

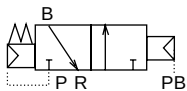


Master valve Body porting 3, 5 port pilot operated valve 3KA1/4KA1/2/3/4 Series

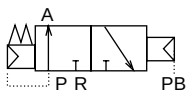
• Applicable cylinder bore size: 20 to 160mm

JIS symbol

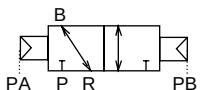
- 3 port valve
2-position NC type single



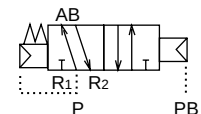
- 2-position NO type single



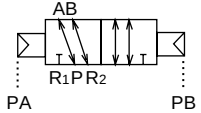
- 2-position double



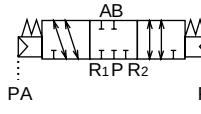
- 5 port valve
2-position single



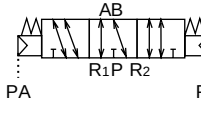
- 2-position double



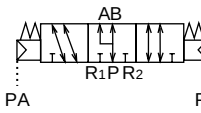
- 3-position all ports closed



- 3-position A/B/R connection



- 3-position P/A/B connection



Common specifications

Descriptions	
Valve and solenoid type	Pilot operated soft spool
Working fluid	Compressed air
Max. working pressure MPa	0.70
Min. working pressure MPa	Refer to main pressure on the following table.
Withstanding pressure MPa	1.05
Ambient temperature °C	-5 to 50
Fluid temperature °C	5 to 50
Lubrication	Not required
Vibration/impact m/s ²	50/300 or less
Working environment	Not to be subject to corrosive gas

Individual specifications: Body porting (valve discrete/manifold)

Position No. of solenoid							Specifications								
2-position NC type single	2-position NO type single	2-position single	2-position double	3-position all ports closed	3-position A/B/R connection	3-position P/A/B connection	Model	• 1. Port size				Effective sectional area mm ²	Main pressure MPa	Pilot signal pressure MPa	
						Series		Air supplying port: P	Cylinder port A/B	Exhaust port R1/R2	Pilot port PA/PB				
●							3KA1 series	3KA111	M5	M5	M5	3	0.15 to 0.7	(0.6 X main pressure + 0.06) to 0.7	
●								M3KA111	Rc 1/8						M5
	●							3KA1111	M5						M5
	●							M3KA1111	Rc 1/8						Rc 1/8
			●					3KA121	M5						M5
			●				M3KA121	Rc 1/8	Rc 1/8	M5	3	0 to 0.7	0.15 to 0.7		
			●				4KA111	M5	M5						
			●				M4KA111	Rc 1/8	Rc 1/8						
			●				4KA121	M5	M5						
			●				M4KA121	Rc 1/8	Rc 1/8						
				●			4KA131	M5	M5	M5	0 to 0.7	0.2 to 0.7			
				●			M4KA131	Rc 1/8	Rc 1/8						
					●		4KA141	M5	M5						
					●		M4KA141	Rc 1/8	Rc 1/8						
					●		4KA151	M5	M5						
						●	M4KA151	Rc 1/8	Rc 1/8	2.5					
		●					4KA2 series	4KA211	Rc 1/8	Rc 1/8	M5	12.5	0.15 to 0.7	(0.6 X main pressure + 0.06) to 0.7	
		●						M4KA211	Rc 1/4						Rc 1/4
			●					4KA221	Rc 1/8						Rc 1/8
			●					M4KA221	Rc 1/4						Rc 1/4
				●				4KA231	Rc 1/8			Rc 1/8	11	0 to 0.7	0.2 to 0.7
				●				M4KA231	Rc 1/4			Rc 1/4			
					●			4KA241	Rc 1/8			Rc 1/8			
					●			M4KA241	Rc 1/4			Rc 1/4			
						●	4KA251	Rc 1/8	Rc 1/8						
							M4KA251	Rc 1/4	Rc 1/4						
							4KA3 series	4KA311	Rc 1/4	Rc 1/4	M5	25	0.15 to 0.7	(0.6 X main pressure + 0.06) to 0.7	
								M4KA311	Rc 3/8						Rc 3/8
								4KA321	Rc 1/4						Rc 1/4
								M4KA321	Rc 3/8						Rc 3/8
				●				4KA331	Rc 1/4			Rc 1/4	22	0 to 0.7	0.2 to 0.7
				●				M4KA331	Rc 3/8			Rc 3/8			
					●			4KA341	Rc 1/4			Rc 1/4			
					●			M4KA341	Rc 3/8			Rc 3/8			
						●	4KA351	Rc 1/4	Rc 1/4						
							M4KA351	Rc 3/8	Rc 3/8						
							4KA4 series	4KA411	Rc 3/8	Rc 3/8	M5	50	0.15 to 0.7	(0.6 X main pressure + 0.06) to 0.7	
								M4KA411	Rc 1/2						Rc 1/2
								4KA421	Rc 3/8						Rc 3/8
								M4KA421	Rc 1/2						Rc 1/2
				●				4KA431	Rc 3/8			Rc 3/8	43	0 to 0.7	0.2 to 0.7
				●				M4KA431	Rc 1/2			Rc 1/2			
					●			4KA441	Rc 3/8			Rc 3/8			
					●			M4KA441	Rc 1/2			Rc 1/2			
						●	4KA451	Rc 3/8	Rc 3/8						
							M4KA451	Rc 1/2	Rc 1/2						

• 1: Optional port sizes are available other than the above table. Refer to model No. on the following page.

3KA1/4KA1 to 4 Series

Master valve: Body porting

How to order

- Discrete master valve

4KA2 1 1 06 P

- Discrete master valve of manifold (gasket, set screw attached)

4KA2 1 8 06

- Manifold

M 4KA2 1 1 06 2

Model

A Solenoid position

B Port size

C Other options

D Station No.

Symbol		Description					
Solenoid position	A	1	2-position NC type single	●			
		11	2-position NO type single	●			
		1	2-position single		●	●	●
		2	2-position double	●	●	●	●
		3	3-position all ports closed		●	●	●
		4	3-position A/B/R connection		●	●	●
		5	3-position P/A/B connection		●	●	●
		8	2-position/3-positionMix manifold • 1		●	●	●
Port size	Port P/A/B						
	B	M5	M5	●	●		
		06	Rc 1 / 8			●	
		08	Rc 1 / 4				●
		10	Rc 3 / 8				●
		GS 4	4 mm dia. push in joint	●	●		
		GS 6	6 mm dia. push in joint	●	●	●	
		GS 8	8 mm dia. push in joint			●	●
		GS10	10 mm dia. push in joint				●
		GS12	12 mm dia. push in joint				●
C	Blank	Blank	●	●	●	●	●
	P	Mounting plate (For 2-position single discrete master valve)	●	●	●	●	●
Station No.	D	2 to 15	2 to 15 stations				●
		2 to 20	2 to 20 stations	●	●	●	

<Example of model number>

4KA311-08-P

Model: 4KA3

A Solenoid position : 2-position single

B Port size : Rc 1 / 4

C Other options : Mounting plate

! Cautions for model No. selection

- 1: 8 for mix manifold.
Refer to following matters about how to indicate combinations.

<Mix manifold>

- How to indicate mix manifold descriptions

When selecting mix manifold (indicate A as 8.), indicate function symbol (refer to Table 1) and allocation numbers (1 to the station No. from left) on the remarks column below model No. according to the example.

<Sheet 1>

Symbol	Function
S1	2-position single
S2	2-position double
S3	3-position all ports closed
S4	3-position A/B/R connection
S5	2-position P/A/B connection
MP	Masking plate

1	2	3	4	5	6	7
2-position single (S1)	2-position double (S2)	3-position all ports closed (S3)	3-position all ports closed (S3)	2-position double (S2)	2-position single (S1)	3-position A/B/R connection (S4)

S1 S2 S3 S4 S5 MP

2 2 2 1 0 0

E.g.

When mix manifold (7 station) as left figure array, 4KA3 Port A/B: Rc1/8, upper porting, model No. is

M4KA381-06-7- 2 2 2 1 0 0

S1=1, 6 S2=2, 5 S3=3, 4 S4=7

Symbol Position

4SA/B0

4SA/B1

4GA/B

MN4GA/B

4GA/B
(master)

MN3S0/
MN4S0

4TB

4L2-4/
LMF0

4KA/B

4F

PV5/
CMF

3MA/B0

3PA/B

P/M/B

NP/NAP/
NVP

4F**0E

HMV/
HSV

Uniwire
system

SKH

PCD/
FS/FD

3, 5 port pilot operated valve
Master valves