

# 5 Port Solenoid Valve Rubber Seal

## Series SYJ5000

### Model

Valve model	Configuration	Port size	Effective area mm <sup>2</sup> (Cv)	Weight (g) (2)(3)		
				Grommet	L/M plug connector	
Body ported	SYJ5□20-□-M5	2 position	Single	3.6 (0.2)	43	45
			Double	3.6 (0.2)	58	62
		3 position	Closed center	3.2 (0.18)	69	73
			Exhaust center			
			Pressure center			
	SYJ5□20-□-C4	2 position	Single	3 (0.17)	50	52
			Double	3 (0.17)	65	69
		3 position	Closed center	3 (0.17)	76	80
			Exhaust center			
			Pressure center			
SYJ5□20-□-C6	2 position	Single	3.5 (0.19)	50	52	
		Double	3.5 (0.19)	65	69	
	3 position	Closed center	3.2 (0.18)	76	80	
		Exhaust center				
		Pressure center				
Base mounted	SYJ5□40-□-01	2 position	Single	4.5 (0.25)	77 (43)	79 (45)
			Double	4.5 (0.25)	92 (58)	96 (62)
		3 position	Closed center	3.4 (0.19)	103 (69)	107 (73)
			Exhaust center			
			Pressure center			



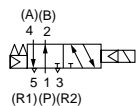
Body ported



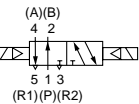
Base mounted

### JIS Symbol

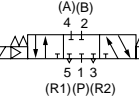
Body ported  
2 position single



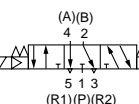
2 position double



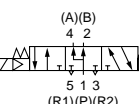
3 position closed center



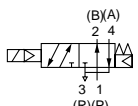
3 position exhaust center



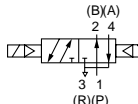
3 position pressure center



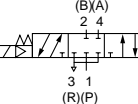
Base mounted (with sub-plate)  
2 position single



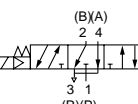
2 position double



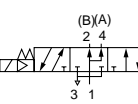
3 position closed center



3 position exhaust center



3 position pressure center



Note 1 [ ] for normal position. Exhaust center: A, B → R1, R2 Pressure center: P → A, B  
Note 2 ( ): Without sub-plate.  
Note 3) For DC/AC voltages, add 1g to the weight of the single solenoid and 2g to the weight of the double solenoid and 3 position types.

### Specifications

Fluid	Air	
Operating pressure range (MPa)	2 position single	0.15 to 0.7
	2 position double	0.1 to 0.7
	3 position	0.15 to 0.7
Ambient and fluid temperature °C	Max. 50	
Response time (ms) (4) at 0.5MPa	2 position single, double	≤ 25
	3 position	≤ 40
Max. operating frequency (Hz)	2 position single, double	5
	3 position	3
Manual override	Non-locking push, Push-turn-locking slotted style	
Pilot exhaust	Individual pilot exhaust, Common exhaust (pilot and main valve)	
Lubrication	Not required	
Mounting position	Free	
Impact/Vibration resistance (m/s <sup>2</sup> ) (5)	150/30	
Protection structure	Dust proof	



Note 4) According to dynamic performance test JIS B8375-1981 (Coil temperature 20°C, at rated voltage, without surge voltage suppressor)

Note 5) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle direction of the main valve and armature, for both energized and de-energized states. (Value in the initial stage)

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000Hz. Test was performed at both energized and de-energized states to axis and right angle direction of the main valve and armature. (Value in the initial stage)

### Solenoid Specifications

Electric entry	Grommet (G)/(H), L plug connector (L), M plug connector (M)		
Coil rated voltage (V)	DC	24, 12, 6, 5, 3	
	AC50/60Hz	100, 110*, 200, 220**	
Allowable voltage	±10% rated voltage		
Power consumption (W) (6)	DC		
	0.5 (With light: 0.55)		
	AC	100V	0.9 (With light: 1.0)
		110V [115V]	1.0 (With light: 1.1) [1.1 (With light: 1.2)]
200V		1.8 (With light: 1.9)	
Apparent power (VA)	220V [230V]	1.9 (With light: 2.0) [2.2 (With light: 2.3)]	
	Surge voltage suppressor	Diode	
Indicator light	LED		



\* 110V AC can be used for 115V AC.  
\*\* 220V AC can be used for 230V AC.  
Note 6) At rated voltage



P.1.2-72



# Series SYJ5000

## How to Order

### Configuration

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

### Rated voltage

For DC		For AC (50/60Hz)	
5	24V DC	1	100V AC
6	12V DC	2	200V AC
V	6V DC	3	110V AC [115V AC]
S	5V DC	4	220V AC [230V AC]
R	3V DC		

### Light and surge voltage suppressor

For electrical entry G,H,L and M

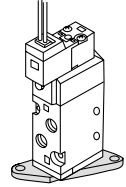
—	Without light and surge suppressor
S	With surge suppressor
Z	With light and surge suppressor
R	With surge suppressor (Non-polar)
U	With light and surge suppressor (Non-polar)



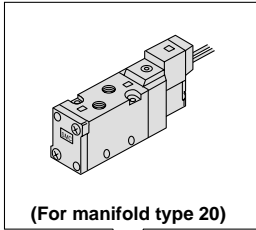
\*For AC voltage valves "S" option is not available. It is already built into the rectifier circuit.  
\*“R” and “U” types are available for DC voltage valves.

### Bracket

—: Without bracket  
F: With bracket

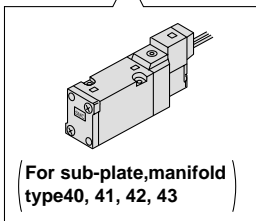
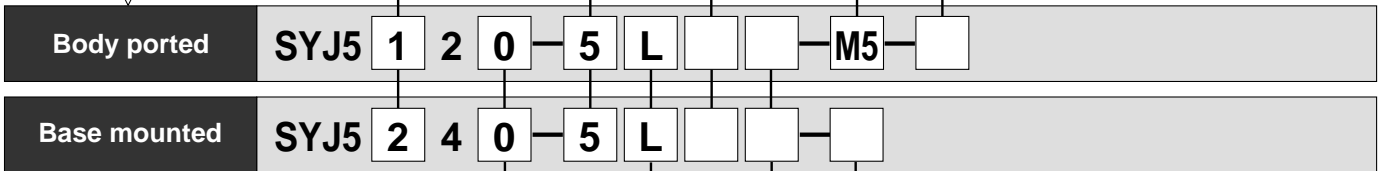


Note) · The double solenoid mounting bracket is supplied unattached.



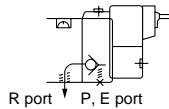
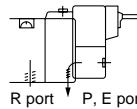
### A, B port size

M5	M5 X 0.8
C4	ø4 One-touch fitting
C6	ø6 One-touch fitting



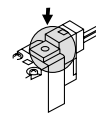
### Body option

0: Individual exhaust for the pilot valve      3: Common exhaust for the pilot and main valves

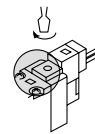


### Manual override

—: Non-locking push style

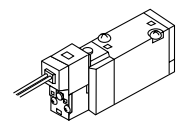


D: Push-turn-locking slotted style



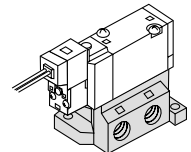
### Port size

—: Without sub-plate



(With gasket and screws)

01: With Rc(PT) 1/8 sub-plate



### Electrical entry

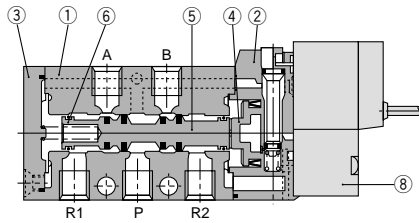
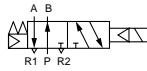
24V, 12V, 6V, 5V, 3V DC/100V, 110V, 200V, 220V AC			
Grommet	L plug connector	M plug connector	
G: 300mm lead wire	L: 300mm lead wire	M: 300mm lead wire	MN: Without lead wire
H: 600mm lead wire	LN: Without lead wire	LO: Without connector	MO: Without connector



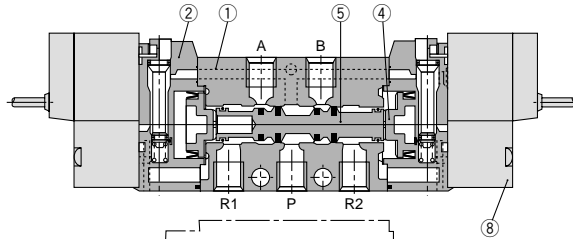
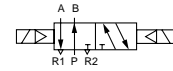
\*LN and MN types are with 2 pcs. of socket.

## Construction

### 2 position single

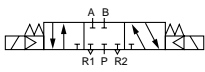


### 2 position double

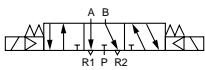


### 3 position closed center/exhaust center/pressure center

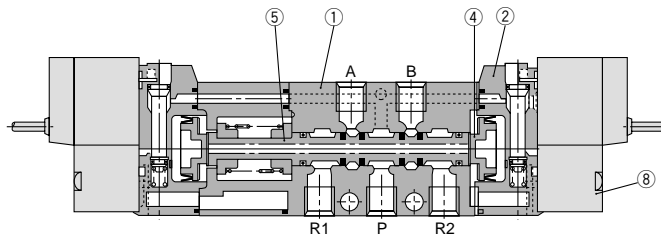
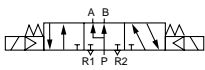
3 position closed center



3 position exhaust center



3 position pressure center



(This construction shows a closed center)

## Component Parts

No.	Description	Material	Note
①	Body	Aluminum die cast	White
②	Piston plate	Resin	White
③	End cover	Resin	White
④	Piston	Resin	—
⑤	Spool ass'y	—	—
⑥	Spool spring	SUS	—

## Replacement Parts

No.	Description	Part No.	Note
⑦	Sub-plate	SYJ5000-22-1	Aluminum die cast
⑧	Pilot valve	SY114-□□□	—

## How to Order Pilot Valve Assembly

SY114 — **5** **G** □

### Voltage

5	24V DC
6	12V DC
V	6V DC
S	5V DC
R	3V DC
1	100V AC50/60Hz
2	200V AC50/60Hz
3	110V AC50/60Hz [115V AC50/60Hz]
4	220V AC50/60Hz [230V AC50/60Hz]

### Electrical entry

G	Grommet (Lead wire length: 300mm)
H	Grommet (Lead wire length: 600mm)
L	L plug connector
LN	L plug connector
LO	L plug connector
M	M plug connector
MN	M plug connector
MO	M plug connector

## How to Order Connector Assembly

DC : SY100-30-4A-□  
 100V AC : SY100-30-1A-□  
 200V AC : SY100-30-2A-□  
 Other AC voltages: SY100-30-3A-□

### Lead wire length

—	300mm
6	600mm
10	1000mm
15	1500mm
20	2000mm
25	2500mm
30	3000mm
50	5000mm

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

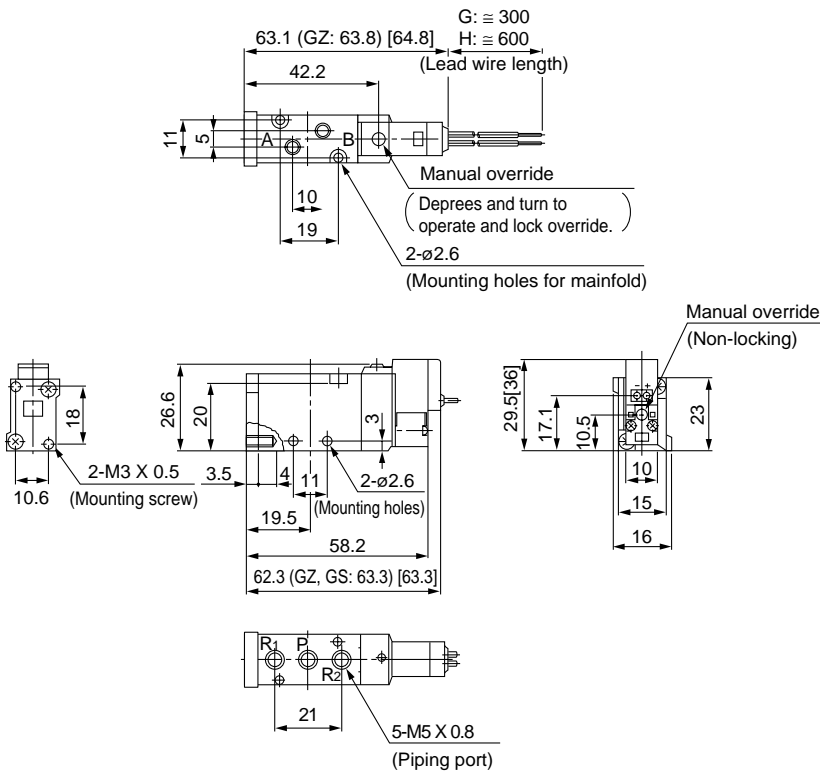
VS

VS7

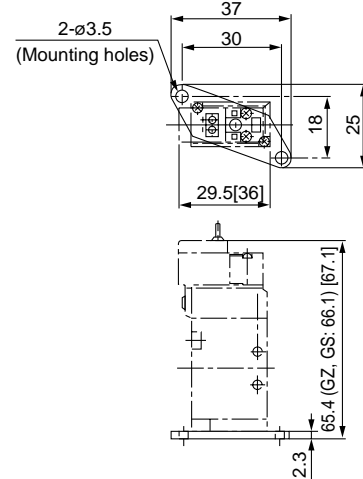
# Series SYJ5000

## 2 Position Single

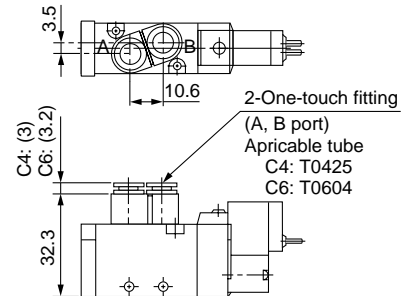
### Grommet (G), (H): SYJ5120-□<sup>G</sup>□□-M5



### With bracket



### Built-in One-touch fitting: SYJ5120-□<sup>G</sup>□□-C4

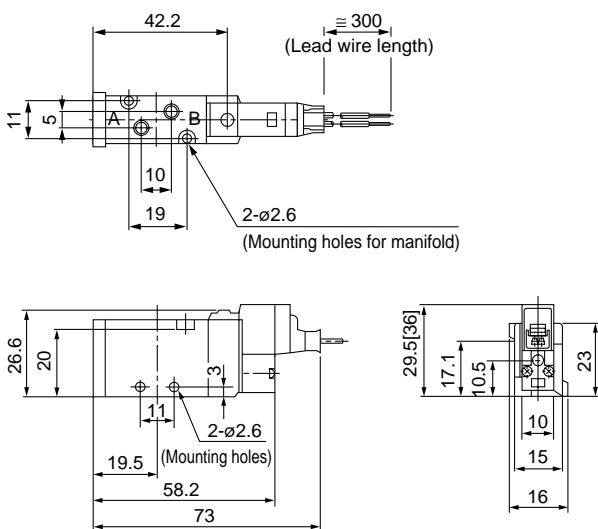


\* [ ] for AC



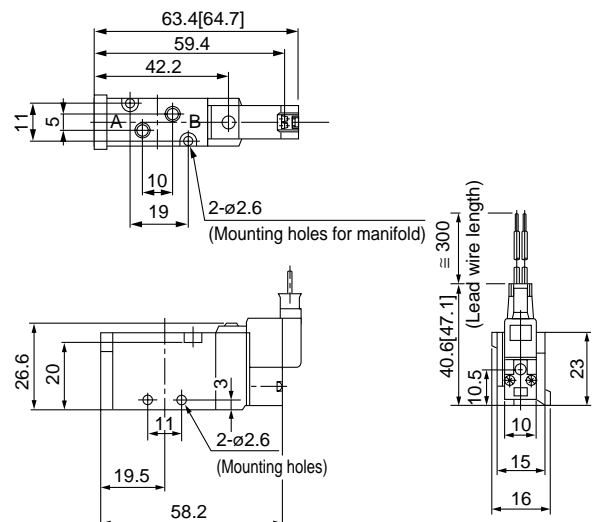
\* [ ] for AC  
\* Other dimensions are the same as the grommet style.

### L plug connector (L): SYJ5120-□L□□-M 5



\* [ ] for AC  
\* Other dimitions are the same as the grommet style.

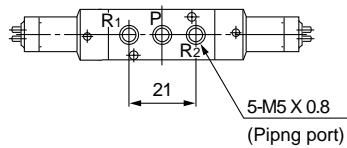
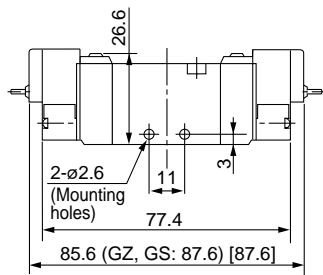
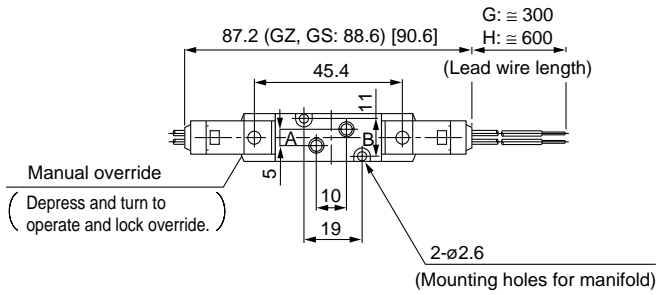
### M plug connector (M): SYJ5120-□M□□-M 5



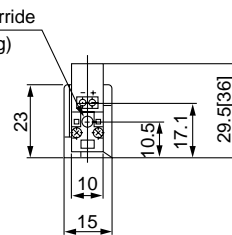
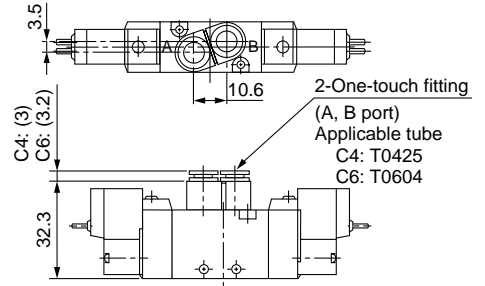
\* [ ] for AC  
\* Other dimitionsare the same as the grommet style.

## 2 Position Double

Grommet (G), (H): SYJ5220-□<sub>H</sub><sup>G</sup>□□-M 5

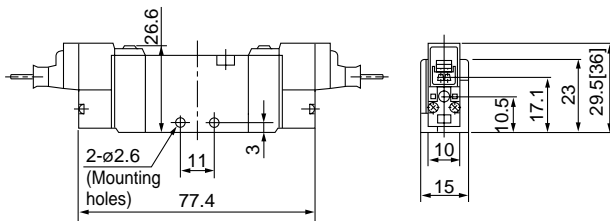
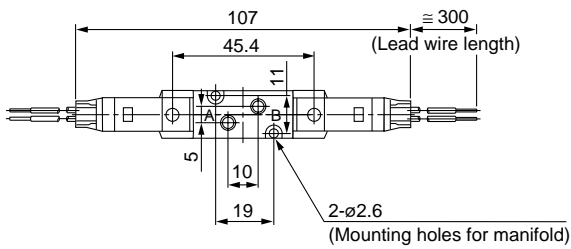


Built-in One-touch fitting:  
SYJ5220-□<sub>H</sub><sup>G</sup>□□-C<sub>4</sub>  
C<sub>4</sub>: T0425  
C<sub>6</sub>: T0604

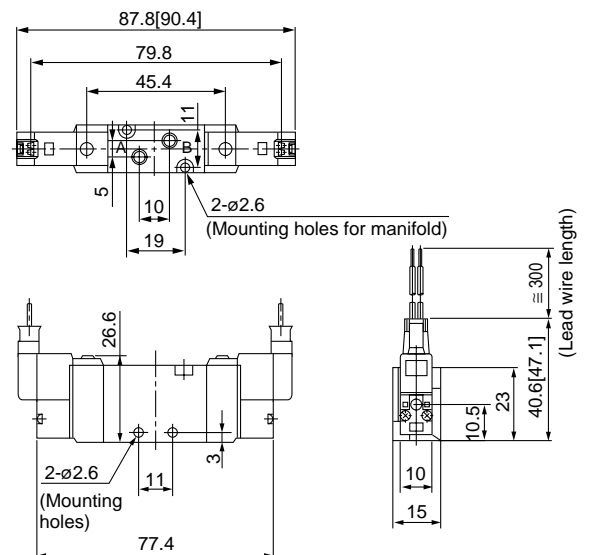


\* [ ] for AC

L plug connector (L): SYJ5220-□L□□-M 5



M plug connector (M): SYJ5220-□M□□-M 5



\* [ ] for AC

\* Other dimensions are the same as the grommet style.



\* [ ] for AC

\* Other dimensions are the same as the grommet style.

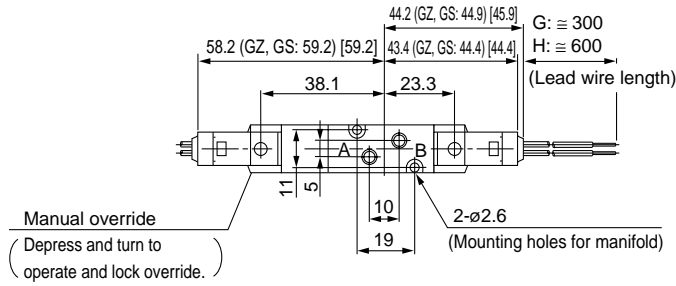
- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# Series SYJ5000

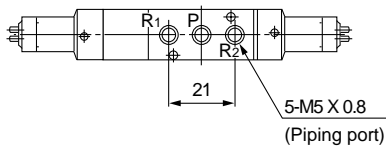
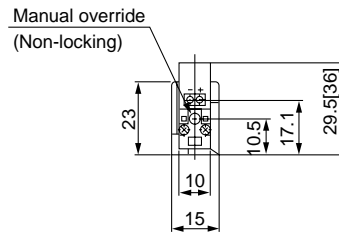
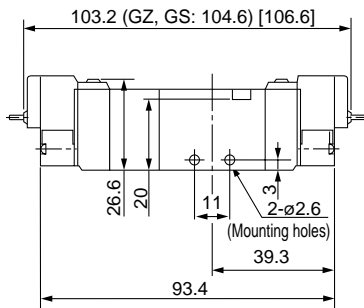
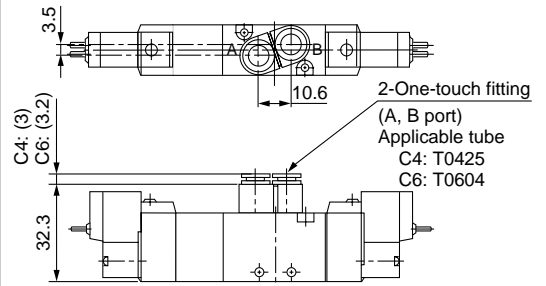
## 3 Position Closed Center/Exhaust Center/Pressure Center

Grommet (G), (H): SYJ5<sup>3</sup>/<sub>4</sub>20-□<sup>G</sup>□□-M 5



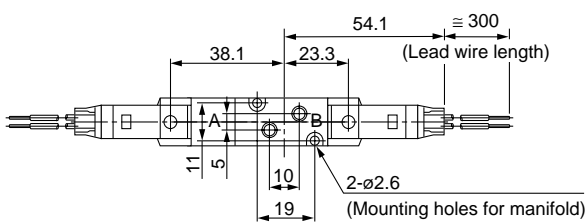
Built-in One-touch fitting:

SYJ5<sup>3</sup>/<sub>4</sub>20-□<sup>G</sup>□□-C<sub>4</sub><sup>C6</sup>

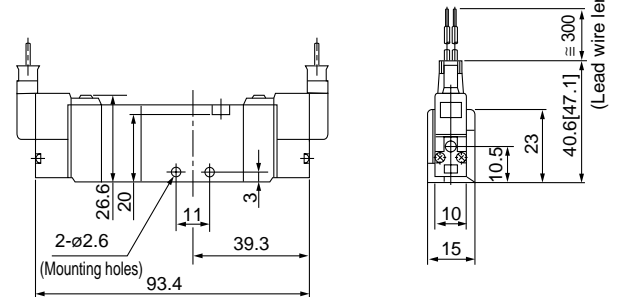
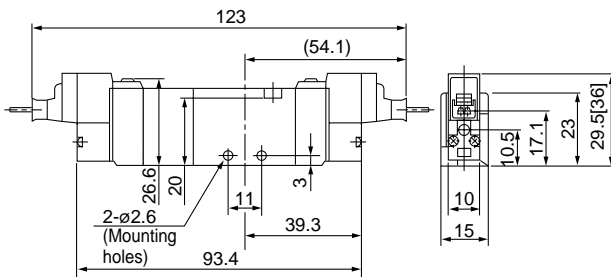
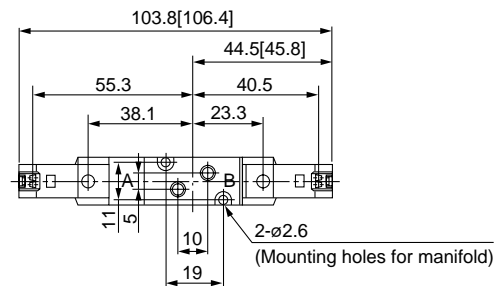


\* [ ] for AC

L plug connector (L): SYJ5<sup>3</sup>/<sub>4</sub>20-□L□□-M 5



M plug connector (M): SYJ5<sup>3</sup>/<sub>4</sub>20-□M□□-M5



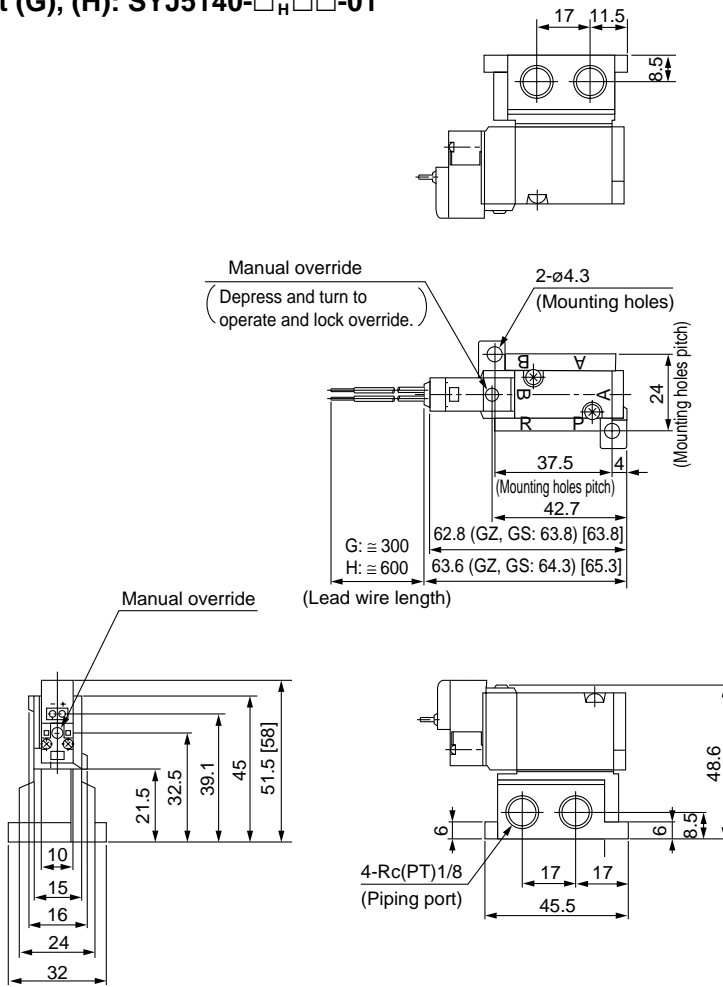
\* [ ] for AC  
\* Other dimensions are the same as the grommet style.



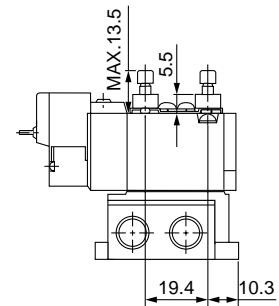
\* [ ] for AC  
\* Other dimensions are the same as the grommet style.

## 2 Position Single

Grommet (G), (H): SYJ5140-□<sup>G</sup>□□□-01



Built-in speed controller  
SYJ5150-□<sup>G</sup>□□□-01



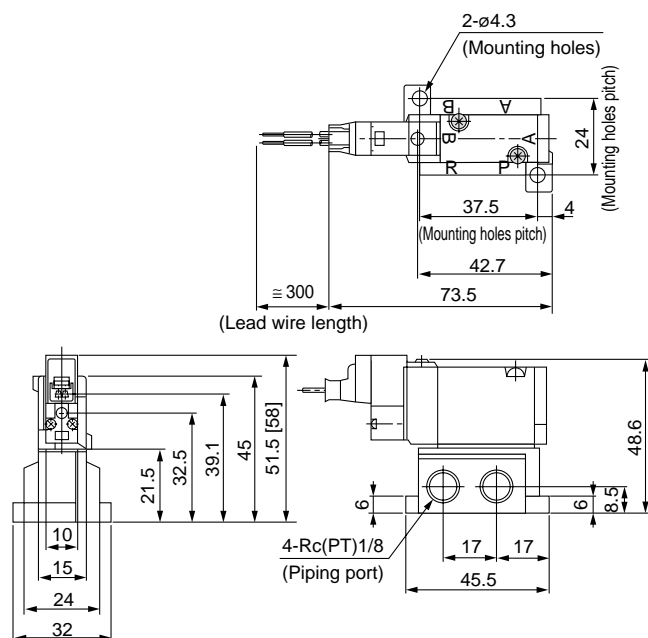
- SY
- SYJ**
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD

- VZS
- VFS
- VS
- VS7

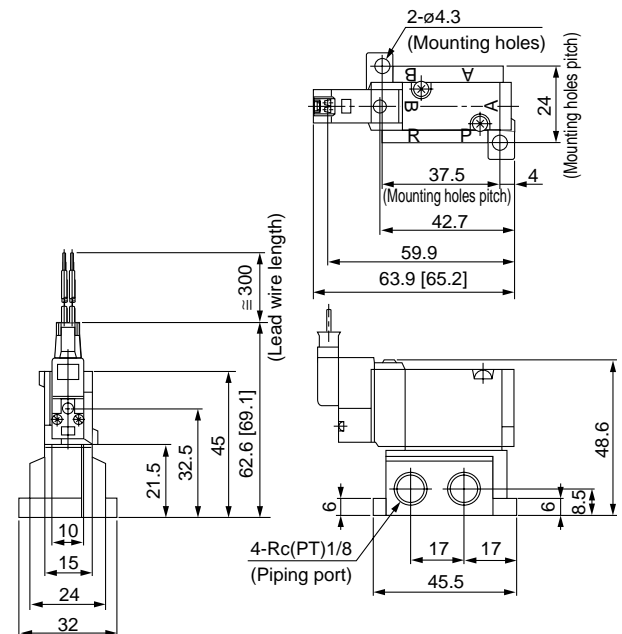
\* [ ] for AC

L plug connector (L): SYJ5140-□L□□□-01



\* [ ] for AC  
\* Other dimensions are the same as the grommet style.

M plug connector (M): SYJ5140-□M□□□-01



\* [ ] for AC  
\* Other dimensions are the same as the grommet style.

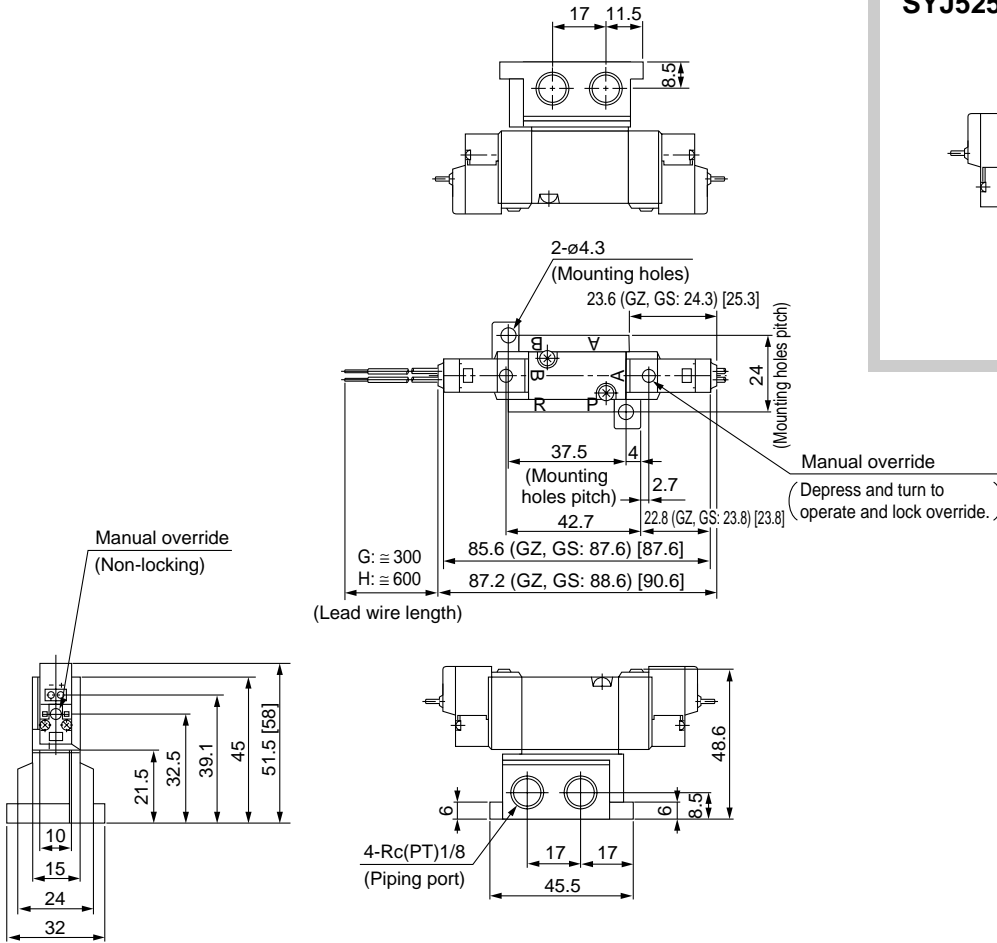


# Series SYJ5000

## 2 Position Double

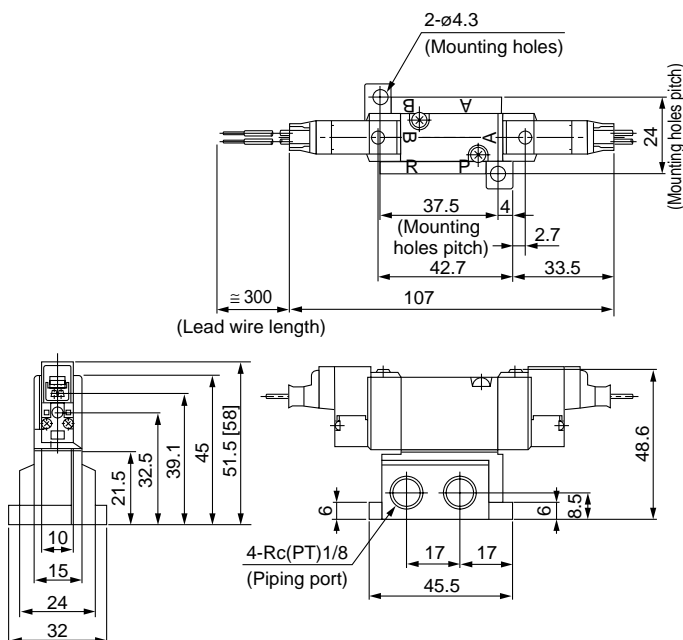
Grommet (G), (H): SYJ5240-□<sup>G</sup>□□-01

Built-in speed controller  
SYJ5250-□<sup>G</sup>□□-01



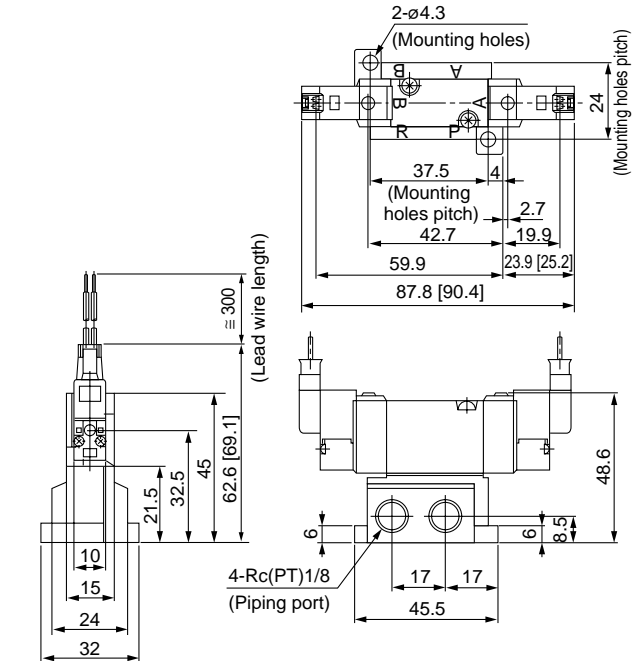
\* [ ] for AC

L plug connector (L): SYJ5240-□L□□-01



\* [ ] for AC  
\* Other dimensions are the same as the grommet style.

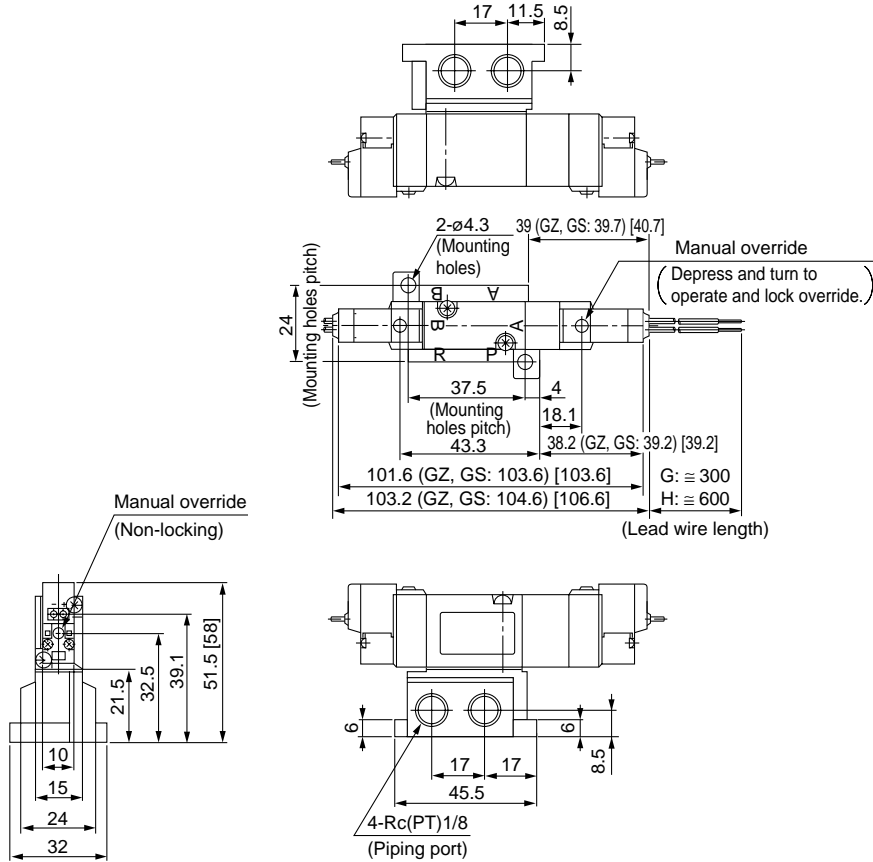
M plug connector (M): SYJ5240-□M□□-01



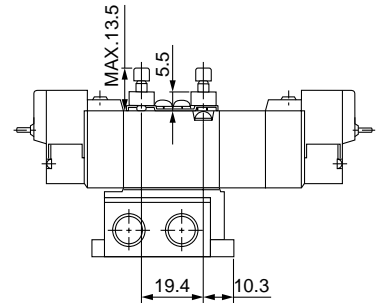
\* [ ] for AC  
\* Other dimensions are the same as the grommet style.

## 3 Position Closed Center/Exhaust Center/Pressure Center

Grommet (G), (H): SYJ5 <sup>3</sup>/<sub>4</sub> 40-□<sup>G</sup>□□-01



Built-in speed controller  
SYJ5 <sup>3</sup>/<sub>4</sub> 50-□<sup>G</sup>□□-01



- SY
- SYJ**
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

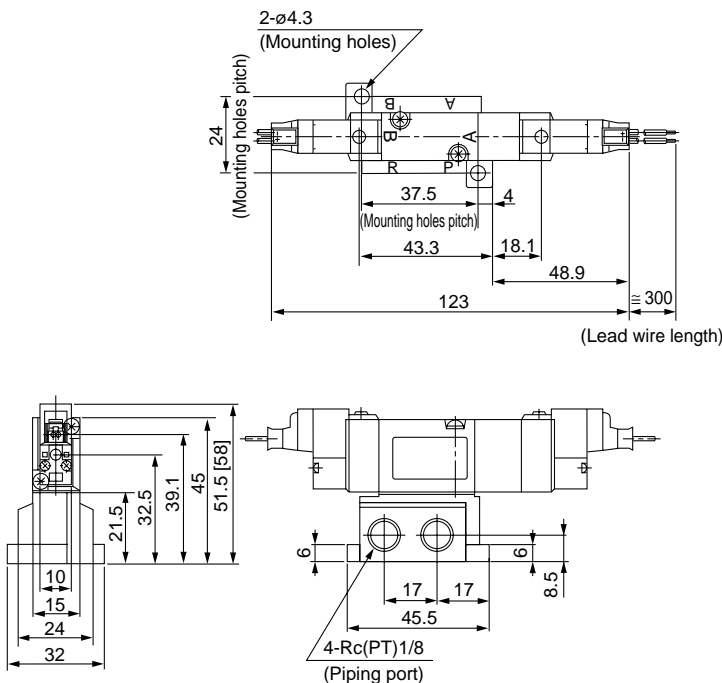
- VQ
- VQ4
- VQZ
- VQD

- VZS
- VFS
- VS
- VS7



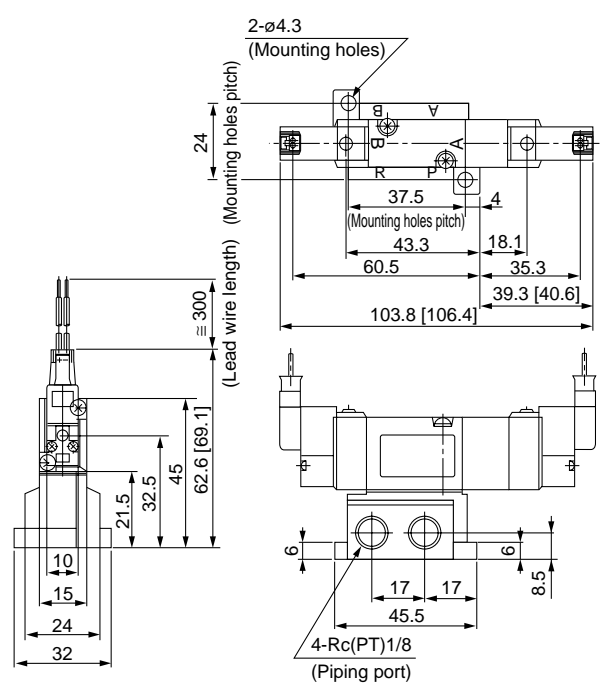
\* [ ] for AC

L plug connector (L): SYJ5 <sup>3</sup>/<sub>4</sub> 40-□<sup>L</sup>□□-01



\* [ ] for AC  
\* Other dimensions are the same as the grommet style.

M plug connector (M): SYJ5 <sup>3</sup>/<sub>4</sub> 40-□<sup>M</sup>□□-01



\* [ ] for AC  
\* Other dimensions are the same as the grommet style.