

# 4/5 Port Air Operated Valve *SYJA3000 Series*

## How to Order

Body ported

SYJA3

1

20-M3-

Base mounted  
(4 port)

SYJA3

2

30

(Manifold use only)

Base mounted  
(5 port)

SYJA3

2

40-

**Bracket**

Nil	Without bracket
F	With bracket

\*Refer to page 1475 for the details of the brackets.

**Port size**

Nil	Without sub-plate
M5	M5 port With sub-plate

**Type of actuation**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

**Symbol**

**5 port**

2 position single

(B)2 4(A)  
(R)3 1 5(R)  
(P)

2 position double

(B)2 4(A)  
(R)3 1 5(R)  
(P)

3 position closed center

(B)2 4(A)  
(R)3 1 5(R)  
(P)

3 position exhaust center

(B)2 4(A)  
(R)3 1 5(R)  
(P)

3 position pressure center

(B)2 4(A)  
(R)3 1 5(R)  
(P)

**4 port**

2 position single

(B)2 4(A)  
1 3(R)  
(P)

2 position double

(B)2 4(A)  
1 3(R)  
(P)

3 position closed center

(B)2 4(A)  
1 3(R)  
(P)

3 position exhaust center

(B)2 4(A)  
1 3(R)  
(P)

3 position pressure center

(B)2 4(A)  
1 3(R)  
(P)

## How to Order Manifold Base

Same manifolds as SYJ3000 series are prepared.

**SS5YJA3-** Fill the same as SS5YJ3 (Refer to page 166.)

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

(Example)

**SS5YJA3-41-03-M5** ..... 1 pc.  
 \*SYJA3140 ..... 1 pc.  
 \*SYJA3240 ..... 1 pc.  
 \*SYJ3000-21-2A ..... 1 pc.

→ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

### ⚠ Caution

Be sure to read this before handling the products.  
 Refer to back page 50 for Safety Instructions  
 and pages 3 to 9 for 3/4/5 Port Solenoid Valve  
 Precautions.

## Specifications



Base mounted



Body ported

<b>Fluid</b>		Air
<b>Operating pressure range</b> MPa	<b>2 position single</b>	0.15 to 0.7
	<b>2 position double</b>	-100 kPa to 0.7
	<b>3 position</b>	-100 kPa to 0.7
<b>Pilot pressure range</b> MPa	<b>2 position single</b>	Operating pressure to 0.7
	<b>2 position double</b>	0.1 to 0.7
	<b>3 position</b>	0.2 to 0.7
<b>Ambient and fluid temperature °C</b>		-10 to 60 (No freezing.)
<b>Lubrication</b>		Not required
<b>Mounting orientation</b>		Unrestricted
<b>Impact/Vibration resistance (m/s<sup>2</sup>)</b>		300/50

Note 1) In case of single type, be certain that pressure within operating pressure range be supplied to supply port, because return pressure is introduced from supply port (1(P)) for activation.

Note 2) Impact resistance: No malfunction resulted from the impact test using a drop impact tester.

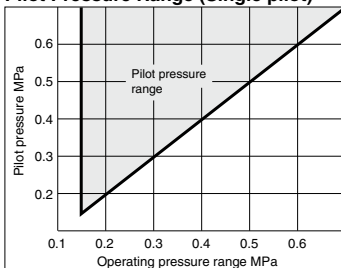
The test was performed on the axis and right angle directions of the main valve, when pilot signal is ON and OFF. (Value in the initial state)

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz.

Test was performed to axis and right angle directions of the main valve

when pilot signal is ON and OFF. (Value in the initial state)

### Pilot Pressure Range (Single pilot)



### With Bracket

Air operated valve	SYJA3□20-M3-F
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The mounting bracket for the 2 position double solenoid and 3 position is supplied unattached.

## Flow Rate Characteristics/Weight

Valve model		Type of actuation		Port size	Pilot port size	Weight (g) <small>Note 3)</small>	Effective area mm <sup>2</sup>	Flow rate characteristics <small>Note 2)</small>																		
								1→4/2 (P→A/B)			4/2→5/3 (A/B→EA/EB)															
								C [dm <sup>3</sup> / (s·bar)]	b	Cv	C [dm <sup>3</sup> / (s·bar)]	b	Cv													
5 port Base mounted (with sub-plate)	SYJA3□40-M5	2 position	Single	M5 x 0.8	M3 x 0.5	48 (22)	-		0.46	0.36	0.12	0.46	0.35	0.12												
			Double			51 (25)																				
		3 position	Closed center			54 (28)									0.47	0.33	0.12	0.47	0.31	0.12						
			Exhaust center																		0.36	0.39	0.10	0.59 [0.40]	0.43 [0.33]	0.16 [0.11]
			Pressure center																							
Body ported	SYJA3□20-M3	2 position	Single	M3 x 0.5	M3 x 0.5	22	0.9																			
			Double			25																				
		3 position	Closed center			28																				
			Exhaust center																							
			Pressure center																							
4 Port Base Mounted (For manifold) <small>Note 1)</small>	SYJA3□30	2 position	Single	-	M3 x 0.5	22																				
			Double			25																				
		3 position	Closed center			28																				
			Exhaust center																							
			Pressure center																							
Note 1) Value when used on a manifold. Refer to page 1474 for details. Note 2) [ ]: denotes normal position. Note 3) ( ): Without sub-plate. Note 4) 5 port, base mounted without sub-plate: SYJA3□40																										

Note 1) Value when used on a manifold. Refer to page 1474 for details.

Note 2) [ ]: denotes normal position.

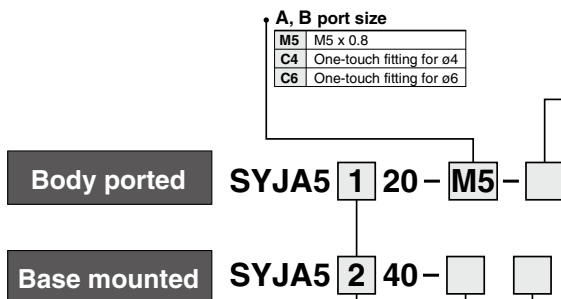
Note 3) [ ]: Without sub-plate.

Note 4) 5 port, base mounted without sub-plate: SYJA3□40



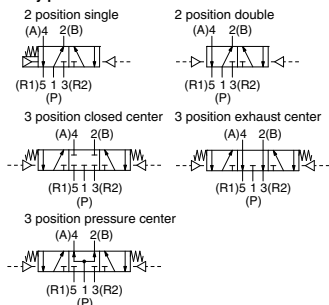
# 4/5 Port Air Operated Valve SYJA5000 Series

## How to Order

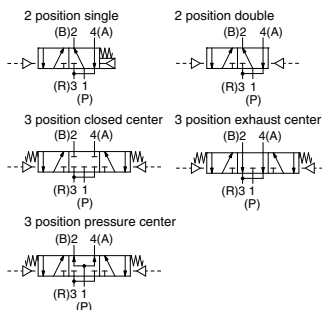


### Symbol

#### Body ported



#### Base mounted



### Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

### Port size

Nil	Without sub-plate
01	1/8 With sub-plate

### Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

## How to Order Manifold Base

Same manifolds as SYJ5000 series are prepared.

SS5YJA5- [Fill the same as SS5YJ5.] (Refer to page 194.)

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

(Ex.)  
 SS5YJA5-42-03-01 ..... 1 set  
 \* SYJA5140 ..... 1 set  
 \* SYJA5240 ..... 1 set  
 \* SYJ5000-21-1A ..... 1 set

↳ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

### ⚠ Caution

Be sure to read this before handling the products.  
 Refer to back page 50 for Safety Instructions  
 and pages 3 to 9 for 3/4/5 Port Solenoid Valve  
 Precautions.

# SYJA5000 Series



Base mounted



Body ported

## Specifications

Fluid		Air
Operating pressure range MPa	2 position single	0.15 to 0.7
	2 position double	-100 kPa to 0.7
	3 position	-100 kPa to 0.7
Pilot pressure range MPa	2 position single	(0.4 x P+0.1) to 0.7 P: Operating pressure
	2 position double	0.1 to 0.7
	3 position	0.15 to 0.7
Ambient and fluid temperature °C		-10 to 60 (No freezing.)
Lubrication		Not required
Mounting orientation		Unrestricted
Impact/Vibration resistance (m/s <sup>2</sup> )		300/50

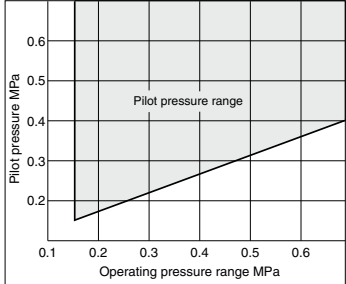
Note 1) In case of single type, be certain that pressure within operating pressure range be supplied to supply port, because return pressure is introduced from supply port {1(P)} for activation.

Note 2) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle directions of the main valve, when pilot signal is ON and OFF. (Value in the initial state)

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz.

Test was performed to axis and right angle directions of the main valve when pilot signal is ON and OFF. (Value in the initial state)

## Pilot Pressure Range (Single pilot)



## With Bracket

Air operated valve	SYJA5120-M5-F
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The mounting bracket is supplied untached.

Bracket Assembly	SYJ5000-13-3A
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Mounting screws included.

## Flow Rate Characteristics/Weight

Valve model		Type of actuation		Port size	Flow rate characteristics <small>(Note 1)</small>						Pilot port size	Weight (g) <small>(Note 2)</small>
					1→4/2 (P→A/B)			4/2→5/3 (A/B→EA/EB)				
					C [dm <sup>3</sup> / (s·bar)]	b	Cv	C [dm <sup>3</sup> / (s·bar)]	b	Cv		
Body ported	SYJA5□20-M5	2 position	Single	M5 x 0.8	0.47	0.41	0.13	0.47	0.41	0.13	M5 x 0.8	34
			Double									38
		3 position	Closed center									48
			Exhaust center									
			Pressure center									
			Pressure center		0.49 [0.39]	0.51 [0.38]	0.14 [0.10]	0.45	0.42	0.12		
	SYJA5□20-C4	2 position	Single	A, B port: C4 (One-touch fitting for ø4) P, R port: M5 x 0.8	0.69	0.39	0.18	0.44	0.39	0.12		41
			Double									45
		3 position	Closed center									55
			Exhaust center									
			Pressure center									
			Pressure center		0.57 [0.41]	0.40 [0.37]	0.15 [0.10]	0.41	0.37	0.10		
	SYJA5□20-C6	2 position	Single	A, B port: C6 (One-touch fitting for ø6) P, R port: M5 x 0.8	0.70	0.36	0.19	0.47	0.40	0.12		41
			Double									45
		3 position	Closed center									55
			Exhaust center									
			Pressure center									
			Pressure center		0.82 [0.44]	0.41 [0.39]	0.23 [0.12]	0.41	0.36	0.11		
Base mounted (with sub-plate)	SYJA5□40-01	2 position	Single	1/8	0.79	0.21	0.19	0.83	0.32	0.21	M5 x 0.8	68 (34)
			Double									72 (38)
		3 position	Closed center									82 (48)
			Exhaust center									
			Pressure center									
			Pressure center		0.99 [0.47]	0.29 [0.38]	0.24 [0.12]	0.72	0.38	0.18		

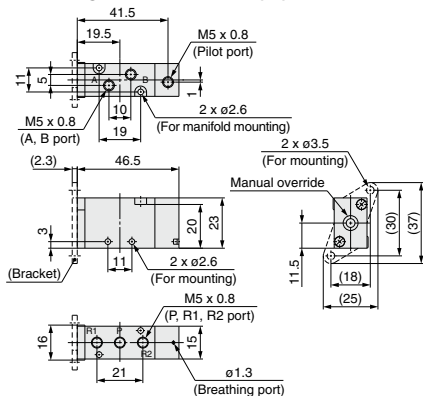
Note 1) [ ]: denotes normal position.

Note 2) ( ): Without sub-plate.

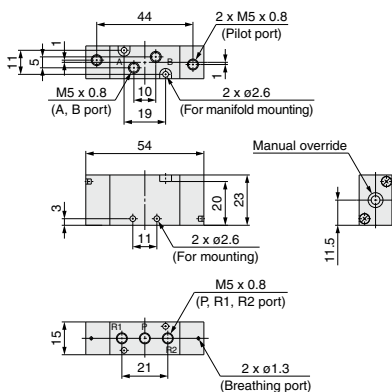
Note 3) Model No. for 5 port base mounted type without sub-plate is SYJA5□40.

## Dimensions/Body Ported

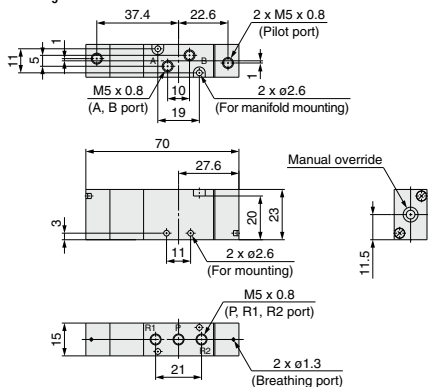
### 2 position single: SYJA5120-M5(-F)



### 2 position double: SYJA5220-M5

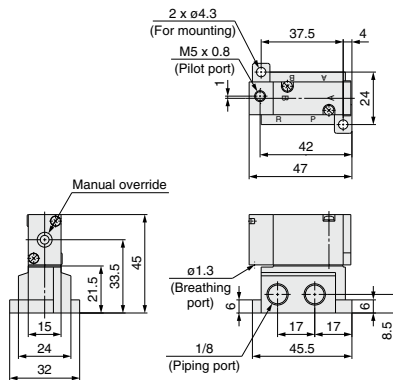


### 3 position closed center/exhaust center/pressure center SYJA5<sub>3</sub>20-M5

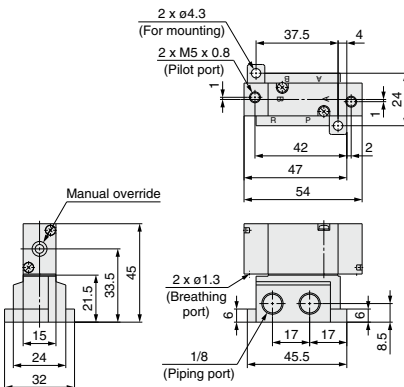


## Dimensions/Base Mounted

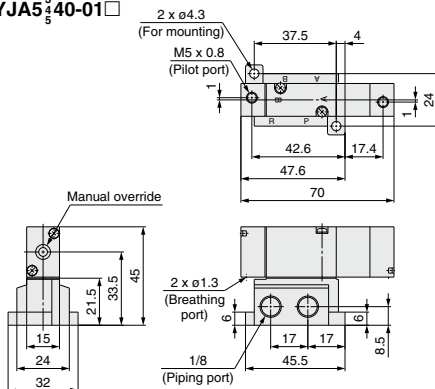
### 2 position single: SYJA5140-01



### 2 position double: SYJA5240-01



### 3 position closed center/exhaust center/pressure center SYJA5<sub>3</sub>40-01



SYA
SYJA
VZA
VFA
VFRA
VPA4
SYJA
VZA
VTa
VGA
VPA
VPA3

# 4/5 Port Air Operated Valve SYJA7000 Series

## How to Order

**A, B port size**

01	1/8
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8

**Bracket**

Nil	Without bracket
F	With bracket

\*The bracket is not mounted.  
\*The bracket cannot be retrofitted later.  
\*2 position single only

**Body ported**

**SYJA7 1 20- 01**

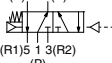
**Base mounted**

**SYJA7 2 40-**

**Symbol**

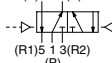
**Body ported**

2 position single  
(A)4 2(B)



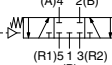
(R1)5 1 3(R2)  
(P)

2 position double  
(A)4 2(B)



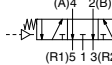
(R1)5 1 3(R2)  
(P)

3 position closed center  
(A)4 2(B)



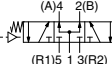
(R1)5 1 3(R2)  
(P)

3 position exhaust center  
(A)4 2(B)



(R1)5 1 3(R2)  
(P)

3 position pressure center  
(A)4 2(B)



(R1)5 1 3(R2)  
(P)

**Type of actuation**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

**Port size**

Nil	Without sub-plate
01	1/8 With sub-plate
02	1/4 With sub-plate

**Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF

## How to Order Manifold Base

Same manifolds as SYJ7000 series are prepared.

**SS5YJA7-** Fill the same as SS5YJ7. (Refer to page 226.)

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

(Ex.)

**SS5YJA7-41-03-01** ..... 1 pc.

\* SYJA7140 ..... 1 pc.

\* SYJA7240 ..... 1 pc.

\* SYJ7000-21-1A ..... 1 pc.

↳ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

### ⚠ Caution

Be sure to read this before handling the products.  
Refer to back page 50 for Safety Instructions  
and pages 3 to 9 for 3/4/5 Port Solenoid Valve  
Precautions.

Specifications



Base mounted



Body ported

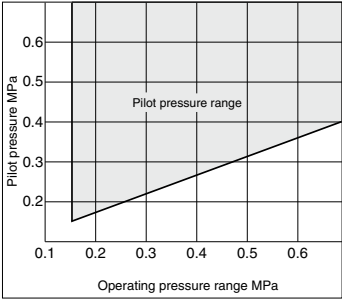
Fluid		Air
Operating pressure range MPa	2 position single	0.15 to 0.7
	2 position double	–100 kPa to 0.7
	3 position	–100 kPa to 0.7
Pilot pressure range MPa	2 position single	(0.4 x P+0.1) to 0.7 P: Operating pressure
	2 position double	0.1 to 0.7
	3 position	0.15 to 0.7
Ambient and fluid temperature °C		–10 to 60 (No freezing.)
Lubrication		Not required
Mounting orientation		Unrestricted
Impact/Vibration resistance (m/s <sup>2</sup> )		300/50

Note 1) In case of single type, be certain that pressure within operating pressure range be supplied to supply port, because return pressure is introduced from supply port {1(P)} for activation.

Note 2) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle directions of the main valve, when pilot signal is ON and OFF. (Value in the initial state)

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz. Test was performed to axis and right angle directions of the main valve when pilot signal is ON and OFF. (Value in the initial state)

Pilot Pressure Range (Single pilot)



With Bracket

Air operated valve	SYJA7120-01-F
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As a bracket is designed for a body, be sure that a bracket is attached when ordering and operating.

SYA

SYJA

VZA

VFA

VFRA

VPA4

SYJA

VZA

VTa

VGA

VPA

VPA3



# SYJA7000 Series

## Flow Rate Characteristics/Weight

Valve model		Type of actuation		Port size	Flow rate characteristics <sup>Note 2)</sup>						Pilot port size	Weight (g) <sup>Note 3)</sup>		
					1→4/2 (P→A/B)			4/2→5/3 (A/B→EA/EB)						
					C [dm <sup>3</sup> / (s·bar)]	b	Cv	C [dm <sup>3</sup> / (s·bar)]	b	Cv				
Body ported	SYJA7□20-01	2 position	Single	1/8	2.2	0.36	0.58	2.4	0.34	0.63	M5 x 0.8	71		
			Double							72				
		3 position	Closed center		1.8	0.37	0.45	2.0	0.35	0.49		82		
			Exhaust center		1.2	0.50	0.34	3.0 [1.3]	0.35 [0.52]	0.73 [0.39]				
			Pressure center		3.0 [0.83]	0.37 [0.50]	0.78 [0.25]	1.8	0.37	0.45				
	SYJA7□20-C6	2 position	Single	A, B port: C6 (One-touch fitting for ø6) P, R port: 1/8	1.6	0.33	0.4	2.2	0.32	0.53		82		
			Double							83				
		3 position	Closed center		1.4	0.27	0.35	1.9	0.33	0.49		93		
			Exhaust center		1.1	0.37	0.27	2.5 [1.3]	0.32 [0.54]	0.61 [0.38]				
			Pressure center		1.8 [0.78]	0.36 [0.40]	0.45 [0.22]	1.6	0.30	0.39				
	SYJA7□20-C8	2 position	Single	A, B port: C8 (One-touch fitting for ø8) P, R port: 1/8	2.0	0.39	0.52	2.3	0.34	0.61		82		
			Double							83				
		3 position	Closed center		1.7	0.35	0.42	2.0	0.29	0.49		93		
			Exhaust center		1.2	0.38	0.33	2.6 [1.3]	0.35 [0.49]	0.67 [0.38]				
			Pressure center		1.9 [0.86]	0.57 [0.46]	0.59 [0.25]	1.7	0.39	0.42				
	Base mounted (with sub-plate)	SYJA7□40-01	2 position	Single	1/8 <sup>Note 1)</sup>	2.3	0.45	0.57	2.8	0.37		0.71	M5 x 0.8	151 (71)
				Double								152 (72)		
			3 position	Closed center		1.9	0.36	0.48	2.1	0.46		0.57		162 (82)
Exhaust center				1.2		0.48	0.35	3.4 [1.3]	0.36 [0.57]	0.86 [0.41]				
Pressure center				3.3 [0.85]		0.43 [0.54]	0.78 [0.25]	2.1	0.45	0.56				
SYJA7□40-02		2 position	Single	1/4 <sup>Note 1)</sup>	2.3	0.41	0.61	2.9	0.35	0.74	M5 x 0.8	151 (71)		
			Double							152 (72)				
		3 position	Closed center		1.9	0.46	0.50	2.2	0.44	0.60		162 (82)		
			Exhaust center		1.3	0.45	0.35	3.7 [1.4]	0.27 [0.56]	0.87 [0.43]				
			Pressure center		3.6 [0.83]	0.23 [0.55]	0.84 [0.25]	2.1	0.47	0.58				

Note 1) P, A, B port: 1/8 is R1, R2 port: 1/4

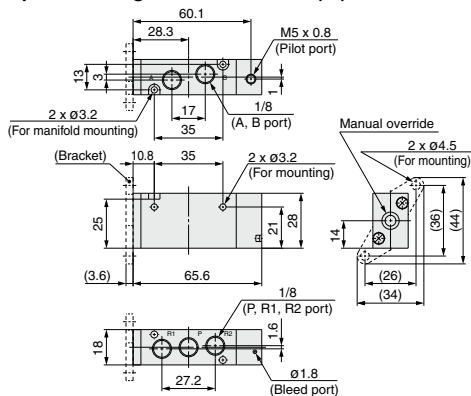
Note 2) [ ]: for nominal position

Note 3) ( ): without sub-plate

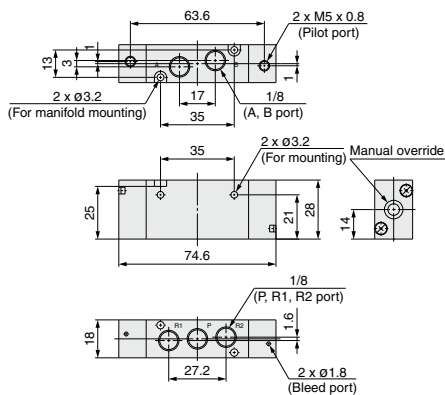
Note 4) Model No. for base mounted type without sub-plate is SYJA7□40.

## Dimensions/Body Ported

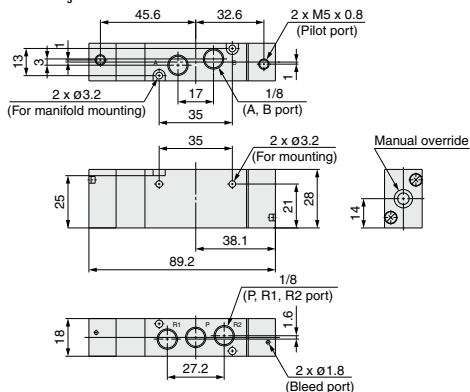
### 2 position single: SYJA7120-01□(-F)



### 2 position double: SYJA7220-01□

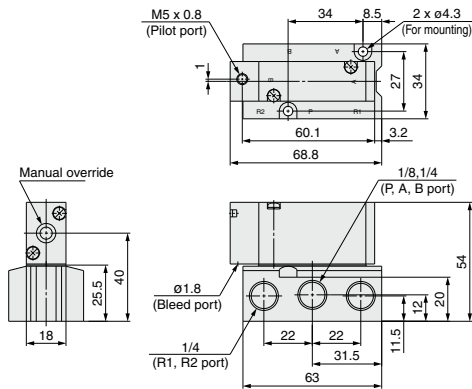


### 3 position closed center/exhaust center/pressure center SYJA7<sub>s</sub>40-01□

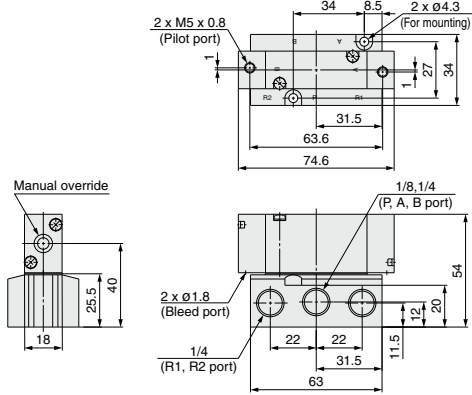


## Dimensions/Base Mounted

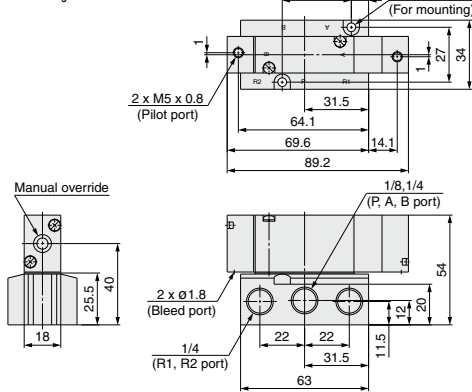
### 2 position single: SYJA7140-<sup>01</sup><sub>02</sub>□



### 2 position double: SYJA7240-<sup>01</sup><sub>02</sub>□



### 3 position closed center/exhaust center/pressure center SYJA7<sub>s</sub>40-<sup>01</sup><sub>02</sub>□



SYA
SYJA
VZA
VFA
VFRA
VPA4
SYJA
VZA
VTa
VGA
VPA
VPA3