 mA or less (when all output points are ON)
	Valve side	15 mA or less (when all output points are OFF)
consumption	Communication side	-
No. of outpu	ıt points	16 points
Occupied no	umber	1 station
Operation display		LED (power supply and communication status)

Coolant proof specifications

Can be selected with "How to order" Item F option "A" on page 264.

CE marking specifications

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

Vacuum components Pneumatic valves

Pneumatic auxiliary components

r Speed Fitting Auxiliary Silencer

valve valve

275 to 277).

B Solenoid position

2-position single

2-position double

solenoid positions)

ø8 push-in fitting

ø10 push-in fitting

ø12 push-in fitting

Push-in fitting mix

3-position all ports closed

3-position ABR connection

3-position PAB connection

Code

2

3

4

Port

C8

C10

C12

CX

10

10G

10 N

© Port size

Port A/B

Rc3/8

G3/8

NPT3/8

P4

Pneumatic actuator

/acuum components

Pneumatic auxiliary components

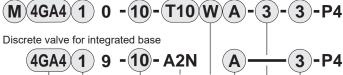
generator

Electric actuator Fluid control components Gas

Related

How to order

Manifold model No.



A Model No.

B Solenoid position

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

Port size

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 Reduced wiring connection

- ●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.

			, ,
Redu	ced wiring (lamp and surge suppress	sor provided	as standard) 12/24 VDC
T10	Common terminal block (M3	Left-sided specs.	•
T10R	thread)	Right-sided specs.	•
T11	Common terminal block	Left-sided specs.	•
T11R	(clamping)	Right-sided specs.	•
T30	D and a second of	Left-sided specs.	•
T30R	D-sub-connector	Right-sided specs.	•
T50	20-pin flat cable connector	Left-sided specs.	•
T50R	(with power supply terminal)	Right-sided specs.	•
T51	20-pin flat cable connector	Left-sided specs.	•
T51R	(without power supply terminal)	Right-sided specs.	•
T52	10-pin flat cable connector	Left-sided specs.	•
T52R	(without power supply terminal)	Right-sided specs.	•
T53	26-pin flat cable connector	Left-sided specs.	•
T53R	(without power supply terminal)	Right-sided specs.	•
Seria	I transmission (lamn/surge sunnres	ssor provide	ed as standard) 24 VDC

*"Manifold specifications sheet" (Pages A Model No.

Description

Mix manifold (when there are multiple

4GA4

Port P/R1/R2

Rc1/2

0

0

0

0

• (*3)

• (*4)

(*2)

smission (lamp/surge suppressor provid T6G1 CC-Link 16 points •

> (*5)(*5)(*6)

> (*7)(*8)

(*9)(*10)

(*9)(*10)

■ Terminal/connector pin array

Blank Standard wiring

Double wiring

Terminal connector pin array method Precautions for model No. selection

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

- *3: Port P/R is G1/2.
- *4: Port P/R is NPT1/2.
- *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: When changing from a single valve for W wiring specifications to a double or 3-position valve, the A type connector socket assembly needs to be purchased separately.
- *7: Consult with CKD when using a vacuum with the external pilot (K).
- *8: Refer to "Pneumatic Valves No.CB-023SA" for the Dimensions of the external pilot (K).
- *9: Specify the spacer mounting position/ quantity in the manifold specifications sheet. Refer to page 270 for details.

*10: Cannot be selected with discrete valve for integrated base.

'	- 1
Option	

No Blank K External pilot Α Coolant proof F Port A/B filter integrated (port P: Standard) **Z**1 Air supply spacer **Z**3 Exhaust spacer

Option

G Station No.				
2	2 stations			
to	to			
11	11 stations (Refer to page 262 for the max. station number per model)			

Voltage

G Station No.

(1)	/oltage	
3	24 VDC	•
4	12 VDC	•

MEMO

P4 Series

Pneumatic actuator

Vacuum components Pneumatic valves

Pneumatic auxiliary components

Clean air Speed components controller Fitting Auxiliary Silencer

Gas generator Fluid control components Electric actuator

Motor Motor Specification specifications

JIS symbol 5-port valve

> 2-position single (A) (B)

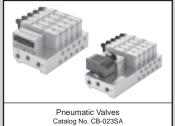
(R₁) (P) (R₂) 2-position double

> (A) (B) b

(R₁) (P) (R₂) 3-position All ports closed

(R₁)(P)(R₂)

3-position A/B/R connection (A) (B)



iscontinue

Reduced wiring manifold (common terminal block/D-sub-connector/ flat cable connector/Serial transmission)

Base piping Direct mount

M4GB4-T* Series

Cylinder bore size:ø100 to ø140



Manifold common specifications

Marillold Corninlori Specifications						
Item		Description				
Manifold		Reduced wiring integrated base				
Mounting meth	od	Direct mount				
Air supply and exha	aust method	Common supply/common exhaust				
Pilot exhaust Inter	nal pilot	Main valve/pilot valve common exhaust				
IIII	nai piiot	(Pilot exhaust check valve built-in)				
method Exte	rnal pilot	Main valve/pilot valve individual exhaust				
Piping direction		Side direction of base				
Valve and oper	ation	Pilot operated soft spool valve				
Working fluid		Compressed air				
Max. working pre	ssure MPa	0.7				
Min. working pre	ssureMPa	0.2 (*3)				
Proof pressure	MPa	1.05				
Ambient tempe	rature °C	-5 to 55 (no freezing)				
Fluid temperatu	ıre °C	5 to 55				
Manual overrid	е	Non-locking/locking common				
Lubrication	(*1)	Not required				
Degree of prote	ection (*2)	Dust-proof (IP40 equivalent)				
Vibration resist		50 or less				
Shock resistan	ce m/s²	300 or less				
Atmosphere		Cannot be used in corrosive gas environments				

Electrical specifications

12, 24
12, 24
±10%
0.083
0.042
C 1.0
1.0
В
Varistor
LED
(

- *1: Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or intermittent lubrication results in unstable operation.
- *2: Avoid water drops or oil, etc., during use.
- *3: The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

Individual specifications

T1□, T30□, T5□

	Item	M4GB4					
	Item	Direct mount					
Pi	lot operated	Standard (Ir	nternal pilot)	External pilot (*3)			
Ma	x. station No.		11 stations				
Port size	Port A/B	Push-in fitting ø8, ø10, ø12 Rc1/4, Rc3/8 G1/4, G3/8 NPT1/4, NPT3/8	Rc1/2, G1/2, NPT1/2	Push-in fitting ø8, ø10, ø12 Rc1/4, Rc3/8, Rc1/2 G1/4, G3/8, G1/2 NPT1/4, NPT3/8, NPT1/2			
Port P/R1/R2		Rc3/8, G3/8, NPT3/8 (*1)	Rc1/2, G1/	2, NPT1/2 (*2)			
Manifold b Weight calcula	ase tion formula (n: station No.)g	292n+907	391n+1119	392n+1060			

T6G1

ltem		M4GB4					
	item	Direct mount					
Pi	lot operated	Standard (Ir	nternal pilot)	External pilot (*3)			
Ma	x. station No.		8 stations				
Port size	Port A/B	Push-in fitting ø8, ø10, ø12 Rc1/4, Rc3/8 G1/4, G3/8 NPT1/4, NPT3/8	Rc1/2, G1/2, NPT1/2	Push-in fitting ø8, ø10, ø12 Rc1/4, Rc3/8, Rc1/2 G1/4, G3/8, G1/2 NPT1/4, NPT3/8, NPT1/2			
	Port P/R1/R2	Rc3/8, G3/8, NPT3/8 (*1)	Rc1/2, G1/2, NPT1/2 (*2)				
Manifold b Weight calculati	ase on formula (n: station No.) g	292n+1864	391n+2432	392n+2329			

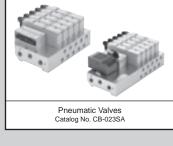
For 5 or more manifold station No., use ports on both sides for air supply and exhaust. The manifold base weight is the value for screw specifications. Note that the maximum number of stations in the manifold is also limited by the maximum number of solenoid points per wiring specification as shown on the right. Dimensions of port sizes (port P/R1/R2) Rc3/8 and Rc1/2 are different.

- *1: Refer to "Pneumatic Valves No.CB-023SA" for dimensions of port size Rc3/8.
- *2: Refer to "Pneumatic Valves No.CB-023SA" for dimensions of port size Rc1/2.
 *3: Refer to "Pneumatic Valves No.CB-023SA" for dimensions of the external pilot (option code: K).

Performance/characteristics by model

	14.	em	M4GB4			
			ON	OFF		
Response time	2-position	Single	40 (40)	40 (52)		
		Double	40 (52)	40 (52)		
ms	3-position	A/B/R connection	60 (72)	60 (72)		

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.() shows AC value.



(R₁) (P) (R₂) 3-position P/A/B connection (A)(B) (R₁) (P) (R₂) CKD

Reduced wiring manifolds; Base piping

Flow characteristics

Model	Port size	Port size P → A/B Solenoid position		A/B→R1/R2			
No.	P, R1, R2		olenola position	C[dm³/(s-bar)]	b	C[dm³/(s-bar)]	b
	(*1) Rc3/8	2-position	on	6.4	0.42	6.9	0.12
	G3/8		All ports closed	6.0	0.37	6.8	0.12
	NPT3/8	3-position	A/B/R connection	6.1	0.38	7.1	0.15
M4GB4	NF13/0	2	P/A/B connection	6.0	0.37	6.8	0.13
	(*2) Rc1/2	2-position	on	8.3	0.23	9.0	0.21
	G1/2		All ports closed	7.4	0.15	8.8	0.19
	NPT1/2	3-position	A/B/R connection	7.5	0.15	9.5	0.21
	INPTI/2		P/A/B connection	7.7	0.21	8.7	0.18

Dimensions of port sizes (port P/R1/R2) Rc3/8 and Rc1/2 are different.

- *1: Refer to "Pneumatic Valves No.CB-023SA" for dimensions of port size Rc3/8.
- *2: Refer to "Pneumatic Valves No.CB-023SA" for dimensions of port size Rc1/2. *3: Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

Wiring specifications

Descriptions	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	_		T53⊡ able 26	6-pin
Connector and terminal	M3 thread tightening	Clamping	D-sub-connectors	MIL-C-83503 standard compliant	MIL-C-83503 standard compliant	MIL-C-83503 standa	rd compliant	MIL-C-83	503 standard c	ompliant
block specifications	Terminal count 18	Terminal count 26	25 terminals	Pressure welding socket 20-pin	Pressure welding socket 20-pin	Pressure welding so	cket 10-pin	Pressure	welding socke	et 26-pin
Max. number of solenoids	16 points	24 points	24 points	16 points	18 points	8 poin	ts	2	4 points	s
Manifold internal wiring		R	efer to "Pneumat	tic Valves No.CB-	023SA" for detail	S.				
Wiring block position Blank: Left side R: Right side	Right side: T R a solenoid side Right side: T R a solenoid side Right side: T R a solenoid side Right				Wiring block					
Array method Blank: Standard	(Example) For Manifold specific 1a 2a 3a 4a	cations Standar	d wiring (sequential	I): Blank	Double wiring: W		3 4	. 5	6 7	8
sequential)	· ·	2a 2b 3a 4a 4b	Valve solenoid No.				Blank 4a	-
W: Double wiring	2b 4k 1st station 3rd station 2nd station 4th s	_	1 10/15	1 1 1 1 1] [1 1-	1	1 1 1 1 1 1 1	

Serial transmission slave unit specifications

Item		T6G1	
Network na	me	CC-Link ver. 1.10	
Power	Unit side	24 VDC ±10%	
supply	Valve side	24 VDC +10%, -5%	
voltage Communication side		-	
0	Unit side	100 mA or less (when all output points are ON)	
Current	Valve side	15 mA or less (when all output points are OFF)	
consumption	Communication side	-	
No. of outp	ut points	16 points	
Occupied n	umber	1 station	
Operation of	display	LED (power supply and communication status)	

Coolant proof specifications

Can be selected with "How to order" Item (F) option "A" on page 268.

CE marking specifications

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

Pneumatic actuator

vacuum components Pneumatic valves

Pneumatic auxiliary components

r Speed Fitting Auxiliary Silencer valve

Gas generator Fluid control components Electric actuato



Vacuum components

Pneumatic auxiliary components Speed

Electric actuator Fluid control components Gas generator

Reduced wiring manifolds; Base piping How to order Manifold model No. Discrete valve for integrated base (4GB4)(1) 9 -(00)- A2N A2N indicates the A-connector (downward), A Model No. Woltage with lamp/surge suppressor and no lead wire. B Solenoid position Port size

> 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 Reduced wiring connection

array method

Option

G Station No.

- 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 with D-sub-connector.

Precautions for model No. selection

- *2: Two types of bases are available. Dimensions differ by bore size of port P/R1/R2.
- *3: Refer to "Pneumatic Valves No.CB-023SA" for a Dimensions of port size R c3/8.
- *4: Refer to "Pneumatic Valves No.CB-023SA" for a Dimensions of port size R c1/2.
- *5: Refer to "Pneumatic Valves No.CB- Terminal/Connector pin 023SA" for the Dimensions of the external pilot (K).
- *6: Port P/R is G thread.
- *7: Port P/R is NPT thread.
- *8: 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.
- *9: When changing from a single valve for W wiring specifications to a double or 3-position valve, the A type connector socket assembly needs to be purchased separately.
- *10: Consult with CKD when using a vacuum with the external pilot (K).
- *11: Specify the spacer mounting position/quantity in the manifold specifications sheet. Refer to page 270 for details.
- *12: Cannot be selected with discrete valve for integrated base.

	*"Manifol 275 to 27	A Model No.	
4	Code	Description	4GB4
•	B Soler	noid position	
	1	2-position single	•
4	2	2-position double	•
-	3	3-position all ports closed	•
	4	3-position ABR connection	•
	5	3-position PAB connection	•
	8	Mix manifold (when there are multiple solenoid positions)	•
_	© Port	*1	
			Port P/R1/R2 (*2)
	Port	Port A/R	Option: Other than K Option: K

© Port	size		*1	
		Port	P/R1/R2	(*2)
C Port s Port C8 C10 C12 CX 08 10 15 08G 10G 15G 08 N	Port A/B	Option: Ot	her than K	Option: K
		Rc3/8 (*3)	Rc1/2 (*4)	Rc1/2 (*5)
C8	ø8 push-in fitting	0		0
C10	ø10 push-in fitting	0		0
C12	ø12 push-in fitting	0		0
CX	Push-in fitting mix	0		0
08	Rc1/4	•		•
10	Rc3/8	•		
15	Rc1/2		•	•
08G	G1/4	(*6)		(*6)
10G	G3/8	(*6)		(*6)
15G	G1/2		(*6)	(*6)
08 N	NPT1/4	● (*7)		(*7)
10 N	NPT3/8	(*7)		(*7)
15N	NPT1/2		(*7)	(*7)

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

	Serial tr	ansmission (lamp/surge suppressor provide	d as standard) 24 VDC
	T6G1	CC-Link 16 points	•
i			

ı	Termi	nal/connector pin array		
	Blank	Standard wiring	(*8)	•
	W	Double wiring	(*8)(*9)	•
I	Optio	n		
I	Blank	No		•

┪	Optio	n	
	Blank	No	•
ſ	K	External pilot (*5)(*10)	•
ſ	Α	Coolant proof	•
ĺ	F	Port A/B filter integrated (port P: Standard)	•
ĺ	Z 1	Air supply spacer (*11)(*12)	•
	Z3	Exhaust spacer (*11)(*12)	•

2	2 stations		
to	to	•	
11	11 stations (Refer to page 266 for the max. station number per model)		
H Volta	ge		

Wolta	ge	
3	24 VDC	•
4	12 VDC	•

indicates not available.

Station No.

MEMO

P4 Series

Pneumatic actuator Vacuum components Pneumatic valves

Pneumatic auxiliary components

Clean air Speed components controller Fitting Auxiliary Silencer

Gas generator Fluid control components Electric actuator

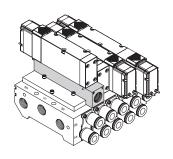
Motor Motorless specification specification specifications

M4GA4/M4GB4 Series

Pneumatic actuator

Related products

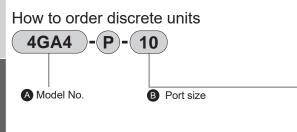
Air supply spacer



Specifications

Item	1	4GA4	4GB4
Flow characteristics	$P \rightarrow A/B$	6.4	5.6 (*2)
$C[dm^3/(s\cdot bar)]$ (*1)	A/B→R	8.0	6.6 (*2)
Weight	g	208	198

- *1: This is the value when a single solenoid is installed.
- *2: This is the value when installing to a manifold base port size Rc3/8.
- *3: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 × C.



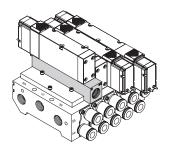
P4 compliant as standard		A Valve r	nodel No 4GB4
Code	Description		
B Port	size		
10	Rc3/8	•	•
10G	G3/8	•	•
10 N	NPT3/8	•	•

Precautions for model No. selection

- *1: Specify the air supply spacer mounting position and quantity in manifold specifications sheets of each
- *2: Combination with the masking plate is not supported.

Attachments: 3 mounting screws, 2 O-rings, 1 body gasket

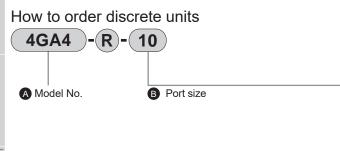
Exhaust spacer



Specifications

Item	1	4GA4	4GB4
Flow characteristics	$P \rightarrow A/B$	6.3	5.4 (*2)
$C[dm^3/(s\cdot bar)]$ (*1)	A/B→R	6.9	5.7 (*2)
Weight	g	206	197

- *1: This is the value when a single solenoid is installed.
- *2: This is the value when installing to a manifold base port size Rc3/8.
- *3: Effective cross-sectional area S and sonic conductance C are converted as S \approx 5.0 \times C.



P4 compliant as standard		A Valve i	nodel No.
		4GA4	4GB4
Code	Description		
B Port	size		
10	Rc3/8	•	•
10G	G3/8	•	•
10 N	NPT3/8	•	•

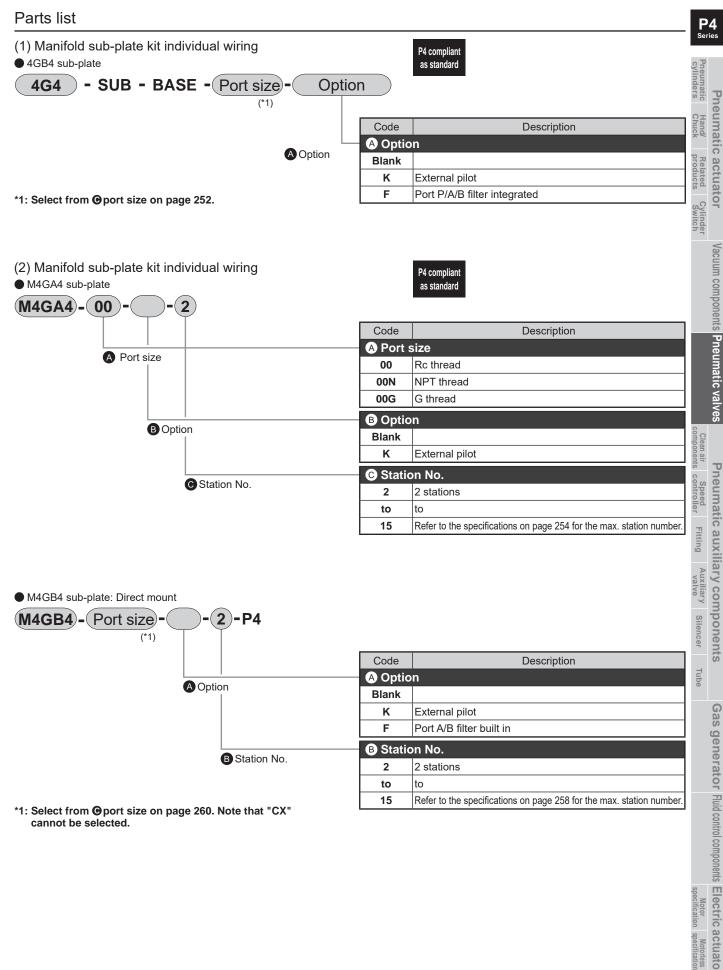
Attachments: 3 mounting screws, 2 O-rings, 1 body gasket

Precautions for model No. selection

- *1: Specify the air supply spacer mounting position and quantity in manifold specifications sheets of each catalog.
- *2: Combination with the masking plate is not supported.
- *3: When mounting an exhaust spacer on the type A or type B manifold (port P Rc3/8 specifications), connect a push-in fitting.

4GA4/4GB4 Series

Parts list



Metal base# M4G4 Series# How to fill out manifold specifications sheet

Manifold model No. (example)

M4G84 8 0- CX -**T30** Solenoid position Reduced wiring Terminal/Connector Option Station No. connection pin array method

Precautions for fitting mix

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

(Note) The M4GA4 type is not supported.

Selectable cartridge fittings

4G4 : C8, C10, C12

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.								ting										/alve	ins	stalla	atior	n po:	sitio	n									Qua
								Α	В	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	В	4	1		9-	C8	3			0	0																							2
4G	В	4	2	2	9-	C8	3					0	0																					2
4G	В	4	3	3	9-	C8	3							0	0																			2
4G	В	4		5	9-	СХ		C8	C10							0	0																	2
4G		4			9-																													
Mas 4G	kin B	g p	ate	iP((S))			ill in	"CX"	whei	5						0																1
Mas 4G	kin	g p	ate -N	P((D))			hangir ombina	g the																								
Air s 4G	up	ply 4	spa - P	ace	er_																													
Exha 4G																																		
	_		_		_																													
																							Ļ											
								Incl	uded	L.			_				g plu	_						_	,,			Thre		÷	<u> </u>			.,_
									art	G	GWP 8-B GWP 10-B GWP 12-B 4G4-8 []] P Cable with D-sub-connector								_	-	4G4-10[[]]P 4G4-15[[]]P N4T-CABLE-D[[]]-[[]]						_							

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

- Individual wiring...Page 274
- Reduced wiring
 - · Common terminal block (T1*), D-sub-connector (T30):Page 275
 - Flat cable connector (T5*):Page 276
 - · Serial transmission (T6G1):Page 277

Pneumatic actuator

Vacuum components Pneumatic valves

Pneumatic auxiliary components

Gas generator Fluid control components Electric actuato

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 pin No.					Installation position															
T30	/T30R	T5	0/T50R/T6*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1		1		а																
	14	2			а				l	1	l	l	l	١						
2		3				а				e c										L,
	15	4				(b)			Pre	ecai	utio	ns	(1)							
3		5					а													//
	16	6					(b)													Ш
4		7						а												Ш
	17	8						b												/Д
5		9	- Power supply						а											\square
	18	10	+(COM)Power supply						b				<u>L</u> .	ļ	l	l	l	l	l	L \
6		11								а			L	Spa	ire (cab	le v	virir	ıg 💄	
	19	12								b			Ц	Pr	eca	utio	ons	(2))]_	
7		13									а		L:		ı		1	ıí	1	
	20	14									b	_,		<u> </u>						<u>L</u> ,
8		15										а								$\perp / /$
	21	16										b								///
9		17																		Ш
	22	18																		11
10			- Power supply																	/Д
	23	20	+(COM)Power supply																	\square
11																				∟'
	24																			
12																				
	25																			
13	(COM)																			

^{*:} Note that when the wiring method is T50 type, the COM polarity will be + (positive).

Precautions regarding spare wiring

(1) With the T30/T50/T51 types, as it is possible for the unit to be equipped with spare wiring in advance to permit modification from a single Sol to a double Sol, consult CKD. Specify the position for expansion (modification area from single to double Sol). Mark a circle in the wiring specification column as an indication of spare wiring, while also filling in the a sol side/b sol side categories.

2)Spare wiring will be installed on the masking plate. (Refer to Pneumatic Valves No.CB-023SA)

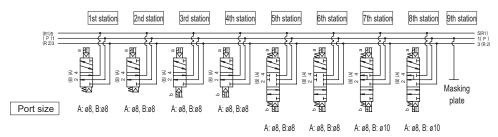
The number of wires for spare wiring can be specified by selecting the masking plate within the specifications.

(* If there is no specification, the spare wiring will be two (MPD)

4G*4-MP(S)...1 pc.

4G*4-MP(D)...2 units

Reference circuit diagram The simplified circuit diagram of the manifold model No. (example) on the previous page is shown below.



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

^{*:} When T50 wiring is used, connector pins NO.9, 10, 19, and 20 cannot be specified, because they are used for the external input power supply.

Date issued

Company

Contact

Order No.

20 21 22 23

4G4-15

C	K	D
C	K	D

	AG A-T1, 3 Manifold specifications sheet Contact																				Date issued / /										
Contact	t			● Qı	uant	tity s	set(s	5)	• D	elive	ery c	late	/										C	omp	any						
Slip No).										C	Orde	r No	١.									Contact								
Manifold	d model N	0.																					_		No.						
//4G Å	4	()-			P4																									
		d position		Port	size	е	R	educed	wiring	Termin	nal/Conn	ector	Opt	tion	.;	Stat	ion l	.: No.	٠	oltaç		•	•								
								conne	ction	pin a	rray met	nod																			
Solenoi	id valve mode	el No.	Fittin															ositio										\vdash	Quantity		
			Α	В	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 4	9-																														
G 4	9-																														
G 4	9-																														
4G 4	9-																														
4G 4	9-	<i>i</i>																													
Masking plat	te	!																_	+											\dashv	
[]	MP(S)																														
Masking plat	te MP(D)																														
Air supply sp	i i																														
4G 4-F																												\perp		_	
Exhaust spa	[
																			\dashv									\Box		\dashv	
																													<u></u>		
																												\vdash			
			Inclu		G	WP	8-B	\top			nking P 10			GW	/P 12	2-B		4G4	4-8	P	1	4G	Thre 4-10		plug P		4G4-	15	Р	\dashv	
			pa	irt							Cabl	e with	n D-sı		nnecto										ABL			-[]			
Wiring sp	Connect	sheet (N		uired	for s	stanc	lard v	wirin	g/dou	ıble v	wiring	g. Co	mple	te th	ese			ions v			cifyi	ng th	e wi	ring	orde	r and	ado	litiona	al cab	les)	
T10/T10R			80/T30	R		1	2	3	4	5	6	7	8	9	10			2 13		1 1 1	5 1	6 1	7	18	19	20	21	22	23	24	
2	2	2		14																											
4 5	4 5	3		15																											
6 7	6 7	4		16																											
8	8			17																											
9	9	5		18	\downarrow																										
11 12	11 12	6		19										L																	
13 14	13 14	7		20										\vdash		\perp															
COM	15 16	8		21	\exists																										
COM		9																													
	17 18	9		22			- 1																								
	18 19	10		22																			+								
	18			22 23 24																											

	5 Man																						Da —	ate i	ssue	ed	/		/
Contact				Qι	uanti	ity se	et(s))	• D	elive	ery c											1	C	omp	any				
Slip No.												rde	r No).									C	onta	ct				
Manifold m	odel No.																						0	rder	No.				
14G ⁶ 4		0)- [-	-								-	. [-	. [-	F	24						
	Solenoid pos			Port	size	;			-		al/Connec		Op	tion		Stat	ion I	No.	V	oltao	ge								
							CI	onnec	tion	ar	ray metho	od																	
Solenoid val	ve model No.		Fitting	СХ	<u> </u>									Va	lve in	stalla	ation p	ositio	n										
			Α	В	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
G 4 9)-																												
	<u> </u>			\dashv			\dashv													\vdash						H	\square		
3 4 9)-																												
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4 9)-			_			7																						
4 9	<u> </u>						+	-																					
sking plate			_	_	\dashv	\dashv	_													\vdash						$\vdash \vdash$	\square	\vdash	
4-MP(3)																												
sking plate			+	\dashv		+	\dashv													\Box						\vdash	\vdash	\vdash	
4-MP(I))																												
supply spacer							\neg																				П		
6 4-P-			\perp																										
haust spacer																													
3 4-1\-	<u></u>			\dashv	\dashv	-	\dashv													\vdash								\vdash	
				\dashv		\top	\neg															\Box							
						\Box																							
			Jacky							Bla	nking	nlug						_		Ш	Ш		Thre	adec	d plug	Ш	Ш	Ш	
			Includ part		G	WP 8	3-B				P 10			GW	/P 12	2-B		4G	4-8	P)	40	G4-10		P		4G4-1	15	ΞP
Wiring specif	cations she	et (No	t requi	red f	for st	anda	rd w	iring	/doul	ole w	/iring	. Cor	nplet	e the	se s	pecif	icatio	ons v	vhen	spec	cifyin	g the	e wiri	ng or	der a	and a	additi	onal	cab
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Pneumatic actuator

Pneumatic valves Vacuum components

Pneumatic auxiliary components

Electric actuator Fluid control components Gas generator

^{*} 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.

Serial transm	issi	ion)																									P. Seri		
M4Gå4-T6G1 Ma	nifol	d s	peo	cific	cat	ion	s s	he	et												D	ate	issu	ed	/		/			
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4G 4 9-																												Cylinder Switch		
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4G 4 9-																														
4G 4 9-																														
4G 4 9-																														
Masking plate 4G 4-MP(S)																														
Masking plate 4G 4-MP(D)																												Clean air		
Air supply spacer 4G 4-P-																												Clean air Speed components controller		
Exhaust spacer 4G 4-R-																												ed F		
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Wiring specifications sheet ((Not red	quired	l for s	stand	dard v	wirin	g/dou	ıble	wirin	g. Co	omple	ete th	hese	spec	cifica	tions	whe	n spe	ecify	ing th	ne w	iring	orde	r an	d add	litiona	ıl cables)			
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