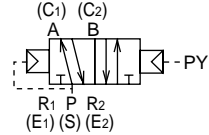


Master valve Discrete/manifold 5 port pilot operated valve 4F Series

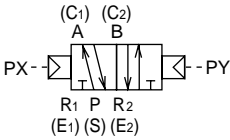
- Applicable cylinder bore size: 10 to 250mm

• JIS symbol

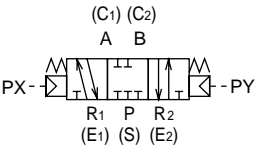
2-position single



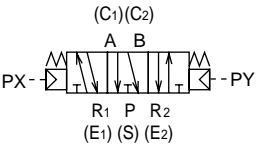
2-position double



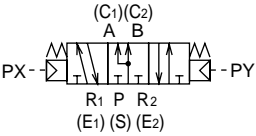
3-position all ports closed



3-position A/B/R connection



3-position P/A/B connection



Common specifications

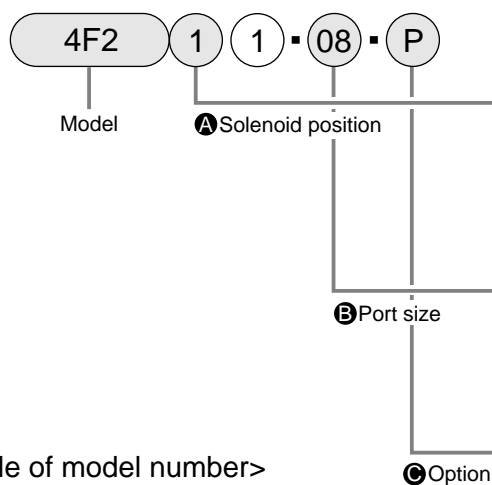
Descriptions		Pilot operated soft spool	
Valve and solenoid type		Pilot operated soft spool	
Working fluid		Compressed air	
Max. working pressure	MPa	1.0	
Min. working pressure	MPa	Refer to the main pressure on the below table.	
Ambient temperature	°C	-10 to 60	
Fluid temperature	°C	5 to 60	
Lubrication		Not required	
Vibration/impact	m/s ² (G)	50 (5) or less/300 (30) or less	
Working environment		Not to be subject to corrosive environment	

Individual specifications (valve discrete/manifold)

Position No. of solenoid					Specifications								
2-position single	2-position double	3-position all ports closed	3-position A/B/R connection	3-position P/A/B connection	Model		Port size				Effective sectional area mm ²	Main pressure MPa	Pilot signal pressure MPa
					Series Model No.	Model No.	Air supply port S	Cylinder port C	Exhaust port E Pilot exhaust port PE	Pilot port			
●					4F0 series	A4F011 4F021	M5 Rp 1/8	M5 Rp 1/8	M5	Rc 1/8	2 (M5) 3 (Rp 1/8)	0.15 to 1.0 0 to 1.0	P _≥ 0.6 X main pressure + 0.06 P _≥ 0.15
	●				4F1 series	4F111	Rp 1/8 Rp 1/4	Rp 1/8 Rp 1/4	Rp 1/8	Rc 1/8	11	0 to 1.0	P _≥ 0.6 X main pressure + 0.06 P _≥ 0.15
		●		4F121									
			●	4F131									
				4F141									
				●	4F2 series	4F211	Rp 1/4	Rp 1/4	E: Rp 1/4 PE: Rp 1/8	Rc 1/8	18	0.15 to 1.0 0 to 1.0	P _≥ 0.6 X main pressure + 0.06 P _≥ 0.15
	●			4F221									
		●		4F231									
			●	4F241									
				●	4F3 series	4F311	Rp 1/4 Rp 3/8	Rp 1/4 Rp 3/8	E: Rp 1/4 Rp 3/8 PE: Rp 1/8	Rc 1/8	25 (Rp 1/4) 32 (Rp 3/8)	0.15 to 1.0 0 to 1.0	P _≥ 0.6 X main pressure + 0.06 P _≥ 0.15
	●			4F321									
		●		4F331									
			●	4F341									
				4F351									
				●	4F4 series	4F411	Rc 1/4 Rc 3/8	Rc 1/4 Rc 3/8	E: Rc 1/4 Rc 3/8 PE: Rc 1/8	Rc 1/8	32	0.15 to 1.0 0 to 1.0	P _≥ 0.6 X main pressure + 0.06 P _≥ 0.15
	●			4F421									
		●		4F431									
			●	4F441									
				4F451									
				●	4F5 series	4F511	Rc 3/8 Rc 1/2	Rc 3/8 Rc 1/2	E: Rc 3/8 Rc 1/2 PE: Rc 1/8	Rc 1/8	47	0.15 to 1.0 0 to 1.0	P _≥ 0.6 X main pressure + 0.06 P _≥ 0.15
	●			4F521									
		●		4F531									
			●	4F541									
				4F551									
				●	4F6 series	4F611	Rc 1/2 Rc 3/4	Rc 1/2 Rc 3/4	E: Rc 1/2 Rc 3/4 PE: Rc 1/4	Rc 1/8	90	0.15 to 1.0 0 to 1.0	P _≥ 0.6 X main pressure + 0.06 P _≥ 0.15
	●			4F621									
		●		4F631									
			●	4F641									
				4F651									
				●	4F7 series	4F711	Rc 3/4 Rc 1	Rc 3/4 Rc 1	E: Rc 3/4 Rc 1 PE: Rc 1/4	Rc 1/8	160	0.15 to 1.0 0 to 1.0	P _≥ 0.6 X main pressure + 0.06 P _≥ 0.15
	●			4F721									
		●		4F731									
			●	4F741									
				4F751									

• 1: Port sizes other than the table above are available as option. Refer to "How to order" on the following page.

How to order discrete valve/body porting



<Example of model number>

4F111-06-P

Model: 4F1

A Solenoid position : 2-position single

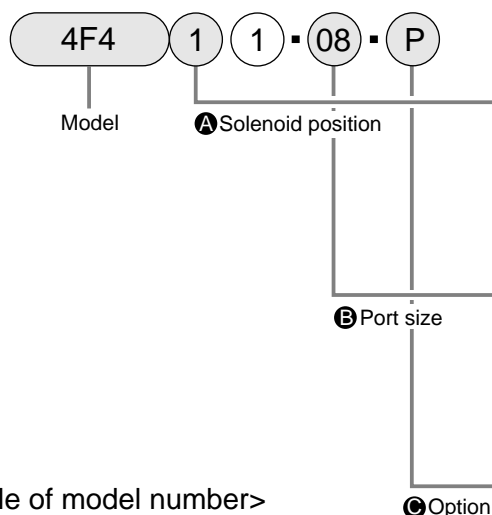
B Port size : Rp 1 / 8

C Option : P type foot bracket

		Model			
		Body porting			
		4F0	4F1	4F2	4F3
4SA/B0					
4SA/B1					
4GA/B					
MN4GA/B					
4GA/B (master)					
MN3S0/ MN4S0					
4TB					
4L2-4/ LMFO					
4KA/B					
4F					
PV5/ CMF					
3MA/B0					
3PA/B					

Symbol	Descriptions	4F0	4F1	4F2	4F3
A Solenoid position					
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				●
B Port size					
M5	M5	●			
06	Rp 1/8	●	●		
08	Rp 1/4		●	●	●
10	Rp 3/8				●
C Option					
P	Mounting bracket (2-position single)	●	●	●	●
P1	Mounting bracket	●	●	●	●
N	Plug attached (3 port valve)	●	●	●	●
H	Check valve attached (only for 3-position all ports closed)			●	●

How to order discrete valve/sub base porting



<Example of model number>

4F411-08-P

Model: 4F4

A Solenoid position : 2-position single

B Port size : Rc 1 / 4

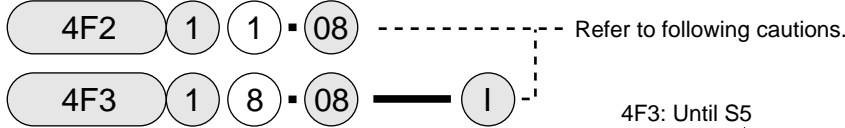
C Option : P type foot bracket

		Model			
		Sub base porting			
		4F4	4F5	4F6	4F7
P/M/B					
NP/NAP/ NVP					
4F**0E					
HMV/ HSV					
Uniwire system					
SKH					
PCD/ FS/FD					
5 port pilot operated valve					

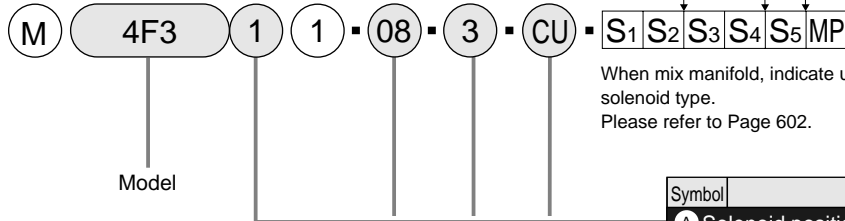
Symbol	Descriptions	4F4	4F5	4F6	4F7
A Solenoid position					
1	2-position single	●	●	●	●
2	2-position double	●	●	●	●
3	3-position all ports closed	●	●	●	●
4	3-position A/B/R connection	●	●	●	●
5	3-position P/A/B connection	●	●	●	●
B Port size					
08	Rc 1/4	●			
10	Rc 3/8	●	●		
15	Rc 1/2		●	●	
20	Rc 3/4			●	●
25	Rc 1				●
C Option					
P	Mounting bracket	●	●	●	●
N	Plug attached (3 port valve)	●	●	●	●
H	Check valve attached (only for 3-position all ports closed)	●	●	●	●

How to order manifold/body porting

• Master valve for manifold



• Manifold



When mix manifold, indicate usage of solenoid type. Please refer to Page 602.

Discrete model
Manifold symbol

Model			
Body porting			
M	M	M	M
4	4	4	4
F	F	F	F
0	1	2	3

Symbol	Descriptions				
A Solenoid position					
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	Mix manifold	●	●	●	●
B Port size					
M5	M5	●			
06	Rp 1/8	●	●		
08	Rp 1/4		●	●	●
10	Rp 3/8				●
C Station #					
2	2 station				
to	to	●	●	●	●
10	10 station				
D Exhaust air mounting style					
CL	Common exhaust/L bracket (2-position single)	●	●	●	●
CU	Common exhaust/U bracket	●	●	●	●
IL	Individual exhaust/L bracket (2-position single)	●	●	●	●
IU	Individual exhaust/U bracket			●	●
C	Common exhaust			●	●
I	Individual exhaust			●	●

⚠ Caution for model No. selection

Use the proper discrete master valve of manifold according to following examples.

• When 4F0 to 4F1



When repair parts are necessary, please purchase gasket kit as following together.

- M4F0-GASKET KIT
- M4F1-GASKET KIT
- M4F1-I-GASKET KIT

• When 4F2/4F3

• Exhaust air mounting style CL, CU, IL, IU



When repair parts are necessary, please purchase gasket kit as following together.

- M4F2-GASKET KIT
- M4F3-GASKET KIT

• When exhaust air mounting style C and I



(When "D" is C: Blank, while I: Indicate I.)

When repair parts are necessary, please purchase gasket kit as following together.

- M4F2-2-GASKET KIT
- M4F3-2-GASKET KIT

<Example of model number>

M4F341-08-5-C

Model: M4F3

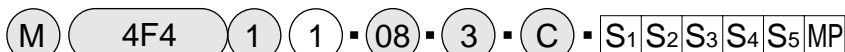
- A** Solenoid position : 3-position A/B/R connection
- B** Port size : Rp 1 / 4
- C** Station No. : 5 station
- D** Exhaust air mounting style : Common exhaust

How to order manifold/sub base porting

- Master valve for manifold



- Manifold



When mix manifold, indicate usage of solenoid type.
Please refer to Page 626.

Discrete model
Manifold symbol

Model			
Sub base porting			
M	M	M	M
4	4	4	4
F	F	F	F
4	5	6	7

Symbol	Descriptions				
A Solenoid position					
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	Mix manifold	●	●	●	●
B Port size					
08	Rc 1/4	●			
08Y	Rp1/4 (cylinder port rear side)	●			
10	Rc 3/8		●		
10Y	Rc 3/8 (cylinder port on rear side)		●		
D15	Rc 1/2			●	
E20	Rc 3/4				●
C Station #					
2	2 station				
to	to	●	●	●	●
10	10 station				
D Exhaust air mounting style					
C	Common exhaust	●	●	●	●

- 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
- 5 port pilot operated valve Master valve

<Example of model number>

M4F441-08-5-C

Model: M4F4

- A** Solenoid position : 3-position A/B/R connection
- B** Port size : Rc 1 / 4
- C** Station No. : 5 station
- D** Exhaust air mounting style : Common exhaust