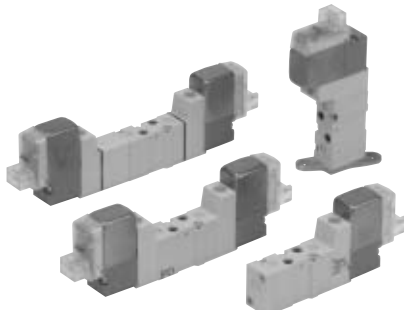


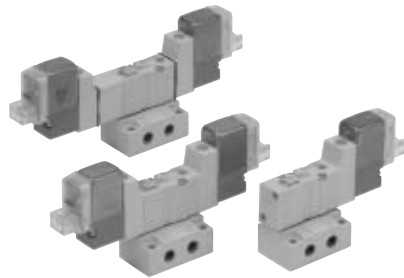


4/5 Port Solenoid Valve Rubber Seal

Series SYJ3000



Body ported



Base mounted

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)	-10 to 50 (No freezing. Refer to page 1-7-4.)	
Response time (ms) (at 0.5 MPa) ^{Note 1)}	2 position single, double	15 or less
	3 position	30 or less
Max. operating frequency (Hz)	2 position single, double	10
	3 position	3
Manual override (Manual operation)	Non-locking push type, push-turn locking slotted type, push-turn locking lever type	
Pilot exhaust method	Individual exhaust for the pilot valve, common exhaust for the pilot and main valve	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Shock/Vibration resistance (m/s ²) ^{Note 2)}	150/30	
Enclosure	Dustproof (* M8 connector conforms to IP65.)	



* Based on IEC529

Note 1) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage)

Note 2) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Value in the initial state)

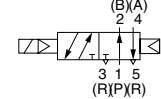
Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz. Test was performed to axis and right angle directions of the main valve when pilot signal is ON and OFF. (Value in the initial state)

JIS Symbol

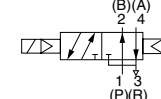
5 port

4 port (manifold)

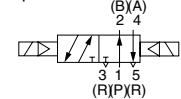
2 position single



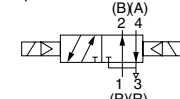
2 position single



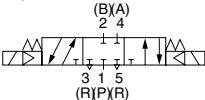
2 position double



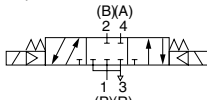
2 position double



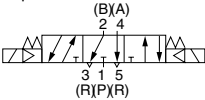
3 position closed center



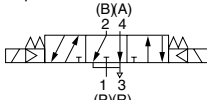
3 position closed center



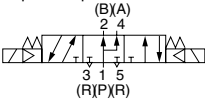
3 position exhaust center



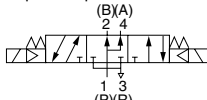
3 position exhaust center



3 position pressure center



3 position pressure center



Solenoid Specifications

Electrical entry	Grommet (G), (H), L plug connector (L), M plug connector (M), M8 connector (W)		
Coil rated voltage (V)	DC	24, 12, 6, 5, 3	
	AC 50/60 Hz	100, 110, 200, 220	
Allowable voltage fluctuation	±10% of rated voltage		
Power consumption (W)	DC	Standard	0.35 (With indicator light: 0.4)
		With power saving circuit	0.1 (With indicator light only)
Apparent power VA*	AC	100 V	1.4 (With indicator light: 1.5)
		110 V [115 V]	1.6 (With indicator light: 1.7) [1.7 (With indicator light: 1.8)]
		200 V	2.3 (With indicator light: 2.4)
		220 V [230 V]	2.5 (With indicator light: 2.6) [2.7 (With indicator light: 2.8)]
Surge voltage suppressor	Diode (Non-polarity type: valistor)		
Indicator light	LED		

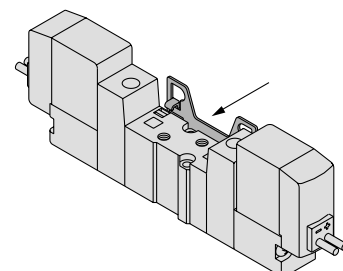
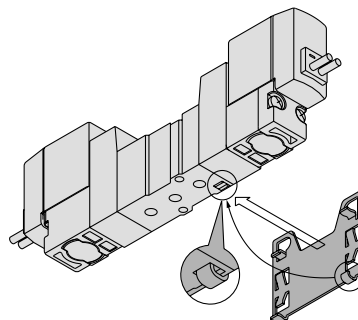


* In common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC.

* For 115 VDC and 230 VDC, the allowable voltage is -15% to +5% of 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.



Made to Order Specifications
(For details, refer to page 1-5-72.)

Flow Characteristics/Weight

Valve model		Type of actuation	Port size		Weight (g) ^{Note 3, 4)}			Effective area (mm ²)	Flow characteristics ^{Note 2)}							
			1, 5, 3 (P, EA, EB)	4, 2 (A, B)	Grommet	L/M plug conector	M8 connector		1→4/2 (P→A/B)			4/2→5/3 (A/B→EA/EB)				
									C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv		
5 port Base mounted (with sub-plate)	SYJ314□	2 position	M5 x 0.8	M5 x 0.8	62 (36)	63 (37)	67 (41)	—	0.46	0.36	0.12	0.46	0.35	0.12		
	SYJ324□														Double	79 (53)
	SYJ334□	3 position			Closed center	82 (56)	84 (58)		92 (66)	—	0.47	0.33	0.12	0.47	0.31	
	SYJ354□				Exhaust center											Pressure center
5 port Body ported	SYJ312□	2 position	M3 x 0.5	M3 x 0.5	36	37	41	0.9	—	—	—	—	—	—		
	SYJ322□														Double	53
	SYJ332□	3 position			Closed center	56	58		66	—	—	—	—	—	—	
	SYJ342□				Exhaust center											
	SYJ352□				Pressure center											
^{Note 1)} 4 Port Base Mounted (For manifold base only)	SYJ313□	2 position	1/8	M5 x 0.8	36	37	41	—	—	—	—	—	—	—		
	SYJ323□														Double	53
	SYJ333□	3 position			Closed center	56	58		66	—	—	—	—	—	—	
	SYJ343□				Exhaust center											
	SYJ353□				Pressure center											

SV

SZ

SY

SYJ

SX



Note 1) Dedicated for manifold base. For details, refer to page 1-5-14.

Note 2) [] denotes normal position. Exhaust center: 4/2 → 5/3, Pressure center: 1 → 4/2

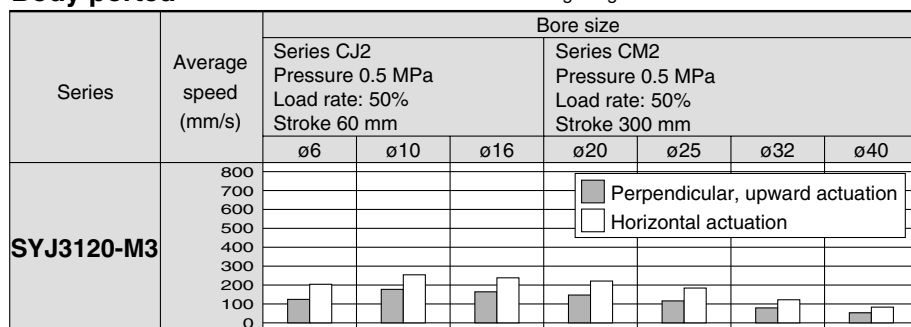
Note 3) (): Without sub-plate.

Note 4) For DC voltages. For AC voltages add 3 g to the weight of the single solenoid and 6 g to the weight of the double solenoid and 3 position types.

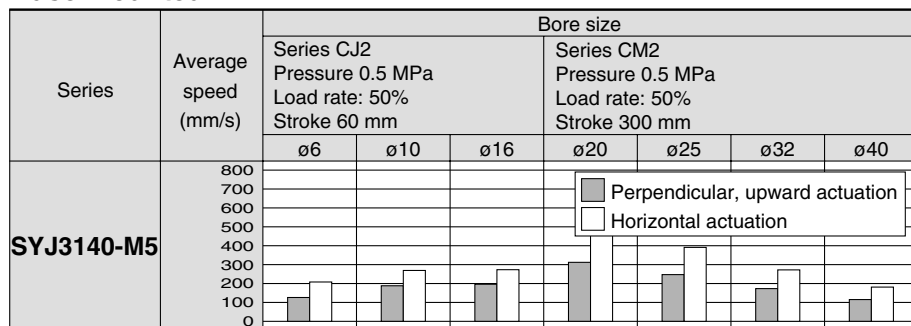
Cylinder Speed Chart

Use as a guide for selection.
Please confirm the actual conditions with SMC Sizing Program.

Body ported



Base mounted



* Cylinder is in extending. Speed controller is meter-out, which is directly connected with cylinder and its needle is fully opened.

* Average speed of cylinder is obtained by dividing the full stroke time by the stroke.

* Load factor: ((Load weight x 9.8)/Theoretical force) x 100%

Conditions

Body ported		Series CJ2	Series CM2
SYJ3120-M3	Tubing bore x Length	ø4 x 1 m	
	Speed controller	AS1301F-04	
	Silencer	AN120-M5	

Base mounted		Series CJ2	Series CM2
SYJ3140-M5	Tubing bore x Length	ø6 x 1 m	
	Speed controller	AS2001F-06	AS2301F-06
	Silencer	AN120-M5	

How to Order

Type of actuation

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

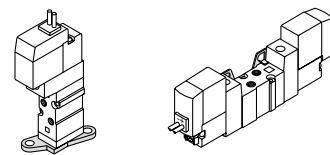
Light/Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
 * For type "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Bracket

Nil: Without bracket
 F: With bracket



Single

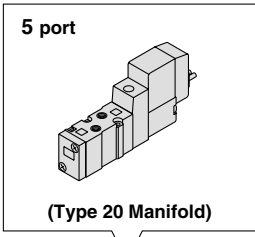
Double

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 bracket (VJ3000-13-1) separately.
 (Example) SYJ3120-5M-M3 VJ3000-13-1

Rated voltage

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

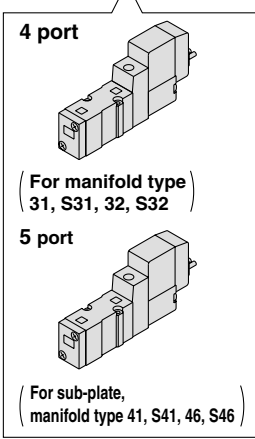
* For type "W□", DC voltage is only available.



Body ported SYJ3 1 2 0 □ 5 M □ □ □ M3 □

Base mounted (4 port) SYJ3 2 3 0 □ 5 M □ □ (Manifold use only)

Base mounted (5 port) SYJ3 2 4 0 □ 5 M □ □ □



Coil specifications

Nil	Standard
T	With power saving circuit (24, 12 VDC only)

* Power saving circuit is not available in the case of "W□" type.

Body option

0: Pilot valve individual exhaust for the pilot valve

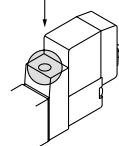
R port P, E port

3: Common exhaust type for main and pilot valve

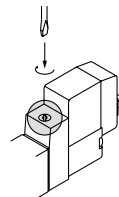
R port P, E port

Manual override

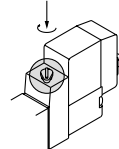
Nil: Non-locking push type



D: Push-turn locking slotted type

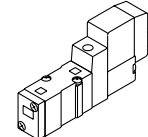


E: Push-turn locking lever type



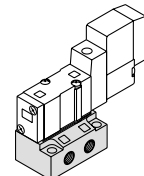
Port size

Nil: Without sub-plate



(With gasket and screws)

M5: With M5 port sub-plate



Electrical entry

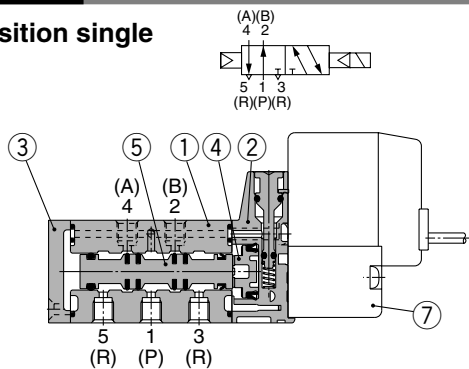
24, 12, 6, 5, 3 VDC 100, 110, 200, 220 VAC				24, 12, 6, 5, 3 VDC	
Grommet	L plug connector	M plug connector		M8 connector	
G: Lead wire length 300 mm	L: With lead wire (Length 300 mm)	M: With lead wire (Length 300 mm)	MN: Without lead wire	WO: Without connector cable	
H: Lead wire length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector		

* "LN", "MN" type: with 2 sockets.
 * For connector cable of M8 connector, refer to page 1-5-78.

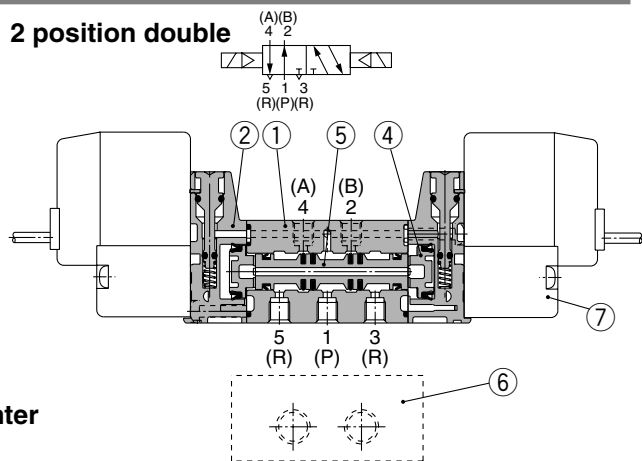
Note) When placing an order for body ported solenoid valve as a single unit, mounting bolt for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to page 1-5-18 on catalog.)

Construction

2 position single

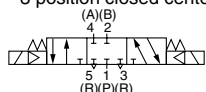


2 position double

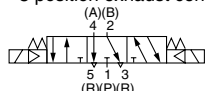


3 position closed center/exhaust center/pressure center

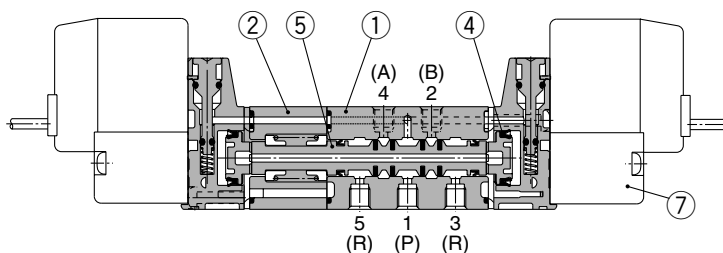
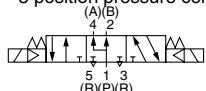
3 position closed center



3 position exhaust center



3 position pressure center



(This figure shows a closed center type.)

Component Parts

No.	Description	Material	Note
①	Body	Zinc die-casted	White
②	Piston plate	Resin	White
③	End cover	Resin	White
④	Piston	Resin	
⑤	Spool valve assembly	Aluminum, HNBR	

Replacement Parts

No.	Description	Part no.	Note
⑥	Sub-plate	SYJ3000-22-1	Zinc die-casted
⑦	Pilot valve	V111 (T) - □□□	

How to Order Pilot Valve Assembly

V111 □ — 5 G □

Coil specifications

Nil	Standard: DC specifications
A	Standard: AC specifications
T	With power saving circuit (24, 12 VDC only)

* Power saving circuit is not available in the case of "W□" type.

Rated voltage

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC
1	100 VAC 50/60 Hz
2	200 VAC 50/60 Hz
3	110 VAC 50/60 Hz [115 VAC 50/60 Hz]
4	220 VAC 50/60 Hz [230 VAC 50/60 Hz]

* For type "W□", DC voltage is only available.

Light/Surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
* For type "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

Electrical entry

G	Grommet, 300 mm lead wire
H	Grommet, 600 mm lead wire
L	L plug connector
LN	With lead wire
LO	Without lead wire
M	M plug connector
MN	With lead wire
MO	Without lead wire
WO	Without connector
W0	M8 connector
	Without connector cable

* For connector cable of M8 connector, refer to page 1-5-78.

How to Order Connector Assembly for L/M Plug Connector

For DC : SY100-30-4A-□
For 100 VAC : SY100-30-1A-□
For 200 VAC : SY100-30-2A-□
For other voltages of AC : SY100-30-3A-□
Without lead wire : SY100-30-A
(with connector and 2 of sockets only)

Lead wire length

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

How to Order M8 Connector Cable

V100-49-1-□

Cable length

1	300 mm
2	500 mm
3	1000 mm
4	2000 mm
7	5000 mm

SV

SZ

SY

SYJ

SX

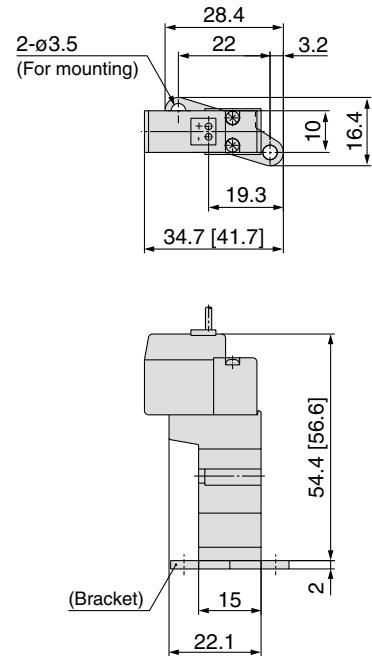
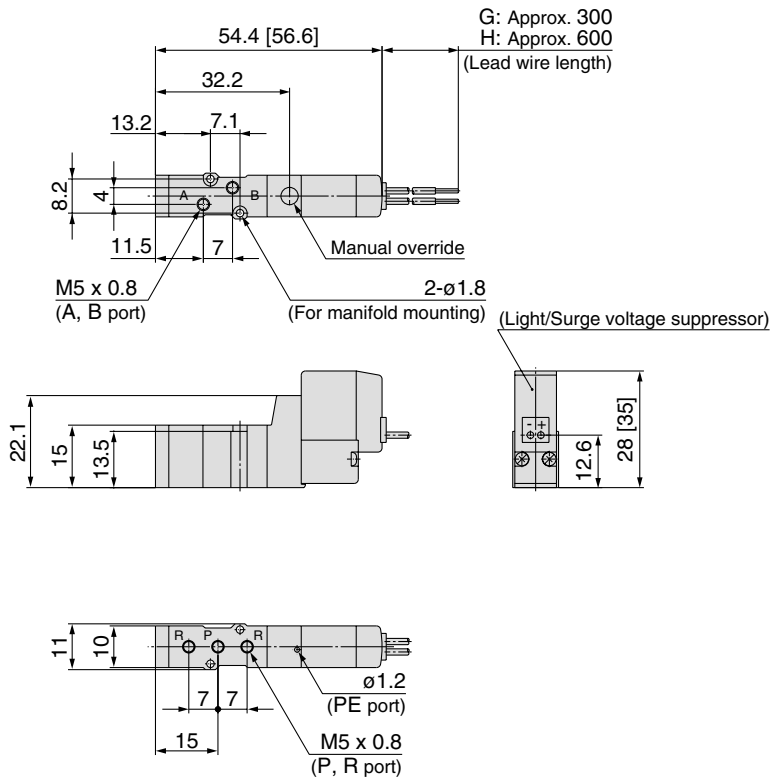
Series SYJ3000

2 Position Single



Grommet (G), (H): SYJ3120-□^G□□-M3

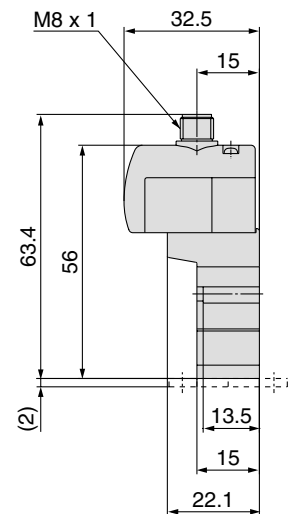
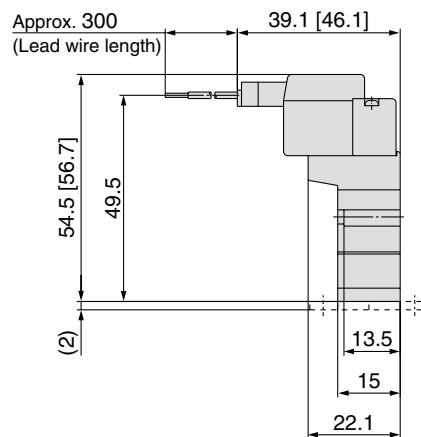
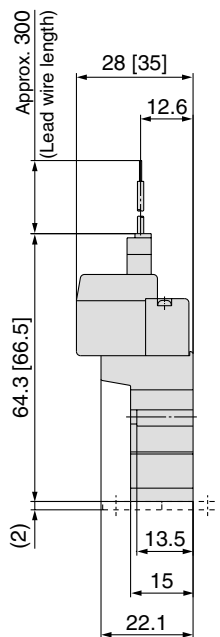
With bracket:
SYJ3120-□^G□□-M3-F



L plug connector (L) :
SYJ3120-□L□□-M3 (-F)

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

M8 connector (WO):
SYJ3120-□WO□□-M3 (-F)



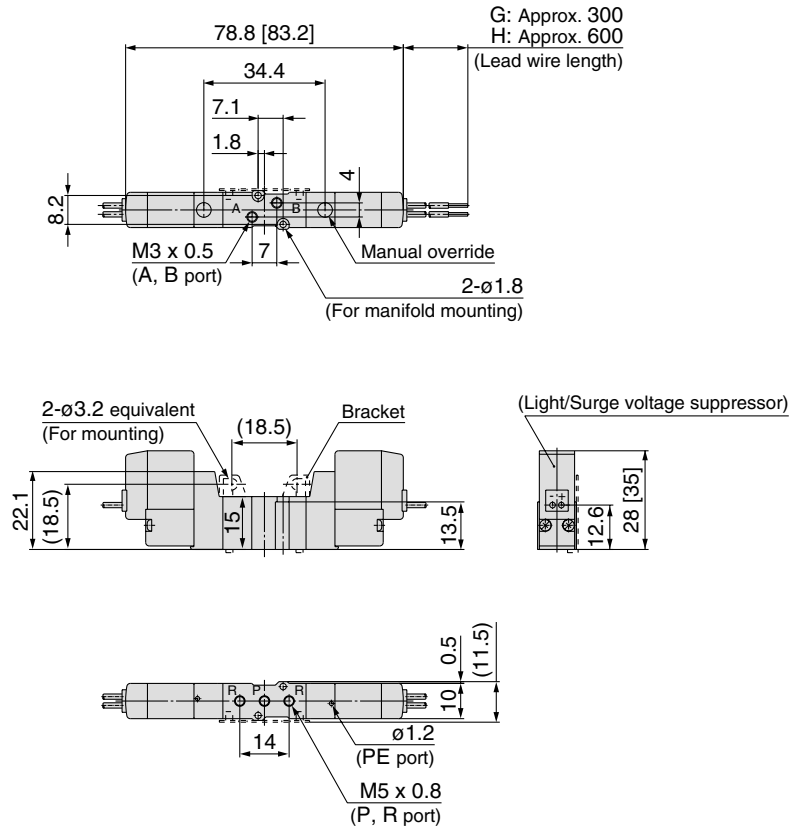
Refer to page 1-5-79 for dimensions with connector cable.

4/5 Port Solenoid Valve Rubber Seal Series SYJ3000

2 Position Double



Grommet (G), (H): SYJ3220-□^G□□-M3 (-F)



SV

SZ

SY

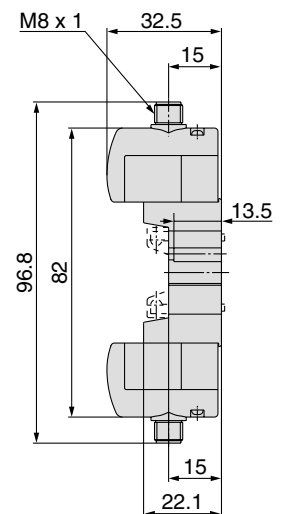
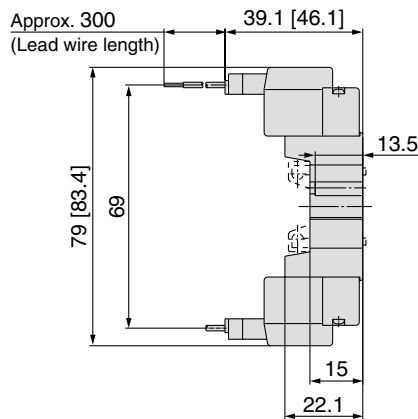
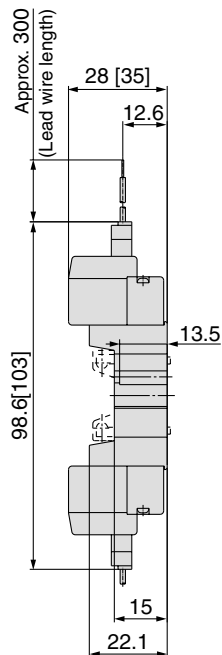
SYJ

SX

L plug connector (L):
SYJ3220-□L□□-M3 (-F)

M plug connector (M):
SYJ3220-□M□□-M3 (-F)

M8 connector (WO):
SYJ3220-□WO□□-M3 (-F)



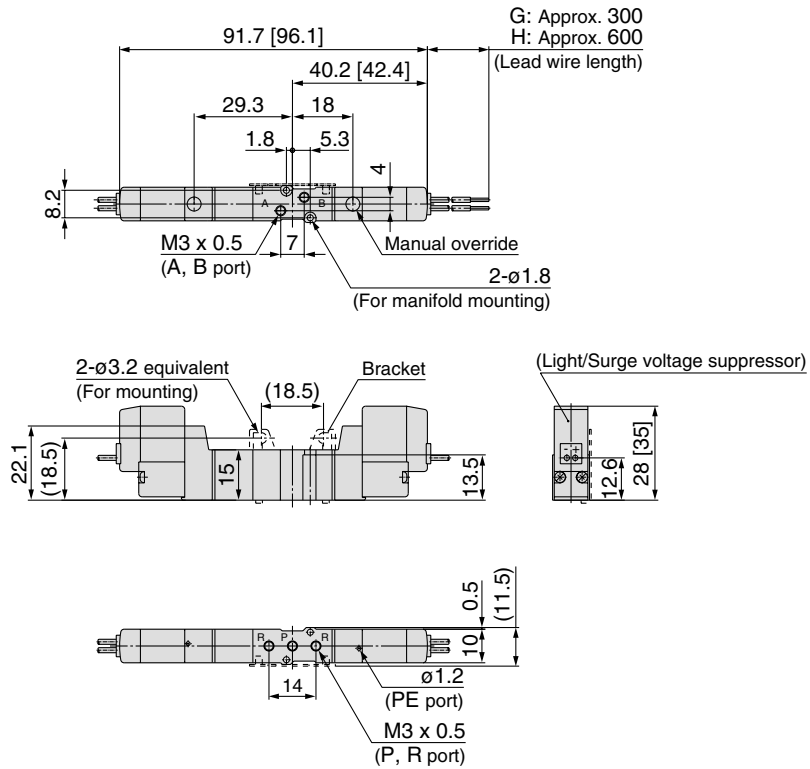
Refer to page 1-5-79 for dimensions with connector cable.

Series SYJ3000

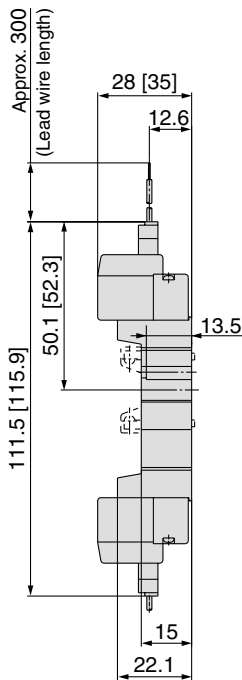
3 Position Closed Center/Exhaust Center/Pressure Center



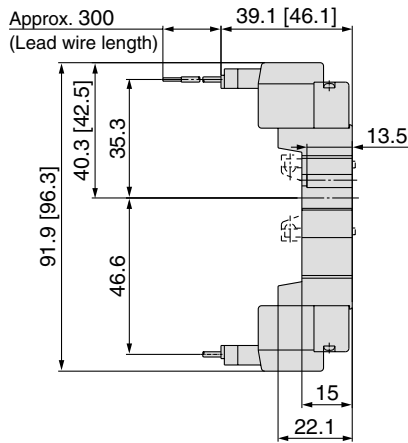
Grommet (G), (H): SYJ3₅³20-□^G□□□-M3 (-F)



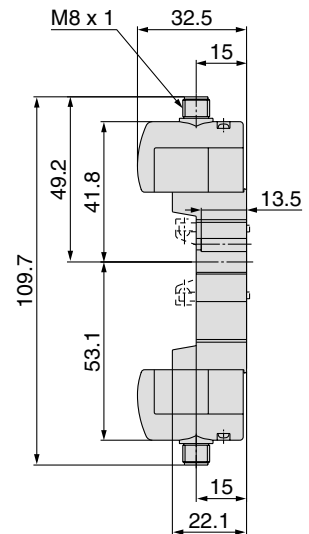
L plug connector (L):
SYJ3₅³20-□L□□-M3 (-F)



M plug connector (M):
SYJ3₅³20-□M□□-M3 (-F)



M8 connector (WO):
SYJ3₅³20-□WO□□-M3 (-F)



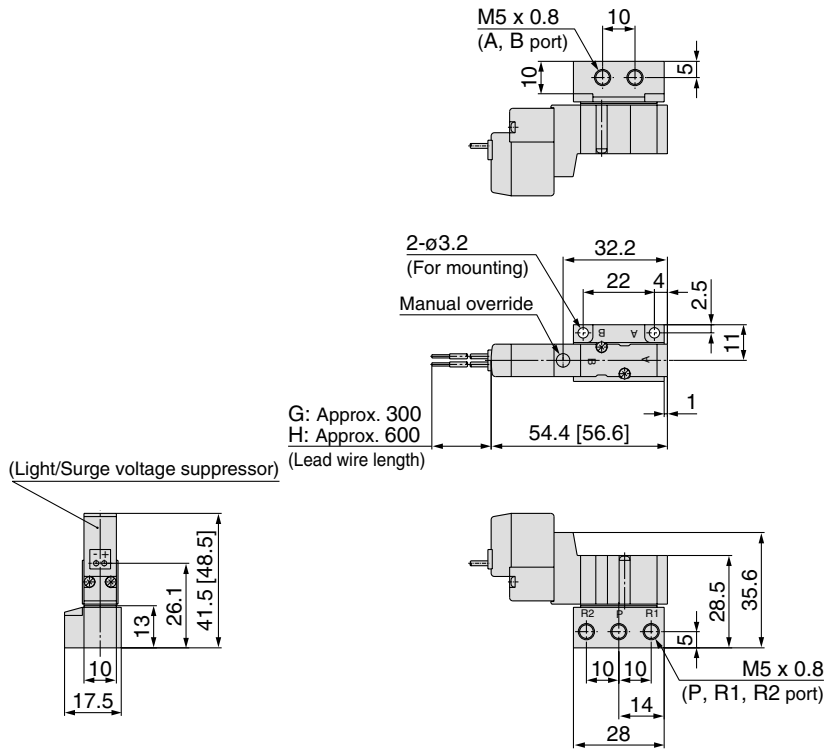
Refer to page 1-5-79 for dimensions with connector cable.

4/5 Port Solenoid Valve Rubber Seal Series SYJ3000



2 Position Single

Grommet (G), (H): SYJ3140-□^G_H□□-M5



SV

SZ

SY

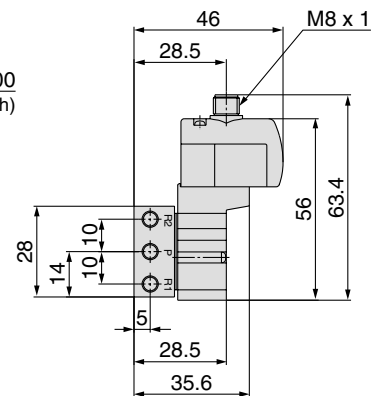
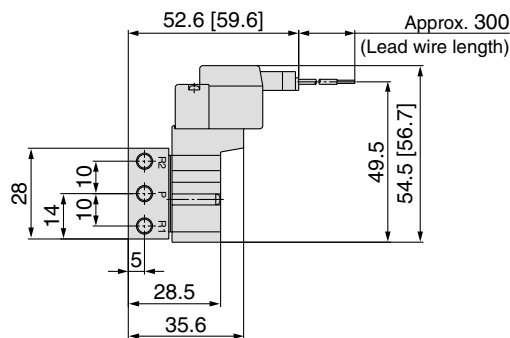
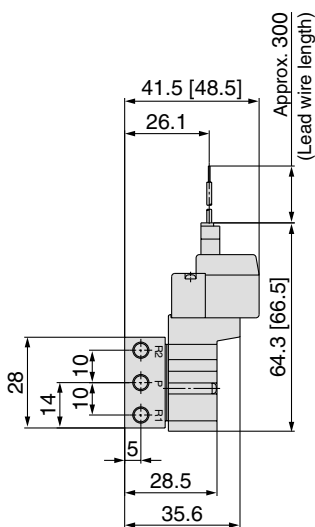
SYJ

SX

L plug connector (L):
SYJ3140-□L□□-M5

M plug connector (M):
SYJ3140-□M□□-M5

M8 connector (WO):
SYJ3140-□WO□□-M5



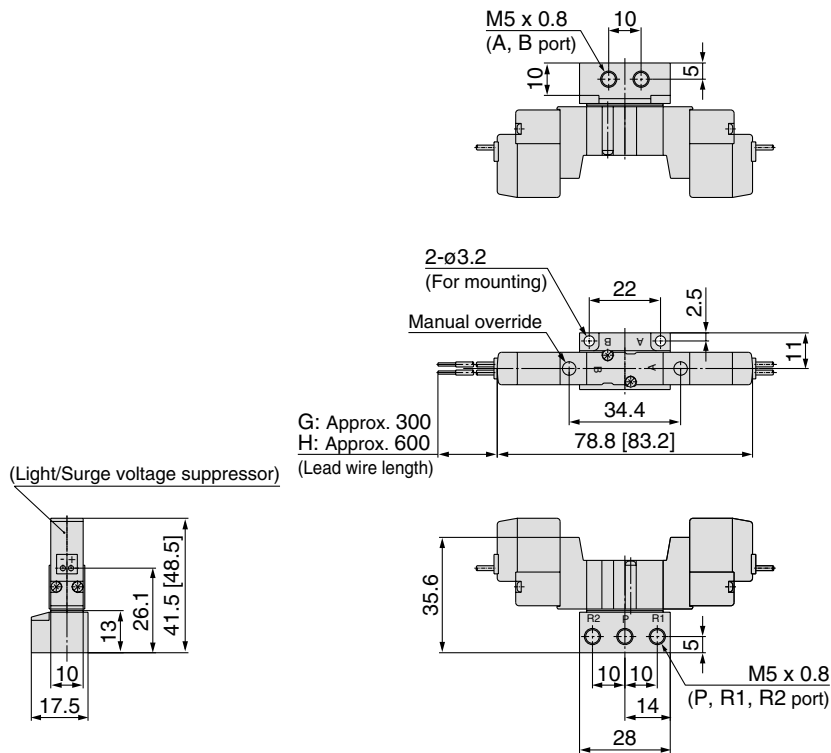
Refer to page 1-5-79 for dimensions with connector cable.

Series SYJ3000

2 Position Double



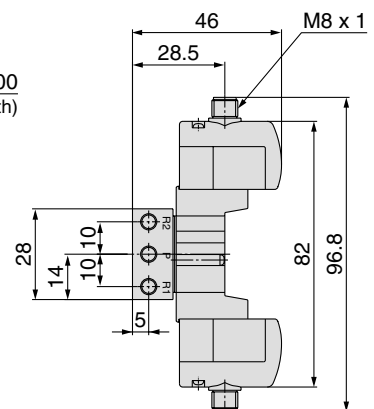
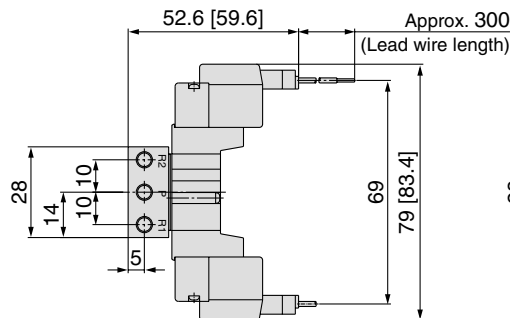
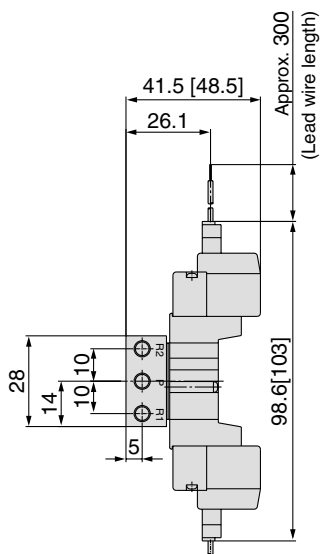
Grommet (G), (H): SYJ3240-□^G□□-M5



L plug connector (L):
SYJ3240-□L□□-M5

M plug connector (M):
SYJ3240-□M□□-M5

M8 connector (WO):
SYJ3240-□WO□□-M5



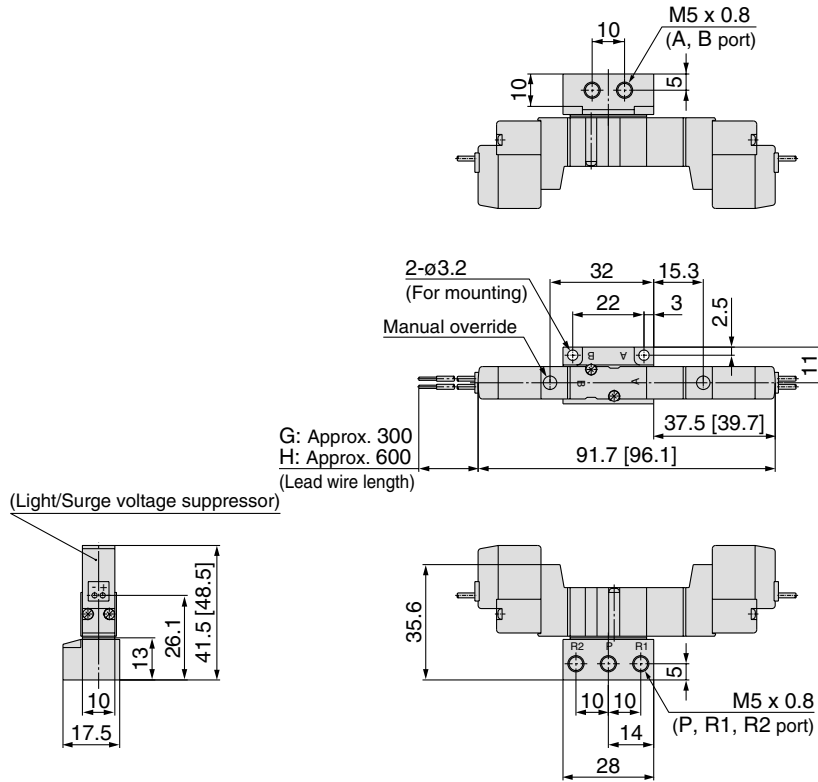
Refer to page 1-5-79 for dimensions with connector cable.

4/5 Port Solenoid Valve Rubber Seal Series SYJ3000

3 Position Closed Center/Exhaust Center/Pressure Center

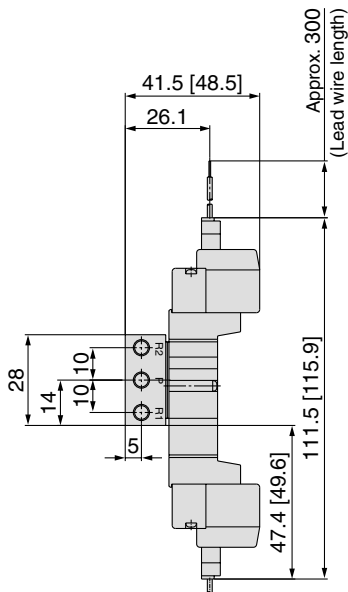


Grommet (G), (H): SYJ3³/₅40-□^G□□-M5

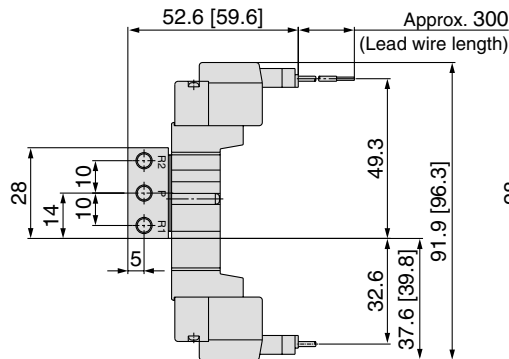


- SV
- SZ
- SY
- SYJ**
- SX

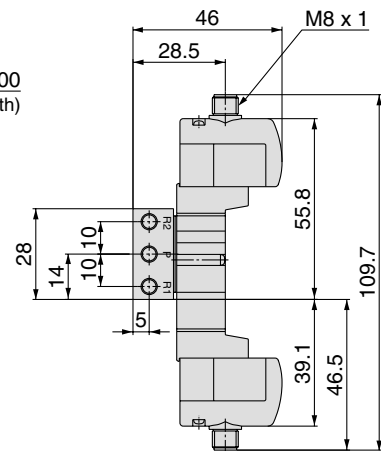
L plug connector (L):
SYJ3³/₅40-□L□□-M5



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



M8 connector (WO):
SYJ3³/₅40(R)-□WO□□-M5□



Refer to page 1-5-79 for dimensions with connector cable.