

### Discrete valve Body piping 3GA1, 2, 3 /4GA1, 2, 3 Series

Item

Holdina

current (A)

Power consumption

Apparent power

Indicator

W

VA (\*3) (\*4

Rated voltage

(\*3)

(\*3)

Thermal class

Surge suppressor

Voltage fluctuation range

Standard

With low exoergic energy circuit

Standard

With low exoerging energy circuit

Standard

**Electrical specifications** 

Applicable cylinder bore size: ø20 to ø100



100 AC

0.009

(0.009)

0.93

(0.98)

200 AC

0.006

(0.006)

1.40

Description

±10%

0.35(0.40)

В

Option

Lamp (option)

3 DC

0.120

(0.136)

5 DC

0.072

(0.082)

12 DC

0.030

(0.034)

0.010

24 DC

0.015

(0.017)

0.005

0.35(0.40)

0.1

\*3: Values in () apply when lamp is included. In addition, the type

with low excergic/energy circuit is only available with lamp. \*4: 200 VAC is the value of DIN terminal box (with lamp).

V

Catalog No. CB-023SA







5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) CKD

### Common specifications

ltem	Description
Valve and operation	Pilot operated soft spool valve
Working fluid	Compressed air
Max. working pressureMPa	0.7
Min. working pressure MPa	0.2
Proof pressureMPa	1.05
Ambient temperature°C	-5 to 55 (no freezing)
Fluid temperature°C	5 to 55
Manual override	Non-locking/locking common (standard)
Pilot exhaust method	Main valve/pilot valve common exhaust
Lubrication *1	Not required
Degree of protection*2	Dust-proof
Vibration resistancem/s <sup>2</sup>	50 or less
Shock resistancem/s <sup>2</sup>	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.

### . .

naivic	aual specifica	ations				
Port si	ze	3GA1, 4GA1	3GA2, 4GA2	3GA3, 4GA3		
lc	Dort A/D	Push-in fitting ø4, ø6	Push-in fitting ø4, ø6, ø8	Push-in fitting ø8		
nread,	FUILAD	M5	Rc1/8	Rc1/4		
15	Port P/R1/R2	M5	Rc1/8	Rc1/4		
PT thread,	Port A/B	-	NPT1/8	NPT1/4 (*5)		
15	Port P/R1/R2	-	NPT1/8	NPT1/4 (*5)		
6 thread	Port A/B	-	Push-in fitting ø4, ø6, ø8 G1/8	Push-in fitting ø8 G1/4		
	Port P/R1/R2	-	G1/8	G1/4		

\*5: Available as made to order.

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### Performance/characteristics by model

ltom			3GA1		3GA2		3GA3		4GA1		4GA2		4GA3	
item		ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	
Paananaa	Two 3-port valves integrated		9	12	12	29	-	-	-	-	-	-	-	-
time	2-position	Single	12	12	19	19	25	28	12	12	19	19	25	28
ume		Double	-	-	-	-	-	-	9	-	18	-	24	-
ms	3-position	A/B/R connection	-	-	-	-	-	-	8	15	17	30	23	45

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.

### P4 Series

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Pneumatic valves

Clean air

### 3GA1, 2, 3/4GA1, 2, 3 Series Discrete valve; Body piping

Weight

ltem				3GA1	3GA2	3GA3	4GA1	4GA2	4GA3
			Grommet lead wire	48 (41)	104 (74)	142 (100)	48 (41)	109 (79)	151 (109)
	2-position	<u>gle</u>	E-connector	50 (43)	106 (76)	144 (102)	50 (43)	111 (81)	153 (111)
		Sin	DIN terminal box	-	141 (111)	177 (135)	-	146 (116)	186 (144)
			Grommet lead wire	-	-	-	65 (58)	127 (97)	174 (128)
Weightg		aldu	E-connector	-	-	-	69 (62)	131 (101)	178 (132)
		Do	DIN terminal box	-	-	-	-	169 (139)	214 (168)
	n	6	Grommet lead wire	-	-	-	67 (60)	139 (109)	183 (141)
	ositi	sorts	E-connector	-	-	-	71 (64)	143 (113)	187 (145)
	3-p	All	DIN terminal box	-	-	-	-	181 (151)	223 (181)

· 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

Madal Na	Solonoid position		P →	A/B	A/B→	R1/R2	
	50	enoia position	C[dm³/(s⋅bar)]	b	C[dm³/(s⋅bar)]	b	
	Two 3-p	ort valves integrated	0.98	0.45	0.71	0.34	
	2-positio	on	1.2	0.47	0.72	0.37	
3GA1 4GA1		All ports closed	1.1	0.39	0.70	0.34	
4041	3-position	A/B/R connection	1.1	0.33	0.72	0.34	
			P/A/B connection	1.3	0.61	0.72	0.36
	Two 3-port valves integrated		1.8	0.29	2.3	0.32	
	2-position		2.4	0.33	2.8	0.30	
3GA2 4GA2		All ports closed	2.2	0.28	2.5	0.28	
4042	3-position	A/B/R connection	2.3	0.26	2.8	0.27	
		P/A/B connection	2.5	0.38	2.4	0.30	
	2-position	on	3.4	0.29	4.0	0.24	
3GA3		All ports closed	3.1	0.27	3.4	0.28	
4GA3	3-position	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 × C.

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item E option "A" on page 150.

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 actuator

Vacuum components

<sup>oneumatic valves</sup>

Pneumatic auxiliary components

generator

Gas

actuator Fluid control components

Electric



Ο indicates made to order.

## 3GA1, 2, 3/4GA1, 2, 3 Series

			<u>_</u>	NOC	101	NO.	
[Ele	ctrical connections list]	3GA1	3GA2	3GA3	4GA1	4GA2	4GA3
DE	lectrical connections						
Blank	Grommet Lead wire (300mm) (*10)	$\bullet$				$\bullet$	
В	DIN terminal box (Pg7) With surge suppressor and indicator lamp(*11)(*13)						
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor(*11)(*13)					$\bullet$	
E type	connector (Upward/lateral common)						
E0	Lead wire (300 mm) (*12)						
E00	Lead wire (500 mm) (*12)						
E01	Lead wire (1000 mm) (*12)						
E02	Lead wire (2000 mm) (*12)						
E03	Lead wire (3000 mm) (*12)						
E0N	Without lead wire(Without socket)						
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 (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 typ	e connector (Socket with cover, upward/late	eral	cor	nmc	on)		
E01J	Lead wire (1000 mm) (*12)						
E02J	Lead wire (2000 mm) (*12)						
E03J	Lead wire (3000 mm) (*12)						
E21J	Lead wire (1000 mm) with surge suppressor/lamp						
E22J	Lead wire (2000 mm) with surge suppressor/lamp						
E23J	Lead wire (3000 mm) with surge suppressor/lamp						

\*10: The grommet lead wire specifications are compatible with DC voltage only.
\*11: AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.

\*12: AC voltage is with a rectifier circuit.

\*13 The terminal box conforms to EN175301-803Type C (former DIN 43650-C). For details, "Pneumatic Valves No.CB-023SA" details.



### Dimensions









### • 4GA2-P4



\*Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, refer to the 4GA1 to 3 Series in "Pneumatic Valves (No. CB-023SA)".

**CKD** 151

Gas generator Fluid control components Electric actuator

Tube



### Discrete valve Base piping 3GB1, 2/4GB1, 2, 3 Series

with lamp

P4 specifications as standard

Electrical specifications

the type with low excergic/energy circuit is only available

(0.082) (0.136) (0.009) (0.006)

12 DC 5 DC 3 DC 100 AC 200 AC

0.009 0.006

1.40

Applicable cylinder bore size: ø20 to ø100



Two 3-port valves integrated

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

3(R2)

5(R<sub>1</sub>) 1 (P)

3(R<sub>2</sub>)

5(R1)

1 (P)

3(R<sub>2</sub>)

5(R1)

1 (P)

3(R<sub>2</sub>)

5(R1)

1 (P)

 $\langle$ 1 3(R<sub>2</sub>) 5 1 (R<sub>1</sub>) (P) 2-position double

b

2(E

(A)

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

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

(A) Ĩ₩]3≊

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

(A) (B)

(A) (B)

(R<sub>1</sub>) (P) (R<sub>2</sub>)

4 (A) (B)

(R1) (P) (R2)

3-position A/B/R connection

2

(R1) (P) (R2)

4 2 (A) (B) Ľ

3-position P/A/B connection

(R1) (P) (R2)

(A) (B)

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5-port valve 2-position single

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3-position All ports closed

JIS symbol

Catalog No. CB-023SA

### Common specifications

Item		Description	ltem	Description						
Valve and	operation	Pilot operated soft spool valve	Rated v	voltage V	24 DC	12 DC	5 DC	3 DC	100 AC	200
Working f	luid	Compressed air	Voltage flu			±1(	0%			
Max. working	g pressureMPa	0.7	Holding		0.015	0.030	0.072	0.120	0.009	0.0
Min. working	g pressureMPa	0.2 (*3)	current (A)	Standard	(0.017)	(0.034)	(0.082)	(0.136)	(0.009)	(0.0
Proof pres	ssure MPa	1.05	(*4)	With low excergic/	0.005	0.010	. ,			
Ambient te	mperature °C	-5 to 55 (no freezing)		energy circuit	0.000	0.010				
Fluid temp	perature °C	5 to 55	Power consumption Stan I dai d W (*4) With low exoergic/ energy circuit		0.33(0.40)		0.35(0.40)		-	
Manual ov	/erride	NNlock/lock common (standard)			0.1		-		-	
Pilot exhaust	Internal pilot	Main valve/pilot valve common exhaust	Apparent power	Standard		_			0.93	1
method	External pilot	Main valve/pilot valve individual exhaust	VA (*4) (*5)	otanuaru			-		(0.98)	
Lubricatio	n (*1)	Not required	Therma	al class			E	3		
Degree of	protection(*2)	Dust-proof	Surge s	uppressor			Opt	tion		
Vibration resistance m/s <sup>2</sup>		50 or less	Indicato	or .						
Shock res	sistancem/s <sup>2</sup>	300 or less				lomni				ion
Atmosphe	ere	Cannot be used in corrosive gas environments	the ty	pe with low	exoerg	ic/ene	gy circ	cuit is o	only av	aila

\*1 Use turbine oil Class 1 ISO VG32 for lubrication. Excessive or \*5: 200 VAC is the value of DIN terminal box with lamp. 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.
- \*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

Port size		3GB1, 4GB1	3GB2, 4GB2	4GB3	
<b>Bo</b> throad	Port A/B	Rc1/8	Rc1/4	Rc1/4, Rc3/8	
Rc thread	Port P/R1/R2	Rc1/8	Rc1/4	Rc1/4, Rc3/8	
NPT thread	Port A/B	NPT1/8	NPT1/4	NPT1/4, NPT3/8	
(*5)	Port P/R1/R2	NPT1/8	NPT1/4	NPT1/4, NPT3/8	
G thread	Port A/B	G1/8	G1/4	G1/4, G3/8	
(*5)	Port P/R1/R2	G1/8	G1/4	G1/4, G3/8	

\*5: Available as made to order.

### Performance/characteristics by model

Itom			3GB1/4GB1		3GB2	/4GB2	4GB3		
nem			ON	OFF	ON	OFF	ON	OFF	
Posponso	Two 3-port valves integrated		9	12	12	29	-	-	
time	2-position	Single	12	12	19	19	25	28	
ume		Double	9	-	18	-	24	-	
ns	3-position	A/B/R connection	8	15	17	30	23	45	

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.

Min. working	g pressureMPa	0.2 (*3
Proof pres	ssure MPa	1.05
Ambient te	mperature °C	-5 to 55 (no fr
Fluid temp	perature °C	5 to 55
Manual ov	verride	NNlock/lock comm
Pilot exhaust	Internal pilot	Main valve/pilot valve c
method	External pilot	Main valve/pilot valve in
Lubricatio	n (*1)	Not requi
Degree of	protection(*2)	Dust-pro
Vibration re	esistancem/s <sup>2</sup>	50 or les
Shock res	sistancem/s <sup>2</sup>	300 or le

Clean air Speed



Tube

Pneumatic valves

P4 Series

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Pne

Hand/ Chuck

Related

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Pneumatic actuator

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# 3GB1, 2/4GB1, 2, 3 Series

Discrete valve; Base piping

#### Weight

ltem					3GB1/4GB1	3GB2/4GB2	4GB3								
Weight	g		Single	Grommet lead wire	80 (38)	156 (74)	215 (96)								
	L	c		E-connector	82 (40)	158 (76)	217 (98)								
:	litio		DIN terminal box	-	193 (111)	249 (130)									
		öd	Double	Grommet lead wire	97 (55)	173 (91)	233 (114)								
		~										E-connector	101 (59)	177 (95)	237 (118)
				DIN terminal box	-	216 (134)	273 (154)								
	ĺ	ы	All ports	Grommet lead wire	98 (56)	184 (102)	242 (123)								
		ositi	closed	E-connector	102 (60)	188 (106)	246 (127)								
		а-р д-р		DIN terminal box	-	227 (145)	282 (163)								

• 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.

• The weight of the two 3-port valves integrated type is the same as that of 2-position double.

### Flow characteristics

Madal Na	Colonaid nesition		P →	A/B	$A/B \rightarrow R1/R2$			
	50	enoia position	C[dm³/(s·bar)]	b	C[dm³/(s⋅bar)]	b		
	Two 3-p	ort valves integrated	0.92	0.08	1.1	0.26		
	2-positi	on	1.3	0.27	1.2	0.22		
3GB1 4GB1		All ports closed	1.1	0.31	1.1	0.27		
4001	3-position	A/B/R connection	1.1	0.31	1.3	0.29		
		P/A/B connection	1.4	0.30	1.1	0.26		
	Two 3-port valves integrated		1.7	0.42	2.1	0.26		
	2-position		2.6	0.20	2.6	0.19		
3GB2		All ports closed	2.3	0.32	2.2	0.22		
4002	3-position	A/B/R connection	2.2	0.23	2.6	0.16		
		P/A/B connection	2.4	0.10	2.4	0.22		
	2-positi	on	4.3	0.24	4.2	0.24		
1002		All ports closed	3.3	0.40	3.4	0.27		
4683	3-position	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: Effective cross-sectional area S and sonic conductance C are converted as S  $\approx$  5.0 × C.

Ozone-proof specifications •

Coolant proof specifications

Can be selected with "How to order" Item E option "A" on page 154.

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".



KD

is not available indicates made to order.  $\cap$ 

154

P4 Series Pneumatic Hand/ cylinders Chuck **Pneumatic actuator** Related Cylinder products Switch Vacuum components Pneumatic valves 
 Pneumatic auxiliary components

 Clean air
 Speed
 Fitting
 Auxiliary
 silencer

 components
 controller
 Fitting
 Auxiliary
 silencer
 Tube Gas generator Fluid control components Electric actuator Motor Motorless specification specification





Pneumatic Valves Catalog No. CB-023SA

### Direct mount/DIN rail mount M3GA1, 2, 3 -(D) /M4GA1, 2, 3 -(D) Series

Applicable cylinder bore size: ø20 to ø100

Individual wiring manifold

Body piping



#### Manifold common specifications

JIS symbol 3-port valve 2-position single NC (Å) 眇 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 2-position single NO (B) É  $\langle |$ 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) Two 3-port valves integrated (A side valve: NC, B side valve: NC) ≝osf⊺⊺ \ ⊠ 3(R2) (A side valve: NC, B side valve: NO) BD 1 (A side valve: NO, B side valve: NC) عة ( 3(R<sub>2</sub>) BD \ (A side valve: NO, B side valve: NO) ĭ∎2 3(R<sub>2</sub>) 5-port valve 2-position single (Å) (Å 趵  $\langle$ 5 1 3 (R1) (P) (R2) 2-position double 4 2 (A) (B) b а  $\exists \Sigma$ 5 1 3 (R1) (P) (R2) 3-position All ports closed (Ā) (Ē) 11 Ì (R1) (P) (R2) 3-position A/B/R connection 4 2 (A) (B) ð È (R1) (P) (R2) 3-position P/A/B connection 4 2 (A) (B) 11

Item		Description
Manifold		Integrated base
Mounting m	ethod	Direct mount/DIN rail mount
	d oxboust mothod	Common supply/common exhaust
All Supply all		(With internal exhaust check valve)
Pilot exhaust	Internal pilot	Main valve/pilot valve common exhaust
r life childred	internal pilot	(Pilot exhaust check valve built-in)
method	External pilot	Main valve/pilot valve individual exhaust
Piping direc	tion	Valve top direction
Valve and o	peration	Pilot operated soft spool valve
Working flui	d	Compressed air
Max. workin	g pressure MPa	0.7
Min. working	g pressure MPa	0.2(*3)
Proof press	ure MPa	1.05
Ambient ter	nperature °C	-5 to 55 (no freezing)
Fluid tempe	rature °C	5 to 55
Manual ove	rride	Non-locking/locking common (standard)
Lubrication	(*1)	Not required
Degree of p	rotection (*2)	Dust-proof
Resistance	/ibration m/s <sup>2</sup>	50 or less
Resistancel	mpact m/s <sup>2</sup>	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.

\*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

ltem		Description								
No.status Volta	age V	24 DC	12 DC	5 DC	3 DC	100 AC	200 AC			
Voltage fluctua	tion range			±1(	0%					
Holding ourront	Standard	0.015	0.030	0.072	0.120	0.009	0.006			
	Stanuaru	(0.017)	(0.034)	(0.082)	(0.136)	(0.009)	(0.006)			
A (4)	Low exoergic/energy circuit	0.005	05 0.010 -		-					
Power consumptionr	Standard	0.35 (0.40) 0.35 (0.40)				-				
W (*4)	Low exoergic/energy circuit	0.	.1		-					
Apparent power	Standard					0.93	1 40			
VA (*4)(*5)	Stanuaru	-		-		(0.98)	1.40			
Resistancethe	rmal class	В								
Surge suppres	sor	Option								
Indicator		Lamp (option)								

\*4: Values in () apply when lamp is included. In addition, the type with low exoergic/energy circuit is only available with lamp. \*5: 200 VAC is the value of DIN terminal box (with lamp).

#### Individual specifications

			M3GA1/	/M4GA1	M3GA2	M4GA2	M3GA3/M4GA3		
n	Direct mount DIN rail Direct mount DIN rail mount		DIN rail mount	Direct mount	DIN rail mount				
tation No.	Standard (Inter	nal pilot)	20 stations	ations 16 stations 20 stations 16 stations 20		20 stations	16 stations		
alion no.	External pilot		12 stations	12 stations	20 Stations	10 Stations	20 518110115	10 514110115	
lc	Port A/B		Push-in fitt	ing ø4, ø6	Push-in fitting ø4, ø6, ø8		Push-in fitting ø8		
nread,			M5		Rc1/8		Rc1/4		
15	Port P/R1/R2		Rc1/8		Rc1/4		Rc3/8		
PT	Port A/B		M	5	NPT	1/8	NPT1/4 (*6)		
read, M5	Port P/R1/R2		NPT	T1/8	NPT	1/4	NPT3/8 (*6)		
3	Port A/B		Push-in fitt	ing ø4, ø6	Push-in fittin	g ø4, ø6, ø8	Push-in fitting ø8		
nread,			M	5	G1	/8	G1	/4	
M5 Port P/R1/R			G1	/8	G1	/4	G3	3/8	
ifold ba	ase	Standard	23n+52	25n+60	47n+64	49n+92	74n+88	76n+117	
Weight calculation formula (n: station No.) g Ext		External pilot	36n+105	38n+113	88n+135	90n+163	136n+194	138n+223	
	n tation No. tc nread, 15 PT read, M5 mread, 15 ifold ba calculation	n tation No. Standard (Inter External pilot External pilot Port A/B Port P/R1/R2 PT Port A/B Port P/R1/R2 Port A/B Port P/R1/R2	n tation No. Standard (Internal pilot) External pilot External pilot External pilot Port A/B Port P/R1/R2 PT Port A/B Port P/R1/R2 POrt A/B Port P/R1/R2 POrt A/B Port P/R1/R2 ifold base calculation formula (n: station No.) g External pilot	n Standard (Internal pilot) External pilot I2 stations External pilot I2 stations External pilot I2 stations I2 st	n Standard (Internal pilot) tation No. Standard (Internal pilot) Stand	n $ \frac{M3GA1/M4GA1}{Direct mount} \frac{M3GA2}{mount} $ $ \frac{DIN rail mount}{mount} $ $ \frac{DIN rail mount}{mo$	n           M3GA1/M4GA1         M3GA2/M4GA2           Direct mount         DIN rail mount         Direct mount         Direct mount         DIN rail mount           tation No.         Standard (Internal pilot)         20 stations         16 stations         20 stations         16 stations           tation No.         External pilot         12 stations         12 stations         20 stations         16 stations           tation No.         Port A/B         Push-in fitting ø4, ø6 M5         Push-in fitting ø4, ø6 Rc1/8         Push-in fitting ø4, ø6, ø8 Rc1/8           15         Port P/R1/R2         Rc1/8         Rc1/4           PT         Port A/B         M5         NPT1/8           read, M5         Port P/R1/R2         NPT1/8         NPT1/4           read, M5         Port A/B         Standard         23n+52         25n+60         47n+64         49n+92           calculation formula (n: station No.)g         External pilot         36n+105         38n+113         88n+135         90n+163	n $\begin{tabular}{ c c c c c c c } \hline M3GA1/M4GA1 & M3GA2/M4GA2 & M3GA3/M3GA2/M4GA2 & M3GA3/M3GA2 & M3GA2 & M3GA3/M3GA2 & M3GA2 & M3GA2$	

\*6: Available as made to order.

Cautions for mounting the DIN rail "Pneumatic Valves No.CB-023SA" before selection. 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.

umatic

Pne

Hand/ Chuck

tch

Silencer

Tube

(R1) (P) (R2)

СКІ

# M3GA1, 2, 3/M4GA1, 2, 3 Series

Individual wiring manifold; Body piping

### Performance/characteristics by model

ltem			M3GA1		M3GA2		M3GA3		M4GA1		M4GA2		M4GA3	
			ON	OFF										
Desserves	Two 3-port	valves integrated	9	12	12	29	-	-	-	-	-	-	-	-
Kesponse	2-position	Single	12	12	19	19	25	28	12	12	19	19	25	28
time		Double	-	-	-	-	-	-	9	-	18	-	24	-
ms	3-position	A/B/R connection	-	-	-	-	-	-	8	15	17	30	23	45

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  ightarrow	A/B	$A/B \rightarrow R1/R2$			
wodel No.			C[dm³/(s⋅bar)]	b	C[dm³/(s⋅bar)]	b		
M2CA1	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)		
MAGA1		All ports closed	0.94	0.23	1.1 -	0.20 -		
WI4GA I	3-position	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 -		
	Two 3-port valves integrated		1.7	0.40	2.3 (1.7)	0.29 (0.32)		
Macva	2-position		2.3	0.36	2.9 (1.7)	0.24 (0.33)		
MAGA2		All ports closed	2.1	0.35	2.5 -	0.32 -		
WI4GAZ	3-position	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 -		
	2-position		3.2	0.37	3.8 (2.5)	0.13 (0.28)		
M3GA3		All ports closed	2.9	2.9         0.35         3.3 -           3.0         0.34         3.8 (2.6)		0.35 -		
M4GA3	3-position	A/B/R connection	3.0			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 E option "A" on page 154.

### 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".

P4 Series

Tube

### M4GA1/2/3 Series

Individual wiring manifold; Body piping

P4 Series	How to order Manifold model No.				i		0	100		Nia	_
eumatic	M 4GA1 1 0R - C6 - E2 H D 3 - P4 3-port manifold model No.	* Be su shee	ure to fill in the "Mai et" (pages 190 to 19	nifold specifications 92).		GA1	GA2	GA3	GA1	GA2	GA3
ator	M (3GA1) (1) 0R (C6) (E2) H (D) () (3) P4	Code	De	scription		3	3	°	4	4	4
:tue	■ Single valve for mounting base	BS	olenoid positi	on							
) ac	$\frac{1}{4GA1}$ $\frac{1}{1}$ 9R $\cdot$ C6 $\cdot$ F2 H $\frac{1}{1}$ $\frac{1}{3}$ -P4	1	2-position single	9							
atic		2	2-position doubl	e						•	
um		3	3-position all po	rts closed						•	
ne	$3GA1 (1)9R \cdot C6 \cdot E2 (H) - 3 \cdot P4$	4	3-position ABR	connection						•	
linde		5	3-position PAB	connection						•	
C	Solenoid position	1	2-position single No	rmally Closed	(*1)						
ents		11	2-position single No	rmally Open	(*1)						
compon	A Model No.	66		A valve side: Normally Clos B valve side: Normally Clos	sed sed	•	•				
acuum		67	3-port valve Two valves integrated	A valve side: Normally Clos B valve side: Normally Op	sed en	•	•				
Ives V		76	(*1) (*2)	A valve side: Normally Op B valve side: Normally Clos	en sed	•	•				
atic va		77		A valve side: Normally Op B valve side: Normally Op	en en	•	•				
neuma		8	solenoid position	nen mere are muit ns)	ipie	•	•	•	•	•	•
<b>_</b> _	Port size	C F	Port size			_					
lean ai		Port	4(A)/2(B)Port		*3	(2) =	Po Rc1/8	rt P/ 3 (3) =	'R1/H Rc1/4	≺2 (4) =R(	c3/8
lts	The port size of "●" is a standard	C4	ø4 push-in fitting	9	0	2	3		2	3	
nel	product and equivalent to P4	C6	ø6 push-in fitting	9	0	2	3		2	3	
odu	add "-P4" to the model No.	C8	ø8 push-in fitting	)	0		3	4		3	4
CON		CX	Push-in fitting m	ix (*4)	0	2	(3)	(4)	2	(3)	(4)
Iry (		M5	M5			(2)			(2)		
killi 8	D Electrical connections	00	Rc1/4		$\overline{0}$		3			3	
ic aux Auxilia		Port	4(A)/2(B)Port		*3	(5) =	Po 1/8NPT	rt P/	( <b>R 1 / F</b> /4NPT, (	<b>R2</b> 7) = 3/81	NPT
nati		M5N	M5			(5)			5	. /	
eun		06 N	NPT1/8				6			6	
Pn		08 N	NPT1/4	(*5)				7			1
Tuho	Mount type	Port	4(A)/2(B)Port		*3	(8) =	Po G1/8	rt P/ , (9) =	'R1/F G1/4	R2 (10)=0	3/8
or		C4G	ø4 push-in fitting	9	0	8	9		8	9	
rat		C6G	ø6 push-in fitting	9	0	8	9		8	9	
ene		C8G	ø8 push-in fitting	3	0		9	10		9	(1)
s g	G Station No.	CXG	Push-in fitting m	ix (*4)	0	8	9	10	8	9	(1)
G		M5G	M5			8			8		
ents		06G	G1/8				9			9	
mpon	H Voltage	08G	G1/4					10			(10)
ntrol co	Precautions for model No. selection										

- \*1: M4GA\*80R when using a mixture of 3, 5-port valves. Furthermore, select M3GA\*80R when mixing with masking plate. \*2: Not compatible with combination with
- external pilot (K). Dimensions are the same as those of the respective 2-position double solenoid.
- \*4: The push-in fitting cannot be mixed with the single valve's 4(A) or 2(B) port. \*5: Made to order.

Motorless specifications

Motor specification

Individual wiring manifold; Body piping

M4GA1/2/3 Series

			A	Noc	lel	No	
		Ł	<b>₽</b> 2	АЗ	Ł	<b>₽</b> 3	ЪЗ
		g	3G	3G	4G	4G	4 6
DE	lectrical connections						
Blank	Grommet Lead wire (300mm) (*13)						
B	DIN terminalBox(Pg7) With surge suppressor/lamp (*14) (*16)						
	[DIN terminalBox(Pg/)(without terminal box)With surge suppressor (*14)(*16)		•			•	
E type	Lead wire (300mm) (*15)						
E00	Lead wire (500mm) (*15)	Ĭ	Ĭ	Ĭ	ŏ	ŏ	ŏ
E01	Lead wire (1000mm) (*15)	۲	۲	۲	٠	٠	Ó
E02	Lead wire (2000mm) (*15)						
E03	Lead wire (3000mm) (*15)						
EON	Lead wireand (without socket) (*15)						
E1 F2	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	Ĭ	Ĭ	Ĭ	Ĭ	Ĭ	
E22	Lead wire (2000 mm)With surge suppressor and indicator lamp						
E23	Lead wire (3000 mm)With surge suppressor and indicator lamp						
E2N	Lead wireand (Without socket)With surge suppressor and indicator lamp						
E3	Lead wireand (socket/terminal attached) With surge suppressor and indicator lamp					•	
EJ LYL	Lead wire (1000mm) (*15)						
E02J	Lead wire (2000mm) (*15)	Ĭ	•	•	•	•	ŏ
E03J	Lead wire (3000mm) (*15)	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ
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			•	•	•	
<b>B</b> 0	ption	,	1	r	,	,	
Blank	Manual override of non-locking/locking common						
M	Non-locking manual override						
ĸ	External pilot (*7)						
A	Ozone/coolant proof	ŏ	ŏ	Ŏ	Ŏ	Ŏ	ŏ
S	Surgeless (*8)	۲	۲	۲	Ŏ	Ŏ	Ŏ
Е	Low exoergic/energy circuit (*8) (*9)						
F	Port A/B filter built in (*10)						
<u>21</u>	Air supply spacer (*11)						
23							
(F) M	ount type						
Blank	Direct mount						
GS	tation No.	1	1	1			
2	2 stations						
20	Refer to page 156 for the max station number per model						
	100 VAC (rectifier integrated)						
2	200 VAC (Rectifier circuit integrated) (*12)		•	•		•	-
3	24 VDC		•	Ó		Ó	Ó
4	12 VDC						
7	3 VDC	0	0	0	0	0	0
- C		10	10	()	10	10	()



is not available.

O indicates made to order.

- \*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 Consult with CKD when using a vacuum with the external pilot (K).
- \*8 E2\* type and E2\*J type connectors support 12/24 VDC only. In addition, surgeless "S" and low excergic/energy circuit "E" cannot be selected together.
- \*9 Surgeless specifications.
- \*10 A filter is built into port P as standard.
- \*11 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 176 to 177 for details.
- \*12 DIN terminal box only is supported.
- \*13 The grommet lead wire specifications are compatible with DC voltage only.
  \*14 AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.
- \*15 AC voltage is with a rectifier circuit.
- \*16 The terminal box conforms to EN175301-803Type C (former DIN 43650-C). Refer to "Pneumatic Valves No.CB-023SA" for details.
  - CKD

Motor

Gas generator Fluid control components Electric actuato

### M4GA1/2/3 Series



\*Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, refer to the M4GA1 to 3 Series in "Pneumatic Valves (No. CB-023SA)".

P4 Series



#### Pneumatic Valves Catalog No. CB-023SA

### Direct mount/DIN rail mount M3GB1, 2/M4GB1, 2, 3-(D) Series

Applicable cylinder bore size: ø20 to ø100

Description

Integrated base

Direct mount/DIN rail mount

Common supply/common exhaust

(With internal exhaust check valve)

Main valve/pilot valve common exhaust

(Pilot exhaust check valve built-in)

Main valve/pilot valve individual exhaust

Side direction of base

Pilot operated soft spool valve

Compressed air

0.7

0.2 (\*3)

1.05

-5 to 55 (no freezing)

5 to 55

Non-locking/locking common (standard) Not required

Dust-proof

50 or less

300 or less

Cannot be used in corrosive gas environments

0.35 (0.40)

0.1

\_

24 DC

0.015

(0.017)

0.005

#### Manifold common specifications

Individual wiring manifold

Base piping

JIS symbol	Manifol	d common	spec
Two 3-port valves integrated	Item		,
(A side valve: NCB side valve: NC)	Manifold		
	Mounting m	ethod	Dir
	Air supply and	d exhaust method	Commo (With in
(A side valve: NCB side valve: NO)	Pilot exhaust	Internal pilot	Main valv (Pilot e
	method	External pilot	Main valv
a4(A)	Piping direc	tion	S
	Valve and o	peration	Pilot o
(A side value: NOB side value: NC)	Working flui	d	
(A side valve. NOp side valve. NO)	Max. working	g pressure MPa	
	Min. working	g pressure MPa	
a <u>4 (A)</u>	Proof press	ure MPa	
	Ambient ten	nperature °C	-
(A side valve: NOB side valve: NO)	Fluid tempe	rature °C	
$b = \frac{2(B)}{B}$	Manual ove	rride	Non-lock
	Lubrication	(*1)	
a <u>4 (A)</u>	Degree of p	rotection (*2)	
	Vibration re	sistance m/s <sup>2</sup>	
● 5-port valve	Shock resis	tance m/s <sup>2</sup>	
2-position single	Atmosphere	9	Cannot be
4 2 a (A) (B)	Electric	al specifica	ations
	Item		
	No.status V	oltage	V
(R <sub>1</sub> ) (P) (R <sub>2</sub> )	Voltage fluc	tuation range	
2-position double	Holding curre	ent Standard	
a (A) (B) b	A (	*4) With low excercic/en	erav circuit
	Power consumpti	on Standard	orgy on out
5 1 3	W	(*4) With low exoergic/en	ergy circuit
(R <sub>1</sub> ) (P) (R <sub>2</sub> )	Apparent powe	er Standard	
3-position	<u>VA (*4)(</u>	*5)	
4 2	Surge supp		
	Indicator	103301	
	*4: Values in (	) apply when lamp	is include

\*4: Values in () apply when lamp is included. In addition, the type with low exoergic/energy circuit is only available with lamp. \*5: 200 VAC is the value of DIN terminal box (with lamp).

12 DC

0.030

(0.034)

0.010

#### Individual specifications

ltem			M3GB1/	/M4GB1	M3GB2/	/M4GB2	M4GB3		
			Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN railLe Mount	
Ma	x. station	Standard (Internal pilot)		20 stations 16 stations 20 stat		20 stations 16 station		20 stations	16 stations
No.		External pilot		12 stations	12 stations	20 518110115	10 518110115	20 Stations	10 514110115
	Rc thread,	Port A/B		Push-ir ø4, M	n fitting ,ø6 I5	Push-in fitting ø4,ø6,ø8 Rc1/8		Push-ii ø8, Rc	n fitting ø10 1/4
Ð	M5	Port P/R1/R2		Rc	1/8	Rc	1/4	Rc	3/8
siz	NPT thread,	Port A/B		M	15	NPT1/8		NPT1	/4 (*6)
ort	M5	Port P/R1/R2		NPT	Г1/8	NPT	F1/4	NPT3	/8 (*6)
G thread,		Port A/B		Push-in fitting ø4,ø6 M5		Push-in fitting ø4,ø6,ø8 G1/8		Push-in fitting ø8,ø10 G1/4	
	M5	Port P/R1/R2 G1/8		G1	/4	G3/8			
Ма	nifold ba	ase	Standard	35n+61	36n+115	71n+106	73n+134	113n+170	115n+119
Weię	ght calculation	n formula (n: station No.)	External pilot	35n+106	36n+114	6n+114 76n+135 78n+1		118n+194	120n+223

"Cautions for mounting the DIN rail" Check and select "Pneumatic Valves No.CB-023SA". 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. \*6: Available as made to order.



\*3

Description

±10%

0.35 (0.40)

\_

B Option

Lamp (option)

3 DC

0 120

(0.136)

5 DC

0.072

(0.082)

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

C E RoHS CAD

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.

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.

100 AC

0.009

(0.009)

0.93

(0.98)

200 AC

0.006

(0.006)

1.40

umatic

Pne

Hand/ Chuck

Related

5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>)

4 2 (A) (B)

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

> Ľ т (R1) (P) (R2)

CKD

3-position A/B/R connection

È

Tube

Pneumatic actuator

Clean air

spe

# M3GB1, 2/M4GB1, 2, 3 Series

Individual wiring manifold; Base piping

### Performance/characteristics by model

Item			M3GB1	/M4GB1	M3GB2	/M4GB2	M4GB3		
			ON	OFF	ON	OFF	ON	OFF	
Deenenee	Two 3-port va	ves integrated	9	12	12	29	-	-	
Response	2-position	Single	12	12	19	19	25	28	
time		Double	9	-	18	-	24	-	
ms	3-position	A/B/R connection	8	15	17	30	23	45	

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

Madal Na	Sal	anald nacition	P  ightarrow	A/B	$A/B \rightarrow R1/R2$			
wodel NO.	- 301	enola position	C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b		
M2CP4	Two 3-port valves integrated		0.86	0.35	1.1 (0.67)	0.22 (0.23)		
	2-positio	on	1.1	0.22	1.2 (0.70)	0.20 (0.10)		
MACRA		All ports closed	0.98	0.22	1.1 -	0.24 -		
INI4GD I	3-position	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 -		
	Two 3-port valves integrated		1.7	0.44	2.1 (1.6)	0.32 (0.30)		
Macda	2-position		2.4	0.34	2.7 (1.7)	0.24 (0.31)		
MACR2		All ports closed	2.2	0.34	2.4 -	0.29 -		
WI4GD2	3-position	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 -		
	2-positio	on	3.5	0.34	3.8 (2.6)	0.11 (0.27)		
MACR2		All ports closed 3.1 0.33 3		3.3 -	0.22 -			
	3-position	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 E option "A" on page 165.

### 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".

P4 Series

Tube

### M4GB1/2/3 Series

Individual wiring manifold; Base piping



same as those of the respective 2-position double solenoid. \*4: 4G1 C8 and 4G2 C10 do not support

vol do una roz o lo do not oupport push-in fitting mixing.\*5: Made to order.

KD

Electric

Motorless

Μ	<b>4G</b>	<b>B1</b>	/2/3	Series

Individual wiring manifold; Base piping

			Э М	ode	el No	э.
		3GB1	3GB2	4GB1	4GB2	4GB3
DE	lectrical connections		1			
Blank	Grommet Lead wire (300 mm) (*14					
В	DIN terminal box(Pg7) With surge suppressor and indicator lamp(*15)(*17)					
BN	DIN terminal box(Pg7)(without terminal box) With surge suppressor(*15)(*17)					
E type	connector (Upward/lateral common)					
E0	Lead wire (300 mm) (*16)					
E00	Lead wire (500 mm) (*16)					
E01	Lead wire (1000 mm) (*16)					
E02	Lead wire (2000 mm) (*16)					
E03	Lead wire (3000 mm) (*16)					
E0N	Without lead wire (without socket) (*16)					
E1	Without lead wire (socket/terminal attached) (*16)					
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-con	nector (socket with cover, upward/lateral common)					
E01J	Lead wire (1000 mm) (*16)					
E02J	Lead wire (2000 mm) (*16)					
E03J	Lead wire (3000 mm) (*16)					
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					
<b>A</b> 0	ntion					
	ption Manual autorida of non-locking/locking common					
ыапк	Manual override of hon-locking/locking common					
	Non-locking manual overnide				-	
T I	with exhaust check value     (*6)       External pilot     (*7)					
n A	External pliot (**)					
A						
<u></u>	Surgeress (o)					
F	Port A/P filter built in (*40)					
r v	Non looking oxhoust structure (*10)	-	-			-
A V4	Looking exhaust structure (*18)					
71	Air supply spacer (*18)					
72	Fyhaust spacer (*11)					
76	Spacer pilot check valve (*11)					
20						
G M	ount type					
Blank	Direct mount (*12)			•		
D	DIN rail mount					
G Si	tation No.					
2	2 stations					
to	to					
20	Refer to page 162 for the max. station number per model	1		-	-	-
	oltago	·	·	: 		
U V						
1	100 VAC (rectifier integrated)					•
6						-
2	200 VAC (rectifier integrated) (*13		•			
2 3	200 VAC (rectifier integrated) (*13 24 VDC		•	•	•	•

is not available.

- \*6 The 3-position all ports closed and PAB connection are not provided with the exhaust check valve specifications (H). For the exhaust check valve, "Pneumatic Valves No.CB-023SA" details. \*7: Consult with CKD when using a vacuum with the external pilot (K).
- \*8: E2\* and E2\*J connectors and 12/24 VDC only are supported.In addition,
- surgeless "S" and low exoergic/energy circuit "E" cannot be selected together. \*9: Surgeless specifications. \*10: A filter is built into port P as standard.
- \*11: Specify the spacer mounting position/quantity in manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 176 to 177 for details.
   \*12: The direct mount type of M4GB1 cannot be changed to the DIN rail mount type
- after purchasing.



\*13: DIN terminal box only is supported. \*14: The grommet lead wire specifications are compatible with DC voltage only.

- \*15: AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.
- \*16: AC voltage is with a rectifier circuit.
- \*17: The terminal box conforms to EN175301-803Type C (former DIN 43650-C). Refer to "Pneumatic Valves No.CB-023SA" for details.
- \*18: Only compatible with M4GB1 and M4GB2 solenoid positions 3 and 4.

Gas generator Fluid control components Electric actuato

### M4GB1/2/3 Series



refer to the M4GB1 to 3 Series in "Pneumatic Valves (No. CB-023SA)".

Silencer

Tube

P4 Series



Catalog No.CB-023SA



M3GA1/2/3-T |4GA1/2/3-T\*(| **Series** 

**Series** 

Cylinder bore size:ø20 to ø100



#### Hand/ Chuck JIS symbol 3 Port valve **Related** products 2-position single NC (A) а Ξ $\langle$ tch Cylir 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 2-position single NO (B) а H 4 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) Two 3-port valves integrated (A side valve: NC, B side valve: NC) at ta - 3(R<sub>2</sub>) 5(R1) 1 (P) (A side valve: NC, B side valve: NO) ba Tto 3(R<sub>2</sub>) Clean air components (A) ast Ta 5(R₁) 1 (P (A side valve: NO, B side valve: NC) Speed ° ∎at\_j\_a 4 (A) a Las Auxiliary Fitting -5(R1) 1 (P (A side valve: NO, B side valve: NO) °a III IIII IIII 3(R<sub>2</sub>) (A) 5(R.) 1 (P) 5-port valve Silencer 2-position single 4 2 (A) (B) а ð Tube 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 2-position double а (A) (B) b ΈΣ R 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position All ports closed 4 2 (A) (B) É ттт 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position A/B/R connection 4 (A) 2 (B) Me ED. Motor specificati + T 4 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position P/A/B connection Motorless (A) (B) 11 Ì

#### Manifold common specifications

ltem			Description	*1: Use turbine oil Class 1 ISO VG32 for
Manifold			Reduced wiring integrated base	lubrication. Excessive or intermittent
Mounting method			Direct mount/DIN Rail mount	lubrication results in unstable
Air supply and exhaust method			Common supply/common exhaust (With internal exhaust check valve)	operation. *2: Avoid dripping water or oil, etc.,
Pilot exhaust	Internal pilo	t	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)	during use. *3: The working pressure range is 0 to
metriou	External pilo	ot	Main valve/pilot valve individual exhaust	0.7 MPa when the external pilot
Piping direc	tion		Valve top direction	(ontion code: K) is selected. Set the
Valve and o	peration		Pilot operated soft spool valve	external pilot pressure between 0.2
Working flui	d		Compressed air	and 0.7 MDa
Max. workin	g pressureM	Ра	0.7	
Min. working	g pressureM	Pa	0.2(Note3)	
Proof press	ure MF	à	1.05	
Ambient ten	nperature °	С	-5 to 55(no freezing)	
Fluid tempe	rature °	С	5 to 55	-
Manual ove	rride		Non-locking/locking common (standard)	-
Lubrication	(Note	<del>)</del>	Not required	-
Degree of p	rotection (	°2)	Dust-proof	
Vibration re	sistance m/	s <sup>2</sup>	50 or less	
Shock resis	tance m/	S <sup>2</sup>	300 or less	-
Atmosphere			Cannot be used in corrosive gas environments	-

**Electrical specifications** 

ltem		Description				
		T1_, T3	0_, T5_	T6G1, T8		
No.status Voltage V		24 DC	12 DC	24 DC		
Voltage flu	ctuation range (*4)	±10	0%	+10%, -5%		
Holding	Standard	0.017	0.034	0.017		
current A	With low exoergic/energy circuit	0.005	0.010	0.005		
Power	Standard		0.4	ł		
consumption W	With low exoergic/energy circuit		0.1			
Resistance	thermal class		В			
Surge supp	pressorLA- (*5)	Zener diode				
Indicator		I FD				

\*4:Be careful of the voltage fluctuation range of T6G1,T8 and (serial transmission) as there is a voltage drop due to the internal circuit.

\*5:If low exoergic/energy circuit or surgeless types are selected then there will be a diode.

### Common specifications

3

CKD

(R<sub>1</sub>) (P) (R<sub>2</sub>)

T6G1

Item		M3GA1/M4GA1	M3GA2/M4GA2	M3GA3/M4GA3
Port size	A/B Port	Push-in fitting ø4,ø6 M5	Push-in fitting ø4,ø6,ø8 Rc1/8	Push-in fitting ø8 Rc1/4
	P/R1/R2 Port	Rc1/8	Rc1/4	Rc3/8
T1_, T30_, T5_				

T1_, T30_, T5_							
	M3GA1/	M4GA1	M3GA2	M4GA2	M3GA3/M4GA3		
Item	Direct mount	DIN rail Mount	Direct mount	DIN rail Mount	Direct mount	DIN rail Mount	
Max. station No.	Standard (Internal pilot)	20 stations 16 station		20 stations	16 stations	16 stations	
	External pilot	12 stations					
Manifold base weight	Standard	29n+215	31n+228	54n+264	56n+297	84n+320	86n+354
Calculation formula (n:Station No.) g	External pilot	44n+334	46n+347	96n+433	96n+468	149n+554	151n+583

1001					
		M3GA1/M4GA1	M3GA2/M4GA2	M3GA3/M4GA3	
Item		DIN rail Mount	DIN rail Mount	DIN rail Mount	
Max. station No.	Standard (Internal pilot)	16 stations	16 stations	16 stations	
Item Max. station No. Manifold base weight Calculation formula (n:Station No.)	External pilot	12 stations			
Manifold base weight	Standard	31n+375	56n+444	86n+501	
Calculation formula (n:Station No.)g	External pilot	46n+494	98n+615	151n+731	
T8					

	M3GA1	M4GA1	M3GA2	M4GA2	M3GA3/M4GA3			
Item	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	16 stations		
	External pilot	12 stations		]				
Manifold base weight	Standard	50n+305	52n+332	57n+259	60n+290	150n+384	153n+416	
Calculation formula(n:Station No.)g	External pilot	51n+313	54n+340	102n+336	105n+368	169n+417	173n+449	

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.

Imatic

Pne

168

# M<sub>4</sub><sup>3</sup> GA1/2/3-T\*(D) Series

Reduced wiring manifolds; Body piping

### Flow characteristics

Model			$\mathbf{P}  ightarrow \mathbf{A}$	VB	$A/B \rightarrow F$	$A/B \rightarrow R1/R2$		
No.	50	enoid position	C[dm³/(s·bar)]	b	C[dm³/(s⋅bar)]	b		
	Two 3-p	port valves integrated	0.86	0.31	1.1(0.66)	0.19(0.22)	c Pn	
M3GA1	2-positi	on	0.99	0.20	1.2(0.70)	0.20 (0.12)	/lin	
MISGAI		All ports closed	0.94	0.23	1.1 -	0.20 -	de	
M4GA1	3-position	ABR connection	0.93	0.18	1.3(0.70)	0.23(0.02)	rs	
		PAB connection	1.1	0.28	1.1 -	0.23 -		
	Two 3-p	oort valves integrated	1.7	0.40	2.3(1.7)	0.29(0.32)	Sha	
M3GA2	2-positi	on	2.3	0.36	2.9(1.7)	0.24(0.33)		
MIGAZ		All ports closed	2.1	0.35	2.5 -	0.32 -		
M4GA2	3-position	ABR connection	2.2	0.37	2.9(1.8)	0.32(0.29)	5 2	
		PAB connection	2.4	0.34	2.5 -	0.33 -	od ol	
	2-positi	on	3.2	0.37	3.8(2.5)	0.13(0.28)	uct	
M3GA3		All ports closed	2.9	0.35	3.3 -	0.35 -	<u></u>	
M4GA3	3-position	ABR connection	3.0	0.34	3.8(2.6)	0.12(0.27)	<i>.</i>	
		PAB connection	3.3	0.30	3.3 -	0.32 -	N N	
*1: Effective	cross-sect	ional area S and sonic co	nductance C are converted as	s S ≈ 5.0 × C.			tch	

\*1: Effective cross-sectional area S and sonic conductance C are converted as S  $\approx$  5.0 × C.

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

### Wiring specifications



### Serial transmission slave unit specifications

Refer to the CKD website (https://www.ckd.co.jp/en/).

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

lt e ve		T8G1	T8GP1	T8P1	T8PP1	T8EC1	T8ECP1	T8EN1	T8ENP1	T8D1	T8DP1	T8EB1	T8EBP1	T8EP1	T8EPP1
nem		T8G2	T8GP2	T8P2	T8PP2	T8EC2	T8ECP2	T8EN2	T8ENP2	T8D2	T8DP2	T8EB2	T8EBP2	T8EP2	T8EPP2
Communic	ation protocol	CC-Link ver. 1.10 PROFIBUS-DP(V0)			Ethe	rCAT	Ether	Net/IP	Devid	ceNet	CC-Link IEF Basic PROFIN		INET		
Power supply	Unit side		24 VDC ±10% 11 to 25 VDC						24 VDC	C±10%					
voltage	Valve side		24 VDC+10%, -5%												
Current	Unit side	60mA	or less	60mA	or less	110mA	or less	120mA	or less	70mA	or less	130mA	or less	130mA	or less
		(when all outpu	t points are ON)	(when all output	points are ON)	(when all outpu	t points are ON)	(when all output	points are ON)	(when all outpu	t points are ON)	(when all output	t points are ON)	(when all output	points are ON)
consumption			T8 1:15 mA or less									15mA	or less		
consumption	Valve side	T8 2:20mA or less (When all output points are ON) L							Load cur	rent is					
		(When all output points are ON) Load current is not included not included													
No. of out	tput points						T8_1:1	6 points	T8_2:3	2 points					
Occupied	number							1 sta	ation						
Operation	n 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

Fitting

CKD

specification

# M<sup>3</sup><sub>4</sub>GA1/2/3-T\*(D)<sub>Series</sub>

Reduced wiring manifolds; Body piping



P4 Series

umatic

Pne

Tube

air

Motor specificati Motorless

			6	A N	100	lel	No	
			_		~	_	~	~
			Š	B	GĂ	Ğ	GA:	GĂ
			°	ŝ	ŝ	4	4	4
D Redi	iced wiring (lamp and surge suppre	essor provided as	s sta	anda	ard)	12/2	24 V	DC
T10	Common terminal block (M3	Left-sided specifications						
T10R	thread)	Right-sided specifications		•			٠	
T11	Common terminal block (clamping)	Left-sided specifications	•				•	•
111R T20		Right-sided specifications						
130 T20P	DSub-connector	Len-sided specifications				H		H
T50	20-pin flat cable connector	Left-sided specifications	•		-		-	
T50R	(with power supply terminal)	Right-sided specifications	Ĭ	ŏ	ŏ	ŏ	ŏ	ŏ
T51	20-pin flat cable connector	Left-sided specifications						
T51R	(without power supply terminal)	Right-sided specifications						
T52	10-pin flat cable connector	Left-sided specifications					$\bullet$	
T52R	(without power supply terminal)	Right-sided specifications					٠	
T53	26-pin flat cable connector	Left-sided specifications						
T53R	(without power supply terminal)	Right-sided specifications	•	•	-		-	•
D Seria	al transmission (lamp/surge suppl	ressor provided	as s	stan	dar	d) 2	4 VI	DC
T6G1	CC-Link	NPN 16 points						
T8G1		NPN 16 points						
T8G2	CC-Link	NPN 32 points						
18GP1		PNP 16 points						
18GP2		NPN 32 points				H		H
T8P2		NPN 32 points					-	
T8PP1	PROFIBUS-DP	PNP 16 points	•		-	Ĭ	•	ŏ
T8PP2		PNP 32 points		Ĭ	ŏ	ŏ	ŏ	Ĭ
T8EC1		NPN 16 points	•	Ō	Õ	Ŏ	Ō	Ō
T8EC2	Ethor OAT	NPN 32 points						
T8ECP1	EtherCAT	PNP 16 points						
T8ECP2		PNP 32 points						
T8EN1		NPN 16 points	•	•	•		٠	•
T8EN2	EtherNet/IP	NPN 32 points	•				•	•
T8ENP1		PNP 16 points					•	
18ENP2		PNP 32 points					-	H
T8D2		NPN 10 points				H	-	
T8DP1	DeviceNet	PNP 16 points	•		-		-	
T8DP2		PNP 32 points	Í	Ĭ	Í	Í	•	Ó
T8EB1		NPN 16 points	•	•	Ó	Ó	•	Ó
T8EB2		NPN 32 points						
T8EBP1	CO LINKILI DAGIO	PNP 16 points			۲		•	$\bullet$
T8EBP2		PNP 32 points	•				•	
T8EP1		NPN 16 points						
T8EP2	PROFINET	NPN 32 points						
TOEPP1		PNP 10 points						
Δ2N	Without lead wire(Without socket)	With sume summers and indicator lamo						
640		Turni anda ankuraan uun umaun guh						
• Opt	ion		-		-	-	-	
Blank	Manual override of non-locking/lock	king common						
NI		(*7)					-	
- TI	External pilot	(*7)						
Δ	Ozone/coolant proof	( 0)					-	
s	Surgeless	(* <u>9</u> )		ē				
E	Low exoergic/energy circuit	(*9)(*10)	•	Í	Í	•	•	•
F	Port A/B filter built in	(*11)	•	•	•	•	•	•
<b>Z1</b>	Air supply spacer	(*12)						
70	Exhaust spacer	(*12)						

# M<sup>3</sup><sub>4</sub>GA1/2/3-T\*(D)<sub>Series</sub>

Ozone-proof specifications

How to order Item (F)Option"A"can be selected.

\*\* - Voltage - (

CE marking specifications

Reduced wiring manifolds; Body piping

ST

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

Coolant proof specifications

P4 Series

Pneumatic cylinders

Hand/ Chuck

Related products

Cylinder Switch

Pneumatic actuator Vacuum components Pneumatic valves

Tube

Gas generator Fluid control components Electric actuator

Precautions for model No. selection

\*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 Consult with CKD when using a

vacuum with the external pilot (K). \*9 Surgeless "S" and low excergic/energy circuit "E" cannot be selected together

circuit "E" cannot be selected together. \*10 Surgeless specifications. \*11 PA filter is built into the port as standard.

 \*12 Specify the spacer mounting position/quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 176 to 177 for details.

171

CKD



Catalog No.CB-023SA

Two 3-port valves integrated

3(R-)

5(R-)

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

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

JIS symbol

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## Reduced wiring manifolds Base piping Direct mount/DIN rail mount M3GB1, 2-T\*(D) Series M4GB1, 2, 3-T\*(D) Series • Cylinder bore size:ø20 to ø100

#### Manifold common specifications

#### **Electrical specifications**

ltem		Description	lt				
Manifold		Reduced wiring integrated base	П				
Mounting r	nethod	Direct mount/DIN Rail mount	R				
Air supply	and exhaust	Common supply/common exhaust	Vol				
method		(With internal exhaust check valve)	rrent				
Pilot exhaust	Internal pilot	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)	Holding CL				
method	External pilot	Main valve/pilot valve individual exhaust	mnfinn				
Piping dire	ction	Side direction of base	LOURI				
Valve and	operation	Pilot operated soft spool valve	POWP				
Working flu	Jid	Compressed air	Т				
Max. working	g pressureMPa	0.7	Su				
Min. working	pressureMPa	0.2 (*3 )					
Proof pres	sure MPa	1.05	*1:				
Ambient te	mperature°C	-5 to 55 (no freezing)					
Fluid temp	erature °C	5 to 55	*2				
Manual ov	erride	Non-locking/locking common (standard)	*3:				
Lubrication	n (*1)	Not required					
Degree of p	protection (*2)	Dust-proof	*4:				
Vibration re	sistancem/s <sup>2</sup>	50 or less					
Shock resi	stance m/s <sup>2</sup>	300or less	*5:				
Atmosphe	re	Cannot be used in corrosive gas environments					

ltem			Descr	iption		
Poto	d voltaga V	T1[], T3	0_, T5_	T6G1, T8		
Rale	u voltage v	24 DC	12 DC	24 DC		
Voltage fli	uctuation range (*4)	±1(	0%	+10%, -5%		
rrent	Standard	0.017	0.034	0.017		
Holding curr A	With low exoergic/ energy saving circuit	<sub>uit</sub> 0.005 0.010		0.005		
Ption H	Standard		0.	.4		
Power consun W	With low exoergic/ energy saving circuit		0.	.1		
Ther	mal class		E	3		
Surge s	uppressor (*5)	Zener diode				
Indic	ator		LED			

CAD

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

- Avoid water drops or oil, etc., during use. 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.
- Since voltage drops for T6G1, T8 and (serial transmission type) due to the internal circuit, pay attention to the voltage fluctuation range.
- If low exoergic/energy circuit or surgeless types are selected then there will be a diode.

#### Common specifications

ltem		M3GB1/M4GB1	M3GB2/M4GB2	M3GB3/M4GB3		
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		
	2-port P/R1/R	Rc1/8	Rc1/4	Rc3/8		

\*6 Available as made to order.

1∟,  30∟,  5											
ltom		M3GB1/M4GB1		M3GB2/	M4GB2	M3GB3/M4GB3					
nem		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	16 stations					
	External pilot	12 stations									
Manifold base weight	Standard	43n+335	45n+348	80n+398	82n+431	124n+548	126n+582				
Calculation formula(n:Station No.)g	External pilot	44n+330	46n+344	88n+433	90n+467	129n+577	131n+606				

#### T6G1

'T

b Ì

1001						
ltom		M3GB1/M4GB1	M3GB2/M4GB2	M3GB3/M4GB3		
item		DIN rail mount DIN rail mount		DIN rail mount		
Max. station No.	Standard (Internal pilot)	16 stations	16 stations	16 stations		
	External pilot	12 stations				
Manifold base weight	Standard	45n+495	82n+578	126n+729		
Calculation formula(n:Station No.)g	External pilot	46n+491	90n+615	131n+753		

0									
tem		M3GB1/M4GB1		M3GB2	/M4GB2	M3GB3/M4GB3			
		Direct mount	DIN rail mount	Direct mount	DIN rail mount	Direct mount	DIN rail mount		
vlax. station No.	Standard (Internal pilot)	20 stations	16 stations	20 stations	16 stations	16 stations			
	External pilot	12 stations							
lanifold base weight	Standard	46n+305	49n+332	83n+318	86n+350	128n+384	132n+416		
Calculation formula(n:Station No.)g	External pilot	48n+312	51n+339	91n+336	94n+368	146n+417	150n+449		

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.

#### Ê≊[[, 5(R.) (A side valve:NO, B side valve:NC) È≊t ĭ∎ 5(R<sub>1</sub>) (A side valve:NO, B side valve:NO) °a T\_]a Clean air Ë⊠[][] <u>,</u>a 5(R<sub>1</sub>) 5-port valve 2-position single Speed 4 2 (A) (B) а $\overline{}$ 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) Fitting 2-position double 4 2 (A) (B) b Auxiliary ð 5 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position Silencer All ports closed (A) (B)

Motor spe Motorless pecifications

Pneumatic auxiliary components

ð Tube

ð

a N ⊟

ТТТ 5 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position A/B/R connection

4 2 (A) (B)

т (R1) (P) (R2)

5 1 3 (R1) (P) (R2) 3-position P/A/B connection (A) (B)

P4 Series

umatic

Pne

Hand/ Chuck

Related

Cylinder Switch

Pneumatic actuator

components

Vacuum

# M<sub>4</sub><sup>3</sup>GB1/2/3-T\*(D) Series

Reduced wiring manifolds; Base piping

### Flow characteristics

	0-1		P→.	A/B	A/B→R1/R2		
Model No.	50	lenoid position	C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b	
	Two 3-port valves integrated		0.86	0.35	1.1 (0.67)	0.22 (0.23)	çPn
M3GB1	2-position	1	1.1	0.22	1.2 (0.70)	0.20 (0.10)	lin
MISCHI		All ports closed	0.98	0.22	1.1 -	0.24 -	de
M4GB1	3-position	ABR connection	0.97	0.35	1.3 (0.68)	0.22 (0.24)	rs tic
		PAB connection	1.1	0.38	1.1 -	0.21 -	
	Two 3-port valves integrated		1.7	0.44	2.1 (1.6)	0.32 (0.30)	유표 8
MACES	2-position		2.4	0.34	2.7 (1.7)	0.24 (0.31)	nuc
WI3GB2		All ports closed	2.2	0.34	2.4 -	0.29 -	
M4GB2	3-position	ABR connection	2.2	0.34	2.8 (1.8)	0.24 (0.27)	
	·	PAB connection	2.4	0.29	2.4 -	0.29 -	PR
	2-position	1	3.5	0.34	3.8 (2.6)	0.11 (0.27)	odu g
		All ports closed	3.1	0.33	3.3 -	0.22 -	Lec
M4GB3	3-position	ABR connection	3.0	0.30	3.8 (2.7)	0.11 (0.22)	v s
	·	PAB connection	3.6	0.36	3.3 -	0.28 -	
*1: Effective cross	-sectional a	rea S and sonic conductand	ce C are converted as $S \approx 5.0 \times C$ .	*2: Values in ( ) are with the $\epsilon$	exhaust check valve.	·	Switch

### Wiring specifications



### Serial transmission slave unit specifications

Refer to the CKD website (https://www.ckd.co.jp/en/).

ltem		T6G1
Network name	Э	CC-Link ver1.10
Deverence	Unit side	24 VDC ±10%
Power supply voltage	Valve side	24 VDC +10% -5%
Current execumption	Unit side	100 mA or less (when all output points are ON)
Current consumption	Valve side	15 mA or less (when all output points are off)
No. of output	points	16 points
Occupied num	nber	1Station
Operation dis	olay	LED (power supply and communication status)

ltem		T8G1	T8GP1	T8P1	T8PP1	T8EC1	T8ECP1	T8EN1	T8ENP1	T8D1	T8DP1	T8EB1	T8EBP1	T8EP1	T8EPP1	
1	lem	T8G2   T8GP2   T8P2   T8PP2   T8EC2   T8ECP2   T8EN2   T8ENP2   T8D2   T8		T8DP2	T8EB2	T8EBP2	T8EP2	T8EPP2								
Communicati	on protocol	CC-Link	ver. 1.10	PROFIBU	S-DP (V0)	Ethe	rCAT	Ether	Net/IP	Devi	ceNet	CC-Link	IEF Basic	PROF	INET	
Power supply	Unit side				24 VD0	C ±10%				11 DC	to25V		24 VDC ±10%			
voltage	Valve side		24 VDC+10%, -5%													
	Unit side	60 mA or le	ss (when all	60 mA or le	ss (when all	110 mA or less (when all		120 mA or le	ess (when all	70 mA or less (when all		130 mA or less (when all		130 mA or less (when all		
Current		output poir	nts are ON)	output poir	t points are ON) output points		nts are ON)	output poir	nts are ON)	output points are ON)		output points are ON)		output points are ON)		
consumption		T8_1:15 mA or less														
consumption	Valve side		T822:20 mA or less							(when all autout points are ON) Load autrent is not included						
		(when all output points are ON) Load current is not included (when all output points are ON) Load current is not included							Included							
No. of output	points						T8_1:1	16 points	T8_2:32	2 points						
Occupied nur	nber	1 station					ation									
Operation dis	play					LE	D (Power :	supply and	l communi	unication status)						
Output		NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	NPN output	PNP output	ut NPN output PNP output NPN output PNP output NPN output PNP o					PNP output	

Pneumatic auxiliary components Fitting Auxiliary valve Silencer Tube

Vacuum components Pneumatic valves

Clean

**CKD** 

Motor

# M4GB1/2/3-T\*(D) Series



spe

**Gas generator** 

Pneumatic actuator

Vacuum components

<sup>></sup>neumatic valves

Pneumatic auxiliary components

			A	M	ode	IN	0.
			31	22	3	32	33
			3GE	3GE	4GE	4GE	4GE
Reduce	ed wiring (lamp and surge suppress	sor provided as sta	nda	rd)	12/2	24 V	DC
T10	Common terminal block(M3 thread)	Left-sided specifications	٠			٠	
T10R		Right-sided specifications	•		•		
T11R	Common terminal block (clamping)	Right-sided specifications	•	•	•	•	•
T30	DSub-connector	Left-sided specifications	•	•	•	•	
T30R T50	20-pin flat cable connector	Right-sided specifications	•	•	•	•	•
T50R	(with power supply terminal)	Right-sided specifications	٠	٠	٠	٠	
T51 T51R	20-pin flat cable connector (without power supply terminal)	Left-sided specifications	•		•	•	•
T52	10-pin flat cable connector	Left-sided specifications	•	•	•	•	
T52R	(without power supply terminal)	Right-sided specifications	•	•	•	•	
T53 T53R	26-pin flat cable connector (without power supply terminal)	Left-sided specifications Right-sided specifications	•	•	•	•	•
Serial	transmission (lamp/surge suppre	ssor provided as	star	ndar	d) 2	4 V	DC
T6G1	CC-Link	NPN 16 points					
T8G1		NPN 16 points	•	•	•	•	•
18G2 T8GP1	CC-Link	PNP 16 points		•	•		
T8GP2	·	PNP 32 points	•	•	•	•	•
T8P1		NPN 16 points	٠	٠	•	٠	
T8P2	PROFIBUS-DP	NPN 32 points					
T8PP2		PNP 32 points	-		-		
T8EC1		NPN 16 points	Ť	•	•	•	•
T8EC2	EtherCAT	NPN 32 points	٠	٠	٠	٠	
T8ECP1		PNP 16 points	•		•	•	•
T8EN1		NPN 16 points	-	-	•	-	•
T8EN2	EthorNot/ID	NPN 32 points	•	•	•	•	•
T8ENP1		PNP 16 points	٠	•	•	٠	
T8ENP2		PNP 32 points	•		•		
T8D2		NPN 16 points	-	-	•	-	•
T8DP1	DeviceNet	PNP 16 points	•	•	•	•	•
T8DP2		PNP 32 points	•	•	•	•	•
T8EB1		NPN 16 points					
T8EBP1	CC-Link IEF Basic	PNP 16 points	-	-	•	-	•
T8EBP2		PNP 32 points	۲	٠	٠	۲	٠
T8EP1		NPN 16 points	•	•	•	•	
18EP2	PROFINET	NPN 32 points				-	
T8EPP2		PNP 32 points	•	•	•	•	•
A2N	Without lead wire (without socket)	With surge suppressor and indicator lamp	٠				
Term	inal/connector pin array						
Blank	Standard wiring	(*5)	•	•	•	•	•
W 1	Double wiring (with single spare wiring)	(*5)		•	•		•
Ontic	on	( 3)	-		-	-	
Blank	Manual override of non-locking/locking	common	•	•		•	•
М	Non-locking manual override		٠	٠	٠	٠	
Н	With exhaust check valve	(*7)	•	•		•	
Δ	External pliot	(*8)					
S	Surgeless	(*9)	•	•	•	•	•
E	Low exoergic/energy circuit	(*9) (*10)	٠	٠	•	٠	٠
F 74	Port A/B filter built in	(*11)					
Z3	Exhaust spacer	(*12)	•	•	•	•	•
Z6	Spacer pilot check valve	(*12)		Ĺ	•		Ĺ
G Mour	nt type						
Blank	Direct mount		٠			٠	
D	DIN rail mount					•	
Statie	on No.						
2	2 stations						
to 20	to Refer to page 172 for the max station r	umber per modol					
	The max. station						
Volta							
4	12 VDC						

### M4GB1/2/3-T\*(D) Series

Ozone-proof specifications

How to order Item (F)

\*\* - Voltage - (

Option"A"can be selected.

CE marking specifications

Reduced wiring manifolds; Base piping

ST

compatible even if the model No. is not indicated with "ST".

· Standard voltage of 24 VDC or less is CE marking-

Coolant proof specifications

P4 Series

Hand/ Chuck

Pneumatic cylinders **Pneumatic actuator** Related products Cylinder Switch Vacuum components Pneumatic valves

Tube

### A Precautions for model No. selection

\*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 Spare wiring (A type socket assembly) is included on the cap side for single types. A holder for retaining the socket assembly is included for single unit valves (A2N). Refer to page 180 for details. The 3-position all ports closed and
- \*7 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 Consult with CKD when using a vacuum with the external pilot (K).
- Surgeless "S" and low excergic/energy circuit \*9 "E" cannot be selected together.
- \*10 Surgeless specifications. \*11
- PA filter is built into the port as standard. \*12 Specify the spacer mounting position/quantity in manifold specifications sheet. Stacking of spacers is not possible. Combination with the masking plate is not supported. Refer to pages 176 to 177 for details.

Gas generator Fluid control components Electric actuator



## M4GA1 to 3 / M4GB1 to 3 Series

Related products

### Related products



Pneumatic

**Pneumatic actuator** 



### **Specifications**

Model	$P \rightarrow$	A/B	A/B	Mainht a	
No.	C(dm³/(s⋅bar))	b	C(dm³/(s⋅bar))	b	weight g
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

r supply spacer mo	- GWS10 A - P4				Val	ve mo	odel	NO.	
		Code	Description	4GA1	4GB1	4GA2	4GB2	4GA3	4GB3
		Air s	supply spacer model No.						
A Air supply space	er model No.	1	For 4G1						
		2	For 4G2						
		3	For 4G3						
		B Por	t size						
	B Port size	Blank	M5(4G1), Rc1/8(4G2), Rc1/4(4G3)						
	*1	GWS4	ø4 push-in fitting		C				
	The port size of "•" is a st	andard GWS6	ø6 push-in fitting				)		
	product and equivalent	to P4 GWS8	ø8 push-in fitting					(	5
	specifications. It is not neces	sary to 06 N	NPT1/8						
	add "-P4" to the model No.	08 N	NPT1/4						
		06G	G1/8						
		08G	G1/4						
		C Mou	nting screw						
	C Mounting s	crew Blank							
		А	4GA3 A/B port: Rc1/4 thread					(*2)	

Attachment: Mounting screw 2 (\*2), PRCheck valve 2, Body gasket 1

### A Precautions for model No. selection

\*2 Specify "A" only when using with 4GA3 \* 9R-08 for base mounting. (The valve mounting screw length differs.)

\*3 Specify the air supply spacer mounting position and quantity in manifold specifications sheets of each catalog.

\*4 Combination with the masking plate is not supported.

Tube

# M4GA1 to 3/M4GB1 to 3 Series

Related products

### **Related products**

### Exhaust spacer



Specifications										
Model	P  ightarrow	A/B	A/B							
No.	C(dm³/(s⋅bar))	b	C(dm³/(s⋅bar))	b	weight g					
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					

Note1: Values are when a valve is mounted.

Note2: Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

How to order discrete units

Exhaust spacer						Valv	/e m	odel	No	
Exhaust spacer model No.								Juei	NO.	
4G 3 R-R-G	SWS10	A)-P4			A1	B1	A2	B2	A3	B3
			Code	Description	4 0	4 6	4 0	4 6	4G	4 0
A in a want to an a set of the se	l No.	I	\land Exha	ust spacer model No.						
Air supply spacer model No.			1	For 4G1						
			2	For 4G2						
			3	For 4G3						
		I	B Port	size						
B Port size			Blank	M5(4G1), Rc1/8(4G2), Rc1/4(4G3)						
	*1		GWS4	ø4 push-in fitting		C				
	The port size of "•" is a standard		GWS6	ø6 push-in fitting						
product an specification		and equivalent to P4 ons. It is not necessary	GWS8	ø8 push-in fitting					C	
			06 N	NPT1/8						
	to add "-P4"	to the model No.	06G	G1/8						
			08G	G1/4						
			C Mour	nting screw						
		C Mounting screw								
			A	4GA3 A/B port: Rc1/4 thread					• (*2)	
			is r	not available.						

Attachment: 2 mounting screws (\*2), 2 PR check valves, 1 body gasket

### A Precautions for model No. selection

\*2 Specify "A" only when using with 4GA3\*9R-08 for base mounting. (The valve mounting screw length differs.)

\*3 Specify the exhaust spacer mounting position and quantity in manifold specifications sheets of each catalog.

\*4 Combination with the masking plate is not supported.

P4 Series cylinders

Chuck

## M4GA1 to 3 /M4GB1 to 3 Series

Related products

### Related products

P4 Series

> Pneumatic cvlinders

Hand/ Chuck

Related

nder tch

**Pneumatic actuator** 

Vacuum components

Pneumatic valves

Spacer pilot check valve



### JIS symbol



Note: Using a cylinder with a large bore size (more than ø50 as a guide) with little exhaust restriction (eg, no speed controller, no silencer) may lead to a decrease in intermediate stop accuracy and stopping error. Please be careful.

### Specifications

opoolindationo							
ltem		4G1R-PC					
Working fluid		Compressed air					
Max. working pressure	MPa	0.7					
Min. working pressure	MPa	0.2					
Proof pressure	MPa	1.05					
Effective cross-sectional area	mm²	1.6(With solenoid valve)					
Ambient temperature	°C	-5 to 55(no freezing)					
Working fluid temperature	°C	5 to 55					
Lubrication	(Note1)	Not required					
Atmosphere		Cannot be used in corrosive gas environment.					
Weight	g	22					

\*1: Use turbine oil Class 1 ISO VG32 for lubrication. Note that excessive lubricant may cause unstable operation.

### Discrete model No.



### A Precautions for model No. selection

- \*1: Specify the spacer positions in the manifold specifications sheet.
- \*2: Stacking of spacers is not possible.
- \*3: A spacer cannot be combined with a masking plate.
- \*4: The spacer pilot check valve can be mounted only when the piping method is base piping.

Tube

# M4GA1 to 3 / M4GB1 to 3 Series

Related products

### **Related products**

Pilot check valve



#### JIS symbol (Position locking)





Example of leak comparison All ports closed (solenoid) valve 10 cm<sup>3</sup>/min or less Pilot check valve (4G2R-PCS) 0 to 0.3cm<sup>3</sup>/min





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.



- \*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

specification

specific

Silencer

Tube

Gas generator Fluid control components Electric actuato

# M4GA1 to 3 /M4GB1 to 3 Series

Related products

### Related products

Double wiring (single spare wiring)

For manifolds



#### Discrete valve (2-position single)



A holder for retaining the socket assembly is included. (Not included for A type sockets.)

This can be used to hold the socket assembly no longer required when changing the valve from a double solenoid to a single solenoid.

Spare wiring (holder and A type socket assembly) is included on the cap side for single solenoid valves. When changing the valve from a single solenoid to a double solenoid, A type socket assembly is not required separately, so changing the valve is easy.



\* Refer to How to order for each series for details about model numbers.

Pneumatic actuator

Pnet

Hand/ Chuck

Related

### **Related parts**



#### Female thread adapter kit

Model	Kit model No.	Set parts
3GA1/4GA1	4G1R-FML-ADAPTOR-KIT-Bore size - Option -P4	Female thread adaptor, gasket, mounting screw 2
3GA2/4GA2	4G2R-FML-ADAPTOR-KIT-Bore size - Option -P4	Female thread adaptor, gasket, mounting screw 2
3GA3/4GA3	4G3R-FML-ADAPTOR-KIT-Bore size - Option - P4	Female thread adaptor, gasket, mounting screw 2, Body mounting screw 2

Specify the option "F" when using the port A/B filter integrated type.

### M4GA1 to 3 /M4GB1 to 3 Series

Related parts

### Related parts



O indicates made to order.

**Pneumatic actuator** 

Vacuum components

Pneumatic valves

# M4GA1 to 3 /M4GB1 to 3 Series

Related parts

**Pneumatic actuator** 

Vacuum components Pneumatic valves





\*3: The DIN rail kit needs to be prepared separately

CKD
# M4GA1 to 3 / M4GB1 to 3 Series

Related parts



Hand/ Pneumatic Chuck cylinders

Cylinder Related Switch products

**Pneumatic actuator** 

Pneumatic valves Vacuum components

Speed Clean air controller components

Auxiliary Fitting valve

## Related parts

(6) Manifold sub-plate kit individual wiring

M4GB2/M4GB3 Sub-plate

M4GB2 R-CL4	4(	2 <b>-</b> P4					A Mo	del No.
		Ī					32	33
			Code	Description	1		14GE	14GE
			B Port s	size			2	2
B	Port size		Port	4(A), 2(B) port		*1	Port P (1) = Rc1/4	/R1/R2 (2) = Rc3/8
	*1 The port size	e of "• is a	C4	ø4 push-in fitting		0	1	
	standard p	roduct and	C6	ø6 push-in fitting		0	1	
	It is not necessa	ary to add "-P4"	C8	ø8 push-in fitting		0	1	2
	to the model No	).	C10	ø10 push-in fitting	(*2)	0		2
			06	Rc1/8		•	1	
			08	Rc1/4		•		2
			Port	4(A), 2(B) port		*1	Port P (3)=NPT1/4	/R1/R2 (4)=NPT3/8
			06 N	NPT1/8		•	3	
			08 N	NPT1/4	(*2)	•		4
			Port	4(A), 2(B) port		*1	Port P (5) =	/R1/R2 G1/4
			C4G	ø4 push-in fitting		0	5	
			C6G	ø6 push-in fitting		0	5	
			C8G	ø8 push-in fitting		0	5	
			06G	G1/8		•	5	
			C Option	1				
	Opti	on 	Blank					
			к	External pilot				
			F	Port A/B filter built in		(*3)		
		Station No.	D Statio	n No.				
			2	2 stations				
			to	to				
			20	Refer to the specifications page for t	he max. station nu	ımber.		
			^2: Availab	le as made to order.				

\*3: PA filter is built into the port as standard.

\*4: Direct mount and DIN rail mount are common.

\*5: The DIN rail kit needs to be prepared separately.

# M4GA1 to 3 /M4GB1 to 3 Series

Related parts

#### Related parts



\*2: The DIN rail kit needs to be prepared separately.

CKD

# M4GA1 to 3/M4GB1 to 3 series

Related parts

#### Related parts P4 Series (7) Manifold sub-plate kit reduced wiring A Model No. Pneumatic cvlinders M4GB1 M4GB2 M4GB3 M4GB-sub-plate Code Description M4GB1)R-(C4)2 -P4 **T10** Hand/ Chuck A Model No. M4GB1 Metal base 4G1 Size Base piping M4GB2 Metal base 4G2 Size Base piping Related B Port size M4GB3 Metal base 4G3 Size Base piping A Model No. B Port size Port P/R1/R2 \*1 \*1 ①= Rc1/8②=Rc1/4③=Rc3/8 Port 4(A), 2(B) port The port size of "O" is a standard Ο C4 ø4 push-in fitting 1 2 product and equivalent to P4 C6 ø6 push-in fitting Ο 1 2 specifications. It is not necessary **C**8 ø8 push-in fitting Ο 2 3 to add "-P4" to the model No. C10 ø10 push-in fitting 0 3 M5 M5 • (1) 06 Rc1/8 • 2 Rc1/4 • 3 08 Port P/R1/R2 4(A), 2(B) port \*1 Port @NPT=1/850NPT=1/460NPT=3/8 M5N M5 (4) NPT1/8 (5) 06 N 08 N NPT1/4 (6) Port P/R1/R2 Port \*1 4(A), 2(B) port ①=G1/8⑧=G1/4 $\overline{\mathcal{T}}$ C4G ø4 push-in fitting 0 8 Clean air 0 1 8 C6G ø6 push-in fitting 0 C8G ø8 push-in fitting 8) 0 CXG Push-in fitting mix 1 8 Speed M5G M5 T 06G G1/8 (8) 00 Discrete valve for integrated base Auxiliary Fitting C Reduced wiring connection C Reduced wiring connection T10 Left-sided spect Common terminal block (M3 thread) T10R Right-sided spece T11 Left-sided specs Common terminal block (clamping) T11R Right-sided spece T30 Left-sided specs DSub-connector Silencer **T30**R Right-sided spece T50 Left-sided specs 20-pin flat cable connector (with power supply terminal) **T50**R Right-sided spece T51 Left-sided specs Tube 20-pin flat cable connector (without power supply T51R terminal) Right-sided specs T52 Left-sided specs 10-pin flat cable connector (without power supply T52R terminal) Right-sided spece T53 Left-sided spect 26-pin flat cable connector (without power supply terminal) **T53R** Right-sided spece 20-pin flat cable connector (without power supply T56 Left-sided specs terminal) Serial transmission slave unit OPP3 connection **T**81 For serial transmission slave (adapter) station OPP7 connection(16 points output) Left-sided specs **T82** For serial transmission slave (adapter) station OPP7 connection (32 points output) Left-sided specs D Option **D** Option Blank No option Κ External pilot \*2 F Port A/B filter built in \*2: A filter is built into port P as standard. E Mount type \*3 \*3: For T8\*, select either mount type. Mount type Motor Blank only for items other than T8\*. Blank Direct mount \*4: The DIN rail kit needs to be prepared D DIN rail mount \*4 separately. F Station No. Motorless E Station 2 2 stations No. to to 20 Refer to the specifications page for the max. station number.

Fluid control components

Electric actuator

186

Pneumatic actuator

Vacuum components

<sup>oneumatic valves</sup>

P4 Series

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# M4GA1 to 3/M4GB1 to 3 series

## How to fill out metal base M4G Series manifold specifications sheet

Manifold model No. (example)

M 4		G <sup>A</sup> B1		8		0F	<b>\-</b>		C	Χ	] -		T	3(	0		r ·			-		9	-		3	-	Ρ	4
Solenoid v	alves	S	olenoio	d positi	on			F	Port	size	e	Ele co	ecti nne	rica ectio	l ons		Term pin ai	inal c rray r	conne metho	ector od	Sta No	atio ).	n	Volt	age			
Precautions for fitting mix CX	Solen	oid valve model No.	Fittir 	ng CX	1	2	3 4	5	6	7	8	9	lr 10	nstall	atio	1 pos	sition	15	16	17	18	10	20	21	22	23	24	luantity
	4G	в 1 1 9R- сх	<b>C</b> 6	X.	Ō	0	, 4			ŕ	0	5	10		12	15	14	15	10	17	10	13	20	21		25	24	2
The port $\Lambda/B$ fitting can be selected	4G i	B 1 1 9R- C6					50	)																	$\square$			2
freely by indicating "CX" in the port	4G	B129R-C6			ŧ۰.	φ		0	0	$\vdash$																		2
size area	46	B1509R.CX	C6	C4	۲À	 اتحاد		l	<u> </u>	0	0	$\left  \right $	_															2
	46	11000.00	  :		ŧ.		ale A		-																			
Selectable cartridge fittings	40				H.	it.	ש ייייריי		Ļ	-			_															$\square$
4G1 C4, C6, x (plug)	362	A;IL_;9K-L	÷.	•••••••	I	IL.,	+	-	$\vdash$	$\vdash$		$\left  \right $	_								-							$\square$
4G2 C4, C6, C8, × (plug)	Maskin	<b>A_1_19K-1</b> g plate		II in "CX	" Whe	en Hing	-			-			_															
4G3 C8, C10, × (plug)	4G1 Maskin	g plate		ianging mbinati		ung	-		-	-			_															$\vdash$
*Port A/B fitting mix is not available	4G1	IR-MP(D)	٠				:			-		0																1
for body piping.							_	_																				$\square$
																												Ц
Base piping M4GB*10 How	in in		SS						Bla	anki	ing p	olug										-	Thre	ade	d plu	ıg		
to use as a 3-port valve	ng r		l part				ь		Τ		Т		G		6-P					$\vdash$		46		M66				$\neg$
attaching a plug cartridge on one	ounti	multiple of 12.5.	ndec				-0				╀				<u> </u>					⊢		Duch		ing to				-
side of port A/B. Indicate "X" in the	ž		Incl	C	able	with D	)-sub	-coni	necto	or		4	GR	-CA	BLE	-D0[						(attach	ed as s	standar	ibe rei .:d) 🗹 Nc	ntove ot requi	r red (ch	neck)
fitting CX column.	* A re	eference circi tt page.	uit dia	agram	ı for	the a	abov	e m	anif	old	(exa	ampl	e) i	is s	hov	vn c	on tl	he		Pla (sta	ce a andar	checł d acc	t here	⊐⊂ e if th ry) is	e tube not re	e reme equire	over :d.	]
NC B (Normally Closed)	From	the manifold	spec	ificati	ons	for ea	ach n	node	el, s	elec	ct ar	nd fill	ou	it the	e ap	opro	pria	ate f	form	۰ ۱.		M40 hav	GB1 /e a	*OF are		3 do ova	esr Ito	not ool
NO (Normally Open) A	•	Individual wir	ing	M4G	<sup>A</sup> B1 (	Page	190)	), M4	4G <sup>A</sup>	2(F	Page	9 191	), N	M4G	S <sup>A</sup> B3	(Pa	age	192	2)			atta	che	d.				
For female thread specifications,	•	Reduced wiri	ng block (	T1*) D.	sub-	connect	or (T3	0) •	M4G	<b>3</b> ≜1	(Pa	ne 10	33)	M4	GA	2(Pa	nde 1	194'	) M	4G <sup>4</sup>	3(F	Page	10	5)				

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.

Flat cable connector (T5\*)

Serial transmission (T6G1)

Serial transmission (T8\*)

- 'age 193), M4G B<sup>2</sup>(Page 194), M40
  - : M4G<sup>A</sup><sub>B</sub>1 (Page 196), M4G<sup>A</sup><sub>B</sub>2(Page 197), M4G<sup>A</sup><sub>B</sub>3(Page 198)
  - : M4G  $^{\rm A}_{\rm B}1$  (Page 199), M4G  $^{\rm A}_{\rm B}2$  (Page 200), M4G  $^{\rm A}_{\rm B}3$  (Page 201)
  - : M4G<sup>A</sup><sub>B</sub>1 (Page 202), M4G<sup>A</sup><sub>B</sub>2(Page 203), M4G<sup>A</sup><sub>B</sub>3(Page 204)

Tube

# M4GA1 to 3/M4GB1 to 3 series

## 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.



\* 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

(1) Spare wires are provided on the masking plate for the reduced wiring manifold...(Refer to page 180)

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.

Spare wiring for the masking plate is provided in the manifold specifications sheet (a), (b).

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.

CKD

specification

specifi

## M4G1 individual wiring



P4 Series

Silencer

Tube

M4G2 individu	al wiring				P4 Series
M4G <sup>2</sup> Manif	old specif	fications s	heet	Date issued /	Pna cy
	on oboon			Company	linde
Contact	Quantity	set(s) De	very date /	Contact	ns rs
Slip No.		Order No.		Order No.	Hanc Chuc
Manifold model No.					* atic
M G <sup>A</sup> <sub>B</sub> 2	0R-				-P4
Solenoid valves Sol	lenoid position	Port size Electri	al Other options ions	Mount type Station No. Ve	oltage
Solenoid valve model No. Fittir	ng CX	5 6 7 8 9	Valve installation positio	on 16 17 18 19 20 21 25	23 24 nautity
4G 2 9R					
					Vaci
40, 2, 38-, -					
4G 2 9R					com
4G 2: 9R					pone
4G 2 9R					ints
3G 2 9R					Pne
3G 2 9R					uma
Masking plate					atic
Air supply spacer 4G2R-P-					valve
Exhaust spacer					<del>نن</del>
402K-K					Clean
					ents <b>D</b>
		Planking alug			
Write an integer multiple of 12.5.	GWP 4-B	GWP 6-B	GWP 8-	B 4G2R-00	SP   Tee

\* Can only be selected for B types.

## M4G3 individual wiring



P4 Series

**Pneumatic actuator** 

# Pneumatic valves Vacuum components

Tube

<sup>2</sup> CKD

## M4G1 reduced wiring



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

	1		1 1						J.			5										,	. U			J	
(	Connecto	r pin No.												I	nsta	allat	ion	posi	tion								
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 (C	OM)																								
	COM																										

P4 Series

Silencer

Tube

Motor

Motor

# M4G2 reduced wiring

umati	М4	G 82-T	1, 3	3 Ma	an	if	ol	d	S	pe	Cİ	fic	ca	ti	01	าร	5 5	sh	<b>e</b> e	et		ate	ISSL	, ea		1	/			
Pne	Con	taat			0					a a tí a	\ \			Joliy	lon	, dat	to	,	,		<u> </u>	om	oany	/						
stua and/	Slip				Qua	anuty	ý		:	sei(s	)	Irdo			/ery	uai		/			<u> </u>	onta								
C aC	Siip	ino.	-									Jue									<u> </u>	rae	r inc							
ted			o.		~ -						;		- : : -				:			- : : -						- 1	:	:		
Rela	M	GB	2		OF	<b>-</b> >					 							   											·P	4
بة P	Sole	noid valves	Soleno	id positi	on		F	ort	size	e	Reduce	ed wiri tion	ng Te	ermina Arra	al/conr ay me	nector ethod	pin d	Opti	on	Ν	lount	type		S N	tatio o.	n	Volt	age		
Syling	Solenoi	d valve model No.	. Fittir	ng CX B		2	3	4	5	6	7	8	9	10	1	Valv	/e ins 12	tallati 13	on pos	ition 15	16	17	18	19	20	21	22	23	24	Quantity
lts	4G	2 9R																-			-							-		
onei	4G	2 9R																												
com	4G	2 9R																												
mun	4G	2 9R													1															
Vac	4G	2 9R													1															
alves	3G 2	9R-1																												
ic va	3G 2	9R-1													1															
umal	Masking	plate													+															
Pne	Masking	plate	1									<u> </u>			╈															
air	Air supp	y spacer													+															
Clean	Exhaust	spacer													+															
ents	4021	· <b>N-</b>													+															
Speed	D		-1 -2					<u> </u>				l Blank	ting p	olug										<u> </u>	I	Th	reade	ed plu	ig Ig	
du	untin	L2= :	clude rtss		GWF	Р 4-E	3				(	GWP	6-B						GW	P 8-B	;					4G2F	R-06P			
V CC	Mo	multiple of 12.5.	pul a		Cab	ole w	ith D	-sub	-con	necto	r				40	GR-C	ABL	E-D	0											
liar	* Can o	nly be selected	for B type	es.																										
xiliary alve	• Wiri	ng specification	s sheet (l	Not reau	ired fo	or sta	andai	d wi	rina/	doubl	e wiri	na. C	Comp	lete	thes	se sp	becif	icatio	ons w	nen s	pecif	vina	the v	virinc	orde	er and	d addi	tiona	l cabl	es)
tic 8		Connector	pin No.		1									Ins	stall	atior	n pc	sitio	n			J <u>9</u>								,
Ima	T10/T10	R T11/T11R	T30/T:	30R	1	2	3	4	5	6 7	8	9	10	11	12	13	14	15	16 1	7 18	19	20	21	22	23 2	24				
sile	2	2	I	14																										
e e	3	3 4	2	15	+		-	+	_		+-				_			_	_	_	-	-			_					
Tuk	5	5	3	40																										
<u>o</u>	6 7	7	4	10							_																			
erat	8	8	5	17	+			_																						
gene	10	10	0	18																										
as (	11	11	6	19			-	-			-				_															
S	13	13	7	20							_																			
	14	14	8	20																										
oneni		16	0	21			_	_																						
component	16 COM	17	u					+																	-					
control component	16 COM COM	17 18	9	22				-										- 1	1	1					-					
Fluid control componem	16 COM COM	17 18 19 20	9	22 23				+						-		$\neg$		-+				-								
ator Fluid control component	16 COM COM	17 18 19 20 21 22	9 10 11	22 23																										
ctuator Fluid control component Motor	16 COM COM	17           18           19           20           21           22           23	9 10 11 12	22 23 24																										
ric actuator Fluid control component ss Motor	16 COM COM	17 18 19 20 21 22 23 23 24 COM	9 10 11 12 13 (CO	22 23 24 25 M)																										

P4 Series

M4G 83-T	1, 3	B M	ar	nif	o	d	s	c	ci	fic	ca	tic	on	S	sł	le	et	-	Date	issu	ied		/	/				Pneun cylinc
Contract			0					-+/-)				Dolive	an d	oto		,		-	Com	pany	/							hatic lers
Slip No			Qua	anut	у		S	et(s)		Irdor		Jenve	ary u	ale	,	/		-	Sont									Har
Manifold model No.										nuer	INO.	•						-	Jide									id/
	8		OF	R-																	-		]-			-F	24	Related
Solenoid valves	Solenoi	d positi	ion		F	ort	size	F	Reduce	ed wirir tion	IG T	erminal/ Array	connec meth	tor pin od	Opt	tion		Mour	nt type	;	S	Statio No.	n	Volta	age			s Cyl
Solenoid valve model No.	Fitting	g CX B	1	2	3	4	5	6	7	8	9	10	Va	alve in 12	stallat	ion po	sition	16	17	18	19	20	21	22	23	24	Quantity	linde vitch
4G 3 9R-	~~~		† i											12	10		10	10		10	10	20			20	24		- ÷
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-																												Clea
Exhaust spacer																												in air onents
																												con
																												peed
b L2=	ded			-				В	lanki	ng plu	Jg											Thre	eade	d plu	g	_		Ť.
Write an integer	Inclu parts	0	Cable	with	<b>- 8-В</b> D-su	b-cor	nnect	or	Т		4GF	G R-CAB	LE-D	ю-в	]						40	3K-	980			1		-ittin

	Connecto	or pin No.												Insta	allat	ion	pos	tion								- 1
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																								
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4	4	15																								
5	5	3																								
6	6	16																								
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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		1																							

Pneumatic auxiliary components Silencer Tube



\* 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.

M4G2	redu	ced	l wir	rin	g																										P4 Series
MAG	<u>ب</u> ∠	5 M	lan	if/	٦Ic		n		ci	fi	2	fi		n	2 6	2 h		ot		C	)ate	iss	ued			/	/				0 P
10140	86 - 1 4		an		Л	13	Υ	G	G		50					וכ	IC	σι		C	Com	pan	у								neum
Contact				Qua	antity			s	et(s	)			Del	iver	y da	ite		/		C	Cont	act									atic ers
Slip No.										(	Orde	er No	0.							0	Drde	er No	э.								Han Chu
<ul> <li>Manifold</li> </ul>	model No.																			_											ck d/
M	G <sup>A</sup> 2			0	R-	•				-							, ,			       				-				-	·P	4י	Relate
Solenoid va	alves	Solen	oid posit	ion		Ρ	ort	siz	е	Red con	luced nectio	wiring n	Tern	ninal/c Array	onnec meth	tor pin od	Op	otion		Mou	nt ty	pe		Sta No	ation		Volt	age			d c
Solenoid valve	e model No.	Fitti A	ng CX B	1	2	3	4	5	6	7	8	(	9 1	10	Val	ve in 12	nstalla 13	ation 14	positi 15	on 16	17	18	19	9 2	0	21	22	23	24	Quantity	r Switch
4G 2 9	)R-: :-: :										-	_	_										+	_	_					$\vdash$	Vac
46 2 9	JR-: :-:								-		+	+	_	_					-			-	+	+	+	_				$\vdash$	unn
40 2 3											+	-	_		_				-			-	+	-	-	_				$\vdash$	compo
4G 2 9	)R-:::-:::													-																	onents
3G 2 9	R-																														Pne
3G 2 9	R-[																														umar
Masking plate	S)-																														IC Va
4G2R-MP(	D)-																														Ilves
Air supply space																															Cle
4G2R-R-																															an air oonent
																															s cor
bitur L2=		uded									Blan	iking	ı pluğ	9									$\perp$			Thr	eade	d plu	ıg		Um peed htrolle
Write multipl	e an integer eof12.5.	Incl part		GW	P 4-B						GWF	P 6-E	3					GV	NP 8	в					40	32R	-06P				atic
* Can only be	selected fo	r B type	es.																												auxi Fitting
Wiring specific	ecifications	sheet (l	Not requ	ired	for sta	Indaro	d wir	ring/	doub	le wi	ring	Wir	ing o	ordei	r, Co	mple	ete th	ese	speci	ficatio	ons \	wher	n spe	ecifyi	ng tl	he e	xpan	sion	cable	es)	Aux
TEO/TEOD	Conne	ctor pi	n No.	T -		_	-	0	0	4			-			10	44	Insta	allatio	on po	ositio	on	47	40	40	00	01	00	00	04	iliary alve
1	1 151/151R	1	02/192K	1	55/153	210	1	2	3	4	5	0	/	Ø	9	10	11	12	13	14	GI	01	17	IQ	19	20	21	22	23	24	s /
2	2	2		2																											ilenc
3	3	3		3		-+								-		-	-				-	-+									ent
-	-'	-1		+		-+									-	-	-	-										-			S

Wiring specifications sheet (Not required for stand	ard wiring/double wiringV	Viring order, Complete these	e specifications when specifying	the expansion cables
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	Connect	or pin No.														Insta	allati	on p	osit	on									Ive
T50/T50R	T51/T51R	T52/T52R	T53/1	53R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	ÿŗy
	1	1	1																										S
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	3	3	3																										cer
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	5	5	5																										
	6	6	6																										ube
	7	7	7																										, U
	8	8	8																										
- Power supply	9	9 сом	9																										
D +(COM)Power supply	10	10 сом	10		1																								
1	11		11		1																								
2	12		12																										
3	13		13																										
1	14		14																										
5	15		15																										
6	16		16																										
7	17		17																										
3	18		18																										
9 . Power supply	19 сом		19																										
D +(COM)Power supply	20 сом		20																										
			21																										
			22																										S
			23																										peci
			24																										ficat
			25	COM																									tion
			26	COM																									spi

## M4G3 reduced wiring



\* 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.

Electric actuator Fluid control components

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M4G1 Seria	l tr	ans	mis	sic	on																P4
		I RA	oni	fa	LA	<b>~ ~</b>		: <b>f</b> :	001	lia	20	<u>ah</u>	t	D	ate iss	ued	/	/			
IVI4G B 1-10	G		an		IQ	sp	ec		Ca		ns	Sne	eel		ompar	IV					Pneui cylin
Contact			Quan	tit∨		se	t(s)		• D	eliver	v date	1		C	ontact	. <b>,</b>					<b>Pr</b> natic ders
Slip No.				,				Orde	er No.		,			0	rder N	0					Ch Ch
Manifold model No								_								<u>.</u>					nat und/
	[			סו	1			][	TC	21			[			_ [				D/	
				JR	- i.			j T i		JI		/connect					i "		2	Γ4	Ctu: lated
Solenoid valves	5016		silion			Port	size	3	senai trans	SMISSION	pin	array		ion		Siai	Ion No.	VOIL	age		ator
Solenoid valve model No.	Fittir A	IG CX B	1	2	3	4	1	5	6	7	Valve II 8	9	10 10	11	12	13	14	15	16	Quantity	ylind
4G 1 9R																					her V
4G 1 9R																					'acuu
4G 1 9R																					Im co
4G 1 9R																					ompo
4G 1 9R-																					nents
3G 1 9R																					- Pn
3G 1 9R																					eum
Masking plate							-														atic
Masking plate																					valv
4G1R-MP(D)- Air supply spacer							-										_				/es
4 G1R-P- Exhaust spacer						-	_												_	_	Clea
4G1R-R-       Pilot check valve spacer						_	_												_		n air
4G1R-PC														<u> </u>							onei s
E L2=	ided s		G	ND 4-1			Biar		blug	G						40			g		um; peed trolle
Write an integer	Inclu	Push	n-in fittin	a tube	remov	er (att	ached	as stai	ndard)	Not re	auired (	check th	e box)			40					atic
*Tube remover is not inclu	ded wi	th C8 o	f M4GE	5.		(							,								aux
<ul> <li>Wiring specifications sh</li> </ul>	neet (N	lot requ	iired for	standa	ard wir	ing/do	uble v	viring.	Compl	ete the	se spe	cification	is when	specif	ying the	wiring	order a	and ad	ditional	cables	ry o valv
Connector pin	No.							<b>—</b>			In	stallatio	on posi	ition	1						ary e
T6G1		1			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Sile
		2																			nen
		3																			ts
		4																			Tube
		5																			
		6																			jas
T6G1:CC Link 16 points		7																			gei
		8							_												nera
		9							_			_									atoi
		10	CO	IVI								_									Filli:
		12										_									d con
		13																<u> </u>			trol co
		14					$\square$			+											mpon
		15																			ents
		16																			Elec Mo
		17																			stric stor ication
		18					-	_	_			_		-							spec
		19					-	_	_			_									:uato ptorless ificatio
		20	CO	M																	ns

## M4G2 Serial transmission

syline		- 1					-		-				•••		Co	mpan	у				
0	Contact		•	Quan	ntity		set(s	)		Deli	very	date	/		Co	ontact					
huck	Slip No.							0	rder N	۱o.					Or	der No	Э.				
C	Manifold model No.																				
nors	M G 2			1	٦R	-			• (T)	6G	1						_		- 3	- - F	27
555		Sole	noid nos	ition		Pr	ort size	! \	Serial	transmis	.∎! sion Te	erminal/	! connecto	r Onti	 n		St	ation	Volta	_; ∎	
		Eitting						•	UGIIUI	uunomio	Volu	pin a	array		511		Ň	).	voita	yc	
	Solenoid valve model No.	A	В	1	2	3	4	5	6	;	7	8	9	10	11	12	13	14	15	16	Quantit
	4G 2 9R																				
	4G 2 9R																				
	4G 2 9R																				
	4G 2 9R																				
	4G 2 9R									+								1			$\vdash$
l	2C 2 0D																		+		
	3G 2 9R-									_									-		-
	3G 2 9R Masking plate																				
	4G2R-MP(S)- Masking plate																				
l	4G2R-MP(D)-																				<u> </u>
2112	4G2R-P-																				
	4G2R-R-																				
-		led						E	Blankin	g plug	)							Th	readed	olug	
	Write an integer	ncluc arts		GWP	4-R				WP 6	.B				WP 8-	B		1	4G2	R-06P		
	multiple of 12.5.	- 4																			
	Wiring specifications s	heet (N	lot requi	red for	stand	ard wiri	na/doubl	e wirir	na Coi	mnlete	thee	e sneri	fication	s when	specifivi	ina the	wirina	order a	nd addit	ional ca	hles)
	Connector pin	No.	Janoqui		Junu			<b>-</b> min	.y. 00		Ir	nstallat	tion po	sition	-poony						
υ	T6G	1				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			1																		
			2																		
			3																		
			4																		
			5										_								
			6									_	_								
			7																		
	T6G1:CC-Link 16 points											_	_								
225	T6G1:CC-Link 16 points		8																		
	T6G1:CC-Link 16 points		8 9																		
222	T6G1:CC-Link 16 points		8 9 10	CO	M																
	T6G1:CC-Link 16 points		8 9 10 11	CO	M																
0.010	T6G1:CC-Link 16 points		8 9 10 11 12	CO	M																
	T6G1:CC-Link 16 points		8 9 10 11 12 13	CO	M																
	T6G1:CC-Link 16 points		8 9 10 11 12 13 14	CO	M																
	T6G1:CC-Link 16 points		8 9 10 11 12 13 14 15 16	CO	M																
	T6G1:CC-Link 16 points		8 9 10 11 12 13 14 15 16 17	CO	M																
411011	T6G1:CC-Link 16 points		8 9 10 11 12 13 14 15 16 17 18	СО	M																
	T6G1:CC-Link 16 points		8 9 10 11 12 13 14 15 16 17 18 19	CO	M																

M4G3 Serial	tra	ans	mis	sio	on																P4 Series
M4G <sup>A</sup> 3-T60	<b>G1</b>	М	an	ifc	bld	SI	nec	ifi	cat	tio	ns	sh	nee		ate iss	ued	/	'	/		c P
						U,			<b>U</b> UI			01		C	ompar	ıy					ylinde
Contact			Quan	tity		se	t(s)		Del	ivery	date	/		С	ontact						Pne
Slip No.								Order	No.					0	rder N	0.					Hand
Manifold model No.																					atic
$\mathbf{M} = \mathbf{G}_{B}^{A} 3$				)R	<b>}-</b>			- ]	lecological field for the field state of the field	1					D	-		- (	3 -	P2	act. Relat
Solenoid valves	Sole	noid po	sition			Port	size	Seri	ial transmis	ssion Te	rminal/c pin a	onnecto rray	<sup>r</sup> Opti	on		St	ation	Volt	age		uato ed cts
Solenoid valve model No.	Fittin	g CX B	1	2	3		4	5	6	7	/alve ins	tallation 9	position	11	12	13	14	1	5 /	Duantity 91	Cylin Swit
4G 3 9R-																					der
4G 3 9R-																					Vacuu
4G 3 9R-																					JIM CO
4G 3 9R-																					ompor
4G 3 9R-																					nents
3GA3 9R-																					Pne
3GA3 9R-																					iuma
Masking plate 4G3R-MP(S)-																					ıtic v
Masking plate 4G3R-MP(D)-																					alve
Air supply spacer 4G3R-P-																					Si O
Exhaust spacer 4G3R-R-																					lean a
							Blan	king pl	ug								Threa	ded pl	ug		Pn nts c
Write an integer	parts		G	WP 8-	·В					GWF	Р 10-В					4G	3R-08	>			<b>eun</b> Spee ontro
muluple of 12.5.																					natio ller
Wiring specifications she	et (N	ot requi	ired for	stand	ard wir	ing/do	uble wii	ring. Co	omplete	these	specifi	cations	when s	pecifyi	ng the v	viring o	rder ar	nd addi	tional	cables)	c au Fitti
Connector pin No	0.					-				,	Ins	tallatic	on posi	tion							ng
T6G1					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	ary <sup>Auxi</sup> val
		1																			<b>CON</b> liary ve
		2																			sile
		3																			nen
		5																			ts
		6																			ube
T6G1:CC-Link 16 points		7																			G
		8																			aso
		9																			Jen
		10	CO	M																	erat
		11																			or F
		12																			-luid c
		13																			ontrol
		14				-						-									compo
		15					-													-	onents
		16																	-		speci
		1/																			ctric lotor ficatio
		10				-															n spec
		20	00	M																	:uato ptorless ificatio
			55									1									ns ns

4 ries	M4G1 Seria	al t	rar	nsmi	issi	on	thi	in										Dete	iaau	ad		,			
Itic	M4G <sup>a</sup> 1-Ta	8 1	Ma	nife	old	S	pe	Cİ	fic	a	tio	n	5 S	sh	ee	t		Date	ISSU	iea		1	/		
ylinde	Contact			● Qu	antity		:	set(s	)		• De	eliver	y dat	е	/			Com	ipany	/					
LL C	Slip No.				,				0	rder	No.		-				] .								
Hand/ Chuck	Manifold model No	).															J .	Orde	er ino						
_ 0	M G M	[		·	0E	)_	,   		,	-		,	   		, , , - , , , , , , , , , , , , , , , ,					_			2	- I	
elated	Solenoid valves	l t S	olenoi	id positio			L Po	rt siz	! e	L_ Seria	l transmi	ssion T	ermina	al/conr	l L	Ontio	 n	Mou	nt type	s S	tation		oltac	¦∎ 1e	
, Bro		Fit	ting CX									Va	pir Ive ins	n array tallatio	n posi	tion				N	0.	-			tity
linder vitch	Solenoid valve model No.	A	В	1	2 3	3	4	5	6	7	8	9	10	11	12	! 1:	3 1	4	15	16	17	18	19	20	Quar
ිර	4G 1 9R					_	_								_	_	-	-					+	+	+
														+	-	-	+						+	+	+
	4G 1 9R-		+											+		-	+	-					+	+	+
	4G 1 9R-		+											+	-	-	+	+					+	+	+
	3G 1 9R					+												+					+		+
	3G 1 9R	1	+											+			+	1					+	+	+
	Masking plate 4G1R-MP(S)-																	1					+	1	+
	Masking plate 4G1R-MP(D)-																						1	1	$\top$
	Air supply spacer 4 G1R-P-																						1		1
n air nents	Exhaust spacer 4G1R-R-																								$\top$
Clear	Pilot check valve spacer 4G1R-PC																								
ed oller	,	•	4						lanki	na nlı								$\uparrow^{\perp}$			Thread				
Specontro		uded	<u></u>		GWP 4	1-B					ig	G	WP 6-	-B				+		40	S1R-N	15P	ug		
ŋg	Write an integer multiple of 12.5.			Push-in fit	tting tub	e rem	over (	attach	ed as	stand	lard) I	Not re	quirec	d (che	ck the	box)									
Fitti																									
ary e	Wiring specifications	sheet	(Not r	equired f	for stand	dard \	viring/	doubl	e wirir	ng. Co	omple	te the	se sp	ecifica	ations	wher	spec	ifying	the v	viring	order	and a	additic	onal ca	ibles)
Auxili valv	Conne	ctor p T8*	oin No	).		1	2	3	4	5	6	7	nstal 8	llation 9	ר pos 10	ition 11	12	13	14	15	16	17	18	19	20
Cer	T8G1 CC-Link		NPN	16 points	1																				
Silenc	T8G2 T8GP1		PNP	32 points 16 points	3																				
-				32 points	5																				
Tube	T8P2	-01		32 points	0 7																				
	T8PP1 T8PP2		PNP	16 points 32 points	8 9																				
	T8EC1 EtherCAT	Г	NPN	16 points 32 points	10																				
	T8ECP1		PNP	16 points	12 13																				
	T8ECP2 T8EN1 EtherNet/I	P	NPN	16 points	14 15																				
	T8EN2 T8ENP1		PNP	32 points 16 points	16 17	-																			
	T8ENP2	ot		32 points	18 19																				
	T8D2	51		32 points	20 21	-	-																<u> </u>	$\square$	
	T8DP1 T8DP2		PNP	16 points 32 points	22																				
	T8EB1 CC-Link		NPN	16 points	24	1		-															<u> </u>	$\square$	
otor fication	T8EBP1	C	PNP	16 points	26	1	+																<u> </u>		
M	T8EBP2	ET	NPN	32 points 16 points	28																		<u> </u>		
cations	T8EP2 T8EPP1		PNP	32 points	30																				
Moto specific	T8EPP2			32 points	31	$\vdash$		$\vdash$	-	-	<u> </u>									-				$\left  \right $	

	Ma	nif	hld	er		∖if	ic	at	in	ne	C	he	ot		I	Date	issu	ed		/	/		
	Ivia		ЛЦ	21		, 11		al		113	3		σι	•	-	Com	pany	/					
Contact		🔵 Qu	antity		Se	et(s)		(	De	liver	/ date	Э	/			Cont	act						
Slip No.							C	Order	No.							Orde	er No						
Manifold model No.																							
G A2	,		<b>NR</b>	)_ [				_										_		_ []	2	- F	עכ
Solenoid valves	Solenoi	! d nositior			Port	size	!	Seria		! iission Ti	erminal	Conne	tor ∩r	ntion	!	L Mo	unt	S	tation	V			-
	Fitting CX		·			5120	,	oone		p Val	in Arra	y meth	od nositie	n		Ту	/pe	Ň	0.		onage	, 	2
Solenoid valve model No.	A B	1	2 3	3 4	1 5	;	6	7	8	9	10	11	12	1:	3 14	4	15	16	17	18	19	20	Quanti
G 2 9R																							
G 2 9R																							
G 2 9R																							
G 2 9R																							
G 2 9R																							
G 2 9R												1				$\uparrow$							1
G 2 9R						$\top$								+		+					1		1
lasking plate														+		+	$\neg$						+
G2R-IVIP(S)-														+								-	+
G2R-MP(D)- ir supply spacer																						-	+
G2R-P- xhaust spacer																						-	-
G2R-R-	7																						
	ts						E	Blankii	ng plu	g										Threa	ded p	lug	
Write an integer multiple of 12.5.	Inc	GW	P 4-B				G	SWP 6	-В				G	WP 8	8-B				40	32R-0	6P		
Wiring specifications sl	neet (Not i	required	for stand	lard w	iring/do	ouble	e wirii	ng. Co	mple	te the	se spe	cifica	ions v	vhen	speci	fying	the w	iring	order	and a	dditio	nal ca	bles)
Connecto	or pin No	-			2	2	4	5	6	7	nstal 。	lation	posi	tion	12	12	14	15	16	17	10	10	20
7004			1	+ '	2	5	4			1	0	5	10		12	15	14	15	10	17	10	15	20
T8G1 CC-Link	NPN	16 points 32 points	2																				
T8GP1	PNP	16 points	4																				
T8GP2 T8P1 PROFIBUS-F		32 points 16 points	5																				
T8P2		32 points	7																				
18PP1 T8PP2	PNP	16 points 32 nointe	9																				
T8EC1 EtherCAT	NPN	16 points	10	<u> </u>					<u> </u>	<u> </u>											<u> </u>		
T8EC2 T8ECP1	DNID	32 points	12																				
T8ECP2		32 points	13	$\vdash$	$\left  \right $				-	-					$\left  - \right $								
T8EN1 EtherNet/IP	NPN	16 points	15																				
T8ENP1	PNP	16 points	17																				
T8ENP2		32 points	18	$\square$																			
T8D2		32 points	20																				
T8DP1	PNP	16 points	21	-																			
T8EB1 CC-Link	NPN	32 points 16 points	23	1																			
T8EB2 IEF Basic		32 points	24																				
T8EBP1 T8EBP2	PNP	16 points 32 points	26																				
T8FP1 PROFINE	T NPN	16 points	28																				
		1.0.0	1.20	1	ı		1	1	1	1	1						1	1	1	1	1	l I	
		32 points	30						1														

P4 Series	•	M4G3 Serial	transmissi	on t	hin													
<u>.0</u>	S	M4G <sup>A</sup> 3-T8	sManifol	a b	nec	ific	ati	on	5 9	he	et	Da	ate issu	led	/	/		
umat	inder		Smanner	u J	pcc		au					Co	ompan	у				
Itor Pne	cyl	Contact	Quantity		set(s)		• De	elivery	date	/		Co	ontact					
stua	iuck	Slip No.				Orde	er No.					Or	der No	D.				
c ac	5	Manifold model No.																
nati ated	lucts	M GA3	0R	- [		] - []										3	- F	24
Rela	prod	Solenoid valves	Solenoid position	P	ort size	Sei	rial transmis	sion Terr	ninal/Conn	ector Op	tion	.; : M_	ount	Stat	ion	Voltage	•	
Pn	ich	Solonoid volvo modol No.	itting CX					pir Valve	Array met installa	hod Ition pos	ition	I.	уре	No.				ntity
Cylin	Swii		A B 1 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	- Oua
ents		4G 3 9R-															-	+
bone		4G 5 9R-																+
n con		4G 3 9R-															+	+
acuur		40, 3, 9R-		_													+	+
SS Ve	i.	3CA2 0P-		_	-												+	+
valve	L	3GA3 0P-		_													-	+
atic	L	Masking plate															+	+
eum	L	AG3R-MP(5)-															+	+-+
<u>P</u>	Ś	Air supply spacer			_												+	+
an air	oonent	Exhaust spacer		_														+
ts <sub>Cle</sub>	comp	2   2   2			B	lanking i	olua							<u> </u>	 hreade	d plua		
nen	roller	Vite an integer	S CWP 8	-B				GW	P 10-R					46	38-088			
npo	con	multiple of 12.5.																
COL	6	Wiring specifications she	et (Not required for stan	dard wiri	ng/double	e wiring.	Comple	ete thes	e speci	fication	s when	specify	ring the	wiring	order a	nd addi	tional c	cables)
iary	Ē	Connector	pin No.		-				Instal	lation p	positior	1	-					
<b>uxil</b> iliary	Ive .	T8*	1	1	2 3	3 4	5	6	7	8	9	10	11	12	13	14	15	16
ic a	V3	T8G1 CC-Link	NPN 16 points 2														_	
mat	2	T8GP1	PNP 16 points 4															
neu	0	T8P1 PROFIBUS-DP	32 points 5 NPN 16 points 6															
P	U	T8P2	32 points 7 PNP 16 points 8						_									
Ĥ		T8PP2	32 points 9															
or		T8EC1 EtherCAT	NPN 16 points 11 32 points 12						-								$ \rightarrow$	
erat		T8ECP1	PNP 16 points 13														_	
gen		T8EN1 EtherNet/IP	SZ points         14           NPN         16 points         15															
as		T8EN2 T8ENP1	32 points 16 PNP 16 points 17															
nts G		T8ENP2	32 points 18														_	
iponer		T8D1 Devicemet	NPN 16 points 20														=	
ol com		T8DP1	PNP 16 points 21 22 points 22															
l contr		T8EB1 CC-Link	32 points         23           NPN         16 points         24														-+	
- Fluid		IEF Basic	32 points 25														$\rightarrow$	
lator	fication	T8EBP2	32 points 27				1	-		-							=	
actu	specif	T8EP1 PROFINET	NPN         16 points         28           32 points         29															
tric	ations	T8EPP1	PNP 16 points 30 32 points 31															
Motor	pecific		<u>102 points</u> 32															

P4 Series



## Individual wiring block manifold Body piping MN4GA1, 2 Series

300 or less

Cannot be used in corrosive gas environments

Cylinder bore size: ø20 to ø80

Pneumatic Valves Catalog No. CB-023SA

 $\langle$ 

 $\langle$ 

3(R2)

5(R1)

3(R2)

5(R1)

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

3(R<sub>2</sub>)

5(R1)

5(R1 1 (P)

b

È

b 

'Æ

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

JIS symbol 3-port valve

2-position single NC

(A)

5 1 3

2-position single NO

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a I L a

5 3 (R1) (P) (R2) 2-position double

4 2

(A) (B)

(R1) (P) (R2)

4 2 Δ (B)

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

5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position P/A/B connection

2 4 (A) (B)

3 (R1) (P) (R2)

'**K** 

5-port valve 2-position single (A) (B)

(R1) (P) (R2)

(B)

(R<sub>1</sub>) (P) (R<sub>2</sub>)

Two 3-port valves integrated

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

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

#### Manifold common specifications Item Description Manifold Block manifolds Mounting method DIN rail mount Common supply/common exhaust Air supply and exhaust metho (With internal exhaust check valve) Main valve/pilot valve common exhaust Pilot exhaust method (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 (\*3) Proof pressure MPa 1.05 Ambient temperature °C -5 to 55 (no freezing) Fluid temperature °C 5 to 55 Manual override Non-locking/locking common (standard) Lubrication (\*1) Not required Degree of protection (\*2 Dust-proof Vibration resistance m/s 50 or less

#### \*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.
- \*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

Shock resistance m/s<sup>2</sup>

Atmosphere

ltem				Descr	iption		
Rated voltag	je V	24 DC	12 DC	5 DC	3 DC	100 AC	200 AC
Voltage fluct	tuation range			±10	0%		
Holding current	Standard	0.015	0.030	0.072	0.120	0.009	0.006
	Stanuaru	(0.017)	(0.034)	(0.082)	(0.136)	(0.009)	(0.006)
A (~4)	With low exoergic/energy circuit	0.005	0.010		-		
Power consumption	Standard	0.35(	0.40)	0.35(	0.40)	-	
W (*4)	With low exoergic/energy circuit	0	.1		-	-	
Apparent power	Standard					0.93	1.40
VA (*4)	Standard		-		-	(0.98)	1.40
Thermal cla	ISS			E	3		
Surge suppi	ressor	Opt	tion				
Indicator				Lamp (	option)		

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

### Individual specifications

			-	
ltem			MN3GA1/MN4GA1	MN3GA2/MN4GA2
Max. stat	ion No.		24 stations	20 stations
	Metric fitting/	Port A/B	Push-in fitting ø4, ø6 M5	Push-in fitting ø4, ø6, ø8 Rc1/8
Dort oizo	Rc thread	P/R Port	Push-in fitting ø6, ø8	Push-in fitting ø8, ø10
Port size	Metric fitting,	Port A/B	-	G1/8
	G thread	P/R Port	-	Push-in fitting ø8, ø10

 For DIN rail mounting "Pneumatic Valves No.CB-023SA" of "Mounting orientation" for details.

Weight "Pneumatic Valves No.CB-023SA".

P4 Series Imatic

Pne

tch  $\exists$ 

Cylin

É

Silencer

町 Tube

а

ΈΣ

ð

3-position All ports closed

Individual wiring block manifold; Body piping

#### Performance/characteristics by model

ltom			MN3GA1	/MN4GA1	MN3GA2	/MN4GA2
item			ON	OFF	ON	OFF
Response	Two 3-port va	lves integrated	9	12	12	29
time	2 position	Single	12	12	19	19
ume	2-position	Double	9	-	18	-
ms	3-position	A/B/R connection	8	15	17	30

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

#### Flow characteristics

Model No	Solor	noid position	P  ightarrow	A/B	A/B →	R1/R2
	Soler	iola position	C[dm³/(s·bar)]	b	C[dm³/(s⋅bar)]	b
	Two 3-p	ort valves integrated	0.87	0.37	1.0 (0.68)	0.14 (0.22)
	2-positi	ion	0.98	0.33	1.2 (0.71)	0.11 (0.27)
MNACA1		All ports closed	0.92	0.34	1.0 -	0.16 -
WIN4GAT	3-position	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 -
	Two 3-p	ort valves integrated	1.7	0.37	2.2 (1.6)	0.13 (0.21)
MNICAO	2-positi	ion	2.2	0.21	2.5 (1.7)	0.19 (0.10)
MNACA2	2-positio	All ports closed	2.0	0.25	2.3 -	0.10 -
WIN4GAZ	3-position	ABRConnection	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  $S \approx 5.0 \text{ x C}$ .

\*2: Values in ( ) are with built-in exhaust check valve.

Ozone-proof specifications • Coolant proof specifications

Can be selected with "How to order" Item (E) option "A" on page 208.

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".

P4 Series

# MN4GA1, 2 series

P	4	How to order							F	N	loc	lel	No		
Seri	es	Manifold model No.							Man	ifold	k	Dis	crete	valv	e
	s	(MN4GA1) 1) 0 R - (C6	3)-(E2)(H)-1(	0-3-P4				3-00r	rt valve	5-nort	t valve	block	with ve/Di	soler scret	ioid e
	eumat	3-port manifold model No.										SOI	enoia	vaiv	9
tor	Pne cyl	(MN3GA1) 1) 0 R - Ce	6)-(E2)H)-1(	0-3-P4				GA1	GA2	GA1	GA2	GA1	GA2	GA1	GA2
:tua	uck	Discrete valve block with soleno	pid valve		0.1		Description	MN3	MN3	MN4	MN4	(N)	с́ N	S S	ŝ
ac	÷б			- 3- D4	Code	Solonoid no	Description								
atic	ots			-3-64	1	2-position singl	e								
ũ.	oduc	Discrete 3-port valve block with	solenoid valve		2	2-position doub	le		$\square$	•		$\neg$		•	•
nel	чğ	(N3GA1)(1) 0 R - (C6	5)-(E2)(H)	<b>—(3)-P4</b>	3	3-position all po	orts closed				$\bullet$	+		•	•
ייי	nder itch	Discrete solenoid valve			4	3-position ABR	connection			$\bullet$	$\bullet$			•	•
:	Cyli Sw	(4GA1) 1 9 R - C	а)- (F2) H) —	-3-P4	5	3-position PAB	connection				$\bullet$			•	•
nts		Disercte 2 port colonaid volve			1	2-position singl	e Normally Closed (*2)						•		
one					11	2-position singl	e Normally Open (*2)		•			•	•		
dulo		(3GA1)(1)9R-CC	5)-E2(H)-	<b>-</b> (3)-P4	66		A side valve: Normally Closed					•	•		
nm c		Madal Na					B side valve: Normally Closed	Ľ			Ц	_	-		
acu!		A Model No.			67	3-port valve	A side valve: Normally Closed		•			•	•		
SS >		B Solenoid position				Two valves	B side valve: Normally Open				$\square$				
alve					76	(*2)(*3)	A side valve: Normally Open		•			•	•		
						( _/( -/	B side valve: Normally Closed	$\vdash$	$\square$		$\square$	_	_	_	
Imai					77		A side valve: Normally Open		$\bullet$			•	•		
nen						Mix manifold (who	b side valve: Normally Open								
<u>a</u>	r its				•										
	ean ai poner		Port size (*1)		Type	ort size (por	(A/B)				*,	1			
ŝ	com	Г			C4	a4 push-in fittir				0			0		0
eni	ed		*4		C6	ø6 push-in fittir	a 	0	0	0	0	0	0	0	0
u o u	Spe		The port size of standard product ar	of "●" is a nd equivalent	C8	ø8 push-in fittir	iq	Ē	0	-	0	-	0	-	0
d u u	ö		to P4 specificatio	ns. It is not	сх	Push-in fitting r	nix (*5)	0	0	0	0				
00	ting		necessary to add	"-P4" to the	M5	M5				ullet		•		•	
ary	Ë		model No.		06	Rc1/8					$\bullet$		•		•
Xilli	ary e		D Electrical c	onnections	Туре		G thread								
au	valv	A Precautions for model a			06G	G1/8					ullet		•		•
atic	<				DE	lectrical con	nections								
l	ence	supply and exhaust block model	No. on the		Refer	to the following	page for electrical connections		_	_					
ner	Sile	manifold specifications sheet. *2 In the case of a mix with a 4, 5-pc	ort valve, it		<b>B</b> (	Option									
ם	e	will be MN4GA*80. Furthe	r, select		Blank	Manual overrid	e of non-locking/locking common			┛		•	•	•	•
	Tub	*3 Not compatible with combina	ation with		M	Non-locking ma	anual override			•		•	•	•	•
<u> </u>		as those of the respective 2-posit	the same tion double		Н	With exhaust c	heck valve (*6)			•		•	•		-
ato		solenoid.	ed with the		n A	External pilot	("7)								
ner		single valve's 4(A) or 2(B) port.			s	Surgeless	(*8)								
ge		PAB connection are not p	provided		E	Low excergic/e	nergy circuit (*8)(*9)		•	•	•	•	•	•	•
as		with the exhaust chec	k valve		F	Port A/B filter b	uilt in (*10)				•	•	•	•	•
ts O		"Pneumatic Valves No.CB-02	23SA" for		Z1	Air supply space	er (*11)		•	ullet	$\bullet$				
onen		details on the exhaust check	t valve.		Z3	Exhaust space	r (*11)			$\bullet$	$\bullet$				
comp		with the external pilot (K).			<b>F</b> S	Station No.									
ontrol		only are supported.In addition,	surgeless	Station No.	1	1 station					ΙT				
uid co		"S" and low exoergic/energy of cannot be selected together.	circuit "E"		to	to				•					
L	uc	*9 Surgeless specifications.	lard		24	24 stations (Max. st	ation number for MN3GA2/MN4GA2 is 20.)								
uato	fication	*11 Specify the spacer mo	ounting	G Voltage	G	Voltage									
act	spec	position/quantity in the r specifications sheet. Sta	nanifold cking of	- I inago	1	100 VAC (rectif	ier integrated)			•	•	•	•	•	•
ric	ess ttions	spacers is not pos	sible. natesis		2	200 VAC (rectif	ier integrated) (*12)								<u> </u>
lect	Motoriece	not possible. For details,	refer to		3					•					
Ш	S	*12 DIN terminal box only is supporte	ed.		ie	not available				-		-	-	-	-
	20														
	20	• CRD													

**Pneumatic actuator** 

Pneumatic valves Vacuum components

Pneumatic auxiliary components

Individual wiring block manifold; Body piping



			A	JN	100	Jel	NC	).	
		I	Man	ifolo	1	Di bloc	scret k with	e val 1 sole	ve noid
		3-p va	oort lve	5-p va	oort Ive	va so	ilve/D lenoi	)iscre d val	te ve
		-	2	-	2	-	2	1	2
		3GA	3GA	4GA	4GA	3GA	3GA	4GA	4GA
		MM	MM	MM	MM	Î	(N)	(N)	Ż
DE	lectrical connections								
Blank	Grommet lead wire (300 mm) (*13)								
В	DIN terminal box (Pg 7) With surge suppressor/lamp (*14))(*16)				•				
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor (*14)(*16)				•				
E-con	nector (upward/lateral common)								
E0	Lead wire (300 mm) (*15)				$\bullet$				
E00	Lead wire (500 mm) (*15)								
E01	Lead wire (1000 mm) (*15)	ullet	ullet	ullet	ullet	ullet	ullet		ullet
E02	Lead wire (2000 mm) (*15)	ullet		ullet	$\bullet$	ullet	ullet		ullet
E03	Lead wire (3000 mm) (*15)	ullet		$\bullet$	$\bullet$	ullet			
E0N	Without lead wire (Without socket) (*15)	ullet		$\bullet$	$\bullet$	ullet			
E1	Without lead wire (socket/terminal attached) (*15)	ullet		ullet	$\bullet$	ullet			
E2	Lead wire (300 mm) With surge suppressor and indicator lamp	ullet				$\bullet$			
E20	Lead wire (500 mm) With surge suppressor and indicator lamp					$\bullet$			
E21	Lead wire (1000 mm) With surge suppressor and indicator lamp	ullet				$\bullet$			
E22	Lead wire (2000 mm) With surge suppressor and indicator lamp					$\bullet$			
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-co	nnector (socket with cover, upward/lateral c	om	mo	n)					
E01J	Lead wire(1000 mm) (*15)		•	•	•			•	•
E02J	Lead wire(2000 mm) (*15)	•	•	•	•				•
E03J	Lead wire(3000 mm) (*15)	•	•	•	•				•
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					lacksquare		ullet	

\*13 The grommet lead wire specifications are compatible with DC voltage only.

\*14 AC voltages and 12/24 VDC are supported. In addition, a lamp comes with the terminal box.

\*15 AC voltage is with a rectifier circuit.

\*16 The terminal box conforms to EN175301-803 Type C (former DIN 43650-C). Refer to "Pneumatic Valves No.CB-023SA" for details.



#### Dimensions

#### MN4GA1-P4



#### MN4GA2-P4



Motor Moto specification specific



## Individual wiring block manifold Base piping MN4GB1, 2 Series

Cylinder bore size: ø20 to ø80

Pneumatic Valves Catalog No. CB-023SA

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#### Manifold common specifications Description ltem Manifold manifolds Block DIN rail mount Mounting method Air supply and exhaust Common supply/common exhaust method (With internal exhaust check valve) Main valve/pilot valve common exhaust Pilot exhaust method (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 0.2 (\*3) Min. working pressure MPa Proof pressure MPa 1.05 Ambient temperature °C -5 to 55 (no freezing) Fluid temperature °C 5 to 55 Manual override Non-locking/locking common (standard) Lubrication (\*1) Not required Degree of protection (\*2) Dust-proof Vibration resistance m/s 50 or less Shock resistance m/s<sup>2</sup> 300 or less Atmosphere Cannot be used in corrosive gas environments

- Use turbine oil Class 1 ISO VG32 for lubrication. \*1 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.
- \*3 The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

## Electrical specifications

Item				Descr	iption		
Rated voltage	ge V	24 DC	12 DC	5 DC	3 DC	100 AC	200 AC
Voltage fluc	tuation range			±1	0%		
Holding current	Standard	0.015	0.030	0.072	0.120	0.009	0.006
	Stanuaru	(0.017)	(0.034)	(0.082)	(0.136)	(0.009)	(0.006)
A ("4)	With low exoergic/energy circuit	0.005	0.010		-		-
Power consumption	Standard	0.35(	0.40)	0.35(	0.40)	-	-
W (*4)	With low exoergic/energy circuit	0	.1		-		-
Apparent power	Standard					0.93	1 40
VA (*4)	Stanuaru		-		-	(0.98)	1.40
Thermal cla	ISS			E	3		
Surge supp	ressor			Op	tion		
Indicator				Lamp (	option)		

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

## Individual specifications

ltem			MN3GB1/MN4GB1	MN3GB2/MN4GB2
Max. statio	on No.		24 stations	20 stations
Dort oizo	Metric	Port A/B	Push-in fitting ø4,ø6	Push-in fitting ø4,ø6,ø8
Port size	fitting 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".

3-port valve 2-position single NC (A) ≌≥ 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 2-position single NO (B) 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>)

JIS symbol

P4 Series

Imatic

Pne

Hand/ Chuck

Related

nder fch

Cylir

Pneumatic actuator

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



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

₽ ब्ध्र 🕂 🔤 5(R.)



a ∎⊠∏ 5(R₁) (P (A side valve: NO, B side valve: NO) ∎≊[]]

7

(R1) (P) (R2)

position double

a≊a∏ **و**\_

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

а

2



т (R1) (P) (R2) CKD

Individual wiring block manifold; Base piping

#### Performance/characteristics by model

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

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

#### Flow characteristics

MedelNe			P  ightarrow	A/B	A/B→R1/R2			
Model No.	Sole	noid position	C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b		
	Two 3-pc	ort valves integrated	0.86	0.35	1.0 (0.66)	0.15 (0.25)		
	2-position	n	1.0	0.30	1.1 (0.72)	0.11 (0.26)		
MN3GB1 MN4GB1		All ports closed	0.96	0.32	1.0 -	0.14 -		
10114001	3-position	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 -		
	Two 3-port valves integrated		1.7	0.42	2.2 (1.6)	0.15 (0.19)		
	2-position	n	2.4	0.35	2.5 (1.7)	0.19 (0.19)		
MN3GB2 MN4GB2		All ports closed	2.2	0.38	2.3 -	0.17 -		
WIN4052	3-position	ABRConnection	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  $S \approx 5.0 \text{ x C}$ .

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

Ozone-proof specifications | • Coolant proof specifications

Can be selected with "How to order" Item (E) option "A" on page 213.

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".

P4 Series



A Model No. Discrete valve Manifold block with solenoid valve 3-port valve 5-port Discrete solenoid wo valves valve integrated valve (N)3GB2 MN3GB2 (N)3GB1 (N)4GB1 (N)4GB2 MN4GB1 MN4GB2 MN3GB1 • 0 • • A side valve: Normally Closed B side valve: Normally Closed A side valve: Normally Closed B side valve: Normally Open A side valve: Normally Oper B side valve: Normally Closed A side valve: Normally Oper B side valve: Normally Open Mix manifold (when there are multiple solenoid positions) Metric fitting/Rc thread • • • • • (\*6) Port B Plug 0 ø4 push-in fitting ø6 push-in fitting • • ø8 push-in fitting 

spec

Motorless

P4 Series

Pneumatic cylinders

Hand/ Chuck

Related products

Cylinder Switch

**Pneumatic actuator** 

Vacuum components Pneumatic valves

Clean air omponents Clean

Pneumatic auxiliary components

lcer

Tube

Individual wiring block manifold; Base piping

A Model No.

Discrete valve

Manifold

			1	5-port valve		solenoid va discrete solenoid va		alve/	
		MN3GB1	MN3GB2	MN4GB1	MN4GB2	N)3GB1	N)3GB2	N)4GB1	(N)4GB2
Code	Description		2	-	2				
D Elec	trical connections								
Blank	Grommet lead wire (300 mm) (*14)								
в	DIN terminal box (Pg 7) With surge suppressor/lamp (*15)(*16)								
BN	DIN terminal box (Pg7) (without terminal box) With surge suppressor/lamp (*15) (*16)								
-connec	tor (upward/lateral direction common)				1	1		1	
E0 I	_ead wire (300 mm)								
E00	_ead wire (500 mm)		•	•		•	•	•	
E01	Lead wire (1000 mm)			•					
E02	_ead wire (2000 mm)				•				
E03	Lead wire (3000 mm)				•				
	/vitnout lead wire (with pocket/forming)								
E1	without lead wire (with Socket/terminal)								
E2	ead wire (500 mm) With surge suppressor and indicator lamp								
E20	ead wire (1000 mm) With surge suppressor and indicator lamp								
E21 1	_ead wire (1000 mm) With surge suppressor and indicator lamp								
E22	ead wire (2000 mm) With surge suppressor and indicator lamp								
E20	Vithout lead wire (without socket) With surge suppressor and indicator lamp								
E2N	Nithout lead wire (with socket/terminal) With surge suppressor and indicator lamp								
E.J-conne	ector (socket with cover upward/lateral direction common)			-					
E01J	ead wire (1000 mm)								
E02J	_ead wire (2000 mm)								
E03J	_ead wire (3000 mm)		•	•	•				
E21J	_ead wire (1000 mm) With surge suppressor and indicator lamp			•	•	•		•	
E22J	_ead wire (2000 mm) With surge suppressor and indicator lamp		•	•	•	•	•	•	•
E23J	_ead wire (3000 mm) With surge suppressor and indicator lamp	•		•					
<b>B</b> Onti	on								
Blank	Manual override of non-locking/locking common								
M	Non-locking manual override			•				•	
н <sup>,</sup>	Vith exhaust check valve (*7)		•	•	•	•	•	•	
ĸ	External pilot (*8)	-	-	•	•	-	-	•	•
A	Dzone/coolant proof			•	•			•	•
S	Surgeless (*9)	•	•	•	•	•	•	•	
E /	Low exoergic/energy circuit (*9)(*10)	•		•		•	•	•	
L	Nith pipe adaptor	•	•	•	•	•	•	•	
F	Port A/B filter built in (*11)	•		•	•		•	•	
<b>Z1</b>	Air supply spacer (*12)								
Z3	Exhaust spacer (*12)			٠					
Z6	Spacer pilot check valve (*12)			٠					
F Stat	ion No.								
1	1 station								
to	to								
24	24 stations (The max. station number for MN4GB2 is 20.)	1							
G Vol									
1	100 VAC (rectifier integrated)			•		•			
	200 VAC (rectifier integrated) (*13)		•	-	•		•		•
2 12			<u> </u>		<u> </u>		<u> </u>		<u> </u>
3 2	24 VDC								

[Options, stations, voltage, electrical connection list]

Cod DE

O indicates made to order.

Speed sition all ports closed A B connection are provided with the ust check valve fications (H). Refer to umatic Valves No.CB-A" for details on the valve ust check valve.

It with CKD when using a n with the external pilot (K). nd E2\*J connectors and

VDC only are supported. ition, surgeless "S" and oergic/energy circuit "E" be selected together. ess specifications.

s built into port P as standard.

cify the spacer nting position and tity in the manifold ifications sheet. king of spacers is not orted. Combination masking plates is not orted. For details, to pages 227 to 228. rminal box only is supported.

grommet lead wire ifications are compatible DC voltage only.

tages and 12/24 VDC are rted. In addition, a lamp with the terminal box.

erminal box conforms to 5301-803 Type C (former 43650- C). Refer to Pneumatic Valves N o.C B-023SA" for details.

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P4 Series Hand/ Pneumatic Chuck cylinders **Pneumatic actuator** Related Cylinder Switch Pneumatic valves Vacuum components Clean air components Pneumatic auxiliary components Speed Auxiliary Fitting valve

Silencer

Tube

Electric actuator Fluid control components Gas generator

Motor specification

Motorless



MN4GB2-P4



\*Fitting dimensions of P4 Series are different from the standard when mounted. For other dimensions, refer to MN4GB1, 2 Series in "Pneumatic Valves (No. CB-023SA)".

P4 Series



## Reduced wiring block manifold Body piping MN4GA1, 2-T\* Series

Pneumatic Valves Catalog No. CB-023SA

#### Pne Hand/ Chuck JIS symbol 3-port valve Related 2-position single NC (Ā) а E tch 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) Cylin 2-position single NO (B) а Ð $\langle$ 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) Two 3-port valves integrated (A side valve: NC, B side valve: NC) -3(R<sub>2</sub>) 1 (A) ÌΡ (A side valve: NC, B side valve: NO) ₽ 3(R<sub>2</sub>) Clean air components 4 (A 5(R1) 1 (P (A side valve: NO, B side valve: NC) Speed b ∎a[]\_t <u>م</u> 3(R2) Auxiliary Fitting 5(R1) 1 (P (A side valve: NO, B side valve: NO) ₽ Bal71 -3(R<sub>2</sub>) (A) 5(R1) 5-port valve Silencer 2-position single 4 2 (A) (B) а ð $\langle$ Tube 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 2-position double 4 2 (A) (B) b а Ľ⇒∑ 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position All ports closed 2 4 (A) (B) B 1 3 (R1) (P) (R2) 3-position A/B/R connection 2 (A) (B) MP 町 Motor specificati 5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position P/A/B connection Motorless (A) (B) 11 È т





#### Manifold common specifications

ltem	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 (*3)
Proof pressure MPa	1.05
Ambient temperature °C	-5 to 55 (no freezing)
Fluid temperature °C	5 to 55
Manual override	Non-locking/locking common (standard)
Lubrication (*1)	Not required
Degree of protection (*2)	Dust-proof
Vibration resistance m/s <sup>2</sup>	50 or less
Shock resistance m/s <sup>2</sup>	300 or less
Atmosphere	Cannot be used in corrosive gas environments

#### **Electrical specifications**

ltem		Description					
Rated volt	age	T1□, T3	0_, T5_	T6G1, T7□, T8□			
rialou ron	V	24 DC	12 DC	24 DC			
Voltage fluc	ctuation range (*4)	±1(	0%	+10%, -5%			
Holding ourront	Standard	0.017	0.034	0.017			
	With low exoergic/	0.005	0.010	0.005			
А	energy saving circuit	0.005	0.010	0.005			
Power	Standard	0.4					
consumption	With low exoergic/energy	0.4					
W	saving circuit		0.1				
Thermal	class	В					
Surge supp	oressor (*5)	Zener diode					
Indicator			LED				

\*4 Since voltage drops due to the internal circuit of T6G1, T7, T8 and (serial transmission), pay attention to the voltage fluctuation range

\*5 If low exoergic/energy circuit or surgeless types are selected then there will be a diode.

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

\*2 Dust-proof degree of protection. Not drip-proof. Avoid dripping water or oil, etc., during use.

\*3 The working pressure range is 0 to 0.7 MPa when the external pilot (option code: K) is selected. Set the external pilot pressure between 0.2 and 0.7 MPa.

#### Individual specifications

lton	ltom			MN3GA1/MN4GA1										
iten	1		T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2		
ax. n 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		
Statio	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 solene	oids	16 points	24 points	24 points	16 points	18 points	8 points	24 points	16 points	8/16 points	16/32 points		
Port	Metric fitting/M5,	Port A/B					Push-ir	n fitting ø	4, ø6 M	5				
size	Rc thread	P/R Port					Push	-in fitting	ø6,ø8					
lton	•		MN3GA2/MN4GA2											
iten	I		T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2		
ax. n 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		
Ma	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 solene	oids	16 points	24 points	24 points	16 points	18 points	8 points	24 points	16 points	8/16 points	16/32 points		
	Metric fitting/M5,	Port A/B				Pu	sh-in fitti	ng ø4,ø6	6,ø8 R	lc1/8				
Port	Rc thread	P/R Port					Push-	in fitting	ø8, ø10					
size	Metric fitting, G	Port A/B		G1/8										
	thread	P/R Port					Push-	in fitting	ø8, ø10					

· Weight is "Pneumatic Valves No.CB-023SA".

#### Flow characteristics

	0.1		$P \rightarrow$	A/B	A/B→R1/R2			
viodei No.	Solenoid position		C[dmʾ/(s⋅bar)]	b	C[dm <sup>3</sup> (s⋅bar)]	b		
	Two 3-po	ort valves integrated	0.87	0.37	1.0 (0.68)	0.14 (0.22)		
	2-positio	n	0.98	0.33	1.2 (0.71)	0.11 (0.27)		
MN/4GA1		All ports closed	0.92	0.34	1.0 -	0.16 -		
WIN4GA1	3-position	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 -		
	Two 3-po	ort valves integrated	1.7	0.37	2.2 (1.6)	0.13 (0.21)		
MNI2CA2	2-positio	n	2.2	0.21	2.5 (1.7)	0.19 (0.10)		
MN4GA2		All ports closed	2.0	0.25	2.3 -	0.10 -		
	3-position	ABRConnection	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  $S \approx 5.0 \text{ x C}$ .

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

P4 Series

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Pneumatic actuator

Vacuum components

(R<sub>1</sub>) (P) (R<sub>2</sub>)

CKD

# MN4GA1, 2-T\* Series

## Reduced wiring block manifold; Body piping

#### Reduced wiring specifications

ltem	T10	T11	Т30	T50	T51	T52	T53	Series					
Туре	Common terminal block M3 thread	inal block Common terminal block D-sub- ead Clamping method connector		20P flat cable connector With power supply terminal	20P flat cable connector Without power supply terminal	10P flat cable connector Without power supply terminal	26P flat cable connector Without power supply terminal	Pneur cyline					
Connector	-	—	D-sub-connector 25-pin	MIL-C-83503 standard compliant	MIL-C-83503 standard compliant	MIL-C-83503 standard compliant	MIL-C-83503 standard compliant	Pne natic ders					
				Pressure welding socket 20-pin	Pressure welding socket 20-pin	Pressure welding socket 10-pin	Pressure welding socket 26-pin	Hand/ Chuck					

#### Serial transmission slave unit specifications

Ser Do	Serial transmission slave unit specifications Download the communication setting file from the CKD website (https://www.ckd.co.jp/en/).							
Iter	n	T6G1	<i></i> 0					
Netw	ork name	CC-Link ver. 1.10	yling					
Alddins	Unit side	24 VDC ±10%	der					
Power : voltage	Valve side	24 VDC +10%, -5%						
Isumption	Unit side 100 mA or less (when all output points are ON)							
Current cor	Valve side	15 mA or less (when all output points are OFF)						
No. o	f output points	16 points						
Occupied number		1 station						
Operation display LED (power supply and commur		LED (power supply and communication status)						
Output NPN		NPN						

ltem		T7G1	T7L1∗1	T7D1	T7S1	T7SP1			
Netw	ork name	CC-Link ver. 1.10	SAVE NET	DeviceNet*2	Comp	oNet			
pply	Unit side			24 VDC +10%, -5%					
er su ige	Valve side		Cor	mmon power supply term	inal				
Pow volta	Communication side	—	11 to 25 VDC *3	14.0 to 2	6.4 VDC				
mption	Unit side	(web		40 mA	or less				
t consu	Valve side	(wi Li	oad current is not include	ed	Load current is not included				
Communication		_	_	65mA or less (all points ON: 24 VDC) 95 mA or less (all points ON: 14 VDC)					
No. o	f output points	16 points	16 points	16 points	16 p	oints			
Occupied number		1 station	1 station	2 bytes	Word slave 1 node (16 points)				
Oper	ation display		LED (powe	er supply and communica	tion status)				
Output NPN					NPN	PNP			

Itom		T8G1	T8GP1	T8P1	T8PP1	T8EC1	T8ECP1	T8EN1	T8ENP1	NP1 T8D1 T8DP1 T8EB1 T8EBP1		T8EP1	T8EPP1			
itterr		T8G2	T8GP2	T8P2	T8PP2	T8EC2	T8ECP2	T8EN2	T8ENP2	T8D2	T8DP2	T8EB2	T8EBP2	T8EP2	T8EPP2	
Commu	inication protocol	CC-Link	ver. 1.10	PROFIBU	S-DP (V0)	Ethe	rCAT	Etherl	Net/IP	Devid	ceNet	CC-Link IEF Basic		PROFINET		
kiddhs	Unit side	24 VDC ±10%					11 to 2	5 VDC		24 VDC	C±10%					
Power voltage	Valve side		24 VDC+10%, -5							%						
umption	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)					ess (when all its 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 le output poin	ss (when all ts are ON)			
Current cons	Valve side	(Wł	nen all ou	T T tput poin	T8⊡1: 15 mA or less T8⊡2: 20 mA or less put 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: 1	6 points	T8_2: 3	32 points						
Occu	bied number	1 station														
Opera	ation display					LED (	power su	ipply and	commur	nication s	tatus)					
Outpu	ut	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 Communication power supply (V+, V- of DeviceNet cable) Power supply terminal (Unit power supply/valve power supply) is insulated from .

itic actuator

Vacuum components Pneumatic valves

Clean

controller Fitting

Auxiliary valve

Silencer

Tube

Pneumatic auxiliary components

**CKD** 

# MN4GA1, 2-T\* Series

Reduced wiring block manifold; Body piping



Pneumatic actuator

218

# MN4GA1, 2-T\* Series

Reduced wiring block manifold; Body piping

P Ser	4 <sup>ies</sup>
Pneumatic cylinders	Pn
Hand/ Chuck	eumatio
Related products	c actuat
SC	07

Cylinder Switch

Tube

Ozone-proof sp	pecifications
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A Model No.

#### Coolant proof specifications

Can be selected with "How to order" Item  $\ensuremath{\mathbb{F}}$  option "A" on page 218.

#### CE marking specifications



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

			Manifold 3-port valve 5-port valve		Valve block with solenoid valve discrete/ single solenoid valve					
			-	N	-	N	_	~	_	~
			À	N S	À	١¥	Ă	βĂ;	λ,	Ř
			130	130	140	140	80	30	40	4
			ž	ž	ž	ž	Z	Ĵ	Z	Z
	luced withing (lemme and outgo		ded		otor		(h)	10/0	4 1/1	
T10	luced winng (lamp and surge	Loft sided specifications	aea	as	stal		a)		4 1	
T10R	Common terminal block (M3 thread)	Right-sided specifications	-							
T11	I1 Common terminal block (clamping)	Left-sided specifications	•	•	•	•				
T11R		Right-sided specifications	Ť	•	•	•				
T30	- D-sub-connector	Left-sided specifications	•	•	•	•				
T30R		Right-sided specifications								
T50	20-pin flat cable connector (with	Left-sided specifications								
T50R	power supply terminal)	Right-sided specifications								
T51	20-pin flat cable connector (without	Left-sided specifications								
T51R	power supply terminal)	Right-sided specifications	•	$\bullet$	$\bullet$	•				
T52	10-pin flat cable connector (without	Left-sided specifications								
T52R	power supply terminal)	Right-sided specifications	•							
T53	26-pin flat cable connector (without	Left-sided specifications	•							
T53R	power supply terminal)	Right-sided specifications								
D Ser	ial transmission (lamp/surge	suppressor pro	vid	ed a	as s	tan	dar	d) 2	4 V	DC
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		NPN 16 points								
18GZ	CC-Link	NPIN 32 points								
TRGP2		PNP 32 points								
T8P1		NPN 16 points	-							
T8P2		NPN 32 points	ŏ	•	•					
T8PP1	PROFIBUS-DP	PNP 16 points	ŏ	Ĭ	Ĭ	ŏ				
T8PP2		PNP 32 points	Ť	•	•	Ť				
T8EC1		NPN 16 points	•							
T8EC2	Ethor CAT	NPN 32 points								
T8ECP1		PNP 16 points								
T8ECP2		PNP 32 points								
T8EN1		NPN 16 points								
T8EN2	EtherNet/IP	NPN 32 points								
T8ENP1		PNP 16 points	•	•	•					
T8ENP2		PNP 32 points								
18D1		NPN 16 points								
	DeviceNet	NPIN 32 points								
		PNP 32 points								
T8FB1		NPN 16 points								
T8EB2		NPN 32 points								
T8EBP1	CC-Link IEF Basic	PNP 16 points	Ó	•	•	Ó				
T8EBP2		PNP 32 points	Ó	•	•	Ó				
T8EP1		NPN 16 points								
T8EP2	PROFINET	NPN 32 points								
T8EPP1		PNP 16 points								
T8EPP2		PNP 32 points	$\bullet$			$\bullet$				
A2N	Without lead wire (without socket)	With surge suppressor						$\bullet$	$\bullet$	
		and indicator fairly								


Catalog No. CB-023SA

Two 3-port valves integrated

(A side valve: NC, B side valve: NC) 2(B b ≌Σ[]

3(R2)

-5(R1) 1 (P) (A side valve: NC, B side valve: NO)

-3(R2)

-5(R1) 1 (P) (A side valve: NO, B side valve: NC) 2(B)

-3(R<sub>2</sub>)

-5(R1)

1 (P)

-3(R2)

5(R1) 1 (P)

 $\triangleleft$ 

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b

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

JIS symbol

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b B C T T S C

a T a

₽

5-port valve

а ≌>

2

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ED

E

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Tube

3-position

All ports closed 4 2(B) (A)

2-position single

4 2(B) (A)

5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 2-position double 4 2(B) (A)

5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>)

TTT 5 1 3 (R1) (P) (R2) 3-position A/B/R connection

4 2(B) (A)

5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>) 3-position P/A/B connection 4 (A) 2(B)

t.

5 1 3 (R<sub>1</sub>) (P) (R<sub>2</sub>)

4 (A)

## Reduced wiring block manifold Base piping MN4GB1, 2-T\* Series

Cylinder bore size:ø20 to ø80



### Manifold common specifications

Item	Description	
Manifold	Block manifolds	
Mounting method	DIN rail mount	R
Air supply and exhaust method	Common supply/common exhaust (With internal exhaust check valve)	V
Pilot exhaust method	Main valve/pilot valve common exhaust (Pilot exhaust check valve built-in)	H Cl
Piping direction	Side direction of base	P
Valve and operation	Pilot operated soft spool valve	CC
Working fluid	Compressed air	W
Max. working pressure MPa	0.7	Т
Min. working pressure MPa	0.2 (*3)	S
Proof pressure MPa	1.05	lr
Ambient temperature °C	-5 to 55 (no freezing)	*1
Fluid temperature °C	5 to 55	
Manual override	Non-locking/locking common (standard)	*2
Lubrication (*1)	Not required	*3
Degree of protection (*2)	Dust-proof	
Vibration resistance m/s <sup>2</sup>	50 or less	
Shock resistance m/s <sup>2</sup>	300 or less	*4
Atmosphere	Cannot be used in corrosive gas environments	*5

## **Electrical specifications**

ltem		Description				
Deteduc	llese	T1□, T3	0_, T5_	T6G1, T7□, T8□		
Rated vo	itage V	24 DC	12 DC	24 DC		
Voltage fluctu	ation range (*4)	±10	0%	+10%, -5%		
Holding	Standard	0.017	0.034	0.017		
current A	With low exoergic/ energy saving circuit	excergic/ ing circuit 0.005 0.010		0.005		
Power	Standard		0	.4		
consumption W	With low exoergic/ energy saving circuit		0	.1		
Thermal	class	В				
Surge sup	pressor (*5)		Zener	diode		
Indicator			L F	D		

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

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

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

Since voltage drops due to the internal circuit of T6G1, T7, T8 and (serial transmission), pay attention to the voltage fluctuation range. 5 If low exoergic/energy circuit or surgeless types are selected then there will be a diode.

### Individual specifications

Itom			MN3GB1/MN4GB1										
nem			T10	T11	T30	T50	T51	T52	T53	T6G1	T7"1	T8*1/2	
Max.	station	Standard wiring	16 stations	24 stations	24 stations	16 stations	18 stations	8 stations	24 stations	16 stations	8/16 stations	16/24 stations	
No. 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	Metric	Port A/B		Push-in fitting ø4,ø6									
size	fitting	P/R Port	Push-in fitting ø6,ø8										
_													

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

ltom		MN3GB2/MN4GB2										
iten	n		T10	T11	T30	T50	T51	T52	T53	T6G1	T7*1	T8*1/2
Mox	atation 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
wax.	Station NO.	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	Metric	Port A/B		Push-in fitting ø4,ø6,ø8								
size fitting P/R Port Push-in fitti								-in fitting	g ø8,ø10	)		

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

### Flow characteristics

Model	Sal	anaid nacition	$P \rightarrow A/B$		$A/B \rightarrow R1/R2$				
No.	301	enoid position	C[dm³/(s·bar)]	·bar)] b C[dm³/(s·bar)]		b			
	Two 3-p	port valves integrated	0.86	0.35	1.0 (0.66)	0.15 (0.25)			
	2-positi	on	1.0	0.30	1.1 (0.72)	0.11 (0.26)			
		All ports closed	0.96	0.32	1.0 —	0.14 —			
WIN4GD I	3-position	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 —			
	Two 3-p	port valves integrated	1.7	0.42	2.2 (1.6)	0.15 (0.19)			
MNI2CR2	2-positi	on	2.4	0.35	2.5 (1.7)	0.19 (0.19)			
MN4GB2		All ports closed	2.2	0.38	2.3 —	0.17 —			
	3-position	ABRConnection	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≈5.0×C.

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

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Clean air

# MN4GB1, 2-T\* Series

## Reduced wiring block manifold; Base piping

## Reduced wiring specifications

	01							F 4
ltem	T10	T11	Т30	T50	T51	T52	T53	Series
Туре	Common terminal block M3 thread	Common terminal block Clamping method	D-sub- connector	20P flat cable connector, With power supply terminal	20P flat cable connector, With power supply terminal	10P flat cable connector, With power supply terminal	26P flat cable connector, With power supply terminal	Pneuma cylinde
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	<b>Pneum</b> tic Hand rs Chuc
Serial transn Download the	nission slave ເ communication set	Init specifica	ations e CKD website	(https://www.ck	d.co.jp/en).			Atic actu W Related k product
ltem				T6G1				ato
Network name			C	C-Link ver 1 10				SVC T

## Serial transmission slave unit specifications

ltem		T6G1
Netw	ork name	CC-Link ver. 1.10
kiddhs	Unit side	24 VDC ±10%
Power voltage	Valve side	24 VDC +10%, -5%
nsumption	Unit side	100 mA or less (when all output points are ON)
Current col	Valve side	15 mA or less (when all output points are OFF)
No. o	f output points	16 points
Occupied number		1 station
Oper	ation display	LED (power supply and communication status)
Outp	ut	NPN

Item	1	T7G1	T7L1∗1	T7D1	T7S1	T7SP1		
Netw	ork name	CC-Link ver. 1.10	SAVE NET	DeviceNet*2	Comp	oNet		
pply	Unit side			24 VDC +10%, -5%				
er su ige	Valve side		Cor	mmon power supply term	inal			
Pow volta	Communication side	—	_	11 to 25 VDC *3	14.0 to 26.4 VDC 40 mA or less (when all output points are ON)			
nption	Unit side		110 mA or less		40 mA or less			
uns		(wh	en all output points are (	DN)	(when all output points are O			
t con	Valve side	L	oad current is not include	d	Load current i	s not included		
rrent	Communication			E0 mA or loss	65mA or less (all p	oints ON: 24 VDC)		
Cul	side	—	—	50 THA OF IESS	95 mA or less (all p	oints ON: 14 VDC)		
No. o	f output points	16 points	16 points	16 points	16 p	oints		
000	iniad number	1 station	1 station	2 hytop	Word	slave		
Occi	ipied number	T Station	I Station	2 Dytes	1 node (16 points)			
Oper	ation display		LED (powe	er supply and communica	unication status)			
Outp	ut		NE	PN		PNP		

Itom		T8G1	T8GP1	T8P1	T8PP1	T8EC1	T8ECP1	T8EN1	T8ENP1	T8D1	T8DP1	T8EB1	T8EBP1	T8EP1	T8EPP1
nem		T8G2	T8GP2	T8P2	T8PP2	T8EC2	T8ECP2	T8EN2	T8ENP2	T8D2	T8DP2	T8EB2	T8EBP2	T8EP2	T8EPP2
Comm	unication protocol	CC-Link	ver. 1.10	PROFIBU	PROFIBUS-DP (V0) EtherCAT EtherNet/IP						ceNet	CC-Link IEF Basic PROFIN			INET
supply	Unit side		24 VDC ±10%								5 VDC		24 VDC	¢±10%	
Power voltage	Valve side						2	24 VDC+	10%, -5%	6					
otion	l Init side	60 mA or less (when all 60 mA or less (when all 110 mA or less (when all 120 mA or less (								70 mA or le	ss (when all	130 mA or	less (when	130 mA or	less (when
duns		output poir	nts are ON)	output poir	its are ON)	output poir	ts are ON)	all output po	ints are ON)	output poir	nts are ON)	all output po	ints are ON)	all output po	ints are ON)
Current cons	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											N) Load		
No. of	output points	T8 1: 16 points T8 2: 32 points													
Occu	pied number	1 station													
Oper	ation display					LED (	Power su	upply and	commu	nication s	tatus)				
Outp	ut	NPN output PNP output NPN output PNP output NPN output NPN output NPN output NPN output NPN output PNP output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN output PNP output NPN 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).

Related Cylinder products Switch

Vacuum components Pneumatic valves

Clean air components

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# MN4GB1, 2-T\* Series

Reduced wiring block manifold; Base piping



## 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.

CKD

- \*3 This will be MN4GA\*80R for a mix with 4, 5-port valves. Further, select MN3GB\*80R when mixing with masking plate.
- \*4: Not compatible with combination with external pilot (K). Dimensions are the same as those of 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.

is not available.

## MN4GB1, 2-T\* Series

Reduced wiring block manifold; Base piping

ort s	ize/wiring method list]			Mar	(A)	Mo	del	No.		
			Two	<u>iviar</u> 3-port	5-1	oort	- Vi	alve bl	lock w	ith
			val	Ves	va	lve	sing	ioiu va ile sole	enoid v	alve/
			5	N	2	N	2	N	2	N
			ğ	ğ	ğ	ğ	U.	U U	U	U U
Codo	Description		ž	Ž	Ž	Ž	Ω	۲) R	2 T	2 T
	ced wiring (lamp and surge supp	ressor provided as st	2 and	2 Jarr	1) 1	2/2/			5	5
T10	ced wining (tamp and surge supp	Left-sided specifications								
T10R	Common terminal block (M3 thread)	Right-sided specifications	۲	٠	٠	۲				
T11	Common terminal block (clamping)	Left-sided specifications	٠	•	•	٠				
T11R		Right-sided specifications	•					-		
130 T30R	D-sub-connector	Right-sided specifications							-	<u> </u>
T50	20-pin flat cable connector (with power	Left-sided specifications	Ť	•	•	•		-		-
T50R	supply terminal)	Right-sided specifications	Ť	Ŏ	Ŏ	Ŏ				
T51	20-pin flat cable connector (without	Left-sided specifications	٠							
T51R	power supply terminal)	Right-sided specifications	•	•	•			<u> </u>		
T52	10-pin flat cable connector (without	Left-sided specifications								<u> </u>
T53	26-pip flat cable connector (without	Left-sided specifications						-		<u> </u>
T53R	power supply terminal)	Right-sided specifications	ŏ	ŏ	ŏ	ŏ		-		
Sorial	transmission (lamp/surge suppr	essor provided as st	and	ard	12/	VF				
T6G1	CC-Link	NPN 16 points								
T7D1	DeviceNet	NPN 16 points	Ť	Ĭ	Ĭ	Ō				
T7G1	CC-Link	NPN 16 points								
T7L1	SAVE NET	NPN 16 points	•	•	•	•				
T7S1	CompoNet	NPN 16 points								
1/SP1	•	NPN 16 points								
T8G2		NPN 32 points	-							
T8GP1	CC-Link	PNP 16 points	Ĭ	Ĭ	Ĭ	Ĭ				
T8GP2		PNP 32 points								
T8P1		NPN 16 points	٠	•						
T8P2	PROFIBUS-DP	NPN 32 points						_		
T8PP1		PNP 16 points								
T8EC1		NPN 16 points						-		
T8EC2		NPN 32 points	ŏ	ŏ	ŏ	ŏ		-		
T8ECP1	EtherCAI	PNP 16 points	۲	٠	•	٠				
T8ECP2		PNP 32 points	٠	•	•					
T8EN1		NPN 16 points						<u> </u>		
T8EN2	EtherNet/IP	NPN 32 points						-		<u> </u>
T8ENP1		PNP 16 points						-	-	<u> </u>
T8D1		NPN 16 points	ŏ	Ĭ	Ŏ	ŏ				
T8D2	DeviceNet	NPN 32 points								
T8DP1	Devicement	PNP 16 points								
T8DP2		PNP 32 points						_		
TOER2		NPN 16 points								
TREBP1	CC-Link IEF Basic	PNP 16 points			-			-		
T8EBP2		PNP 32 points	ŏ	ŏ	ŏ	ŏ		<u> </u>		
T8EP1		NPN 16 points	۲	٠	٠	۲				
T8EP2	PROFINET	NPN 32 points	•	•	•					
T8EPP1		PNP 16 points								
18EPP2	Without lead wire (without eachet)	With surge suppressor and indicator land	•	•	•	•				
		тил элиде эпфриезол чил шисалог Iamp								
E Termil	Standard wiring	(*6)								
W	Double wiring	(*6)		-						
W 1	Double wiring (with single spare wiring)	(*6)(*7)	Ĭ	Ĭ	Ĭ	Ĭ	Ĭ	Ĭ	Ĭ	Í
🔁 Ontio	n									
Blank	Manual override of non-locking/locking c	ommon								•
М	Non-locking manual override						•		۲	•
н	With exhaust check valve	(*8)	٠	•	٠		$\bullet$	٠	٠	
К	External pilot	(*9)				•				•
A	Uzone/coolant proof	(****)								
5 F	ourgeress	(*10) (*10)(*11)								
L	With pipe adaptor	(10)(11)		Ĭ						
Q	Reduced wiring duct		Ŏ	•	•	Ó	Ó	Ó	Ó	Ó
F	Port A/B filter built in	(*12)								
Z1	Air supply spacer	(*13)	•	•	•	•				
Z3	Exhaust spacer	(*13)	•							
26		(*13)								
G Statio	n No.									
1 to	1 station									
24	24 stations (Max_station number for MN//	B2 is 20.)								
						-				
4	12 VDC									

Ozone-proof specifications • Coolant proof specifications P4 Series Can be selected with "How to order" Item E option "A" on the left. Pneumatic cylinders CE marking specifications Hand/ Chuck \*\* - Voltage - ( ST Standard voltage of 24 VDC or less is CE marking-Related products compatible even if the model No. is not indicated with "ST". Cylinder Switch Clean air mponents Speed Fitting Auxiliary valve A Precautions for model selection \*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. Tube \*7 Spare wiring (A type socket assembly) is included on the cap side for single types. A holder for retaining the socket assembly is included for single unit valves (A2N). Refer to page 230 for details. Combination with port sizes C\*NC and C\*NO is not supported.
 \*8 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 oxhaust check valve

- for details on the exhaust check valve. \*9 Consult with CKD when using a vacuum with the
- external pilot (K).
- \*10 Surgeless "S" and low exoergic/energy circuit "E" cannot be selected together.
- \*11 Surgeless specifications.
- \*12 A filter is built into port P as standard. \*13 Specify the spacer mounting position/quantity in the manifold specifications sheet. Stacking of spacers is not possible. Combination with masking plates is not possible. For details, refer to pages 227 to 228.
- \*14 Only compatible with MN4GB1 and MN4GB2 solenoid positions "3" and "4".

**Pneumatic actuator** 

Vacuum components Pneumatic valves

Pneumatic auxiliary components

Block manifold: piping section

#### P4 Series Piping

Imatic

Pne

### 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 208, base piping individual wiring: Page 212, Body piping reduced wiring: Page 218, base piping reduced wiring: Page 222

B. Discrete valve block with masking plate





Block manifold: piping section

P4 Series

### Piping

### C. Discrete valve block (separate item only)

Discrete valve block (split resin base).



Pipe adaptor

Block manifold: piping section

#### Piping P4 Series

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

<sup>oneumatic valves</sup>

Pneumatic auxiliary components

Auxiliary Fitting

Silencer

Tube

Clean air

Speed

### C. Discrete valve block (separate item only)

#### Valve block for expansion Cable length

Calculate the distance W between the expansion position and the wiring block (Fig. 1), «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

	>wichgin sciection	No. compatibility table								
Selection	Type of wiring									
No.	T10/11(R)	T30/5*/6ťR)	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							



## 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.



Motor

Block manifolds; Related products

Related products

Air supply spacer

#### Air supply spacer



### Specifications

oposinications											
Model No	P→	A/B	A/B	ightarrow R	Waight a	SVC VI					
woder no.	C[dm³/(s·bar)]	b	C[dm³/(s·bar)]	b	weight g	inde /itch					
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



### 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).
- If the elbow (upward) port A/B fitting is used \*4 for the reduced wiring manifold, the air supply spacer cannot be selected.
- \*5 Combination with the masking plate is not supported.

Pneumatic cylinders

Hand/ Chuck

Related

Pneumatic actuator

Vacuum components Pneumatic valves

Clean air components

Pneumatic auxiliary components

specification

Block manifold: related products

P4 Series Related products Exhaust spacer

Pneumatic

Hand/ Chuck

Related

nder d C P

**Pneumatic actuator** 

Vacuum components

Pneumatic valves

Exhaust spacer



## Specifications

Medal No	P →	A/B	A/B	ightarrow R	Wainht a
wodel no.	C[dm <sup>3</sup> /(s·bar)]	b	C[dm³/(s·bar)]	b	weight g
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.

4G2 2 mounting screws, 2 PR check valves, 1 body gasket

## How to order discrete units

4G (2) R - R - (GW	/S6) – P4						
$\uparrow$					Mode	el No.	
				4GA1	4GB1	4GA2	4GB2
		Code	Description				
	I	A Ex	haust spacer model No.				
A Exhaust spacer model No.		1	For 4G1				
		2	For 4G2				
		BPC	ort size				
	B Port size	Blank	M5 (4G1), Rc1/8 (4G2)				
		GWS4	ø4 fitting		)		
	*1	GWS6	ø6 fitting			C	)
	The port size of "●" is a	06N	1/8NPT thread				
	standard product and	06G	G1/8 thread				
	equivalent to P4 specifications. It is not necessary to add "-P 4" to the model No.	i: Accesso	s not available. ories:4G1 2 mounting screws, 1 specially o	designe	ed gasl	ket	

## A Precautions for model selection

- \*2 Specify the positions and quantity of exhaust spacers for manifold in the manifold specifications sheet.
- \*3 If the port A/B fitting is elbow, turn the exhaust port of the exhaust 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.

Silencer

Tube

Motorless

## 4G1R-PC Series Block manifolds; Related products

4G1R-PC

Compressed air

0.7



linders

Hand/ Chuck

Pneumatic auxiliary components r Speed Fitting Auxiliary Silencer valve Valve

Tube

Clean air omponents

229



ducts Spacer pilot check valve

Spacer pilot check valve



## JIS symbol



Note: Using a cylinder with a large diameter (more than ø50 as a guide) with little exhaust restriction (eg, no speed controller, no silencer) may lead to a decrease in intermediate stop accuracy and stopping error. Please be careful.

### Pilot check valve



Refer to page 179 for details.

## Dimensions



Note: For A dimension, check the dimensions of the respective specifications.



Min. working pressure	MPa	0.2	
Proof pressure	MPa	1.05	pro
Effective cross-sectional area	mm <sup>2</sup>	1.6 (Solenoid valve)	oduc
Ambient temperature	°C	−5 to 55 (no freezing)	ts d
Working fluid temperature	°C	5 to 55	50
Lubrication	*1	Not required	vito
Atmosphere		Cannot be used in corrosive gas environment.	her
Weight	g	22	
*1: Use turbine oil Class 1 I Note that excessive lubr	SO VG3 icant ma	32 for lubrication. ay cause unstable operation.	-

MPa

Discrete model No.

4G1R-PC

Specifications

Pilot check valve

Max. working pressure

Working fluid

## Precautions for model No. selection

\*1: Specify the spacer positions in the manifold specifications sheet.

- \*2: Stacking of spacers is not possible.
- \*3: A spacer cannot be combined with a masking plate.
- \*4: The spacer pilot check valve can be mounted only when the piping method is base piping.
- \*5: Reduced wiringWhen adding a spacer to the manifold, select the socket assembly lead wireis insufficient (does not reach it). Replace the valve block. (Refer to page 225 for details.)

Block manifolds; Related products



umatic

Pnet

Hand/ Chuck

Pneumatic actuator

Related products Double wiring (with single spare wiring)

## Double wiring (with single spare wiring) (W1)

For manifolds



Discrete valve (2-position single)



A holder for retaining the socket assembly is included. (Not included for A type sockets.)

This can be used to hold the socket assembly no longer required when changing the valve from a double solenoid to a single solenoid.

Spare wiring (holder and A type socket assembly) is included on the cap side for single solenoid valves.

This simplifies the workflow when changing valves from a single solenoid to a double solenoid, as you do not need to prepare the A type socket assembly separately.

## Example of model No.



\* Refer to How to order for each series for details about model numbers. Combination with port sizes C\*NC and C\*NO is not supported.

air

Motorless

Block manifold: related products



### Dimension lines



CKD

specification specific

Silencer

Tube

Gas generator Fluid control components Electric actuato

P

Pneumatic actuator

Pneumatic valves Vacuum components

Pneumatic auxiliary components

Fitting

Auxiliary valve

Silencer

Tube

MN	4 GA1 8		O	<b>R-</b>		C	X	-		T	5	0	_	[	W				ŀ	4		•	[	8				3			Ρ	4
A M For information, Blo	odel No. B Solenoid ck configurations (Pneumatic Valves	pos No.CE	itior 1-0238	n C SA) to	Po selec	o <b>rt s</b> tamo	bize	0.	D (Rec	Electric duced v	cal conn viring co	ections innectio	<b>()</b> () () ()	Termii array	nal/Co Exp	nneci ressi	or pir on (r	Note:	Op Fill i	otioi in fo	n r red	uced	<b>G</b> I wirii	Statio	on No	). (		/olta	age			
Part name	Model No.	1	2	3	4	5	6	7	8	9	10	11	12	13	La 14	yout 15	posi 16	ition 17	18	19	20	21	22	23	24	25	26	27	28	29	30	Qı
Wiring block	N4G1R-T [50]	0					<u> </u>								1																	
With solenoid	N4GA1 1 0R- C4 -	1	0	0			1								T						T	T										Ħ
valve	N4GA1 2 0R- C6 -	1		1		0									1																	┢
Valve block	N4GA1 3 0R- C4 -	1			0										1																	t
(Page 224)	N4GA1 OR-																															
	N4GA1 0R	3																														Γ
	N4GA1 0R																															F
	N3GA1 1 0R- C4 -	]								0	0	0																				Γ
	N3GA1 0R	]																														
Valve block with	N4GA1R-MP																															T
masking plate	N4GA1R-MPS						-								1																	
(Page 224)	N4GA1R-MPD						0																									
Supply and	N4G1R-Q - 8L					İ		0					0		T						T	T										T
exhaust block	N4G1R-Q -																															t
(Page 226)	N4G1R-Q -																															1
Partition block	N4G1R-S A			<u> </u>					$\overline{0}$													<u> </u>										亡
	N4G1R-S														1																	┢
	N4G1R-S																															1
End block	N4G1R-E			<u> </u>										$\overline{0}$	<u> </u>						<u> </u>	T										t
	N4G1R-E														-							-		-								+
											F	Blank	kina i	olua												Tag	plate	e (inc	lude	d)		t
	L2=	-	(	WP	4-E						GW	/P 6	- <b>B</b>	olug				(	WP	8-B						iug	A	5 (				
Mounting rail	(How to calculate length on next page)			D	Cat	ble w	ith s	ub-co	onne	ctor			Ī			4	GR-0	CABI	_E-D	0[	_				1	Push-ii attach	n fitting	tube r	emove	er (star	ndard eck)	

#### 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.

• For required included parts,  $\bigcirc$  mark.

• 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.

- MN4GA1: Page 236
- MN4GB1: Page 237
- MN4GA2: Page 238
- MN4GB2: Page 239

• MN4GA×1, 2 (mix manifold): Page 240

• MN4GB×1, 2 (mix manifold): Page 241

Motorless pecifications

## 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.
- With standard length, For specifications sheet, N (L2) is not required. If you need a length other than the standard length, please enter it.

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

L2': 
$$\xrightarrow{L1+40}$$
 round up to integer

Rail mounting pitch (L3) = L2 - 12.5

	alve block	-	MN4GA/B1	MN4GA/B2		/2MIX	inde	
	alve block			WIN4GA/DZ	MN/GA/R1			
	alve block		10 E			MN4GA/B2	ers	Pn
A Va	upply and e		10.5	16	10.5	16	~-	le
B Su	appi) and	exhaust block	16	18	16	18	Han	m
C Pa	artition blo	ck	10.5	10.5	10.5	10.5	ске	lat
In	ndividual w	iring	41.2	46.2	43	.7	73	ic
		T10/T11	83.9	86.4	86	.4	Proc	ac
		T10R/T11R	83.9	86.4	83	.9	ated	tu
FC	or	T30/T5*	69.4	71.9	71	.9	50	at
	iring	T30R/T5*R	69.4	71.9	69	.4	So	9
	/iring block	T6G1	143.6	146.1	146	6.1	wite	
I  '''	ning bioon	T7*	64.4	66.9	66	.9	cher	
		T8*	64.4	66.9	66	.9		<
E M	lixed block				16	3		acu

\* The end block is, Included in wiring block.

(	Mou	Inting	rail le	ength	quic	c refe	rence	table	e										,								
	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
	PitchL <sup>3</sup>	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:L1 exceeds this table,"How to calculate the length of the mounting rail" for calculation.



Vacuum components Pneumatic valves

Clean air components

P4 Series

### Block length (width) dimensions table

CKD

umatic inders

Pneu cvlir

> Hand/ Chuck

Related

**Pneumatic actuator** 

Vacuum components

<sup>></sup>neumatic valves

Pneumatic auxiliary components

Clean air

Speed

Auxiliary Fitting

Silencer

Tube

## How to fill out wiring specifications sheet

Not required for standard wiring and double wiring.

Wiring specificationsbook (Example)

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

	Connecto	or pin No.													Valve	e 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		а																						
3	3	3	3				а																				
4	4	4	4				b																				
5	5	5	5					а																			
6	6	6	6					b																			
7	7	7	7			а																					
8	8	8	8			b																					
9 - Power supply	9	9 <sub>сом</sub>	9																								
10 + (COM) Power supply	10	10 <sub>сом</sub>	10																								
11	11		11						а																		
12	12		12							а																	
13	13		13								а																
14	14		14																								
15	15		15																								
16	16		16																								
17	17		17																								
18	18		18																								
19 - Power supply	19 <sub>сом</sub>		19																								
20 + (COM) Power supply	20 <sub>сом</sub>		20																								
			21																								
			22																								
			23																								
			24																								
			25 <sub>сом</sub>																								
			26 <sub>COM</sub>																								

 $^{\ast}$  When T50/T50R, the COM polarity is + (Positive) be careful.

### Notes on wiring specifications

① Fill 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.
 ② The 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.
 ③ As 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 notes for each reduced wiring method (Pneumatic Valves No.CB-023SA).

(Wiring (socket assembly) is included with valve blocks with masking plates. "-MPS" is on the A side only. "-MPD" is on the A/B sides.

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

(6) It is not possible to install spare wires for station expansion in advance. Wire the socket assembly of the solenoid value for expansion of stations. To expand stations, (Pneumatic Values No.CB-023SA).

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



 $^{\ast}$  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.

Motor

spec

Motorless

KD

P4 Series

235

## MN4GA1 Block manifold specifications sheet

P Ser	4 <sup>ies</sup>	MN4G	A1 Block ma	anife	old	sp	e	cif	ic	at	io	n	S S	sh	e	et																
	rs	Contact	•	Quant	itv se	t(s)	•	Del	iver	v d	ate	/												D	ate	issu	ued		/		/	
_	linde	Slip No.			.,	-(-)	-			0	rde	r No	Э.											С	om	pan	у	-	-	-		
atoi	C) Du	Manifold m	nodel No.																					С	onta	act						
actu	Hand/ Chuck																							0	rde	r No	Э.					
atic a	ted ucts (	MN	GA1 0	R-			-												-			-	•			-	P	4				
eum	Relat	A Mode	I No. B Solenoid position	n C	Port s	size	D	Electric	cal con	nectio	ons E	Teri	minal	conne	ector	Ð	Opti	on	(	G	Stati	on N	lo.		olta	ge						
Pn	tch	Refer to "Block configu	rations" (Pneumatic Valves No.CB-023S	A) to select	the mode	l No.	C	connec	ction)	inig	pir	n arra	y (No	te: Fil	l in foi	reduc	ed wir	ing.)														
ts	Cylir Swi	Part name (Page)	Model No.	1 2	3	4 5	6	7	8	9	10	11	12	13	Lay	vout p	16	on 17	18	19	20	21	22	23	24	25	26	27	28	29	30	Quantity
nonen		Wiring block	N4G1R-T										_																			
um com		With solenoid	N4GA1 0R-																													
Vacui		valve Valve block	N4GA1 0R-																													
valves		(Page 224)	N4GA1 0R-																													
natic			N4GA1 0R-																													
Pneur			N4GA1 0R-																													
	n air onents		N4GA1 0R-																													
ts	Clea compo		N3GA1 0R-																													
onen	speed ntroller		N3GA1 0R-																													
dmo	0.02	With masking plate	N4GA1R-MP																													
Iry co	Fitting	Valve block (Page 224)	N4GA1R-MPS																													
uxilia	liary ve		N4GA1R-MPD																													
tic at	Auxil val	Air supply	4 G1R-P-																													
umat	lencer	(Page 227)	4 G1R-P-																													
Pne	Si	Exhaust spacer (Page 228)	4G1R-R-																													
	Tube	Supply and	N4G1R-Q -																													
Itor		(Page 226)	N4G1R-Q -																													
enera			N4G1R-Q -																													
as ge		Partition block	N4G1R-S																													
nts G			N4G1R-S																													
Inpone			N4G1R-S																													
ontrol co		End block	N4G1R-E																													
Fluid co			N4G1R-E																													
uator	Notor iffication	Mounting rail	L2=								BI	lanki	ing p	lug											Т	ag p	late (	(attac	chme	ent)		p
ic act	s h		* Write an integer multiple of 12.5.		GWP 4	-В					GWI	P 6-I	в					G	WP	8-B					-1		A					Include Part
Electri	Motorles		page 233)		Cab	le with	D-sı	ub-co	nnec	tor						4G	iR-C/	ABLE	E-DO	)[	]				F	<sup>p</sup> ush-in s Stan	fitting dard) [	tube re	emover require	d (Ch	ided eck)	

																							-					,		,		Serie
Contact	•	Quar	ntity s	set(s	s)	•	De	live	ry c	late	/											1	D 	ate	ISS	ued	I	/	/			Pne cyli
Slip No.									(	Ord	er N	lo.											<u>C</u>	om	pan	y						umati nders
Manifold r	nodel No.																						<u>C</u>	ont	act							от -
					-1	·					·			:			;		·		- ;	;	<u>o</u>	orde	er No	o.					—	land/ huck
MN4	GB1 OF	<b>X-</b>									l							-			-	· [		]	-	Ρ2	1					PR
A Mode	el No. B Solenoid position	C	Por	t siz	e	D Ele (Re	ectrica educe	al conr ẹd wii	nectior ring	15 E	Terrr	ninal/C	onnec' Fill in f	tor pin	<b>B</b> red wi	Opti	on		G	Statio	on No	). <b>H</b>	Vol	tage								elater
eler to Block conlig		55A) 10 SE	elect the	mode	I NO.	cor	nnect	ion)			unuy	(14010.		La	/out	posi	tion														_	20 20
Part name (Page)	Model No.				_		_												10						0.5		07			_	Juantit	ylinde Switch
	()	1 2	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 3	30		n er
Viring block	N4G1R-T																															
Vith solenoid	N4GB1 0R																															
alve /alve block	N4GB1 0R																															
Page 224)	N4GB1 0R																															
	N4GB1 0R																													-		
	N4GB1 0R		-																											-	_	
	N4GB1 0R		-																											_	_	
	N3GB1 OR																													_	_	Clear
	N3GB1 OR																													_	_	n air nents
/ith masking plate	N4GB1R-MP-																														-	Speed
(alve block	N4GB1R-MPS-																														_	er F
raye 224)	N4GB1R-MPD-																													-		itting
Air supply	4 G1R-P-																															Auxili valv
pacer Page 227)	4 G1R-P-																													-	_	ary (
Exhaust spacer	4G1R-R-																													T		Silencer
Spacer pilot	4G1R-PC-																													1	_	Ţ
Supply and	N4G1R-Q -																													+		be
xhaust block Page 226)	N4G1R-Q -																														_	
	N4G1R-Q -																														_	
Partition block	N4G1R-S																												$\equiv$	+	-	
	N4G1R-S														L											L						
	N4G1R-S																															
nd block	N4G1R-E																															-
	N4G1R-E																															spe
Nounting rail	L <sub>2</sub> =				<u>.</u>			BI	anki	ng pl	ug				<u> </u>	·	<u>.                                    </u>			·	·	Та	ag pla	ate (	attac	hme	nt)	<u> </u>				Motor cificatio
	* Write an integer multiple of	G	WP 4	-В				GW	/P 6-	в				GW	P 8-	в					B1						B2			Joluded	Part	n specit
	12.5. (How to determine the length; page 233)	0	Cable	with	D-su	b-cor	nnec	tor				4GI	R-CA	BLE	-D0					Pus	h-in	fitting	tub	e ren	nover	(sta	ndar	d atta	ichme	nt)		ficatio

Contact		(	l Qı	lanti	ty s	et(s	5)		De	live	ry d	late	/													Da	ate	ISSU	led		/		/
Slip No.											С	rde	r N	о.												<u>C</u>	omp	any	<u>/</u>				
Manifold n	nodel No.																									Co	onta	act					
																										0	rder	· No	).				
MN	GA2		0R	2-				-	[							][			-	- []			-			] •	- F	24	ŀ				
A Model	No. B Solen	oid positio	on	С	Por	t siz	e 🕻	Ele	ectrical	l conne	ections	E	Tern	ninal/c	onne	ctor	F C	Optior	n		St	ation	No.	0	Vol	itag	е						
Refer to "Block configu	irations" (Pneumatic V	alves No.CB-	023SA) t	o selec	t the n	nodel I	No.	cor	necti	on)	ing .	pin	array	(Note	e: Fill i	in for I	educ	ed wir	ring.)														Т
Part name	Model	No.														Lay	/out	posit	ion												<u>г</u>		
(Fage)			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	N4G2R-T																																
With solenoid	N4GA2	0R-																													$\square$		Î
valve	N4GA2	0R-																															T
(Page 224)	N4GA2	0R-																															+
	N4GA2	0R-																															-
	N4GA2	0R-																															-
	N4GA2	0R-																									-						-
	N3GA2	0R-																									-						-
	N3GA2	0R-																															╞
With macking plato		) )																								_	<u> </u>		_				Ī
Valve block			-	-																							-						+
(Page 224)			_																								$\vdash$	╞					-
	N4GA2R-MF		_																								$\vdash$	$\vdash$					
Air supply spacer	4G2R-P-		_																							_	-	-	-				_
(Page 227)	4G2R-P-																									L	Ļ	L	L			<u> </u>	1
Exhaust spacer (Page 228)	4G2R-R-																																
Supply and	N4G2R-Q	-																															
(Page 226)	N4G2R-Q	-																															
	N4G2R-Q	-																															
Partition block	N4G2R-S																																Î
	N4G2R-S																																t
	N4G2R-S																																t
End block	N4G2R-E		$\uparrow$																												Π		Ť
	N4G2R-E																																+
	 	<u></u> i								<u> </u>	BI	ı ankir	la pl	ua						<u> </u>		<u> </u>			L Ta	ag pla	⊥ ate (;	L attac	hme	nt)			Ŧ

## P4 Series

**Pneumatic actuator** 

Pneumatic valves Vacuum components

Pneumatic auxiliary components

Electric actuator Fluid control components Gas generator Motorless

Contact	-	Qu	antit	v set	(s)		De	live	rv d	late	/											D	)ate	e iss	uec	Ł	/		/			0.7
Slip No.				<i>y</i> eet.	(0)				., c	)rde	r N	0.										0	Com	npar	ייש						-	cylind
Manifold r	nodel No.																					C	Cont	tact							_	ers
																						2	Drde	er N	0.						_	Chuc
MN4	GB2 01	२-	[		-	. [								[			-	[			-			-	P	4						р.
A Model	No. B Solenoid position	(	<b>)</b> P	ort si	ze	DE	lectric	al conr	nection	s (	Ter	minal/(	Connec	tor pi	Ē	) Op	tion		G	Stat	tion I	No.	D V	oltag	e							roduc
fer to "Block configu	urations" (Pneumatic Valves No.CB-023	SA) to se	elect th	e model I	No.	(F 	leduc onnec	ed wii tion)	ring		arra	y (Note	e: Fill in	for rec	luced w	iring.)																2 th
Part name	Model No.						1	1						Lay	out p	osit	ion														lantity	Switch
(i ugo)		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	ğ	
iring block	N4G2R-T																															
ith solenoid	N4GB2 0R																															
lve	N4GB2 0R																															
age 224)	N4GB2 0R																															I.
	N4GB2 0R																													$\rightarrow$	_	
	NACE2 OF				-																											I
	N40D2 0R																								$\vdash$	$\vdash$	$\square$			$ \rightarrow $		I
	N4GB2 0R																													$ \rightarrow $	_	compo
	N3GB2 0R																															onents
	N3GB2 0R																															contr
ith masking plate	N4GB2R-MP-																										ĺ					oller
alve block Page 224)	N4GB2R-MPS-																															Fitti
0 /	N4GB2R-MPD-																															ng
ir supply	4G2R-P-																														_	valv
pacer	4G2B-P-	+																													_	9
xhaust spacer	40211-1-	+																												$\exists$	=	Silenc
'age 228)	4G2R-R-																															er
upply and xhaust block	N4G2R-Q -																															Tube
Page 226)	N4G2R-Q -																															
	N4G2R-Q -																															
artition block	N4G2R-S	$\square$																												Ť		
	N4G2R-S																															
	N4G2R-S				+																										$\neg$	
nd block	N4G2R-E	+																												=	=	
	NACOD E	+																							$\square$	$\vdash$	$\square$	$\square$	$\square$	$ \rightarrow$		
		$\perp$							RI	anki													To			attec	hme	nt)			$ \rightarrow$	
ounting rail									ان مان		.9 PI	-9											10	- 9 Pic	(c					$\neg$	ded t	specifi
	vvrite an integer multiple of 12.5.		GN	₽ 4-B					GW	r 6-	5				G	WP	ő-В							В							Inclu Pai	cation

C		

Contac	t 🔴	Quan	tity se	et(s)		Del	iver	y dat	e /												D	ate	iss	ued		/		/
Slip N	D.							Ord	er N	0.											<u>C</u>	om	pan	y				
Manifo	d model No.																				<u>C</u>	onta	act					
																					0	rde	r No	э.				
MN	GAX12R-			-	[							ſ			-	•			-	[			-	<b>P4</b>	1			
A	Model No.	C Por	t size		DEle	ctrical c	onnect	ions	<b>B</b> Te	rminal	/conn	ector	<b>F</b>	Optio	n	(	GS	tatio	n No	). <b>G</b>	) Vo	oltag	ge					
Refer to "Block of	nfigurations" (Pneumatic Valves No.CB-023S	SA) to select	t the mod	lel No.	(Re con	duced nectior	wiring n)		pin arra	ay (No	te: Fil	l in foi	reduc	ed wi	iring.)													
Part nan	e Model No.					1 1						Lay	/out p	ositi	ion													
(i age)		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																											
With solence	N4GA OR-																											
Valve block	N4GA 0R-																											
(224 page)	N4GA 0R-																											
	N4GA 0R-																											
	N4GA 0R-																											
	N4GA 0R-																											
	N3GA 0R-																											
	N3GA 0R-																										1	
With masking pla	N4GA R-MP																										+	
Valve block	N4GA R-MPS																										+	
(224 page)	N4GA R-MPD																										+	
Air supply spa	4 G1R-P																										+	_
(Page 227)															_												+	
	402R-F-														_												+	_
Exhaust spa (Page 228)							_	_							_												-	
	4G2R-R-																										_	
Mixed block	N4G12R-MIX														_													
Supply and exhaust blo	k N4G R-Q -																											
(Page 226)	N4G R-Q -																											
	N4G R-Q -																											
Partition blo	k N4G R-S																											
	N4G R-S																											
	N4G R-S																											
End block	N4G R-E																											
	N4G R-E																											
Mounting ra	L <sub>2</sub> =											Bl	ankin	g plu	ıg													
	* Write an integer multiple of	G	WP	-В				GV	/P	-В					GW	/P	-E	3					GWF	•	-В			
	How to determine the	Cabl	e with	D-sub-	conne	ector		4G	R-CAI	BLE-	D0	-				Pu	sh-ir	n fittir	ng tu	be re	emov	ver (s	stand	lard a	- attac	hme	nt)	

Contact	• (	Quantity set(s)  Del	ivery date /			cyl
Slip No.			Order No.		Company	inder
Manifold n	nodel No.				Contact	
					Order No.	huck
MN4	GBX12R-	-			- P4	pr
A Mo	odel No. C P	ort size DElectrical connectio	ns E Terminal/Connector pin P Option	n <b>G</b> Station No.	(H) Voltage	oduct
fer to "Block configura	tions" (Pneumatic Valves No.CB-023SA) to se	elect the model No. (Reduced Wiring connection)	array (Note: Fill in for reduced wiring.)			0 0
Part name	Model No.		Layout p	osition		uantity
		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 0	ā
iring block	N4G R-T					
ith solenoid	N4GB 0R					
alve block	N4GB OR					
age 224)	N4GB 0R					11
	N4GB 0R					
	N4GB OR					
	N4GB 0R					
	N3GB OR					COLL
	N3GB 0R					ponent
ith masking	N4GB R-MP-					s con
ateValve	N4GB R-MPS-					trolle
ock(Page 224)	N4GB R-MPD-					
r aupply						
acer(Page 227)	4 G IR-F-					Va
	401P P					Ive
xhaust spacer Page 228)	4G1R-R-					_
	4G2R-R-					
xed block	N4G12R-MIX					
upply and	N4G R-Q -					_
Page 226)	N4G R-Q -					
	N4G R-Q -					
artition block	N4G R-S					
	N4G R-S					
	N4G R-S					
nd block	N4G R-E					
	N4G R-E					
ounting rail	L <sub>2</sub> =		Blanking	g plug		
-	* Write an integer multiple of	GWP -B	GWP -B	GWP -B	GWP -B	Part
	12.5. (How to determine the		<u>ii</u>	L]	be remover (standard attachment)	- I cation

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## 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.

tic	* Not red	quired wi	th sta	anda	rd wi	ring/c	loubl	e wir	ing.																	
uma	Connecto	or pin No.												Valve	e No.											
Pnei	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																								
and/ nuck	2	2																								
ΞĊ	3	3																								
- 0	4	4																								
ated	5	5																								
Rel	6	6																								
L_	7	7																								
itch	8	8																								
Cyli Sw	9	9																								
	10	10																								
	11	11																								
	12	12																								
	13	13																								
	14	14																								
	15	15																								
	16	16																								
	COM	17																								
	COM	18																								
		19																								
		20																								
		21																								
		22																								
air ents		23																								
lean		24																								
COL		COM																								
- La		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	e 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																								
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8																								
21																								
9																								
22																								
10																								
23																								
11																								
24																								
12																								
25																								
13 (COM)																								

#### P4 Series

## 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.

	Connecto	or pin No.													Valv	e No												lind	
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	atic ers	Pn
1	1	1	1	İ																								유표	eu
2	2	2	2																									and/ huck	ma
3	3	3	3																										tic
4	4	4	4																									Rela	ac
5	5	5	5																									ucts	tua
6	6	6	6																									<u>م</u>	tor
7	7	7	7																									wito	
8	8	8	8																									her	
9 - Power supply	9	9 <sub>сом</sub>	9																										Vac
10 + (COM) Power supply	10	10 <sub>COM</sub>	10																										unn
11	11		11																										con
12	12		12																										nod
13	13		13																										lent
14	14		14																										2
15	15		15																										leu
16	16		16																										mat
17	17		17																										ic v
18	18		18																										alv
19 . Power supply	19 <sub>сом</sub>		19																									0	S
20 + (COM) Power supply	20 <sub>сом</sub>		20																									Clea	
			21																									n air onent	
			22																									s co	PNe
			23																									Spec	une
			24																									oller	nat
			25 <sub>сом</sub>																									ч	IC a
			26 <sub>сом</sub>																									itting	xne

\* 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.

	Connect	or pin No.								Valv	e No.								ence
Serial transmission	T6G1	T7*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Connector type	1	1	ĺ						1										1 7
T6G1:CC-Link 16 points	2	2																	ibe
	3	3																	1
	4	4																	1
	5	5																	1
	6	6																	1
	7	7																	1
	8	8																	1
	9	9																	1
	10 <sub>CON</sub>	10																	1
	11	11																	
	12	12																	
Thin slot-insertion type	13	13																	
T7D1:DeviceNet 16 points	14	14																	(0)
T7G1:CC-Link 16 points	15	15																	speci
T7 L1:SAVE NET 16 points	16	16											1						ficati
T7S1:CompoNet 16 points (NPN)	17	17																	s no
T7SPT:Componet 16 points (PNP)	18	18																	pecifi
	19	19																	cation
	20 <sub>CON</sub>	1 20																	S

P4 Series

оP

## P4 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 transmiss	sion		Connector pin No.												Valve	e No											
	Ochar transmise	JOIT		T8*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
T8G1			16 points	1																								
T8G2	—	NPN	32 points	2																								
T8GP1	- CC-Link		16 points	3																								
T8GP2	_	PNP	32 points	4																								
T8P1			16 points	5																								
T8P2		INPIN	32 points	6																								
T8PP1		PNP	16 points	7																								
T8PP2			32 points	8																								
T8EC1		NPN	16 points	9																							1	
T8EC2	EtherCAT		32 points	10																								
T8ECP1	_	PNP	16 points	11																								
TOENIA			32 points	12																								
T8EN2	-	NPN	32 points	13																								
T8ENP1	EtherNet/IP		16 points	14																							1	
T8ENP2	-	PNP	32 points	15																								
T8D1			16 points	16																							1	
T8D2	DeviceNet	NPN	32 points	17																							$\vdash$	
T8DP1	Devicemen	PNP	16 points	18																							<u> </u>	
T8DP2			32 points	19																							+	
T8EB1	_	NPN	16 points	20																							$\vdash$	
T8EB2	CC-Link		32 points	21																							+	
T8EBP1	IEF Basic	PNP	16 points	22																							+	<u> </u>
TOED4			32 points	23																							$\vdash$	
TREP2	-	NPN	32 points	24																				-	-		+	<u> </u>
T8EPP1	PROFINET		16 points	25																							+	
T8EPP2	-	PNP	32 points	26	-																						+	-
			<u> </u>	27	-																				-		-	-
				28	$\vdash$																-						+	
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Pneumatic actuator

Tube