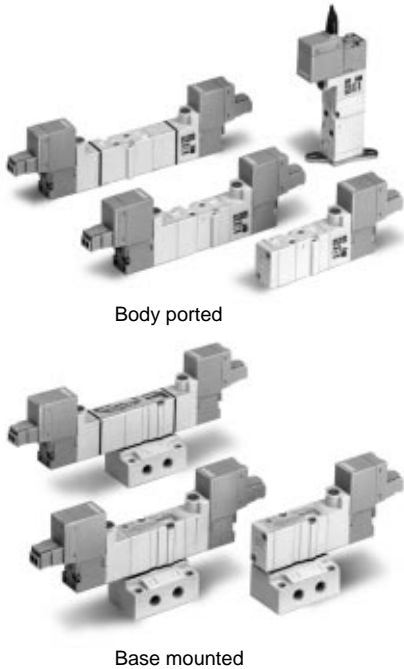


4, 5 Port Solenoid Valve Rubber Seal

Series SYJ3000

Model



Body ported

Base mounted

Valve model		Configuration		Port size	Effective area mm ² (Cv) ⁽¹⁾	Weight (g) ⁽²⁾⁽³⁾	
						Grommet	L/M plug connector
5 port Body ported	SYJ312□	2 position	Single	M3 X 0.5	0.9 (0.05)	33	35
	SYJ322□		Double			47	51
	SYJ332□	3 position	Closed center			50	54
	SYJ342□		Exhaust center				
	SYJ352□		Pressure center				
5 port Base mounted (With sub-plate)	SYJ314□	2 position	Single	M5 X 0.8	1.8 (0.1)	59(33)	61(35)
	SYJ324□		Double			73(47)	77(51)
	SYJ334□	3 position	Closed center			76(50)	80(54)
	SYJ344□		Exhaust center				
	SYJ354□		Pressure center				
4 port Base mounted (For manifold use only)	SYJ313□	2 position	Single	-	1.2 ⁽¹⁾ (0.067)	33	35
	SYJ323□		Double			47	51
	SYJ333□	3 position	Closed center			50	54
	SYJ343□		Exhaust center				
	SYJ353□		Pressure center				

Note 1) In case of M5 and mounted on manifold base.
 Note 2) (): Without sub-plate.
 Note 3) For DC voltages. For AC voltages add 1g to the weight of the single solenoid and 2g to the weight of the double solenoid and 3 position styles.

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	0.2 to 0.7
Ambient and fluid temperature °C	Max. 50	
Response time (ms) ⁽⁴⁾ at 0.5MPa	2 position single, double	≤15
	3 position	≤30
Max. operating frequency (Hz)	2 position single, double	10
	3 position	3
Manual override	Non-locking push type, 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 ²) ⁽⁵⁾	150/30	
Protection structure	Dust proof	

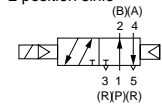
Note 4) According to dynamic performance test JIS B8375-1981 (Coil temperature 20°C, at rated voltage, without surge voltage suppressor)
 Note 5) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle direction of 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

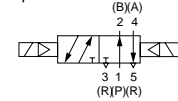
Electrical entry	Grommet(G)/(H), L plug connector(L), M plug connector(M)		
Coil rated voltage (V)	DC	24, 12, 6, 5, 3	
	AC50/60Hz	100, 110*, 200, 220**	
Allowable voltage	±10% rated voltage		
Power consumption (W) ⁽⁶⁾	DC	0.5 (With light: 0.55)	
Apparent power (VA)	AC	100V	0.9 (With light: 1.0)
		110V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

JIS Symbol 5 Port

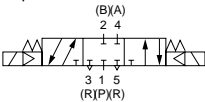
2 position single



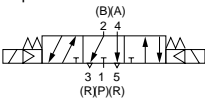
2 position double



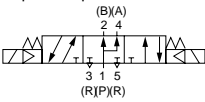
3 position closed center



3 position exhaust center

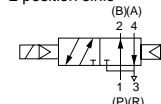


3 position pressure center

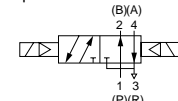


4 Port (manifold)

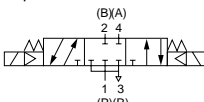
2 position single



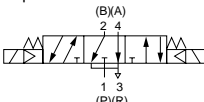
2 position double



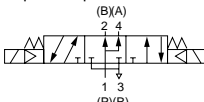
3 position closed center



3 position exhaust center



3 position pressure center

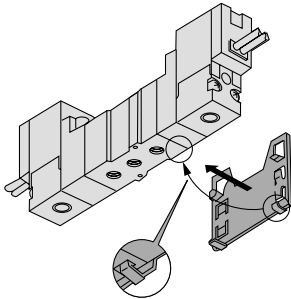


Order Made P.1.2-72

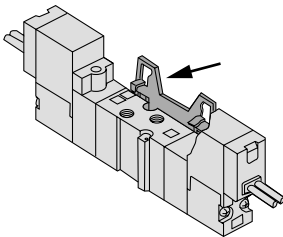
* Can be used for 115V AC in common.
 ** Can be used for 230V AC in common.
 Note 6) At rated voltage

Bracket Mounting

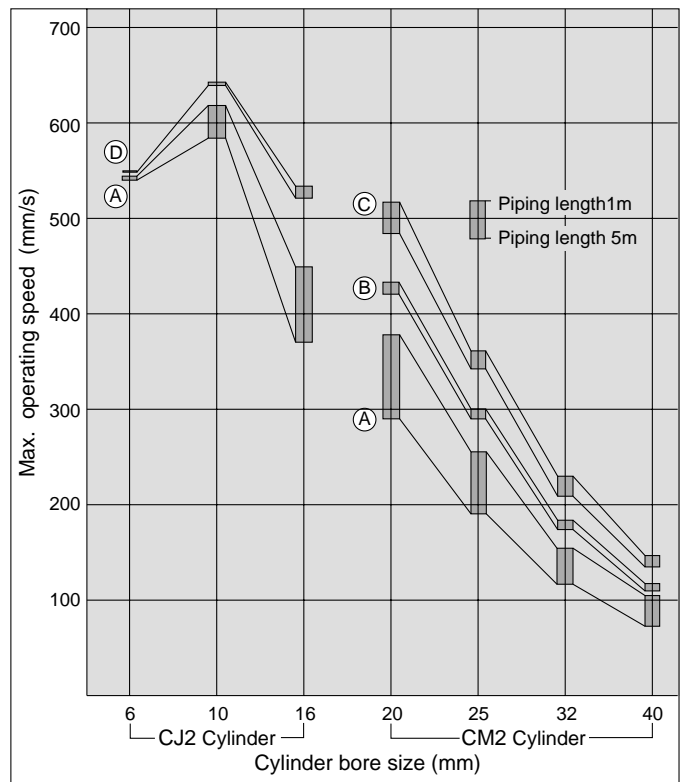
① Insert the lower hook of the mounting bracket into the groove on the bottom of the valve as shown.



② Press the valve and mounting bracket together until the upper hook of the bracket snaps into place in the groove on top of the valve.

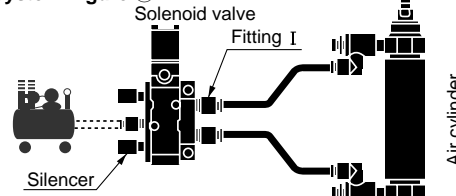


Cylinder Maximum Operating Speed

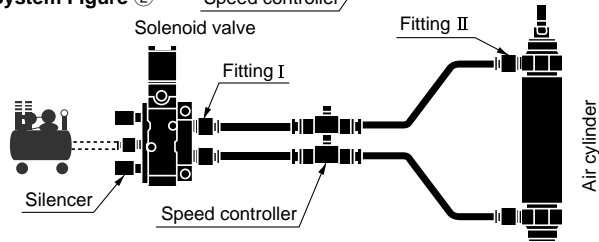


- SY
- SYJ**
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

● System Figure ①



● System Figure ②



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

Operating conditions) Pressure: 0.5MPa, Load rate: 50%
 At cylinder extended, cylinder stroke CJ2: 60mm
 CM2: 300mm

System components

System	Solenoid valve	Speed controller	Silencer	Fitting (Tube O.D. X Port size)		System Figure
				I	II	
(A)	SYJ3000 M5 X 0.8 (S = 1.8mm ²)	AS1301F-M5-04	AN120-M5 (S=5mm ²)	ø4 X M5	—	①
(B)		AS1301F-M5-06		ø6 X M5	—	
(C)		AS2301F-01-06		ø6 X 1/8	—	
(D)		AS2001F-06		—	ø6 X M5	ø6 X M5

Series SYJ3000

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

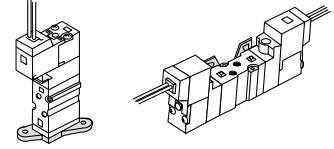
Light and surge voltage suppressor

—	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



Single

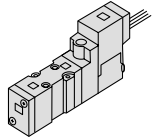
Double

Note) ● The double solenoid mounting bracket is supplied unattached.
● To order the double solenoid bracket for use with a single solenoid valve, order the single solenoid valve without a bracket and order the double solenoid bracket separately.
Example) SYJ3120-5M-M3, VJ3000-13-1

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		

5 port



(For manifold type 20)

Body ported

SYJ3 1 2 0 — 5 M — — M3 —

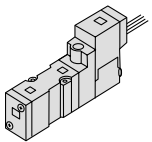
Base mounted
(4 port)

SYJ3 2 3 0 — 5 M — — (For manifold use only.)

Base mounted
(5 port)

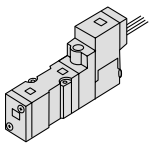
SYJ3 2 4 0 — 5 M — —

4 port



(Manifold type
31, S31, 32, S32)

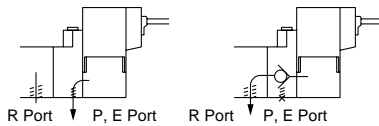
5 port



(For sub-plate,
Manifold type
41, S41, 46, S46)

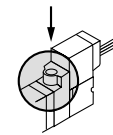
Body option

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

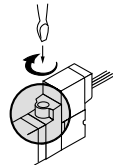


Manual override

—: Non-locking push style

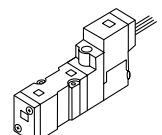


D: Push-turn-locking slotted style



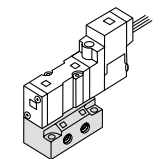
Port size

—: Without sub-plate



(With gasket and screws)

M5: With M5 port sub-plate



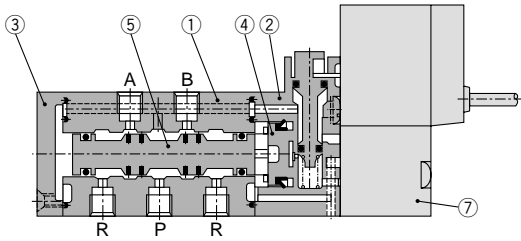
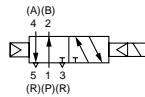
Electrical entry

24, 12, 6, 5, 3V DC/100, 110, 200, 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	MN: Without connector	MN: Without connector

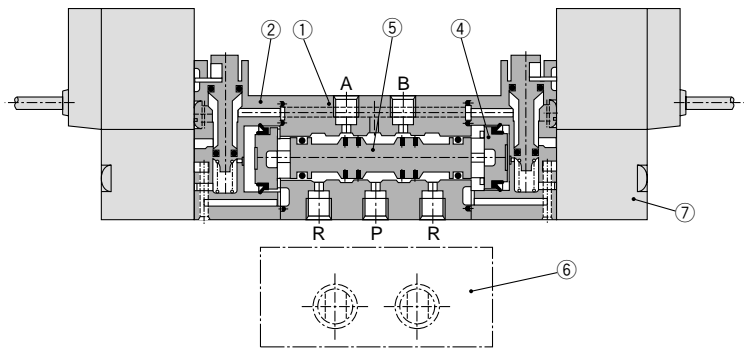
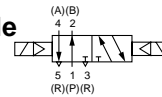
* LN and MN types are with 2 sockets.

Construction

2 position single

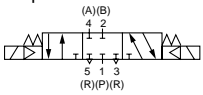


2 position double

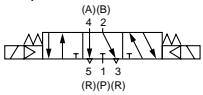


3 position closed center/exhaust center/pressure center

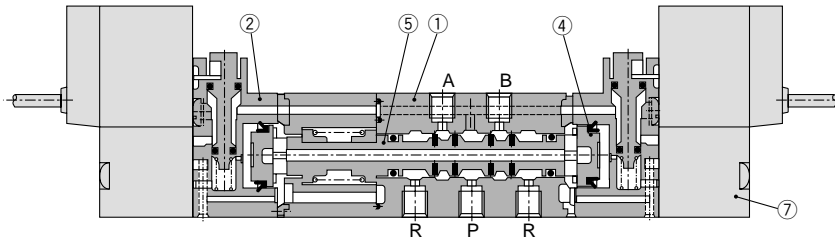
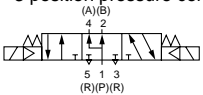
3 position closed center



3 position exhaust center



3 position pressure center



(This construction shows a closed center.)

Component Parts

No.	Description	Material	Note
①	Body	Zinc die cast	white
②	Piston plate	Resin	white
③	End cover	Resin	white
④	Piston	Resin	—
⑤	Spool Ass'y	—	—

Replacement Parts

No.	Description	Part No.	Note
⑥	Sub-plate	SYJ3000-22-1	Zinc die cast
⑦	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

Light and surge voltage suppressor

—	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" options are available for DC voltage valves only.

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-□

Without lead wire: SY100-30-A

(with connector and 2pcs. of socket)

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

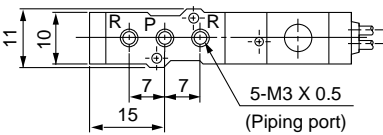
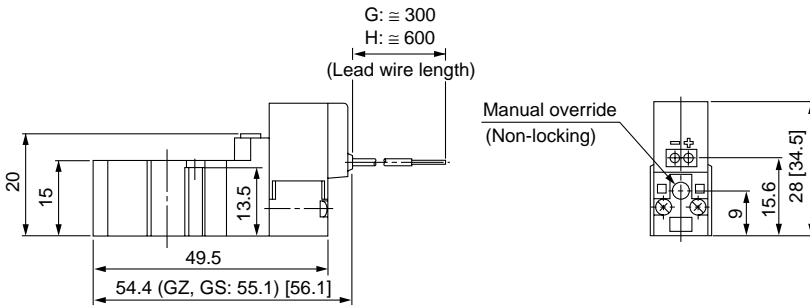
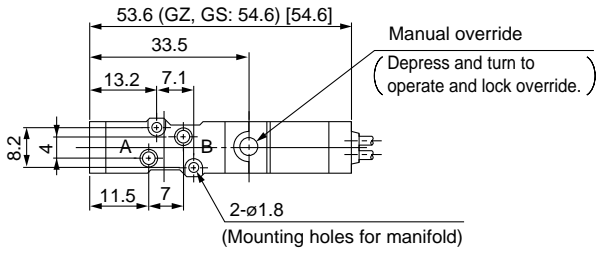
VS

VS7

Series SYJ3000

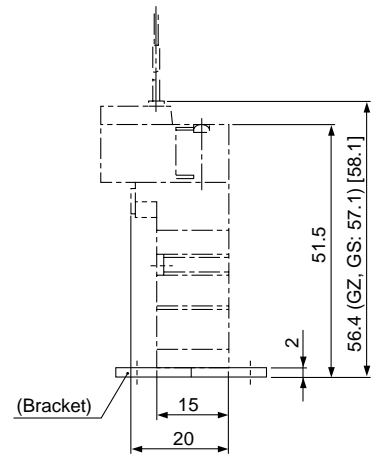
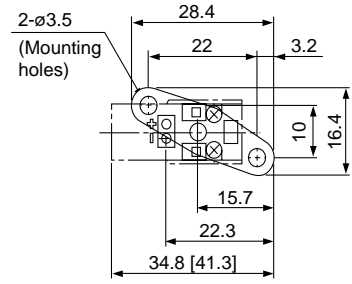
2 Position Single

Grommet (G), (H): SYJ3120-□^G□□-M3



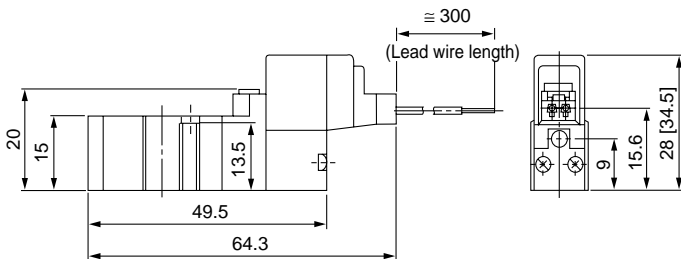
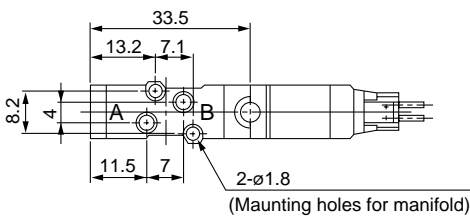
* [] for AC

With bracket



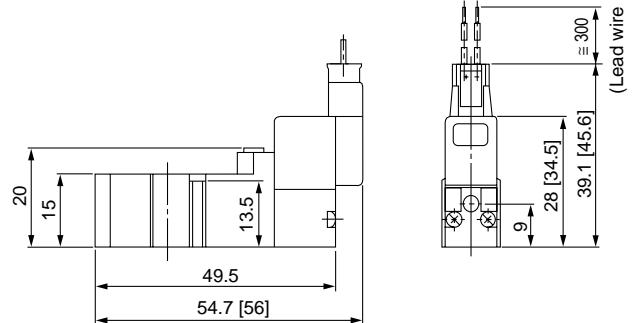
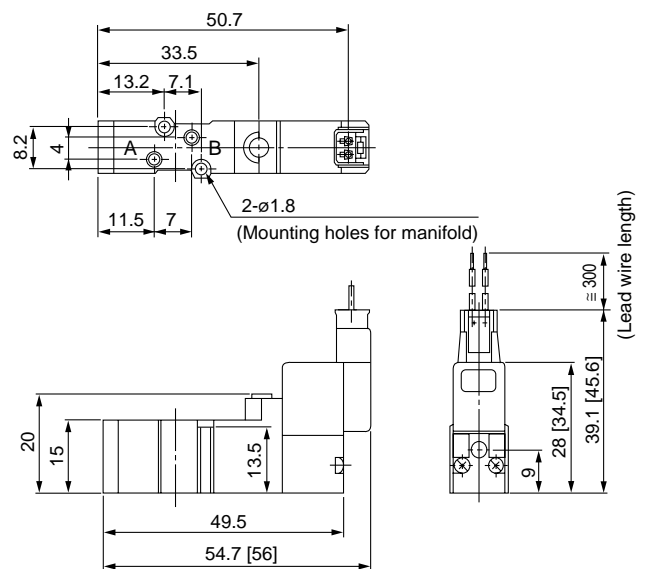
* [] for AC
* Other dimensions are the same as the grommet style.

L plug connector (L): SYJ3120-□L□□-M3



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

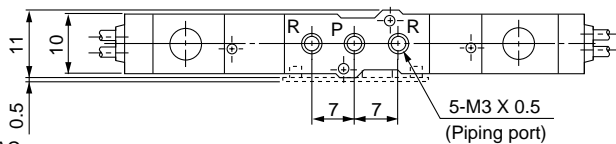
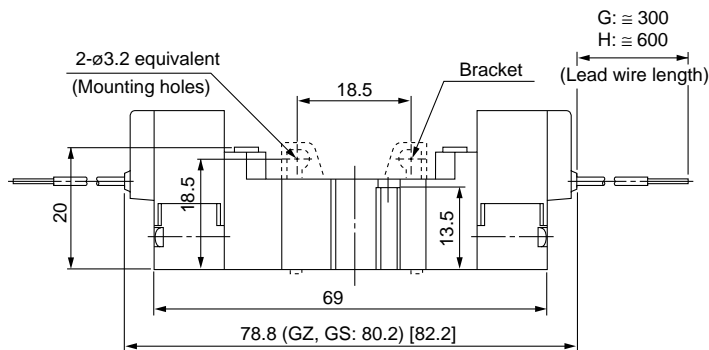
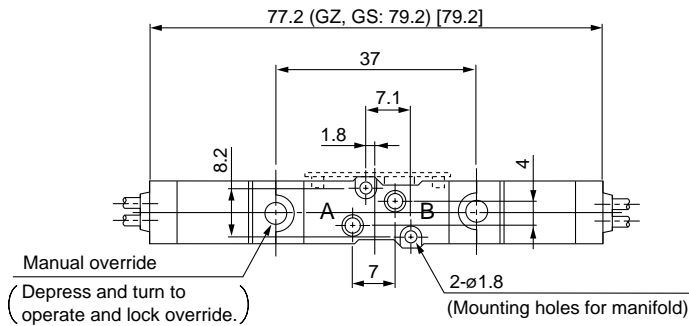
M plug connector (M): SYJ3120-□M□□-M3



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

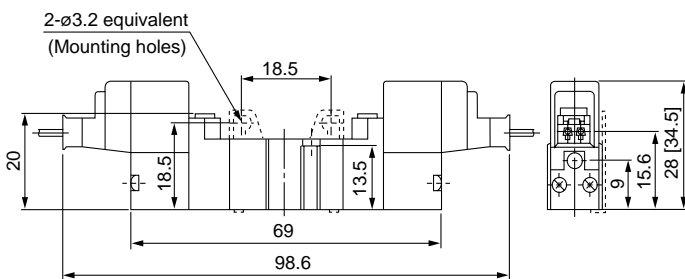
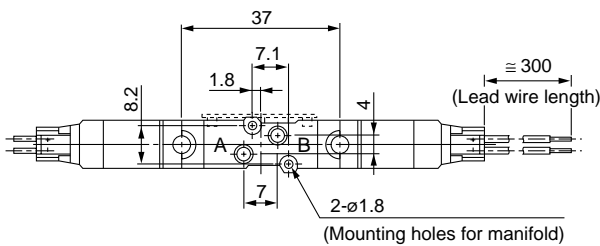
2 Position Double

Grommet (G), (H): SYJ3220-□^G□□-M3



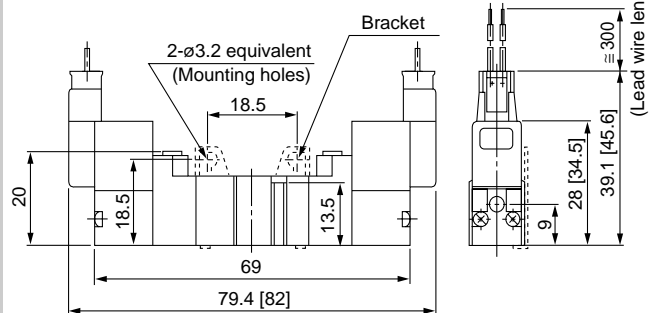
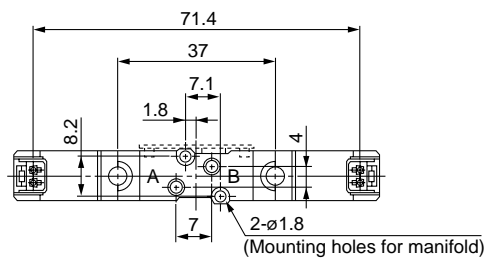
* [] for AC

L plug connector (L): SYJ3220-□L□□-M3



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

M plug connector (M): SYJ3220-□M□□-M3



* [] 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

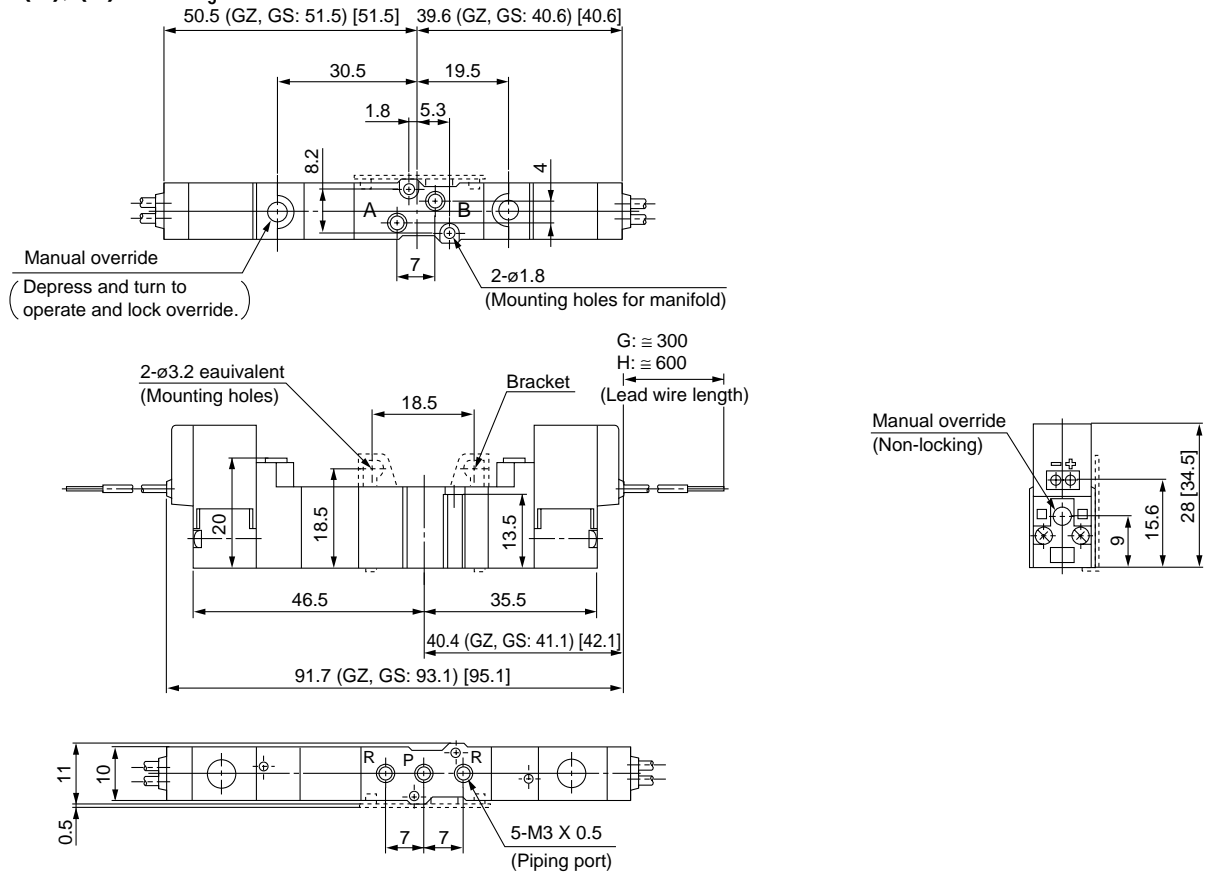
VS

VS7

Series SYJ3000

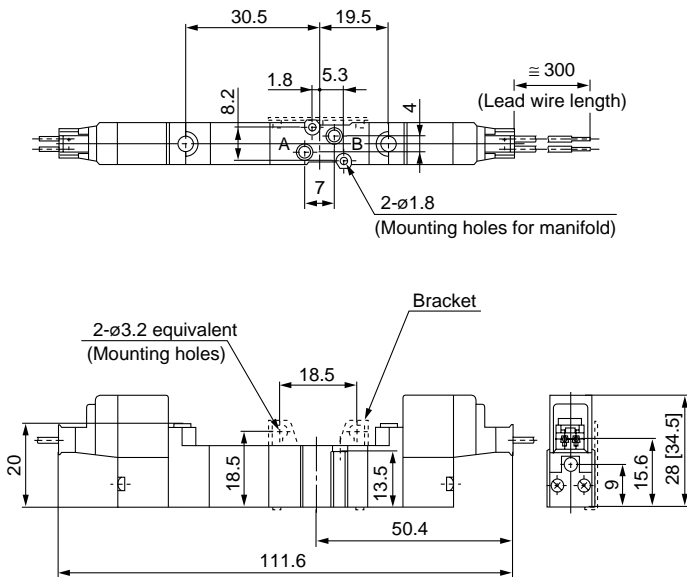
3 Position Closed Center/Exhaust Center/Pressure Center

Grommet (G), (H): SYJ3 $\frac{3}{5}$ 20-□^G□□-M3



* [] for AC

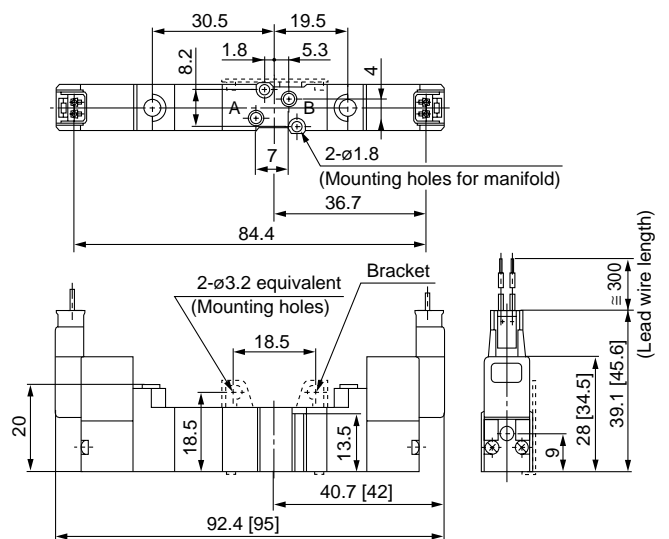
L plug connector (L): SYJ3 $\frac{3}{5}$ 20-□L□□-M3



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

1.2-14

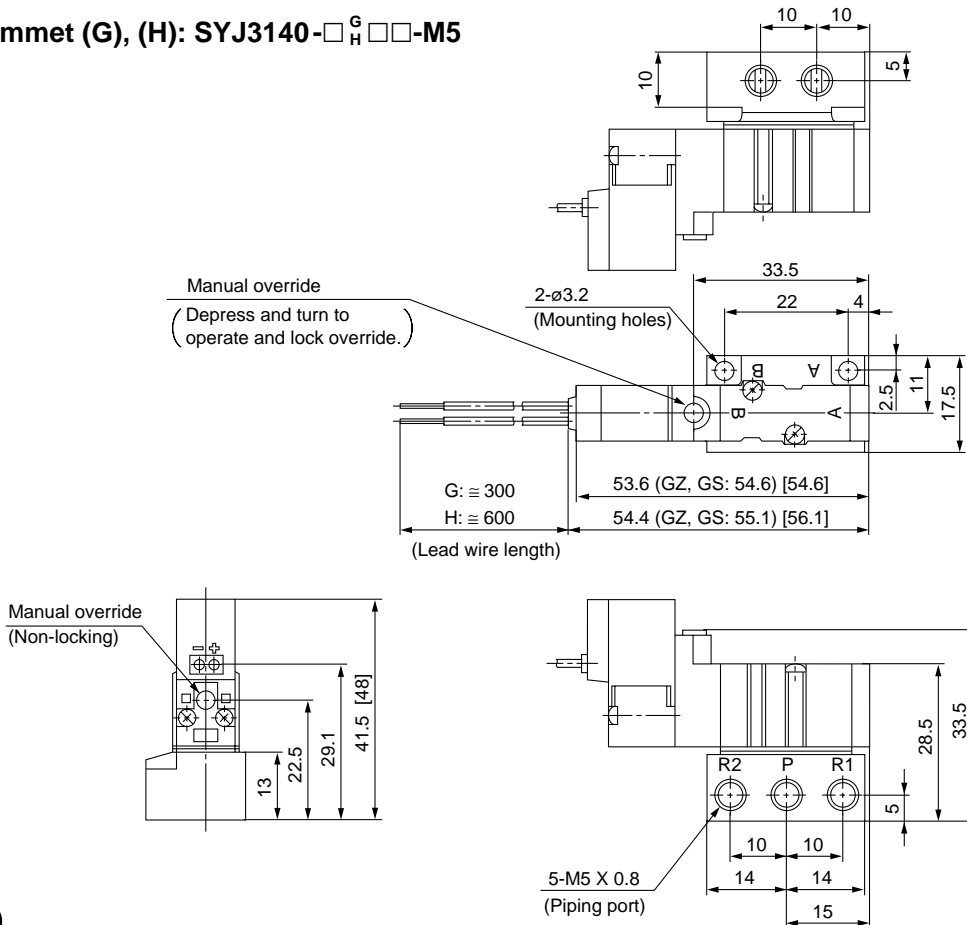
M plug connector (M): SYJ3 $\frac{3}{5}$ 20-□M□□-M3



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

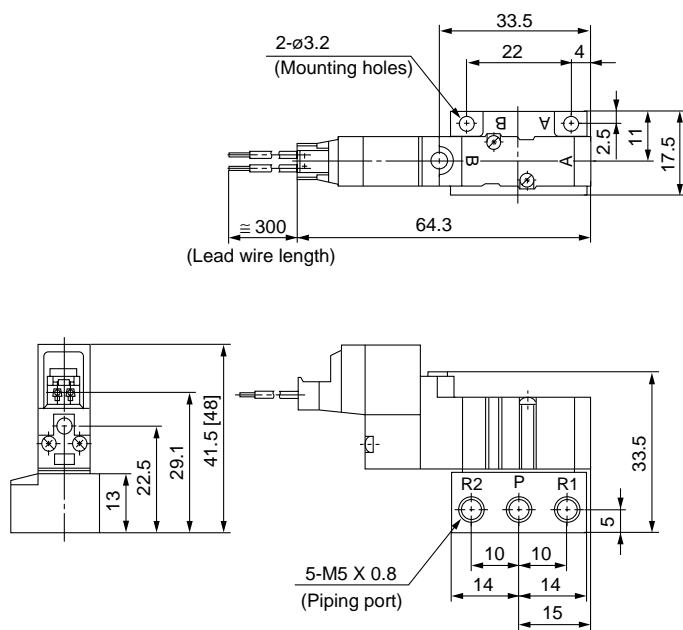
2 Position Single

Grommet (G), (H): SYJ3140-□^G□^H□□-M5



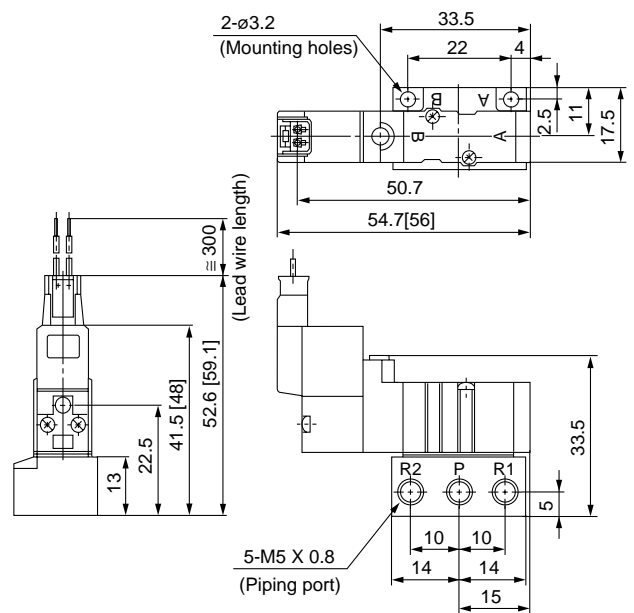
* [] for AC

L plug connector (L): SYJ3140-□L□□-M5



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

M plug connector (M): SYJ3140-□M□□-M5



* [] 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

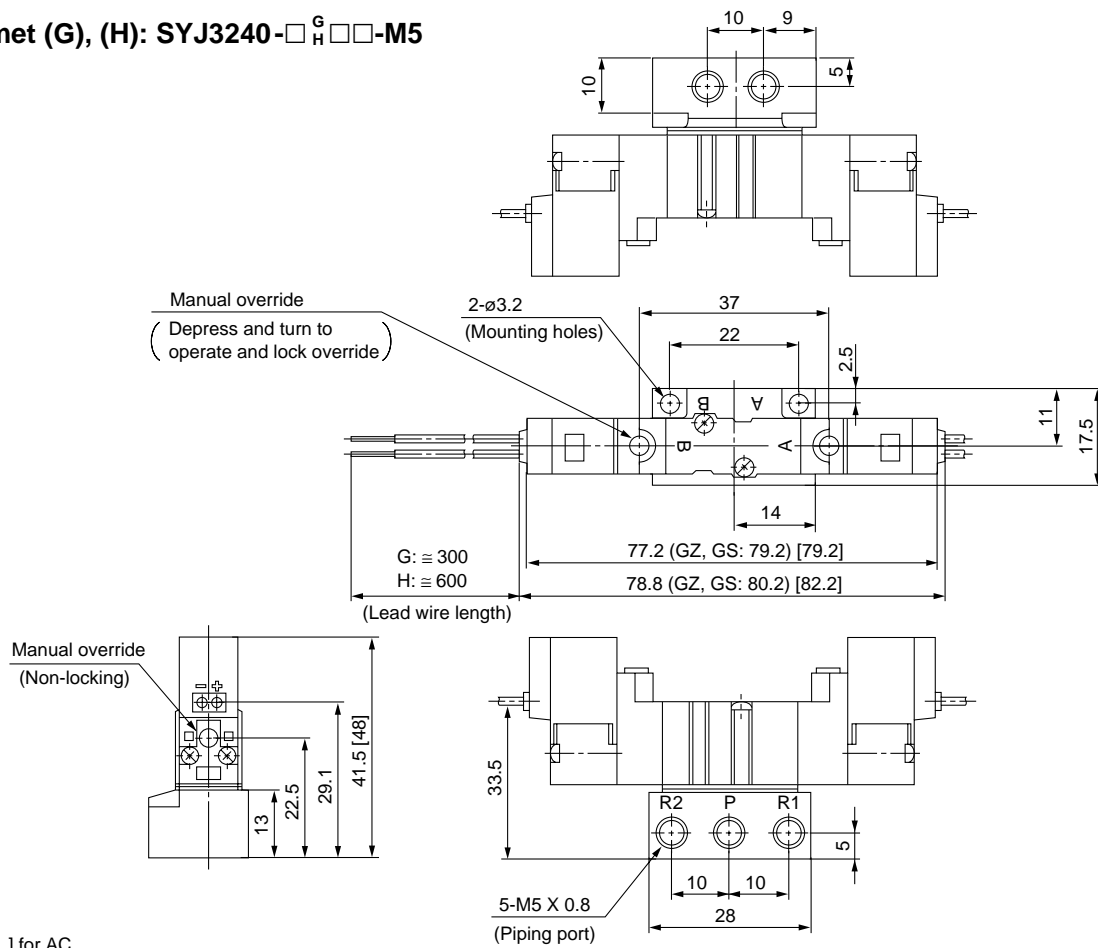
VS

VS7

Series SYJ3000

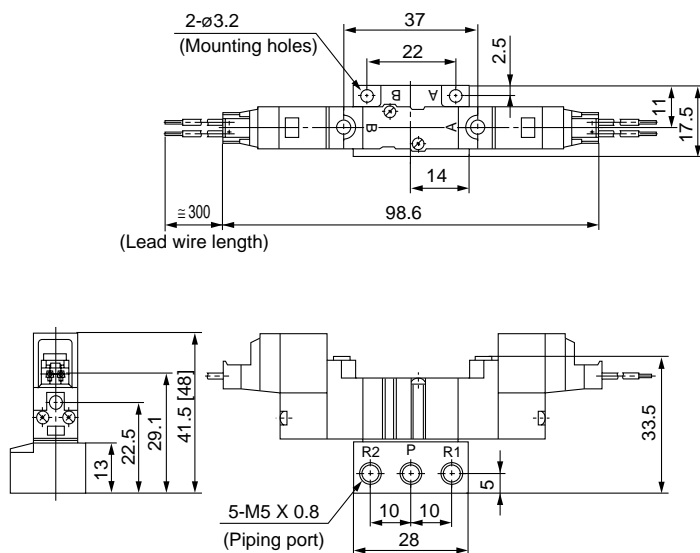
2 Position Double

Grommet (G), (H): SYJ3240-□^G□□-M5

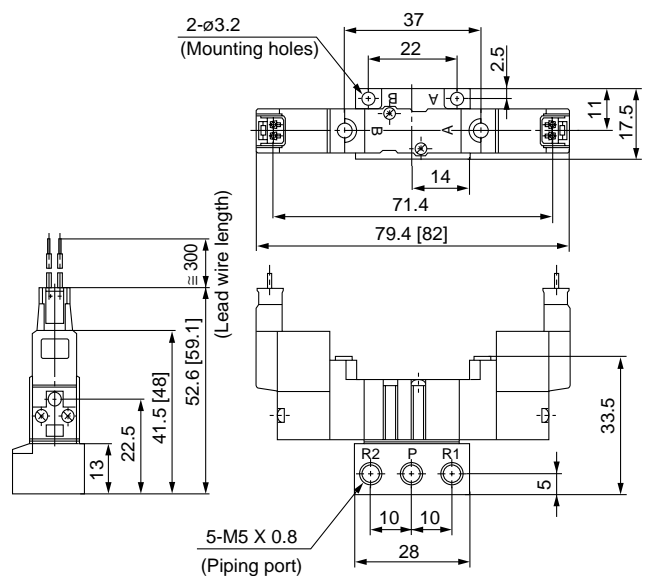


* [] for AC

L plug connector (L): SYJ3240-□L□□-M5



M plug connector (M): SYJ3240-□M□□-M5



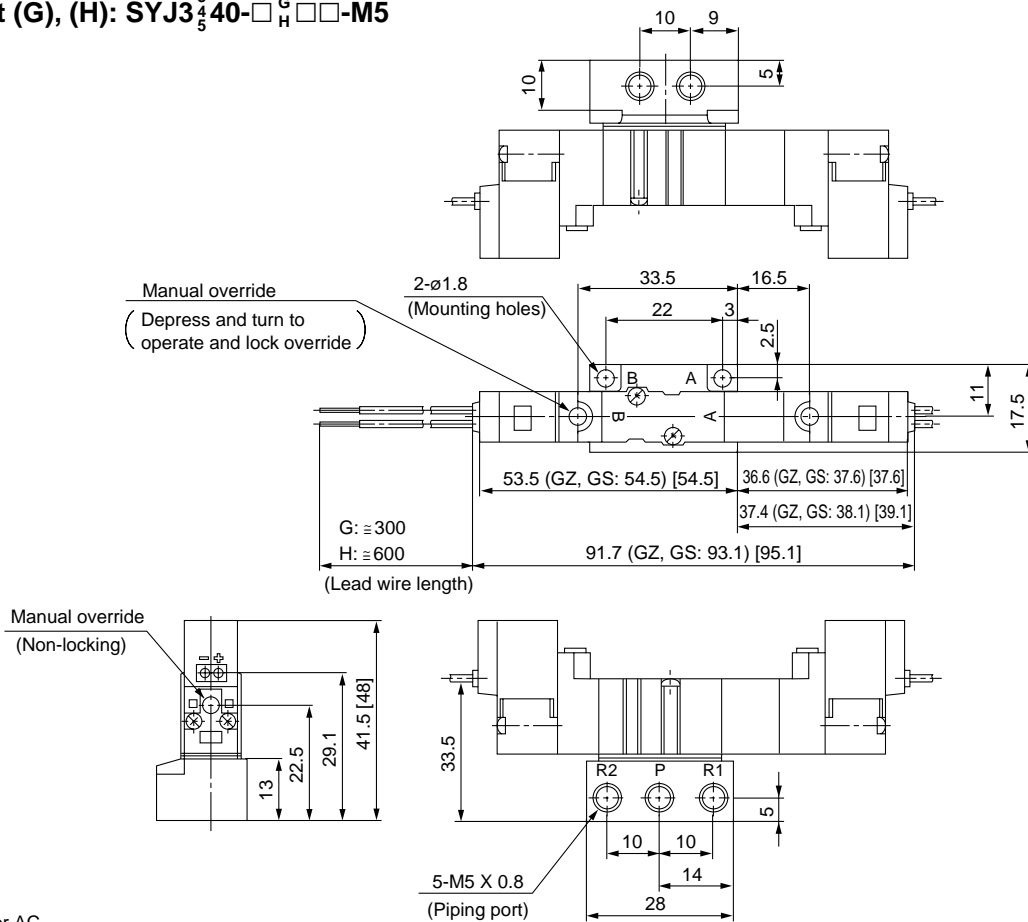
* [] for AC
* Other dimensions are the same as the grommet style.



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

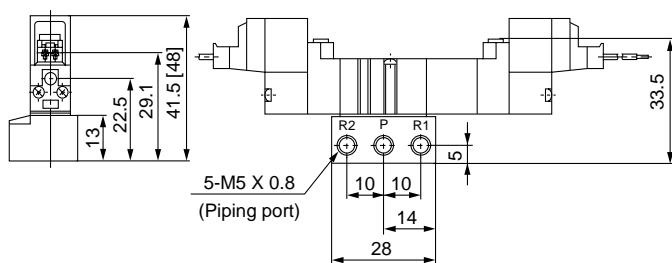
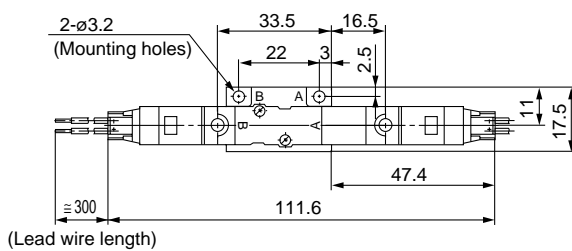
3 Position Closed Center/Exhaust Center/Pressure Center

Grommet (G), (H): SYJ3³/₅40-□^G□□-M5



* [] for AC

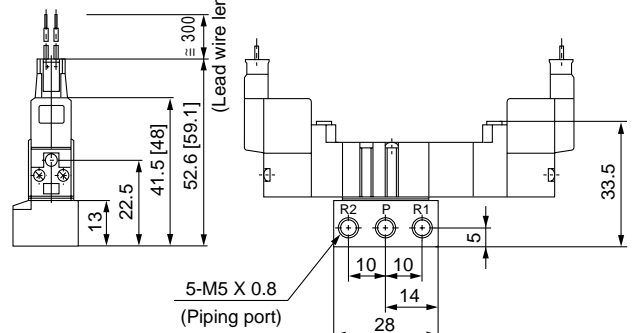
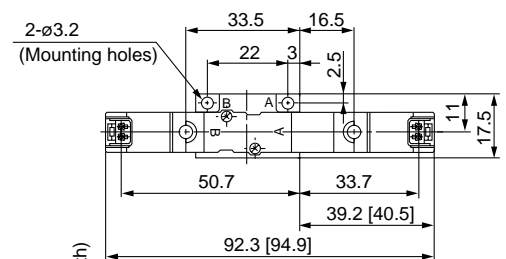
L plug connector (L): SYJ3³/₅40-□□□-M5



* [] for AC

* Other dimensions are the same as the grommet style.

M plug connector (M): SYJ3³/₅40-□M□□-M5



* [] 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