
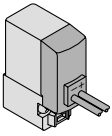
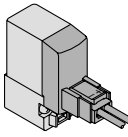




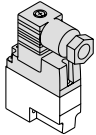






Series 10-SYJ3000/5000/7000

Rubber seal
4/5 port solenoid valve

Variations

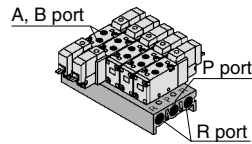
	Series	Sonic conductance C[dm ³ /(s·bar)]	Type of actuation	Voltage	Electrical entry	Option	Manual override
						Light/Surge voltage suppresser	
Body ported	10-SYJ3000  P.494	Effective area 0.9mm ² { 4/2→5/3 } { (A/B→EA/EB) }		For DC ■ 24 VDC 12 VDC 6 VDC 5 VDC 3 VDC	Grommet  L plug connector  M plug connector 	For DC ■ With surge voltage suppresser	
	10-SYJ5000  P.515	0.47 { 4/2→5/3 } { (A/B→EA/EB) }				■ With light/surge voltage suppresser	
	10-SYJ7000  P.537	2.4 { 4/2→5/3 } { (A/B→EA/EB) }				For AC ■ AC 100V ^{50/60} Hz AC 110V ^{50/60} Hz AC 200V ^{50/60} Hz AC 220V ^{50/60} Hz	
Base mounted type	10-SYJ3000  P.494	0.46 { 4/2→5/3 } { (A/B→EA/EB) }	3 position · Closed center · Exhaust center · Pressure center		DIN terminal  (10-SYJ5000/7000 only) M8 connector 	For AC ^{Note)} ■ With light/surge voltage suppresser	■ Push-turn locking slotted type ■ Push-turn locking lever type
	10-SYJ5000  P.515	0.83 { 4/2→5/3 } { (A/B→EA/EB) }					
	10-SYJ7000  P.537	2.9 { 4/2→5/3 } { (A/B→EA/EB) }					

 Note) All standard AC voltage models have built-in surge voltage suppresser.

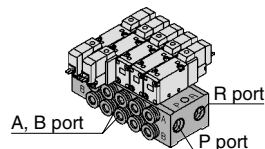
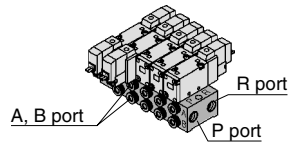
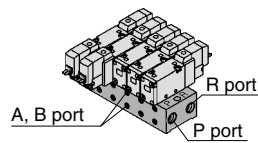
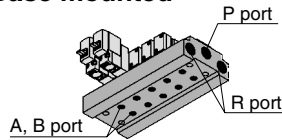
Manifold variations

Valve series	A, B port location	A, B port size									Manifold option		Flat ribbon cable manifold
		M3	M5	1/8	One-touch fitting						Individual SUP spacer assembly	Individual EXH spacer assembly	
					Applicable tubing O.D.								
					ø4	ø6	ø8	N3	N7	N9			
Body ported	10-SYJ3000	●	—	—	—	—	—	—	—	—	—	—	—
	10-SYJ5000	—	●	—	●	●	—	●	●	—	●	●	—
	10-SYJ7000	—	—	●	—	●	●	—	●	●	—	●	●
Base mounted	10-SYJ3000	Side	●	●	—	●	—	—	●	—	—	—	—
		Bottom	—	—	—	—	—	—	—	—	—	—	—
	10-SYJ5000	Side	—	●	—	●	●	—	●	●	—	—	—
		Bottom	—	●	—	—	—	—	—	—	—	—	—
	10-SYJ7000	Side	—	—	●	—	●	●	—	●	●	—	—
		Bottom	—	—	●	—	—	—	—	—	—	—	—

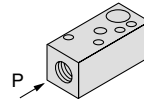
Body ported



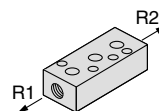
Base mounted



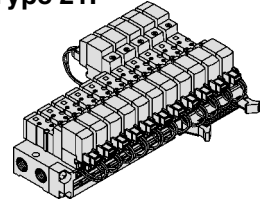
Individual SUP spacer assembly



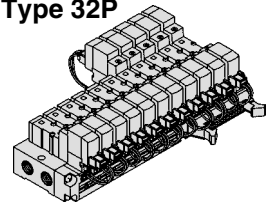
Individual EXH spacer assembly



Type 21P

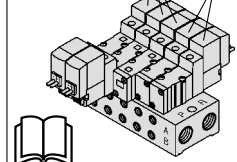


Type 32P



Mixed mounting of 3 port valves and 4, 5 port valves

4/5 port valve 3 port valve



For detailed specifications about 10-SYJ3000, refer to page 507. For 10-SYJ5000, refer to page 529, and for 10-SYJ7000, refer to page 550.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

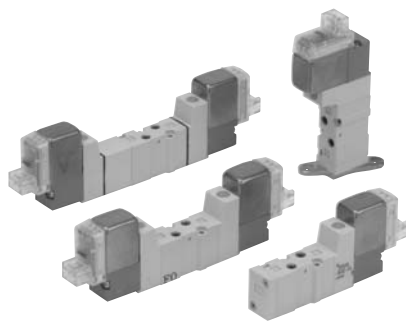
Air preparation equipment

Pressure switch

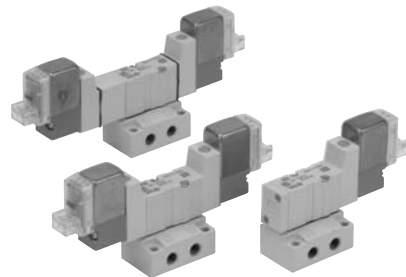
Clean gas filter

Series 10-SYJ3000

Rubber seal
4/5 port solenoid valve



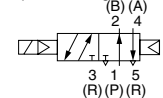
Body ported



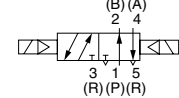
Base mounted

JIS Symbol 5 port

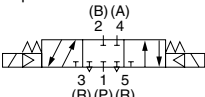
2 position single



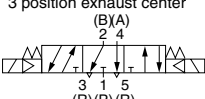
2 position double



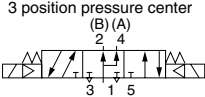
3 position closed center



3 position exhaust center

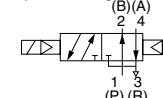


3 position pressure center

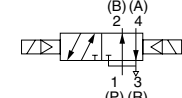


4 port (For manifold use only)

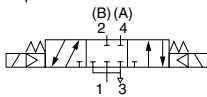
2 position single



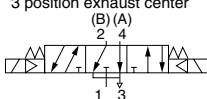
2 position double



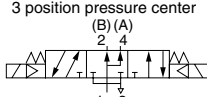
3 position closed center



3 position exhaust center



3 position pressure center



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 (with no freezing. Refer to page 714.)	
Response time ms (0.5MPa) ^{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	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 IEC60529

Note 1) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature : 20°C, at rated voltage and without surge voltage suppressor)

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 2000Hz. 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)

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	
	AC50/60Hz	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 VAC	0.78 (With indicator light: 0.81)
		110 VAC	0.86 (With indicator light: 0.89)
		[115 VAC]	[0.94(With indicator light: 0.97)]
		200 VAC	1.18 (With indicator light: 1.22)
		[230 VAC]	[1.42 (With indicator light: 1.46)]
Surge voltage suppressor	Diode (Non-polar type: Varistor)		
Indicator light	LED		



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

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

* For the allowable voltage fluctuation for S, Z and T types (with power saving circuit), please observe the following range because they have voltage drop due to internal circuit.

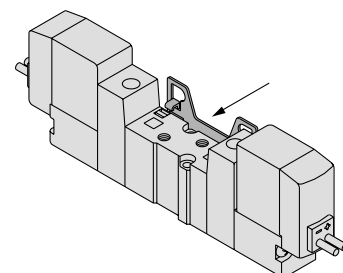
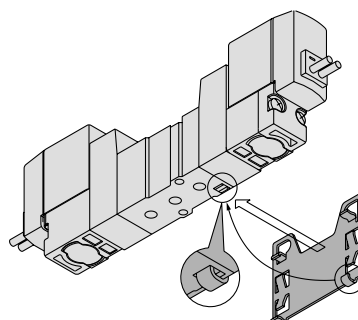
S and Z types 24 VDC: -7% to +10% 12 VDC: -4% to +10%

T type 24 VDC: -8% to +10% 12 VDC: -6% to +10%

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
(Refer to page 557 for details.)

Flow characteristics / Weight

Valve model		Type of actuation		Port size		Weight (g) ^{Note 3, 4)}			Effective area mm ²	Flow characteristics ^{Note 2)}								
						Grommet	L/M plug connector	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)	10-SYJ3143	2 position	Single	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			
	10-SYJ3243		Double			79(53)	81(55)	89(63)										
	10-SYJ3343	3 position	Closed center			M3 x 0.5	M3 x 0.5	82(56)		84(58)	92(66)	—	0.47	0.33	0.12	0.47	0.31	0.12
	10-SYJ3443		Exhaust center															
10-SYJ3543	Pressure center	0.58[0.32]	0.42[0.33]	0.16[0.080]	0.46				0.32				0.11					
5 port body ported	10-SYJ3123													2 position	Single	M3 x 0.5	M3 x 0.5	36
	10-SYJ3223	Double	53	55	63													
	10-SYJ3323	3 position	Closed center	1/8	M5 x 0.8	56	58	66	—	—	—	—	—	—	—			
	10-SYJ3423		Exhaust center															
10-SYJ3523	Pressure center																	
4 port base mounted (For manifold base only) ^{Note 1)}	10-SYJ3133	2 position	Single							1/8	M5 x 0.8	36	37	41	—	—	—	—
	10-SYJ3233		Double	53	55	63												
	10-SYJ3333	3 position	Closed center	56	58	66	—	—	—			—	—	—		—	—	
	10-SYJ3433		Exhaust center															
10-SYJ3533	Pressure center																	



- Note 1) Dedicated for manifold base, refer to page 11 for details.
- 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 3g to the weight of the single solenoid and 6g to the weight of the double solenoid and 3 position types.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

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 "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Rated voltage

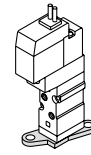
DC		AC (50/60Hz)	
5	24 VDC	1	100 VAC
6	12 VDC	2	200 VAC
V	6 VDC	3	110 VAC [115 VAC]
S	5 VDC	4	220 VAC [230 VAC]
R	3 VDC		

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

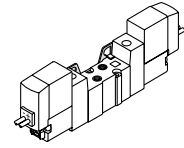
Bracket

Nil: Without bracket

F: With bracket



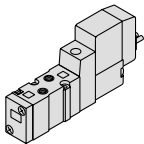
Single
(Bracket cannot be retrofitted.)



Double

Note) The double solenoid mounting bracket is supplied unattached.
 To order the double solenoid bracket for use with a single solenoid valve without a bracket and double solenoid bracket separately by specifying the part number of the bracket VJ3000-13-1 besides the part number of the solenoid valve.
 [Example] 10-SYJ3123-5M-M3 VJ3000-13-1

5 port



(Type 20 manifold)

Body ported

10—SYJ3 1 23 □ — 5 M □ □ — M3 □

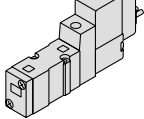
Base mounted (4 port)

10—SYJ3 2 33 □ — 5 M □ □ (Manifold use only)

Base mounted (5 port)

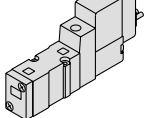
10—SYJ3 2 43 □ — 5 M □ □ □

4 port



(For manifold type 31, S31, 32, S32)

5 port



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

Clean series

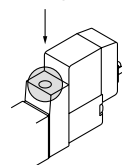
Coil specifications

Nil	Standard
T	With power saving circuit <24, 12 VDC only>

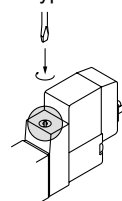
* Power saving circuit is not available in the case of "W□" type.

Manual override

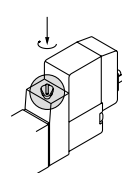
Nil: Non-locking push type



D: Push-turn locking slotted type

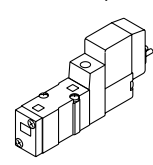


E: Push-turn locking lever type



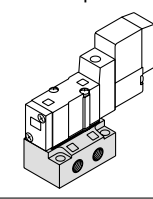
Port size

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 VDC 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 	W□: With connector cable ^{Note 1)}

* "LN", "MN" types: with 2 sockets.
 * For connector cable of M8 connector, refer to page 562.
 Note 1) Be sure to enter a symbol of the cable length in □ with reference to P562.

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. (Refer to catalog page 508 for details.)

How to Order Pilot Valve Assembly

10—V111 — **5** **G**

● **Clean series**

● **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.

● **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 "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

● **Rated voltage**

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC
1	100 VAC50/60Hz
2	200 VAC50/60Hz
3	110 VAC50/60Hz [115 VAC50/60Hz]
4	220 VAC50/60Hz [230 VAC50/60Hz]

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

● **Electrical entry**

G	Grommet (Lead wire length 300 mm)
H	Grommet (Lead wire length 600 mm)
L	L plug connector With lead wire
LN	L plug connector Without lead wire
LO	L plug connector Without connector
M	M plug connector With lead wire
MN	M plug connector Without lead wire
MO	M plug connector Without connector
WO	M8 Without connector cable
W□	Connector With connector cable ^{Note 1)}

⦿ * For connector cable of M8 connector, refer to page 562.
 Note 1) Be sure to enter a symbol of the cable length in □ with reference to page 562.

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 (With connector and 2 of sockets only): **SY100-30-A**

● **Lead wire length**

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

How to Order M8 Connector Cable

V100-49-1-

● **Cable length**

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

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

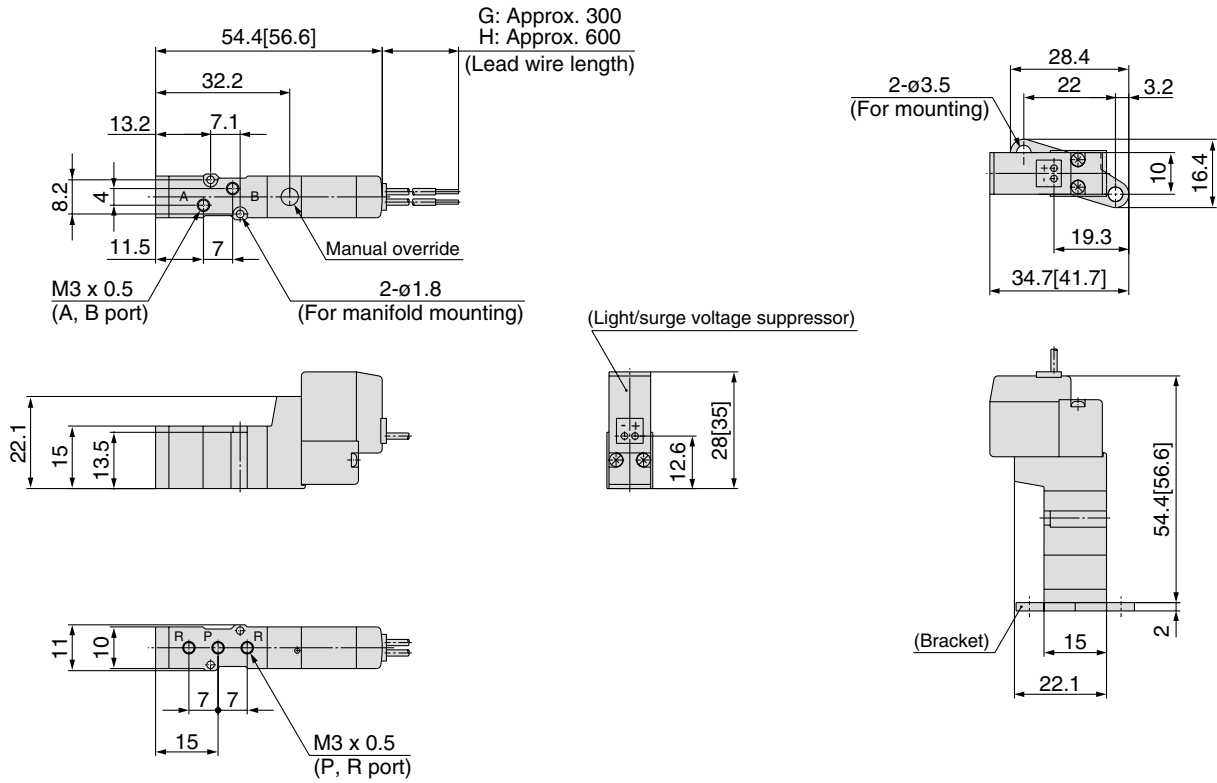
Pressure switch

Clean gas filter

2 position single

Grommet (G), (H): 10-SYJ3123-□^G□□-M3

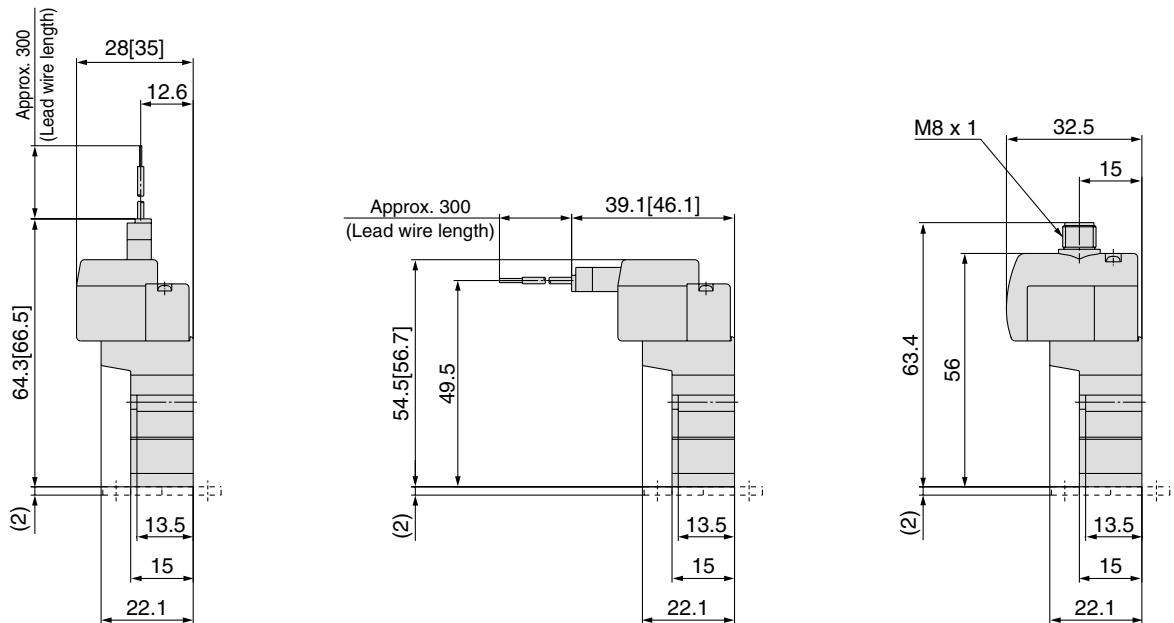
With bracket: 10-SYJ3123-□^G□□-M3-F



L plug connector (L):
10-SYJ3123-□L□□-M3 (-F)

M plug connector (M):
10-SYJ3123-□M□□-M3 (-F)

M8 Connector (WO):
10-SYJ3123-□WO□□-M3 (-F)

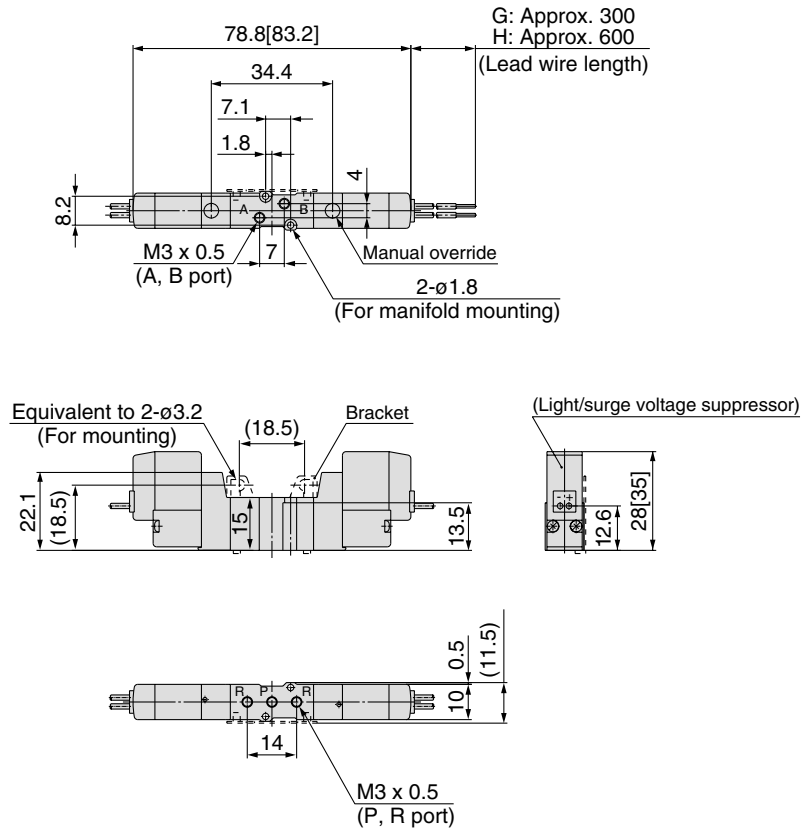


* Refer to page 563 for dimensions with connector cable.

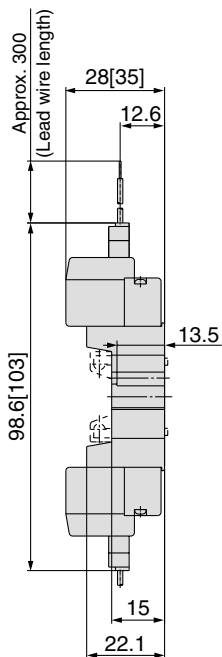


2 position double

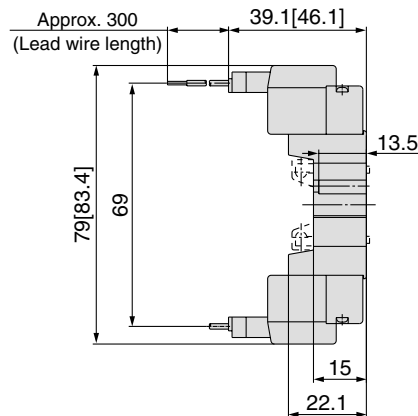
Grommet (G), (H): 10-SYJ3223-□□^G□□-M3 (-F)



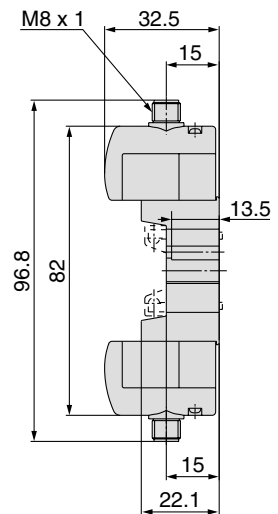
L plug connector (L):
10-SYJ3223-□L□□-M3 (-F)



M plug connector (M):
10-SYJ3223-□M□□-M3 (-F)



M8 connector (WO):
10-SYJ3223-□WO□□-M3 (-F)



* Refer to page 563 for dimensions with connector cable.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

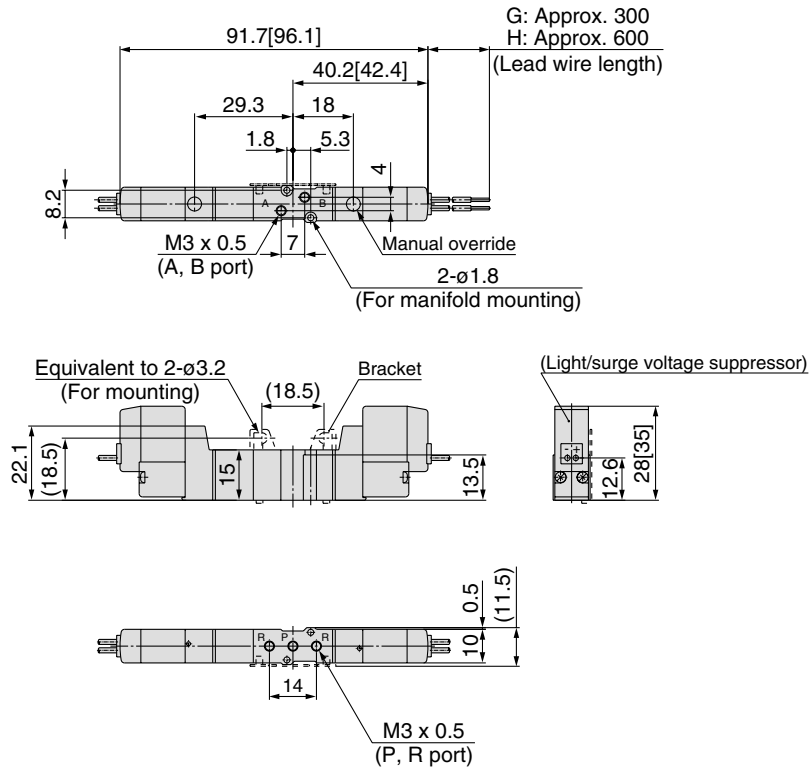
Fittings & Tubing

Air preparation equipment

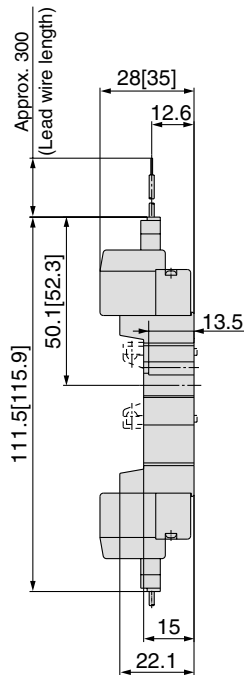
Pressure switch

Clean gas filter

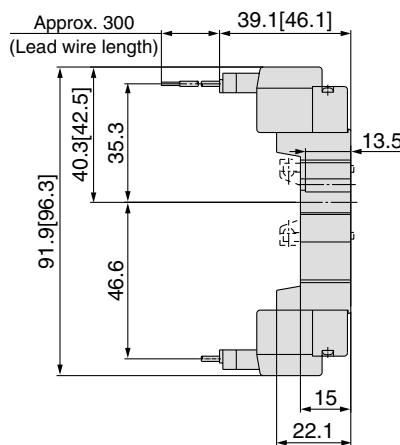
Grommet (G), (H): 10-SYJ3³/₅23-□GH□□-M3 (-F)



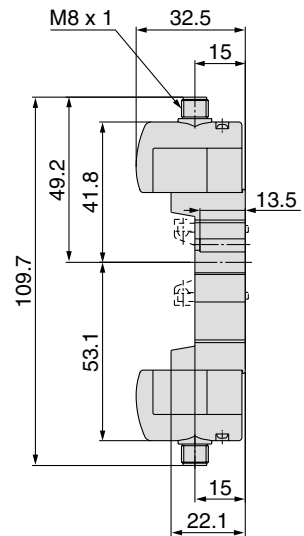
L plug connector (L):
10-SYJ3³/₅23-□L□□-M3 (-F)



M plug connector (M):
10-SYJ3³/₅23-□M□□-M3 (-F)



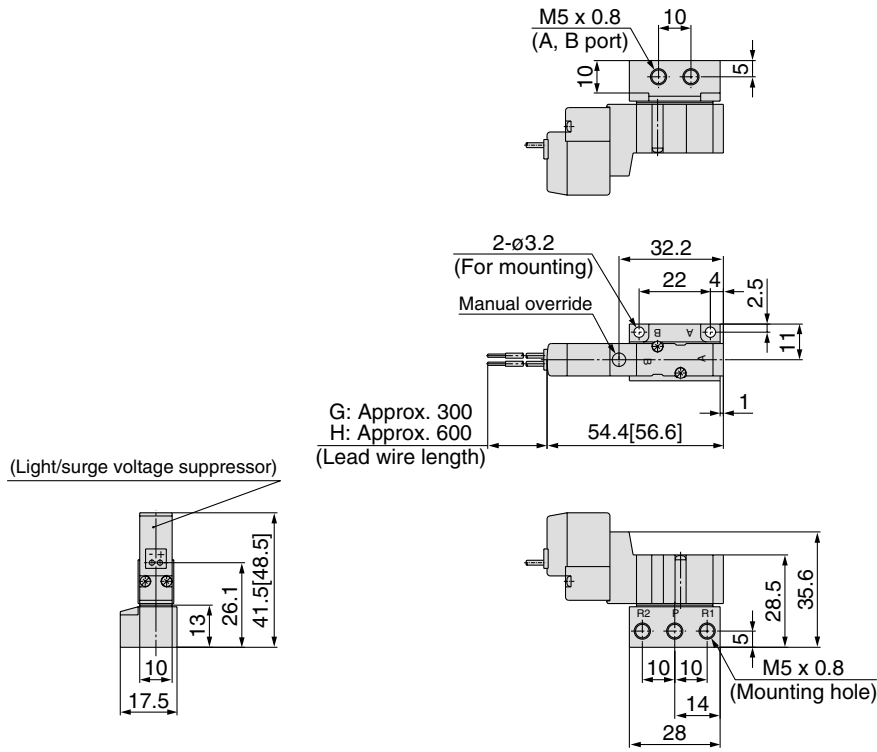
M8 Connector (WO):
10-SYJ3³/₅23-□WO□□-M3 (-F)



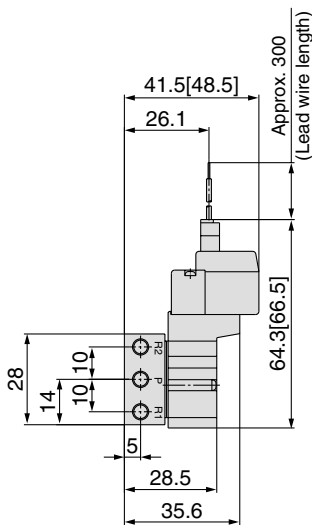


2 position single

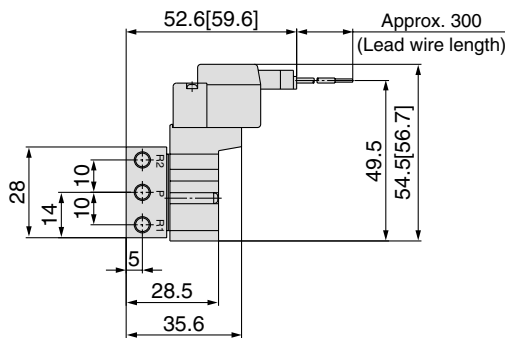
Grommet (G), (H): 10-SYJ3143-□^G□□□-M5



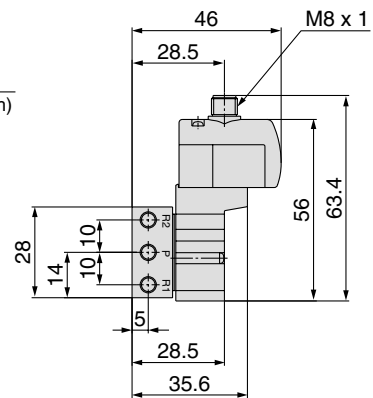
L plug connector (L):
10-SYJ3143-□L□□□-M5



M plug connector (M):
10-SYJ3143-□M□□□-M5



M8 Connector (WO):
10-SYJ3143-□WO□□□-M5



* Refer to page 563 for dimensions with connector cable.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

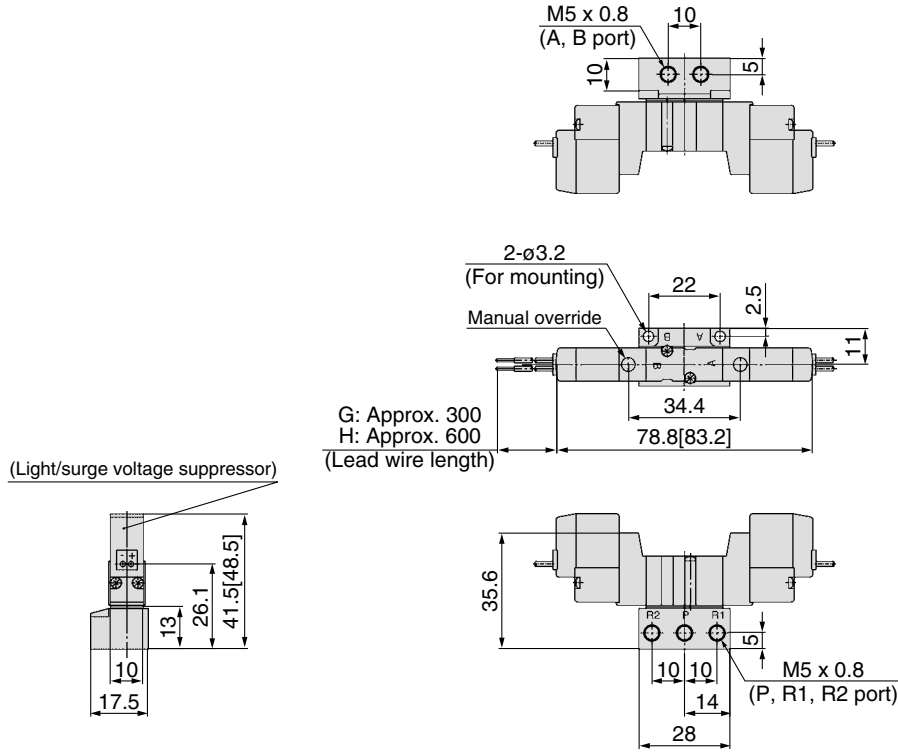
Air preparation equipment

Pressure switch

Clean gas filter

2 position double

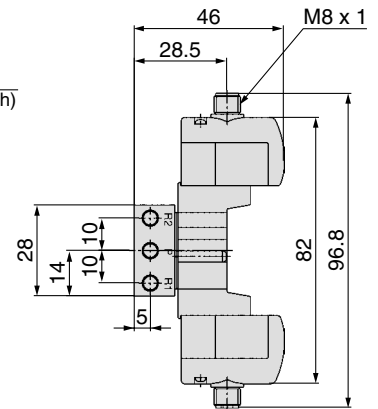
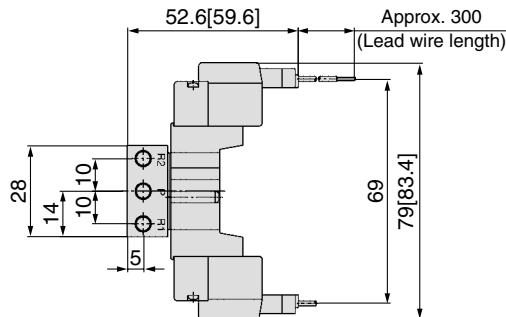
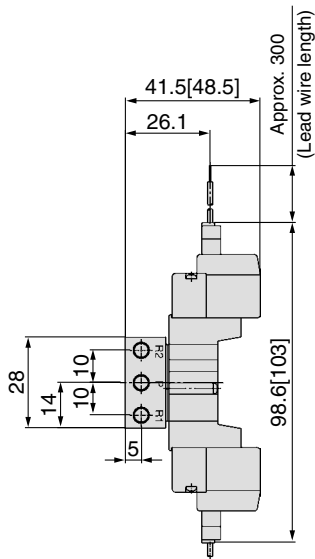
Grommet (G), (H): 10-SYJ3243-□^G_H□□-M5



L plug connector (L):
10-SYJ3243-□L□□-M5

M plug connector (M):
10-SYJ3243-□M□□-M5

M8 connector (WO):
10-SYJ3243-□WO□□-M5

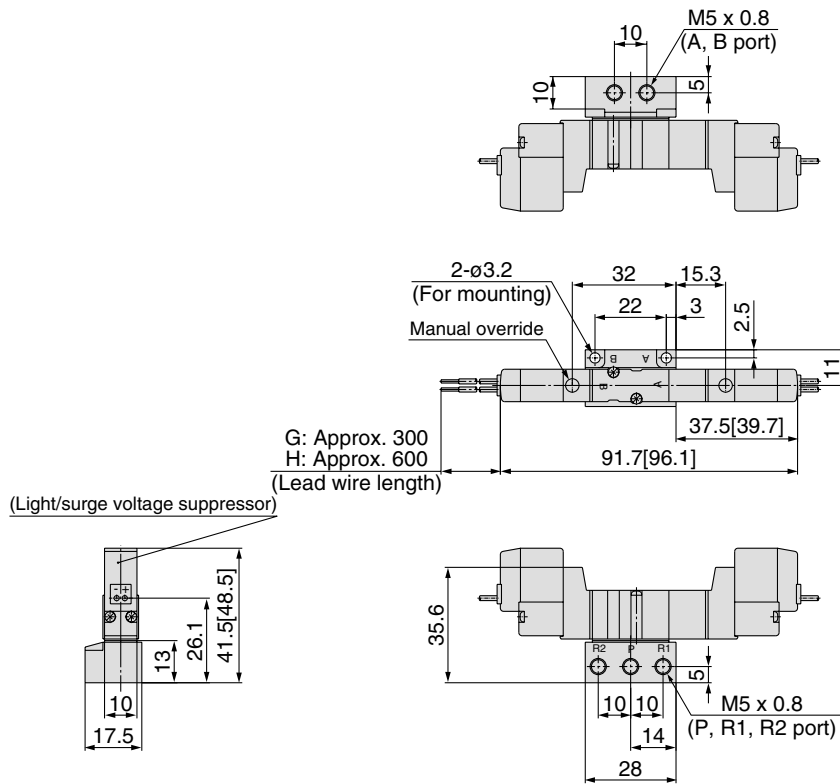


* Refer to page 563 for dimensions with connector cable.

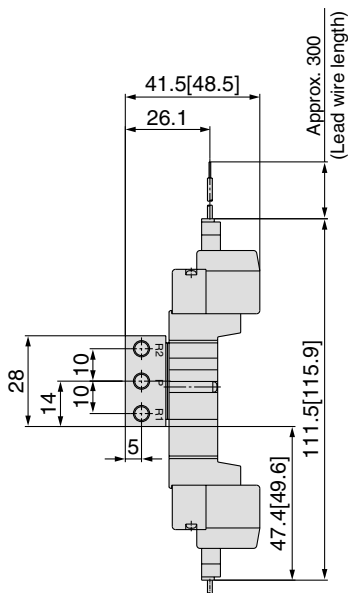


3 position closed center / Exhaust center / Pressure center

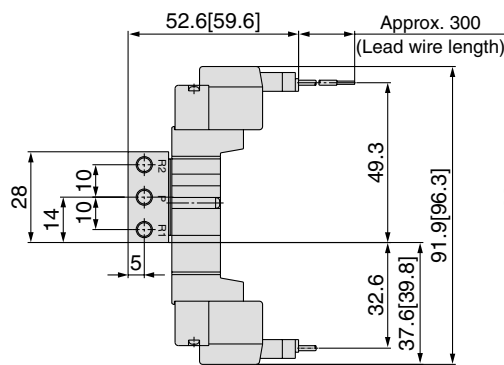
Grommet (G), (H): 10-SYJ3³/₅43-□^G/_H□□-M5



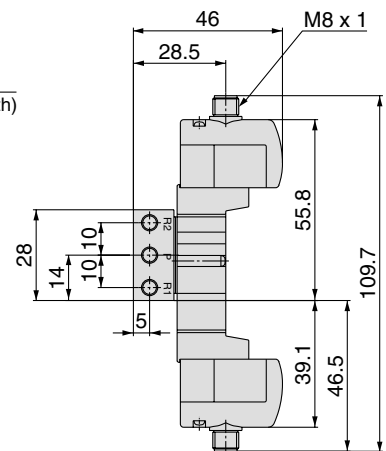
L plug connector (L):
10-SYJ3³/₅43-□L□□-M5



M plug connector (M):
10-SYJ3³/₅43-□M□□-M5



M8 Connector (WO):
10-SYJ3³/₅43-□WO□□-M5□

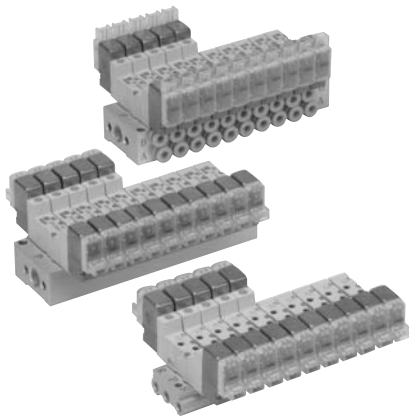


* Refer to page 563 for dimensions with connector cable.

Series 10-SYJ3000

Manifold specifications

Manifold standard



Manifold specifications

Model		Type 20	Type 31/S31	Type 32/S32	Type 41/S41	Type 46/S46
Manifold type		Single base / B mount				
P (SUP) / R (EXH)		Common SUP / Common EXH				Common SUP / Individual EXH
Valve stations		2 to 20 stations				
A, B port porting specifications	Location	Valve		Base		
	Direction	Top		Side		
Port size	P, R port	M5 x 0.8		1/8		P: 1/8 R: M5 x 0.8
	A, B port	M3 x 0.5		M5 X 0.8, C4 (One-touch fitting for ø4)		

Flow characteristics

Manifold			Port size		Flow characteristics						Effective area (mm ²)
					1→4/2 (P→A/B)			4/2→5/3 (A/B→R)			
			1(P), 5/3(R) port	2(B), 4(A) port	C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv	
Body ported for internal pilot	10-SS5YJ3-20	10-SYJ3□23	M5 x 0.8	M3 x 0.5	—	—	—	—	—	—	0.9
	10-SS5YJ3-31-S31	10-SYJ3□33	M5 x 0.8	M3 x 0.5	—	—	—	—	—	—	0.9
Base mounted for internal pilot	10-SS5YJ3-32-M5	10-SYJ3□33	1/8	M5 x 0.8	0.25	0.19	0.060	0.32	0.25	0.077	—
	10-SS5YJ3-32-C4			C4	0.25	0.18	0.059	0.30	0.27	0.075	—
	10-SS5YJ3-S32-M5			M5 x 0.8	0.25	0.26	0.060	0.29	0.15	0.062	—
	10-SS5YJ3-S32-C4	C4	0.24	0.21	0.057	0.27	0.18	0.062	—		
	10-SS5YJ3-41-M5	10-SYJ3□43	1/8	M5 x 0.8	0.32	0.25	0.081	0.33	0.19	0.079	—
	10-SS5YJ3-41-C4			C4	0.32	0.28	0.079	0.35	0.24	0.084	—
	10-SS5YJ3-S41-M5			M5 x 0.8	0.33	0.29	0.082	0.34	0.17	0.081	—
	10-SS5YJ3-S41-C4	C4	0.32	0.27	0.079	0.34	0.24	0.084	—		
	10-SS5YJ3-46-M5	10-SYJ3□43	1/8	M5 x 0.8	0.20	0.25	0.048	0.10	0.12	0.024	—
	10-SS5YJ3-46-C4			C4	0.21	0.27	0.050	0.21	0.13	0.047	—
	10-SS5YJ3-S46-M5			M5 x 0.8	0.20	0.25	0.048	0.19	0.16	0.024	—
	10-SS5YJ3-S46-C4	C4	0.22	0.34	0.057	0.10	0.090	0.024	—		



Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold (Example)

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

Example

●10-SS5YJ3-20-03..... 1 set (Manifold base)

●10-SS5YJ3-S41-03-C4..... 1 set (Manifold base)

* 10-SYJ3123-5G-M3..... 2 sets (Valve)

* 10-SYJ3143-5LZ..... 2 sets (Valve)

* SYJ3000-21-1A..... 1 set (Blanking plate assembly)

* SYJ3000-21-2A..... 1 set (Blanking plate assembly)

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

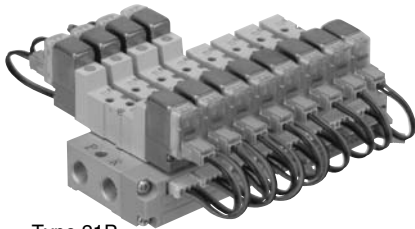
* Use manifold specification sheet.

Flat ribbon cable manifold

• **Multiple valve wiring is simplified through the use of the flat ribbon cable connector.**

• **Clean appearance**

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Type 21P

Flat ribbon cable manifold specifications

Model		Type 21P	Type 32P
Manifold		Single base / B mount	
P(SUP) / R(EXH)		Common SUP / Common EXH	
Valve stations		4 to 12 stations	
A, B port piping specifications	Location	Valve	Base
	Direction	Top	Side
Port size	P, R port	1/8	
	A, B port	M3 x 0.5	M5 x 0.8 C4 (One-touch fitting for ø4)
Applicable flat ribbon cable connector		Socket: 26 pins MIL type with strain relief (conforming to MIL-C-83503)	
Internal wiring		In common between +COM and -COM (Z type: +COM only).	
Rated voltage		12, 24 VDC, 100, 110 VAC	



Note) The withstand voltage specification for the wiring unit section conforms to JIS C0704, Grade 1 or its equivalent.

Flow characteristics

Manifold	Port size	Flow characteristics						Effective area (mm ²)		
		1→4/2 (P→A/B)			4/2→5/3 (A/B→R)					
		C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv			
Body ported for internal pilot	10-SS5YJ3-21P / 10-SYJ3□23	1/8	M3 x 0.5	—	—	—	—	—	0.9	
Base mounted for internal pilot	10-SS5YJ3-32P-M5 / 10-SYJ3□33	1/8	M5 x 0.8	0.25	0.19	0.060	0.32	0.25	0.077	—
	10-SS5YJ3-32P-C4		C4	0.25	0.18	0.059	0.3	0.27	0.075	—



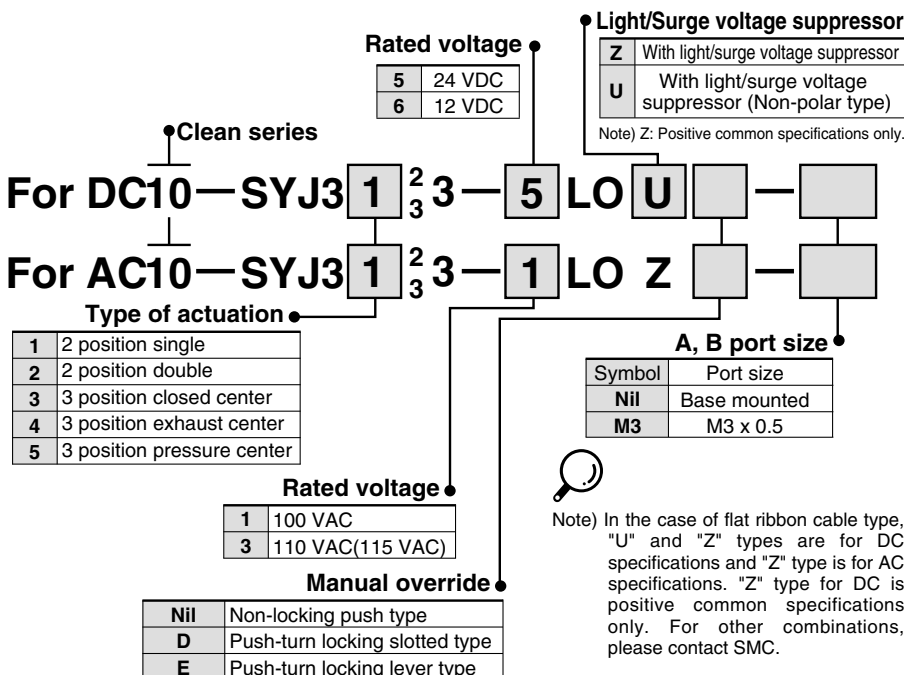
Note) Value at manifold base mounted, 2 position single operating

How to Order Manifolds

- **10-SS5YJ3-32P-07-C4** ..1 set (Manifold base)
 - **10-SYJ3133-5LOU**3 sets (Valve)
 - **10-SYJ3233-5LOU**3 sets (Valve)
 - **SYJ3000-21-4A** ..1 set (Blanking plate assembly)
 - **SY3000-37-28A** ..3 sets (Connector assembly)
 - **SY3000-37-29A** ..3 sets (Connector assembly)
- ↳ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

* Use manifold specification sheet.

How to Order Valves



How to Order Connector Assemblies

For 12, 24 VDC

For single solenoid	SY3000-37-28A
Double solenoid 3 position type	SY3000-37-29A

For 100 VAC

For single solenoid	SY3000-37-46A
Double solenoid 3 position type	SY3000-37-47A

110 VAC (115 VAC)

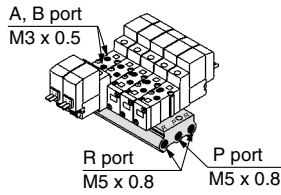
For single solenoid	SY3000-37-54A
Double solenoid 3 position type	SY3000-37-55A

Common SUP / Common EXH



Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 20 (5 port / Body ported)



How to Order

10-SS5YJ3-20-05

• Clean series

• Stations

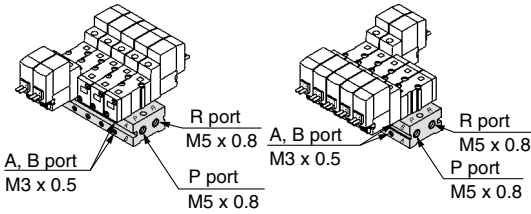
02	2 stations
:	:
20	20 stations

Applicable solenoid valve
10-SYJ3□23-□□□□-M3

Applicable blanking plate assembly
SYJ3000-21-1A

Type 31 (4 port / Base mounted)

Type 31 Type S31 (Single solenoid coil is located on the same side of A and B ports.)



How to Order

10-SS5YJ3-□31-05-M3

• Clean series

• Valve mounting direction

Nil	Single solenoid coil is located on the opposite side of A and B ports.
S	Single solenoid coil is located on the same side of A and B ports.

Applicable solenoid valve
10-SYJ3□33-□□□□

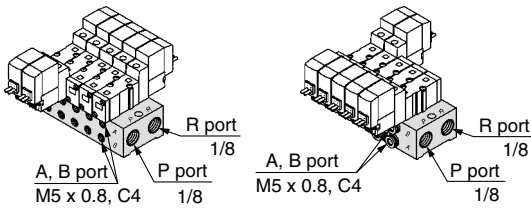
Applicable blanking plate assembly
SYJ3000-21-2A

• Manifold stations

02	2 stations
:	:
20	20 stations

Type 32 (4 port / Base mounted)

Type 32 Type S32 (Single solenoid coil is located on the same side of A and B ports.)



How to Order

10-SS5YJ3-□32-05-M5

• Clean series

• Valve mounting direction

Nil	Single solenoid coil is located on the opposite side of A and B ports.
S	Single solenoid coil is located on the same side of A and B ports.

• Manifold stations

02	2 stations
:	:
20	20 stations

• P, R port thread type

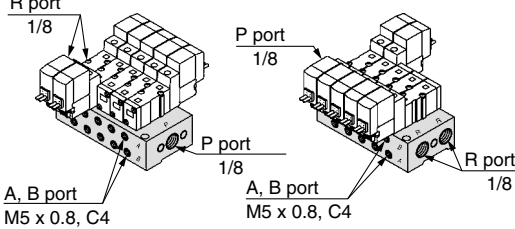
Nil	Rc
F	G
N	NPT
T	NPTF

• A, B port size

M5	M5 x 0.8
C4	One-touch fitting for ø4
N3	One-touch fitting for ø5/32"

Type 41 (5 port / Base mounted)

Type 41 Type S41 (Single solenoid coil is located on the same side of A and B ports.)



How to Order

10-SS5YJ3-□41-05-C4

• Clean series

• Valve mounting direction

Nil	Single solenoid coil is located on the opposite side of A and B ports.
S	Single solenoid coil is located on the same side of A and B ports.

• Manifold stations

02	2 stations
:	:
20	20 stations

Applicable solenoid valve
10-SYJ3□43-□□□□

Applicable blanking plate assembly
SYJ3000-21-2 A

• P, R port thread type

Nil	Rc
F	G
N	NPT
T	NPTF

• A, B port size

M5	M5 x 0.8
C4	One-touch fitting for ø4
N3	One-touch fitting for ø5/32"

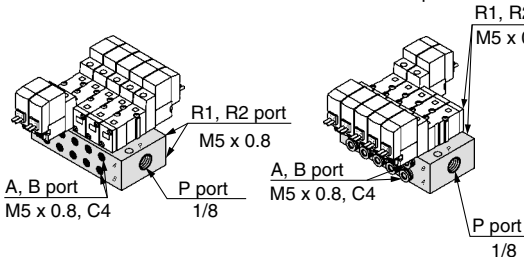
Common SUP / Individual EXH



Note) For more than 10 stations, supply air to both sides of P port.

Type 46 (5 port / Base mounted)

Type 46 Type S46 (Single solenoid coil is located on the same side of A and B ports.)



How to Order

10-SS5YJ3-□46-05-M5

• Clean series

• Valve mounting direction

Nil	Single solenoid coil is located on the opposite side of A and B ports.
S	Single solenoid coil is located on the same side of A and B ports.

• Manifold stations

02	2 stations
:	:
20	20 stations

Applicable solenoid valve
10-SYJ3□43-□□□□

Applicable blanking plate assembly
SYJ3000-21-2A

• P port thread type

Nil	Rc
F	G
N	NPT
T	NPTF

• A, B port size

M5	M5 x 0.8
C4	One-touch fitting for ø4
N3	One-touch fitting for ø5/32"

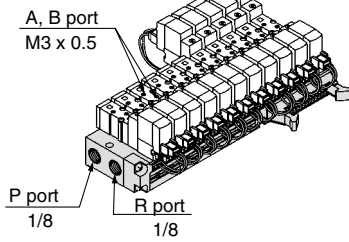
Flat ribbon cable manifold

Common SUP / Common EXH



Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 21P



How to Order

10-SS5YJ3-21P-07

• Clean series

Manifold stations

04	4 stations
:	:
12	12 stations

• P, R port thread type

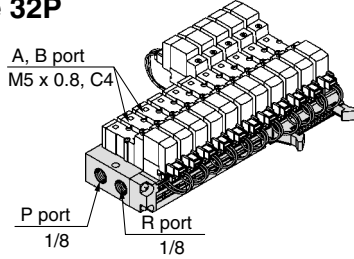
Nil	Rc
00F	G
00N	NPT
00T	NPTF

Applicable solenoid valve
Refer to page 505.

Applicable connector assembly
Refer to page 505.

Applicable blanking plate assembly
SYJ3000-21-3A
(With dust cap)

Type 32P



How to Order

10-SS5YJ3-32P-07-C4

• Clean series

Manifold stations

04	4 stations
:	:
12	12 stations

A, B port size

M5	M5 x 0.8
C4	One-touch fitting for ø4
N3	One-touch fitting for ø5/32"

• P, R port thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
Refer to page 505.

Applicable connector assembly
Refer to page 505.

Applicable blanking plate assembly
SYJ3000-21-4A
(With dust cap)

Mixed installation of the 10-SYJ300 and the 10-SY3000 valves on the same manifold

Series 10-SYJ300 valves can be mounted on the manifolds for 10-SY3000.

① **10-SS5YJ3-20, 10-SS5YJ3-21P**

The 3 port valve can be used by simply sealing off the unused "R" port with rubber plug, SYJ3000-33-1.

Applicable solenoid valves: Type 10-SYJ312M
Type 10-SYJ322M

② **10-SS5YJ3-31/-S31, 10-SS5YJ3-32/-S32, 10-SS5YJ3-46/-S46, 10-SS5YJ3-32P**

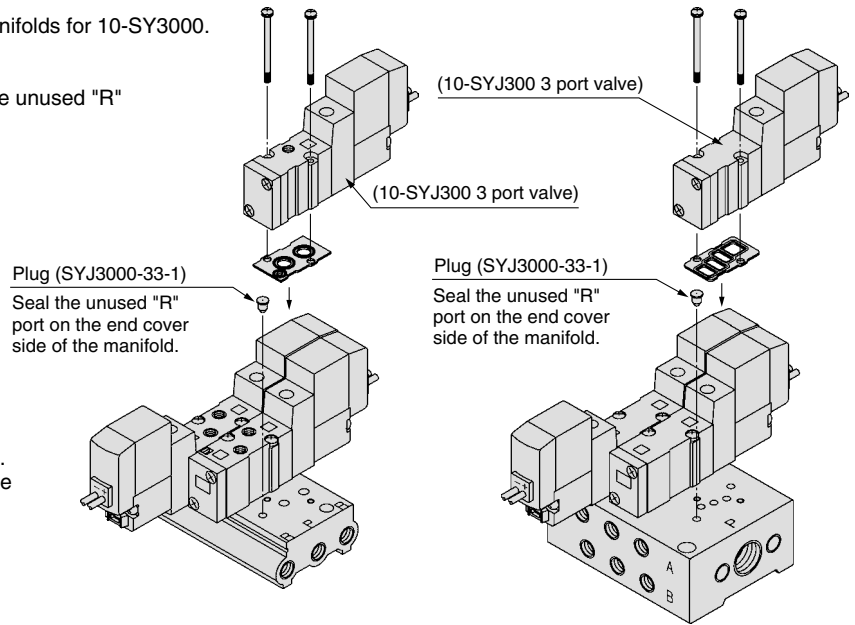
The 3 port valve can be used without modification. The A port of the valve will flow out of the B port of the manifold.

Applicable solenoid valve: Type 10-SYJ314M
Type 10-SYJ324M

③ **10-SS5YJ3-41/-S41**

The 3 port valve can be used by simply sealing off the unused "R" port with rubber plug (SYJ3000-33-1). The A port of the valve will flow out of the B port of the manifold.

Applicable solenoid valve: Type 10-SYJ314M
Type 10-SYJ324M



Type 10-SS5YJ3-20

Type 10-SS5YJ3-41

"B" port becomes "A" port of 3 port valve.



Caution

Mounting screw tightening torque

M1.7: 0.12N·m

Use caution to the assembly orientation for solenoid valves, gasket, and optional parts.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

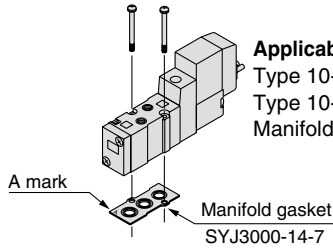
Pressure switch

Clean gas filter

<Manifold option>

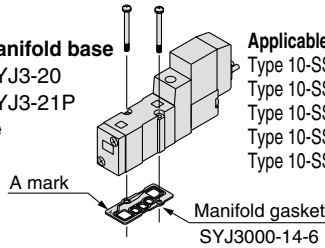
Combinations of solenoid valve, manifold gasket and manifold base

**5 port body ported
(Type 10-SYJ3□23)**



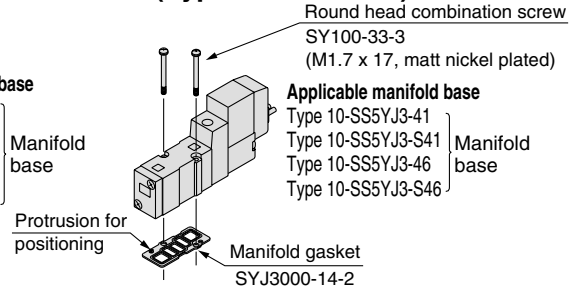
Applicable manifold base
Type 10-SS5YJ3-20
Type 10-SS5YJ3-21P
Manifold base

**4 port base mounted
(Type 10-SYJ3□33)**



Applicable manifold base
Type 10-SS5YJ3-31
Type 10-SS5YJ3-S31
Type 10-SS5YJ3-32
Type 10-SS5YJ3-S32
Type 10-SS5YJ3-32P

**5 port base mounted
(Type 10-SYJ3□43)**

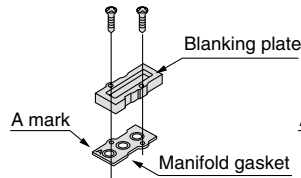


Applicable manifold base
Type 10-SS5YJ3-41
Type 10-SS5YJ3-S41
Type 10-SS5YJ3-46
Type 10-SS5YJ3-S46

Note) Please insert the protrusion for positioning of the manifold gasket into the hole of the valve body completely.

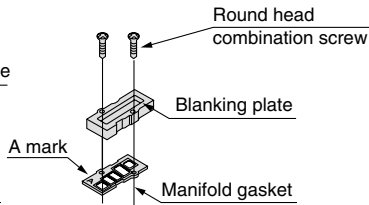
Combination of blanking plate assembly and manifold base

**Blanking plate assembly
SYJ3000-21-1A**



Applicable base
Type SS5YJ3-20 manifold base

**Blanking plate assembly
SYJ3000-21-2A**



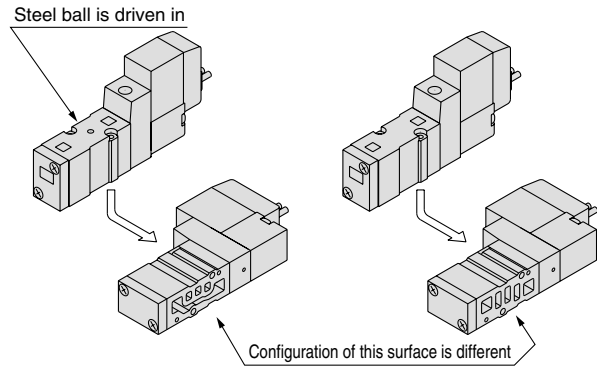
Applicable base sub-plate
Type 10-SS5YJ3-41
Type 10-SS5YJ3-S41
Type 10-SS5YJ3-46
Type 10-SS5YJ3-S46
Type 10-SS5YJ3-31
Type 10-SS5YJ3-S31
Type 10-SS5YJ3-32
Type 10-SS5YJ3-S32

Note) The SYJ3000-14-2 manifold gasket can be used for 10-SS5YJ3-31/-S31 and 10-SS5YJ3-32/-S32 manifold bases.

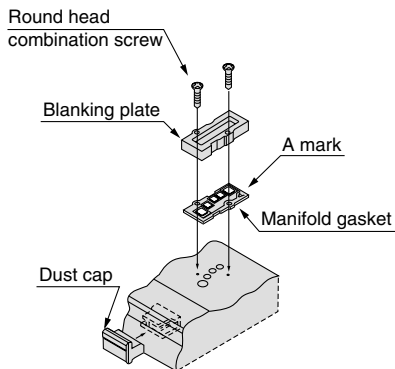
Difference between types 10-SYJ3□33 and 10-SYJ3□43

Type 10-3□33 (4 port)

Type 10-3□43 (5 port)

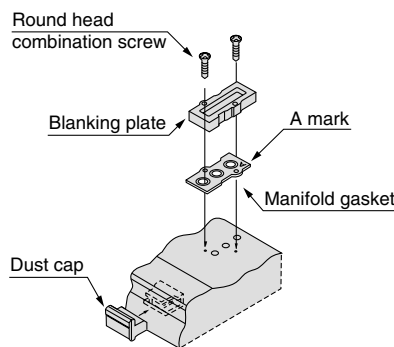


**Blanking plate assembly
SYJ3000-21-4A**



Applicable base
Type 10-SS5YJ3-32P manifold base

**Blanking plate assembly
SYJ3000-21-3A**



Applicable base
Type 10-SS5YJ3-21P manifold base

Caution

Mounting screw tightening torque

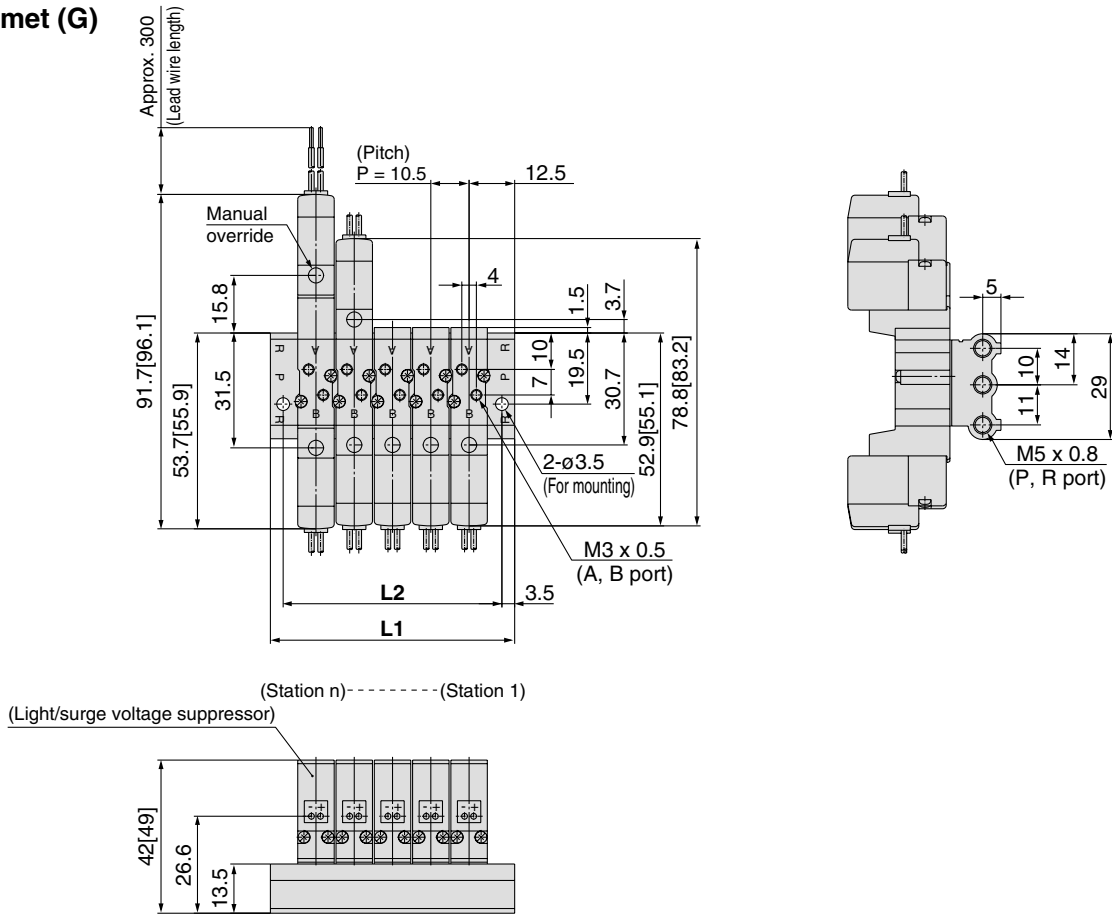
M1.7: 0.12N·m

Use caution to the assembly orientation for solenoid valves, gasket and option parts.

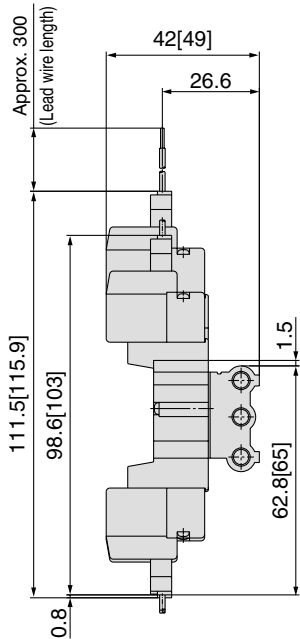
Type 20 manifold: Top ported / 10-SS5YJ3-20- Stations



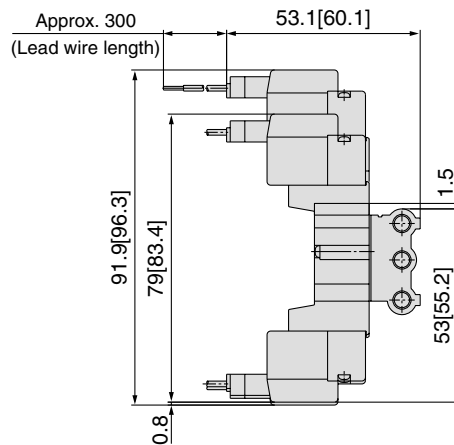
Grommet (G)



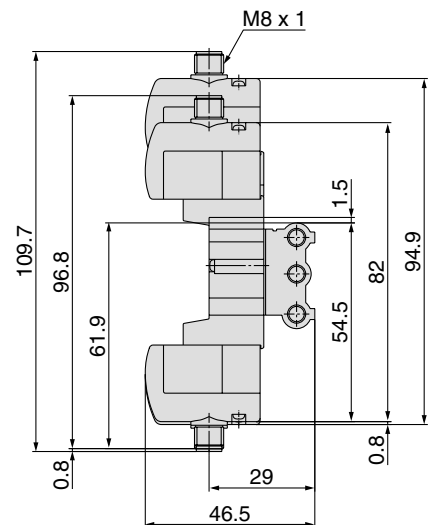
L plug connector (L)



M plug connector (M)



M8 connector (WO)



* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	35.5	46	56.5	67	77.5	88	98.5	109	119.5	130	140.5	151	161.5	172	182.5	193	203.5	214	224.5
L2	28.5	39	49.5	60	70.5	81	91.5	102	112.5	123	133.5	144	154.5	165	175.5	186	196.5	207	217.5

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

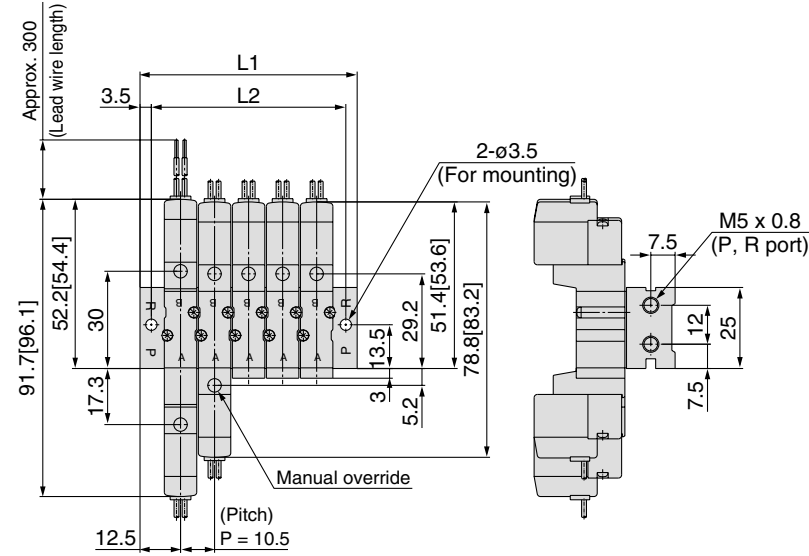
Pressure switch

Clean gas filter

Type 31 manifold: Side ported / 10-SS5YJ3-31- Stations -M3

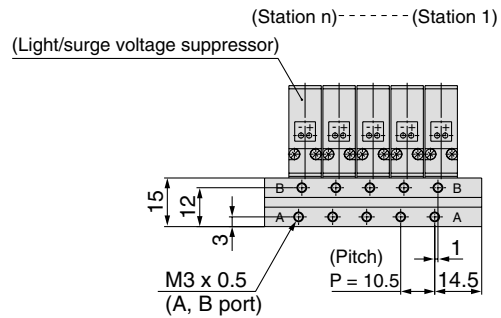
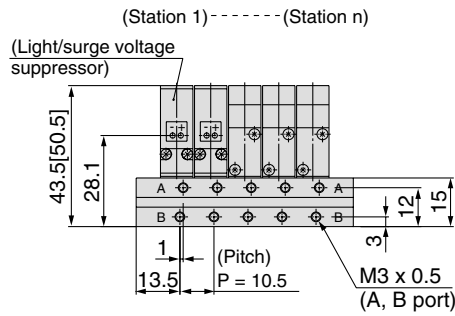
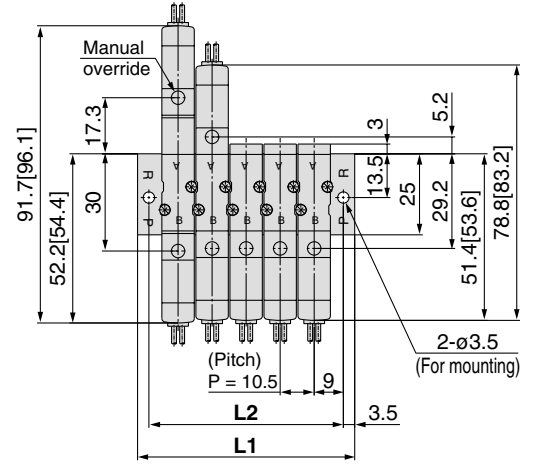


Grommet (G)

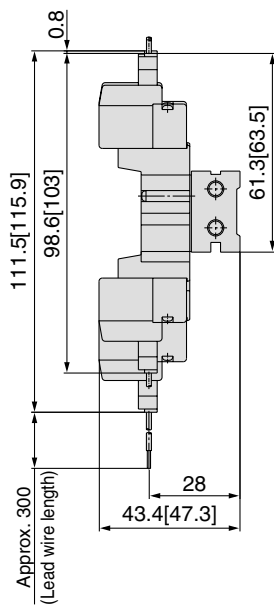


Type S3: Side ported 10-SS5YJ3-S31- Stations -M3

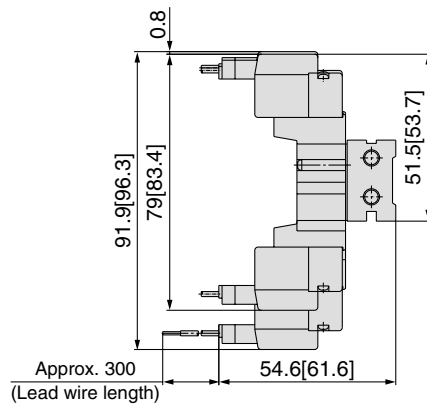
Pilot valve of single solenoid valve is located on the same side of A and B ports.



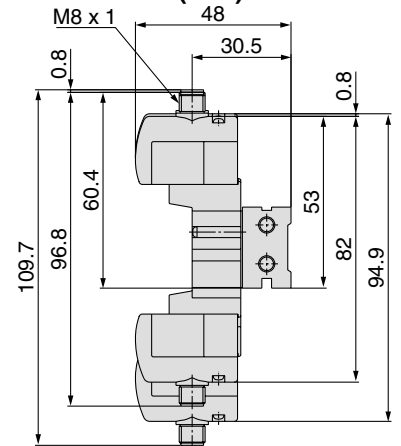
L plug connector (L)



M plug connector (M)



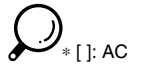
M8 connector (WO)



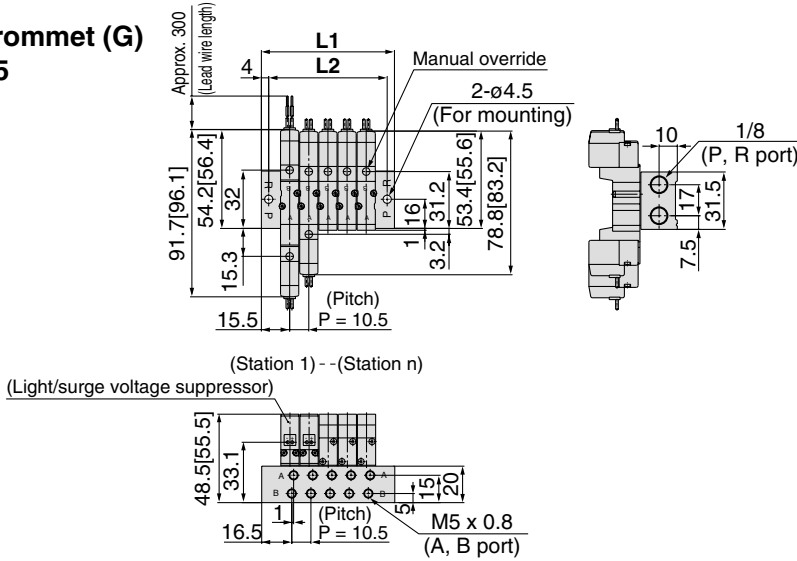
* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	35.5	46	56.5	67	77.5	88	98.5	109	119.5	130	140.5	151	161.5	172	182.5	193	203.5	214	224.5
L2	28.5	39	49.5	60	70.5	81	91.5	102	112.5	123	133.5	144	154.5	165	175.5	186	196.5	207	217.5

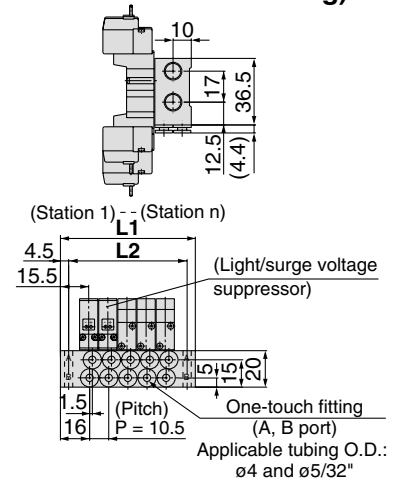
Type 32 manifold: Side ported / 10-SS5YJ3-32- Stations -M5, C4, N3



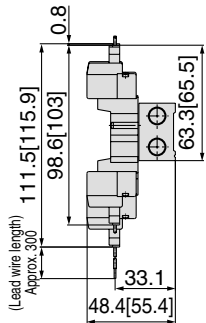
**Grommet (G)
M5**



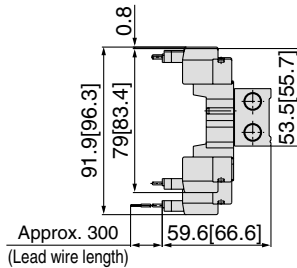
C4, N3 (With built-in One-touch fitting)



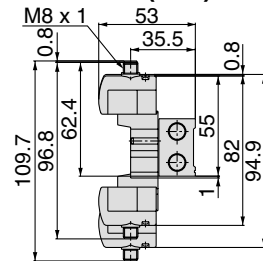
L plug connector (L)



M plug connector (M)



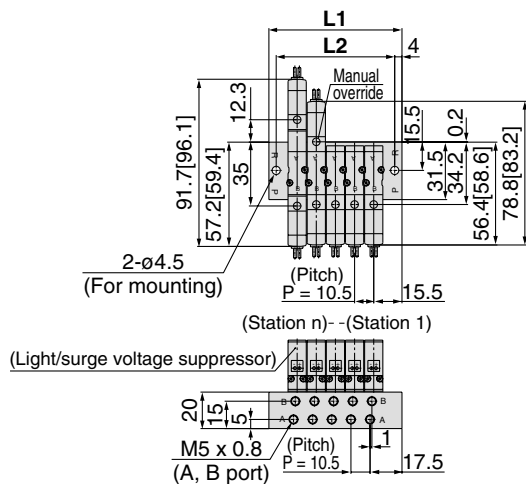
M8 connector (WO)



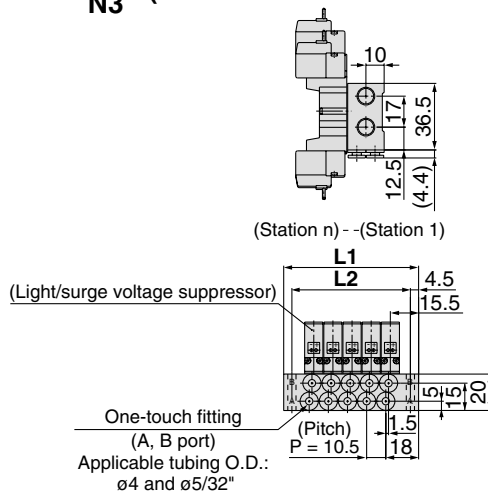
* Refer to page 563 for dimensions with connector cable.

Type S32 manifold: Side ported (Pilot valve of single solenoid valve is located on the same side of A and B ports.) / 10-SS5YJ3-S32- Stations -M5, C4, N3

M5



C4, N3 (With built-in One-touch fitting)



SS5YJ3-32, S32- Stations -M5

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	41.5	52	62.5	73	83.5	94	104.5	115	125.5	136	146.5	157	167.5	178	188.5	199	209.5	220	230.5
L2	33.5	44	54.5	65	75.5	86	96.5	107	117.5	128	138.5	149	159.5	170	180.5	191	201.5	212	222.5

10-SS5YJ3-32, S32- Stations -C4

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	42.5	53	63.5	74	84.5	95	105.5	116	126.5	137	147.5	158	168.5	179	189.5	200	210.5	221	231.5
L2	33.5	44	54.5	65	75.5	86	96.5	107	117.5	128	138.5	149	159.5	170	180.5	191	201.5	212	222.5

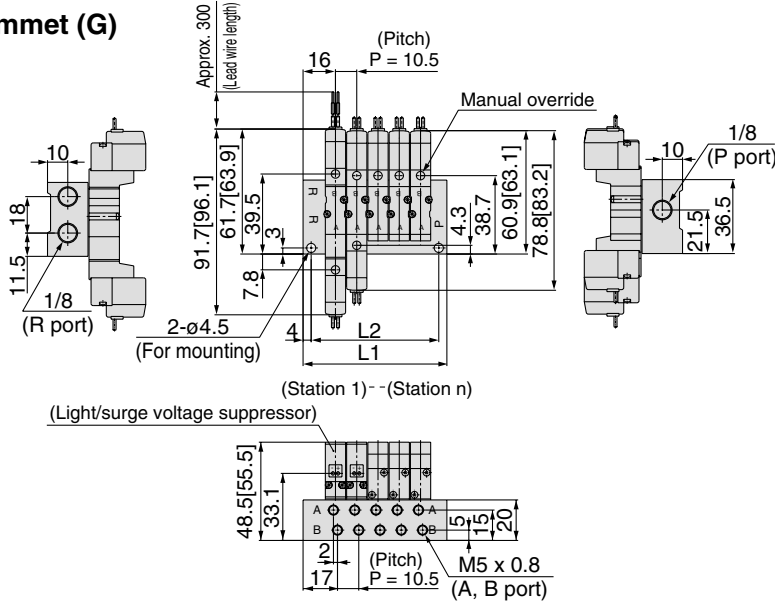
- Air cylinder
- Rotary actuator
- Air gripper
- Directional control valve
- Flow control equipment
- Filter, Pressure control equipment
- Fittings & Tubing
- Air preparation equipment
- Pressure switch
- Clean gas filter

Manifold specifications **10-SYJ3000**

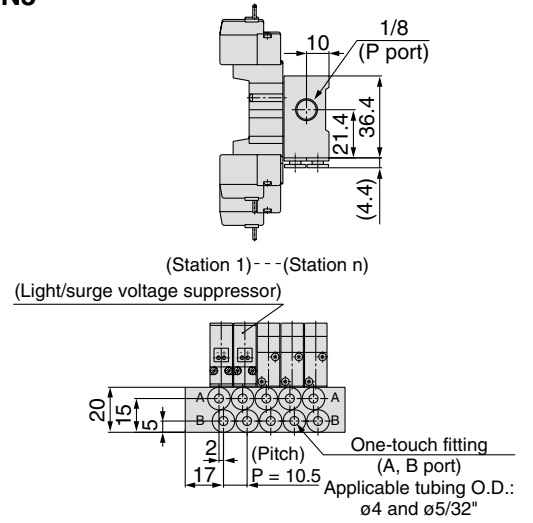
Type 41 manifold: Side ported / 10-SS5YJ3-41- Stations -M5, **C4** **N3**



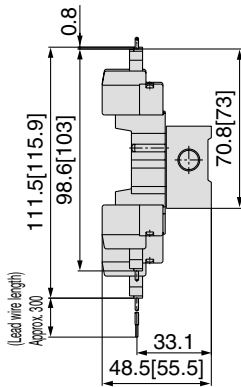
Grommet (G)
M5



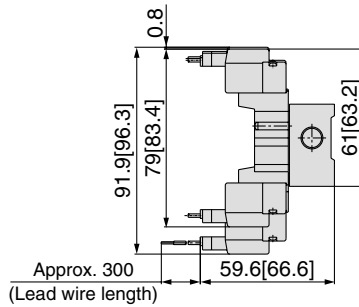
C4 **N3** (With built-in One-touch fitting)



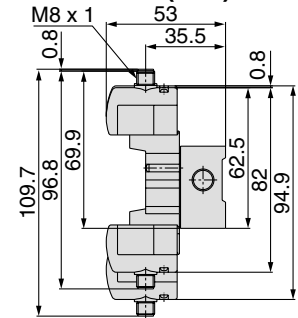
L plug connector (L)



M plug connector (M)



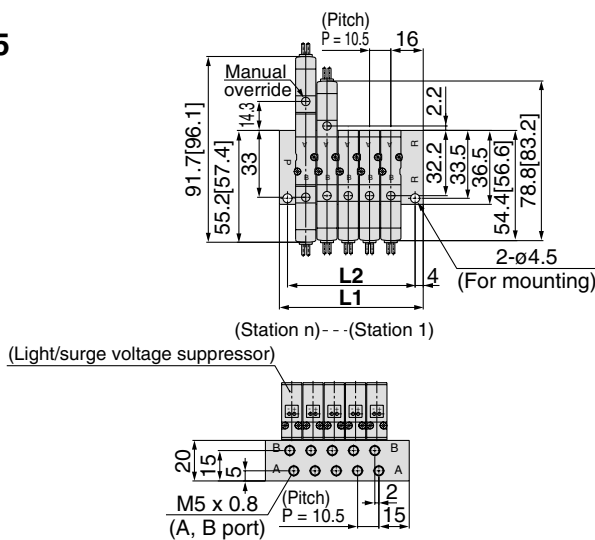
M8 connector (WO)



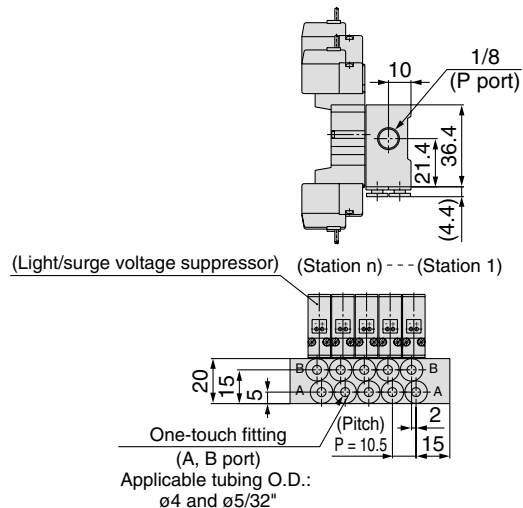
* Refer to page 563 for dimensions with connector cable.

Type S41 manifold: Side ported (Pilot valve of single solenoid valve is located on the same side of A and B ports.) 10-SS5YJ3-S41- Stations -M5, **C4** **N3**

M5



C4 **N3** (With built-in One-touch fitting)

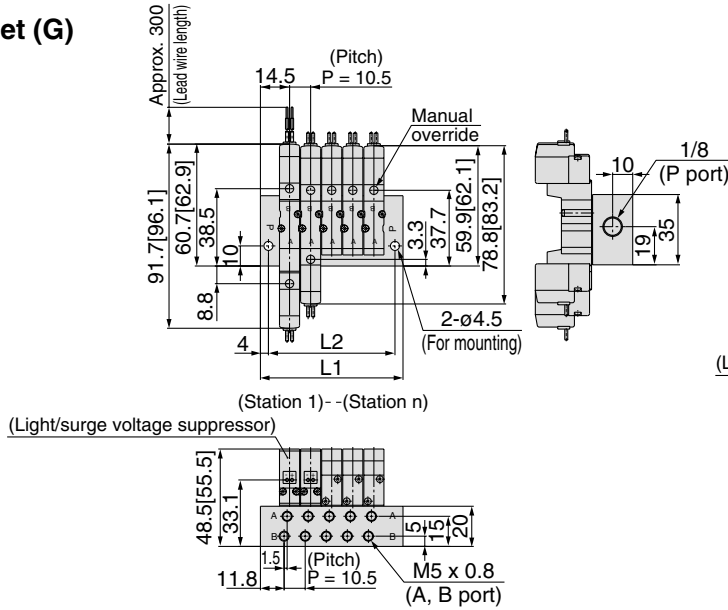


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	39.5	50	60.5	71	81.5	92	102.5	113	123.5	134	144.5	155	165.5	176	186.5	197	207.5	218	228.5
L2	31.5	42	52.5	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.5	189	199.5	210	220.5

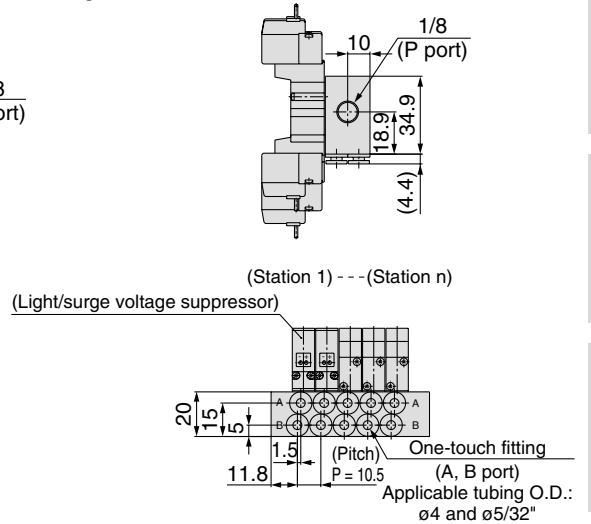
Type 46 manifold: Side ported / 10-SS5YJ3-46- Stations -M5, **C4** **N3**



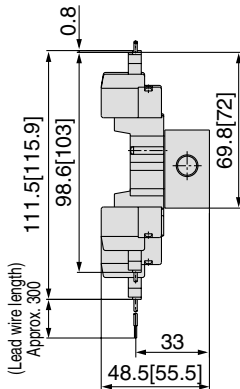
Grommet (G)
M5



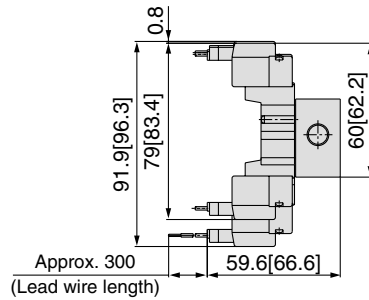
C4 **N3** (With built-in One-touch fitting)



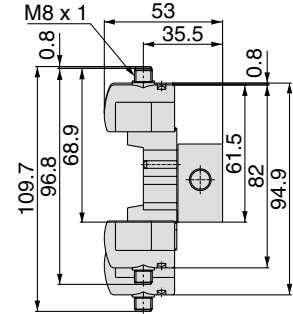
L plug connector (L)



M plug connector (M)



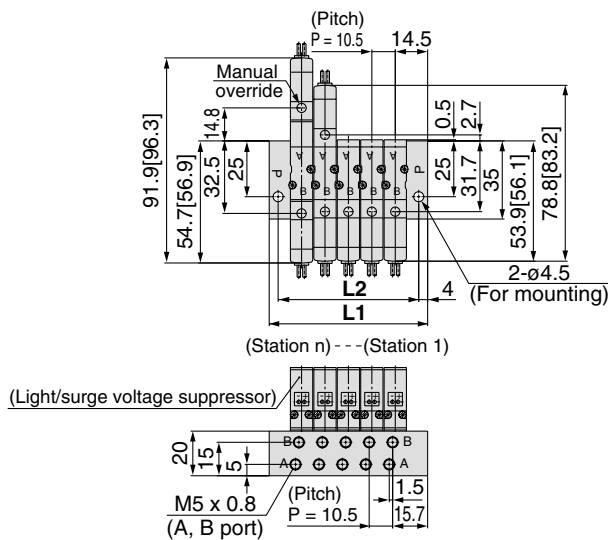
M8 connector (WO)



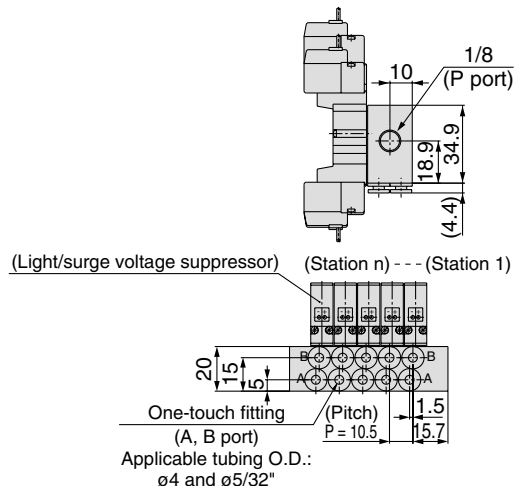
* Refer to page 563 for dimensions with connector cable.

Type S46 manifold: Side ported (Pilot valve of single solenoid valve is located on the same side of A and B ports.) /10-SS5YJ3-S46- Stations -M5, **C4** **N3**

M5



C4 **N3** (With built-in One-touch fitting)

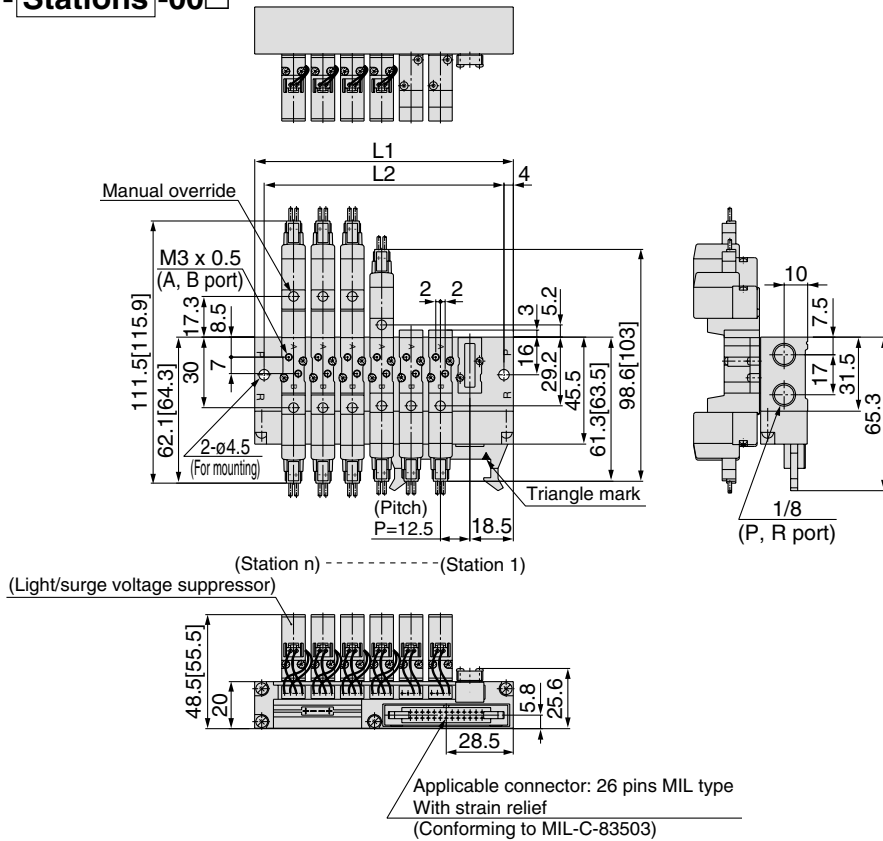


Stations n	2 Stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 Stations
L1	39.5	50	60.5	71	81.5	92	102.5	113	123.5	134	144.5	155	165.5	176	186.5	197	207.5	218	228.5
L2	31.5	42	52.5	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.5	189	199.5	210	220.5

- Air cylinder
- Rotary actuator
- Air gripper
- Directional control valve
- Flow control equipment
- Filter, Pressure control equipment
- Fittings & Tubing
- Air preparation equipment
- Pressure switch
- Clean gas filter

Flat ribbon cable manifold

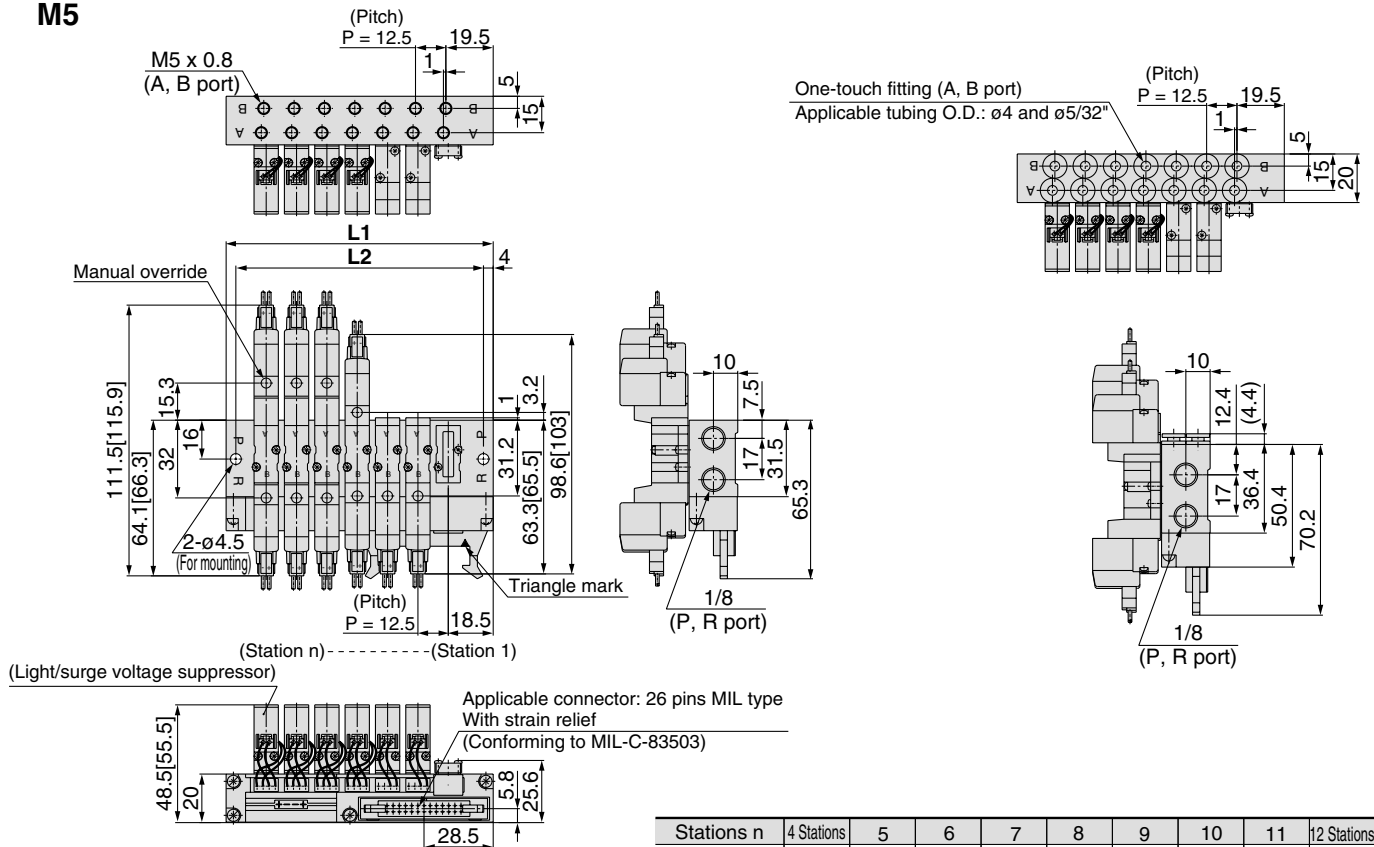
10-SS5YJ3-21P- Stations -00 □



10-SS5YJ3-32P- Stations -M5, C4, N3 □

M5

C4, N3 □ (With built-in One-touch fitting)

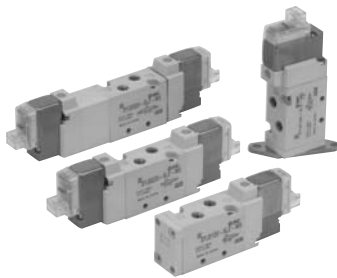


Stations n	4 Stations	5	6	7	8	9	10	11	12 Stations
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5

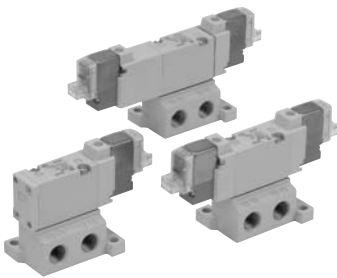
Series 10-SYJ5000

Rubber seal
5 port solenoid valve

Specifications



Body ported

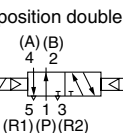
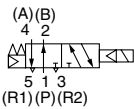


Base mounted

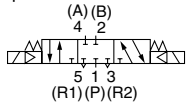
JIS Symbol

Body ported

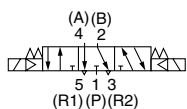
2 position single



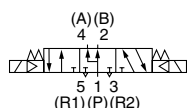
3 position closed center



3 position exhaust center

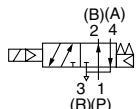


3 position pressure center

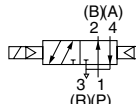


Base mounted (With sub-plate)

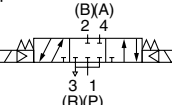
2 position single



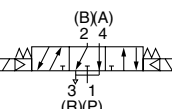
2 position double



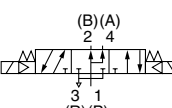
3 position closed center



3 position exhaust center



3 position pressure center



Made to Order Made to order specifications
(Refer to page 557 for details.)

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	-10 to 50°C (with no freezing. Refer to page 714.)	
Response time ms^(Note 1) (0.5 MPa)	2 position single, double	25 or less
	3 position	40 or less
Max. operating frequency (Hz)	2 position single, double	5
	3 position	3
Manual override (Manual operation)	Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type	
Pilot exhaust method	Common exhaust for the main and pilot valve	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Impact/Vibration resistance m/s² (Note 2)	150/30	
Enclosure	Dustproof (* DIN terminal, M8 connector conforms to IP65.)	

* Based on IEC60529
 Note 1) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage, without surge voltage suppressor)
 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 between 45 and 2000Hz. Test was performed 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)

Solenoid specifications

Electrical entry	Grommet(G), (H), L plug connector (L), M plug connector (M), DIN terminal (D), M8 connector (W)			
	G, H, L, M, W	D		
Rated coil voltage V	DC	24, 12, 6, 5, 3		
	AC 50/60Hz	100, 110, 200, 220		
Allowable voltage fluctuation	±10% of rated voltage *			
Power consumption (W)	DC	Standard	0.35 (With indicator light: 0.4 (DIN terminal with indicator light: 0.45))	
		With power saving circuit	0.1 (With indicator light only)	
	AC	100V	0.78 (With indicator light: 0.81)	0.78 (With indicator light: 0.87)
		110V	0.86 (With indicator light: 0.89)	0.86 (With indicator light: 0.97)
		[115V]	0.94 (With indicator light: 0.97)	0.94 (With indicator light: 1.07)
		200V	1.18 (With indicator light: 1.22)	1.15 (With indicator light: 1.30)
220V	1.30 (With indicator light: 1.34)	1.27 (With indicator light: 1.46)		
[230V]	1.42 (With indicator light: 1.46)	1.39 (With indicator light: 1.60)		
Surge voltage suppressor	Diode (DIN terminal, varistor for non-polar types)			
Indicator light	LED (Neon light for DIN terminal AC)			

* In common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC.
 * For 115 and 230 VAC, the allowable voltage fluctuation is -15% to +5% of rated voltage.
 * For the allowable voltage fluctuation for S, Z and T types (with power saving circuit), please observe the following range because they have voltage drop due to internal circuit.

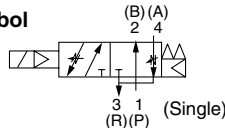
S and Z types 24 VDC: -7% to +10% 12 VDC: -4% to +10%
 T type 24 VDC: -8% to +10% 12 VDC: -6% to +10%

Built-in speed controller

10-SYJ5□53

- Built-in exhaust flow controls enable simple cylinder speed adjustments.
- When mounted on the manifold, the common exhaust discharges the pilot and main valve exhaust through a common EXH port to enable simple exhausting.

JIS Symbol

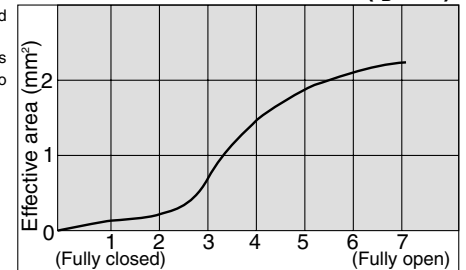


How to order valve with built-in speed controller

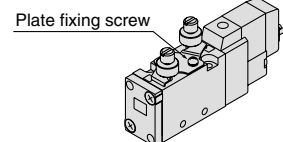
10-SYJ5□53-□□□□-□

- Clean series
- Type of actuation
- Rated voltage
- Electrical entry
- Manual override
- Light/Surge voltage suppressor
- Port size

Throttle valve characteristics ($A_B \rightarrow R$)



Note) ● When using 10-SYJ5□53 model, the speed controller must be opened more than 1 complete rotation from fully closed in order to function properly.
 ● Adjust the speed controller with a torque of 0.3 N·m or less.



Note) Do not loosen plate fixing screw.

5 port solenoid valve Series **10-SYJ5000**

Flow characteristics / Weight

Valve model	Type of actuation		Port size		Flow characteristics ^{Note 1)}						Weight (g) ^{Note 2, 3)}				
			1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1→4/2 (P→A/B)			4/2→5/3 (A/B→EA/EB)			Grommet	L/M plug connector	DIN terminal	M8 connector	
					C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv					
Body ported	10-SYJ5□23-□-M5	2 position	Single	M5 x 0.8	M5 x 0.8	0.47	0.41	0.13	0.47	0.41	0.13	46	47	68	51
			Double									64	66	108	74
		3 position	Closed center			0.49	0.44	0.13	0.44	0.40	0.12	75	77	119	85
			Exhaust center												
	3 position	Pressure center	0.49[0.39]	0.51[0.38]	0.14[0.10]	0.45	0.42	0.12	53	54	75	58			
		Double	71	73	115	81									
	10-SYJ5□23-□-C4	2 position	Single	M5 x 0.8	C4 (One-touch fitting for ø4)	0.69	0.39	0.18	0.44	0.39	0.12	53	54	75	58
			Double												
		3 position	Closed center			0.69	0.40	0.19	0.43	0.40	0.12	82	84	126	72
			Exhaust center												
	3 position	Pressure center	0.56	0.40	0.15	0.41[0.41]	0.37[0.37]	0.10[0.11]	0.57[0.41]	0.4[0.37]	0.15[0.10]	0.41	0.37	0.10	
		Double	71	73	115	81									
10-SYJ5□23-□-C6	2 position	Single	M5 x 0.8	C6 (One-touch fitting for ø6)	0.70	0.36	0.19	0.47	0.40	0.12	53	54	75	58	
		Double													71
	3 position	Closed center			0.72	0.37	0.19	0.44	0.34	0.12	82	84	126	92	
		Exhaust center													
3 position	Pressure center	0.67	0.54	0.19	0.41[0.41]	0.38[0.38]	0.11[0.11]	0.82[0.44]	0.41[0.39]	0.23[0.12]	0.41	0.36	0.11		
	Double	71	73	115	81										
Base mounted	10-SYJ5□43-□-01	2 position	Single	1/8	1/8	0.79	0.21	0.19	0.83	0.32	0.21	80 (49)	81 (47)	102 (68)	51
			Double									98 (64)	100 (66)	142 (108)	74
	3 position	Closed center	0.80			0.28	0.18	0.86	0.34	0.20	109 (75)	111 (77)	153 (119)	85	
		Exhaust center													
3 position	Pressure center	0.71	0.26	0.18	1.1[0.60]	0.24[0.44]	0.26[0.18]	0.99[0.47]	0.29[0.38]	0.24[0.12]	0.72	0.38	0.18		
	Double	71	73	115	81										

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

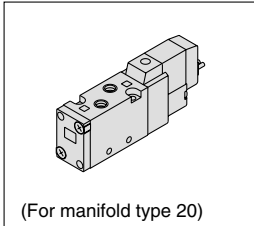
Note 2) (): Without sub-plate

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

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
Electrical entry for G, H, L, M, W

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 "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

Electrical entry for D

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

* "DOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Rated voltage
DC specifications

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

* DC specifications of type "D" and "DO" is only available with 12 and 24 VDC.

AC specifications (50/60Hz)

1	100 VAC
2	200 VAC
3	110 VAC[115 VAC]
4	220 VAC[230 VAC]

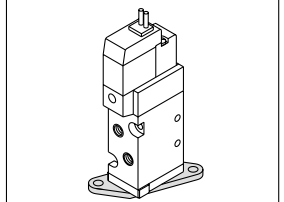
* For type "W□", DC voltage is only available.

A, B port size

M5	M5 x 0.8
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
N3	One-touch fitting for ø5/32"
N7	One-touch fitting for ø1/4"

Bracket

Nil: Without bracket
F: With bracket



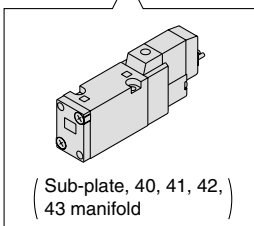
Note) The mounting bracket is supplied unattached.

Body ported

10-SYJ5 1 23 □ 5 L □ □ M5 □

Base mounted

10-SYJ5 2 43 □ 5 L □ □ □ □



Clean series

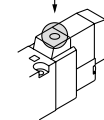
Coil specifications

Nil	Standard
T	With power saving circuit <For 24 and 12 VDC only>

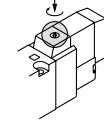
* Power saving circuit is not available in the case of "D", "DO" or "W□" type.

Manual override

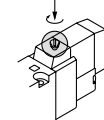
Nil: Non-locking push type



D: Push-turn locking slotted type



E: Push-turn locking lever type

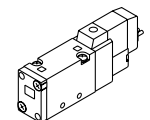


Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

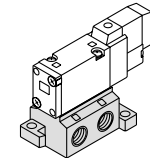
Port size

Nil: Without sub-plate



(With gasket and screws)

O1: 1/8 with sub-plate



Electrical entry

24, 12, 6, 5, 3 VDC / 100, 110, 200, 220 VAC				24, 12 VDC, 100, 110, 200, 220 VAC	24, 12 VDC, 6, 5, 3 VDC
Grommet	L plug connector	M plug connector	MN: Without lead wire	DIN terminal	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 	D: With connector 	WO: Without connector cable
H: Lead wire length 600 mm 	LN: Without lead wire 	LO: Without connector 	MO: Without connector 	DO: Without connector 	W□: With connector cable (Note 1)

Note 1) Be sure to enter a symbol of the cable length with reference to page 562.

* "LN", "MN" types: with 2 sockets.
* DIN terminal type "Y" conforming to EN-175301-803C (former DIN43650C) is also available. For details, refer to page 557.
* For connector cable of M8 connector, refer to page 562.

How to Order Pilot Valve Assembly

10—V111—5 G

● Clean series

● Coil specifications

Nil	Standard
T	With power saving circuit <24 and 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 50/60Hz
2	200 VAC 50/60Hz
3	110 VAC 50/60Hz [115 VAC 50/60Hz]
4	220 VAC 50/60Hz [230 VAC 50/60Hz]

* 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 "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

● Electrical entry

G	Grommet (Lead wire length 300 mm)
H	Grommet (Lead wire length 600 mm)
L	L plug connector With lead wire
LN	L plug connector Without lead wire
LO	Without connector
M	M plug connector With lead wire
MN	M plug connector Without lead wire
MO	Without connector
WO	M8 connector Without connector cable
W□	M8 connector Without connector cable ^(Note 1)

* For connector cable of M8 connector, refer to page 562.

Note 1) Be sure to enter a symbol of the cable length with reference to page 562.

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

10—V115—5 D

● Clean series

● Rated voltage

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

* DC specifications of type "D" and "DO" is only available with 12 and 24 V DC.

* Power saving circuit is not available in the case of "D" or "DO" type.

● Light/surge voltage suppressor

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

* "DOZ" is not available.

* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

● Electrical entry

D	DIN terminal	With connector
DO	terminal	Without connector

Note) Do not replace 10-V111 (G, H, L, M, W) to 10-V115 (DIN terminal) and vice versa when replacing pilot valve assembly only.

How to Order M8 Connector Cable

V100-49-1-

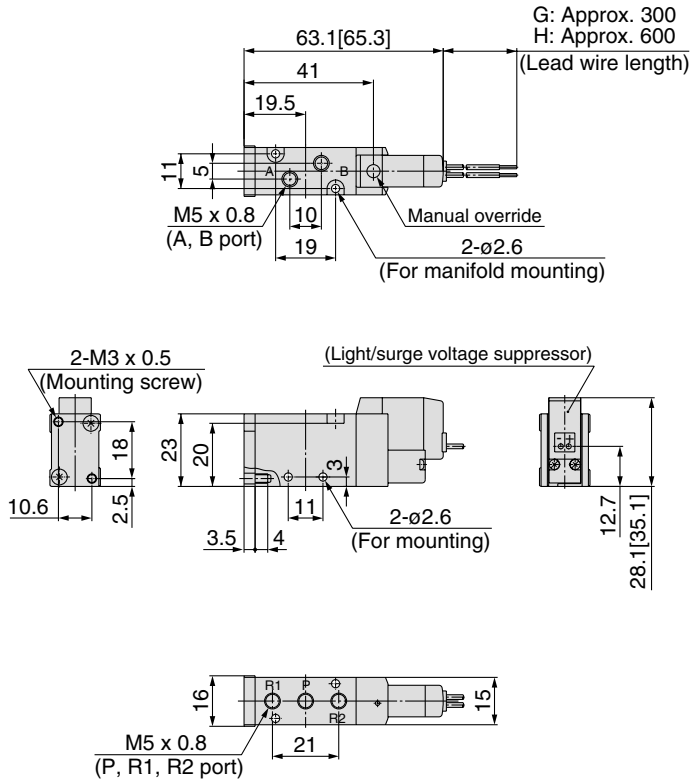
● Cable length

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

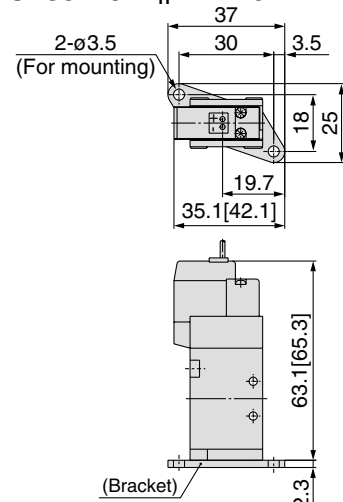


2 position single

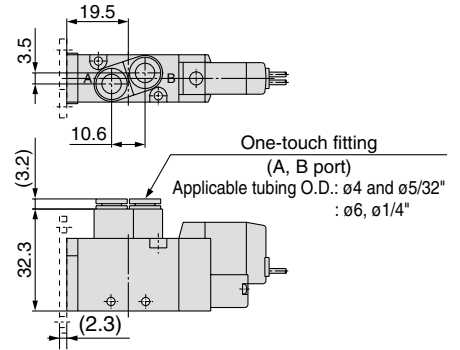
Grommet (G), (H): **10-SYJ5123-□^G□□-M5**



With bracket
10-SYJ5123-□^G□□-M5-F



Built-in One-touch Fitting:
10-SYJ5123-□^G□□-C4,N3-C6,N7 (-F)

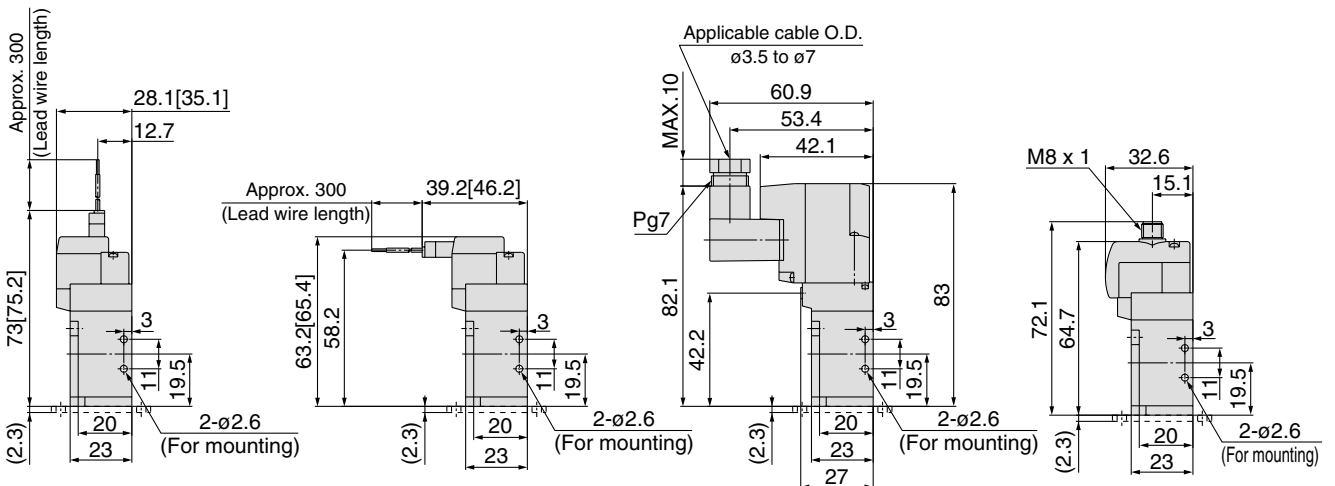


L plug connector (L):
10-SYJ5123-□L□□-M5(-F)

M plug connector (M):
10-SYJ5123-□M□□-M5(-F)

DIN Terminal (D):
10-SYJ5123-□D□□-M5(-F)

M8 connector (WO):
10-SYJ5123-□WO□□-M5(-F)



* Refer to page 563 for dimensions with connector cable.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

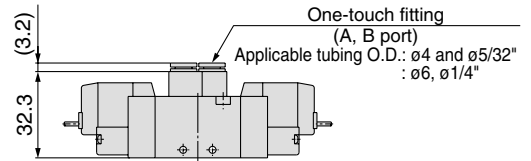
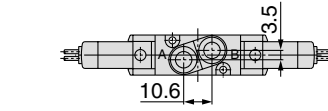
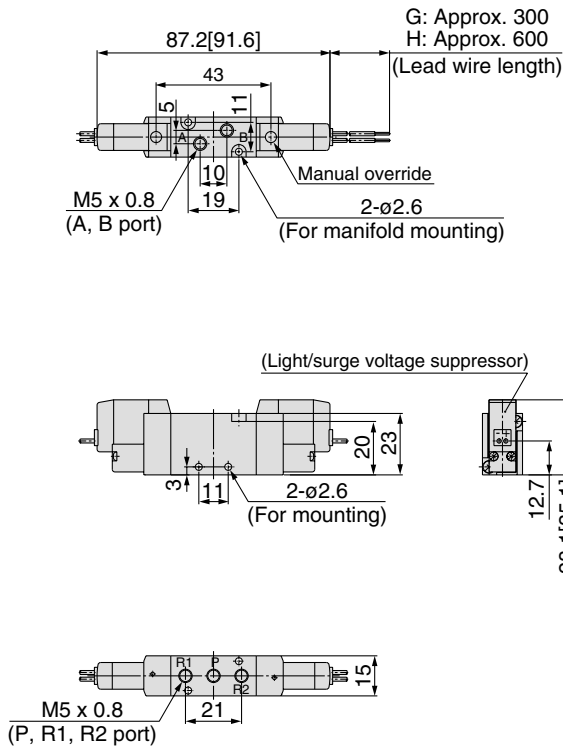
5 port solenoid valve Series **10-SYJ5000**

2 position double



Grommet (G), (H): 10-SYJ5223-□^G□□-M5

Built-in One-touch fitting
10-SYJ5223-□^G□□-^{C4,N3}_{C6,N7}

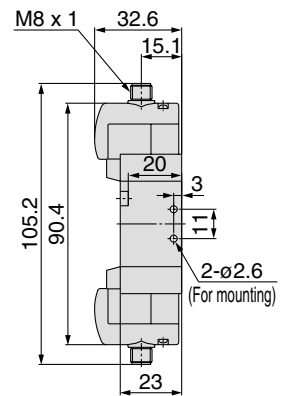
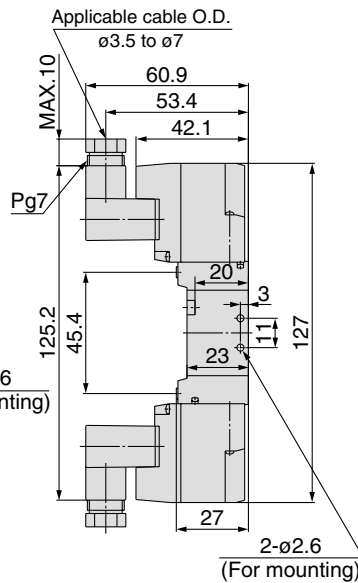
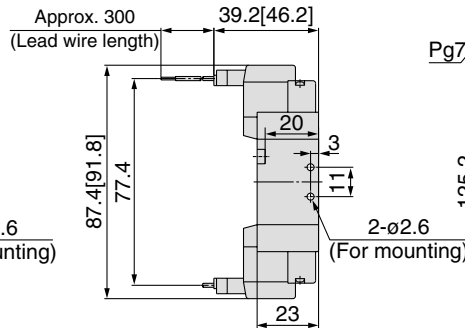
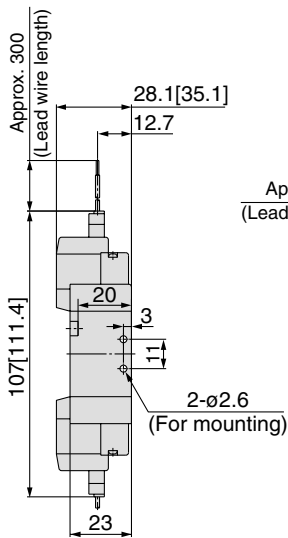


L plug connector (L):
10-SYJ5223-□L□□-M5

M plug connector (M):
10-SYJ5223-□M□□-M5

DIN Terminal (D):
10-SYJ5223-□D□□-M5

M8 connector (WO):
10-SYJ5223-□WO□□-M5



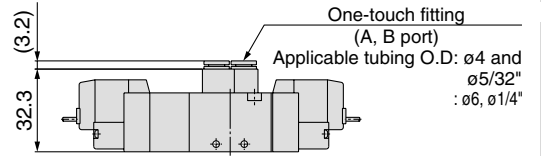
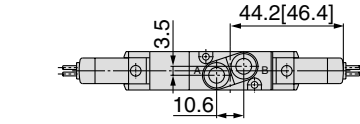
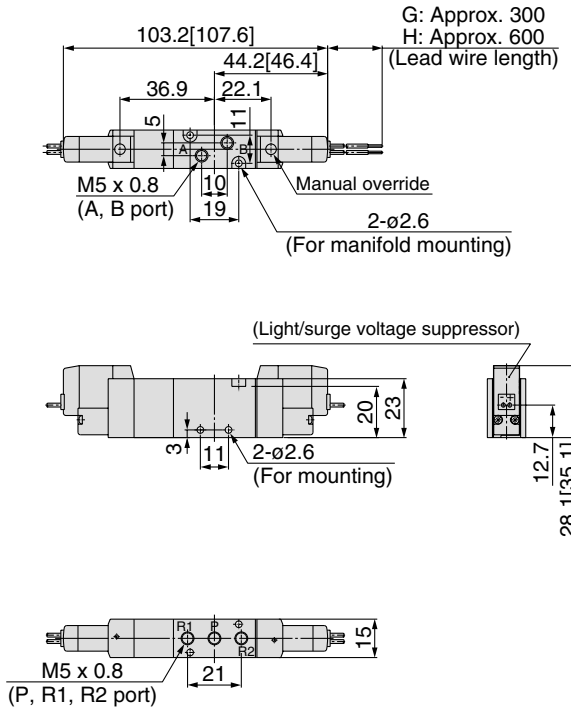
* Refer to page 563 for dimensions with connector cable.

3 position closed center / exhaust center / pressure center



Grommet (G), (H): 10-SYJ5³/₅23-□^G□□-M5

Built-in One-touch fitting:
10-SYJ5³/₅23-□^G□□-C4,N3
C6,N7

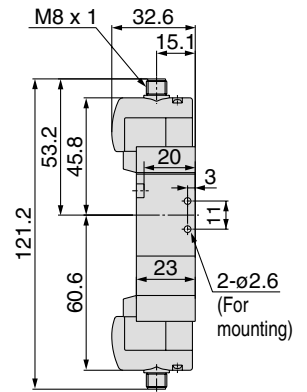
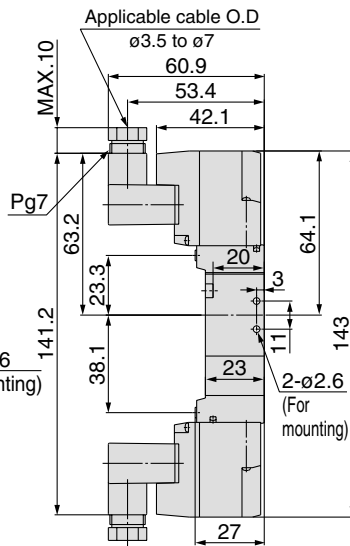
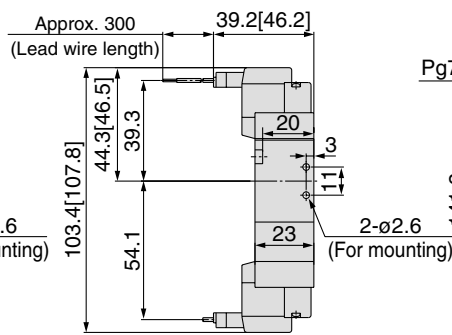
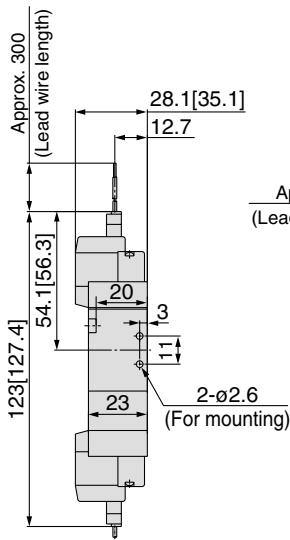


L plug connector (L):
10-SYJ5³/₅23-□^L□□-M5

M plug connector (M):
10-SYJ5³/₅23-□^M□□-M5

DIN Terminal (D):
10-SYJ5³/₅23-□^D□□-M5

M8 connector (WO):
10-SYJ5³/₅23-□^{WO}□□-M5



* Refer to page 563 for dimensions with connector cable.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

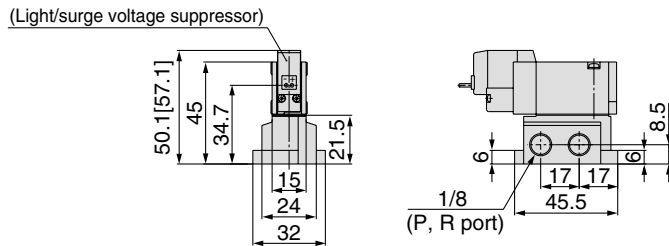
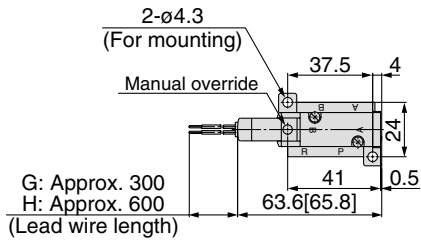
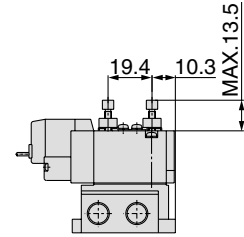
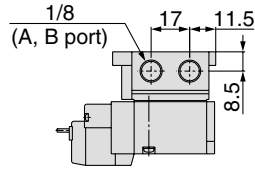
5 port solenoid valve Series **10-SYJ5000**



2 position single

Grommet (G), (H): 10-SYJ5143-□_H□□-01□

Built-in speed controller:
10-SYJ5153-□_H□□-01□

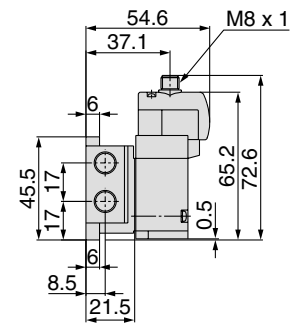
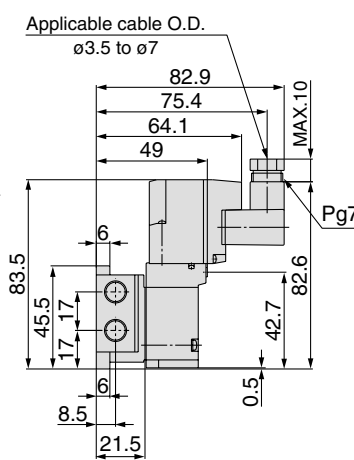
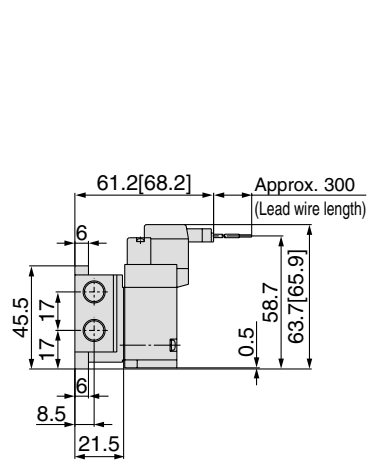
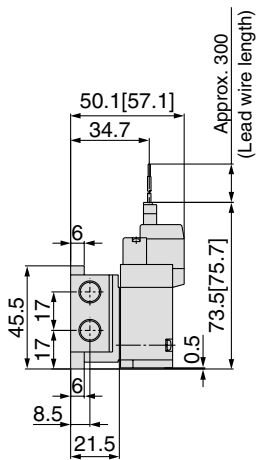


L plug connector (L):
10-SYJ5143-□L□□-01□

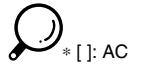
M plug connector (M):
10-SYJ5143-□M□□-01□

DIN Terminal (D):
10-SYJ5143-□D□□-01□

M8 connector (WO):
10-SYJ5143-□WO□□-01□



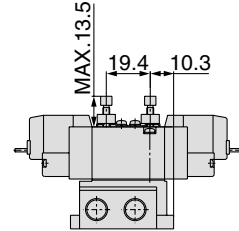
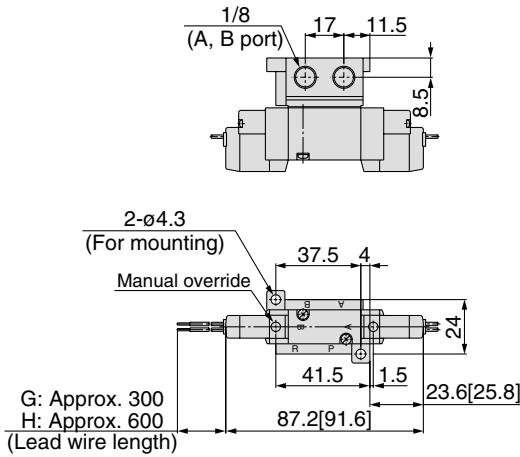
* Refer to page 563 for dimensions with connector cable.



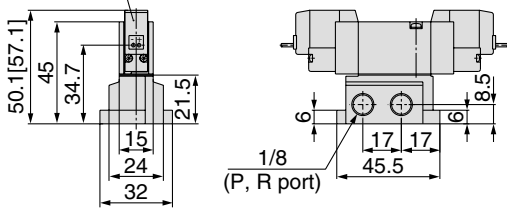
2 position double

Grommet (G), (H): 10-SYJ5243-□^G_H□□-01□

Built-in speed controller:
10-SYJ5253-□^G_H□□-01□



(Light/surge voltage suppressor)

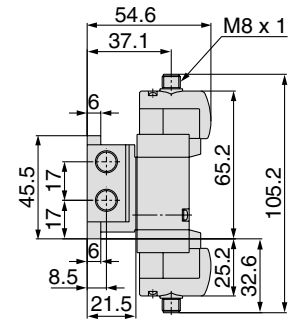
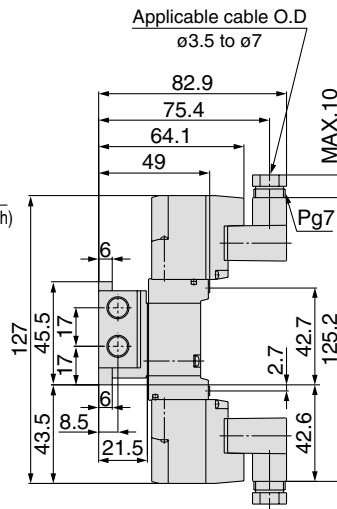
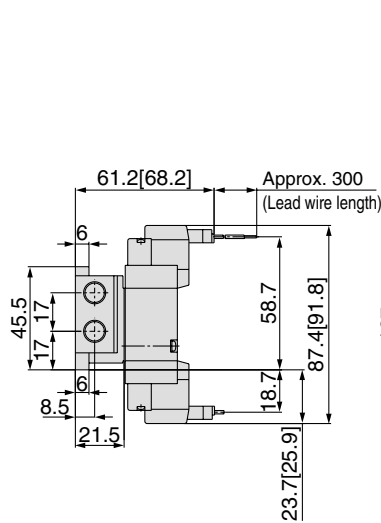
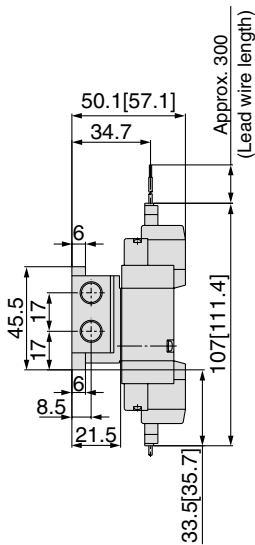


L plug connector (L):
10-SYJ5243-□L□□-01□

M plug connector (M):
10-SYJ5243-□M□□-01□

DIN Terminal (D):
10-SYJ5243-□D□□-01□

M8 connector (WO):
10-SYJ5243-□WO□□-01□



* Refer to page 563 for dimensions with connector cable.

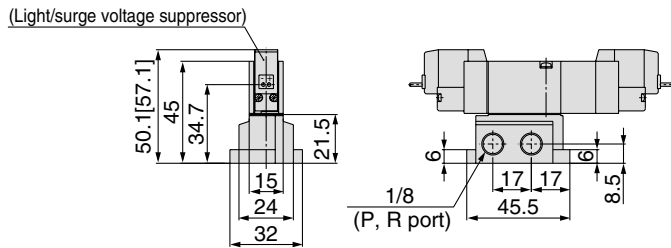
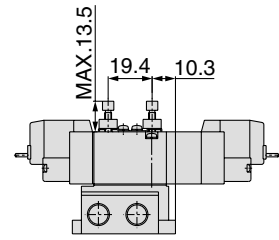
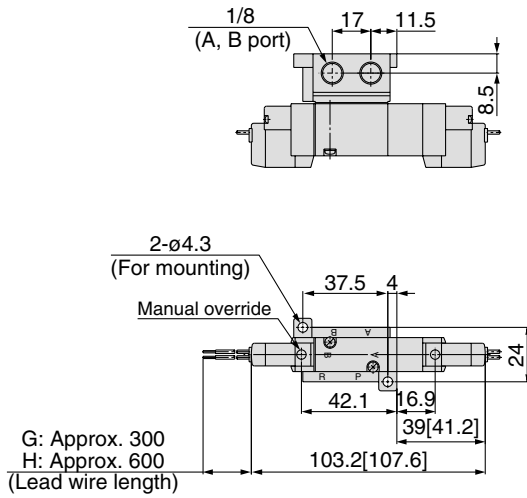
5 port solenoid valve Series **10-SYJ5000**

3 position closed center / Exhaust center / Pressure center



Grommet (G), (H): 10-SYJ5³₄43-□^G□□-01□

Built-in speed controller:
10-SYJ5³₄53-□^G□□-01□

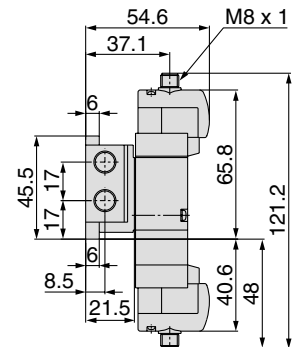
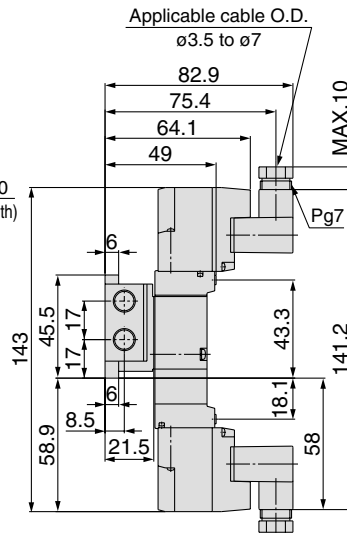
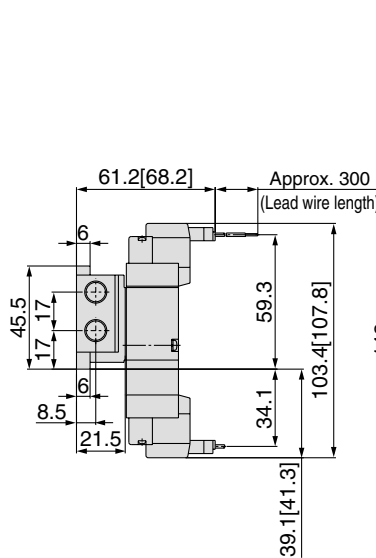
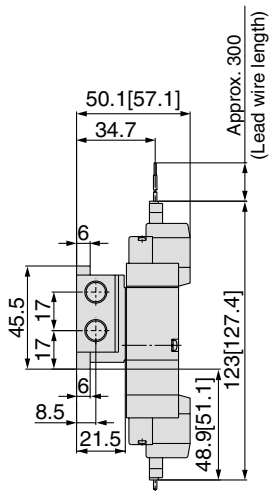


L plug connector (L):
10-SYJ5³₄43-□^L□□-01□

M plug connector (M):
10-SYJ5³₄43-□^M□□-01□

DIN Terminal (D):
10-SYJ5³₄43-□^D□□-01□

M8 connector (WO):
10-SYJ5³₄43-□^{WO}□□-01□



* Refer to page 563 for dimensions with connector cable.

Series 10-SYJ5000

Manifold specifications

Manifold standard



Manifold specifications

Model		Type 20	Type 40	Type 41	Type 42	Type 43
Manifold type		Single base / B mount				
P (SUP) / R (EXH)		Common SUP / Common EXH				
Valve stations		2 to 20 stations				
A, B port piping specifications	Location	Valve	Base	Base		
	Direction	Top	Bottom	Side		
Port size	P, R port	1/8			1/4	1/8
	A, B port	M5 x 0.8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	M5 x 0.8		1/8, C6 (One-touch fitting for ø6)	C4 (One-touch fitting for ø4)

Flow characteristics

Manifold model			Port size		Flow characteristics					
					1→4/2 (P→A/B)			4/2→5/3(A/B→R)		
			1(P), 5/3(R) port	2(B), 4(A) port	C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv
Body ported for internal pilot	10-SS5YJ5-20	10-SYJ5□23	1/8	M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19
			1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20
			1/8	C6	0.79	0.36	0.21	0.91	0.36	0.24
Base mounted for internal pilot	10-SS5YJ5-40	10-SYJ5□43	1/8	M5 x 0.8	0.55	0.35	0.15	0.64	0.26	0.16
	10-SS5YJ5-41		1/8	M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17
	10-SS5YJ5-42-01		1/4	1/8	0.74	0.22	0.18	0.82	0.31	0.21
	10-SS5YJ5-42-C6		1/4	C6	0.71	0.24	0.17	0.8	0.29	0.20
	10-SS5YJ5-43		1/8	C4	0.55	0.29	0.14	0.74	0.32	0.19



Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold (Example)

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model number.

Example **10-SS5YJ5-20-03** 1 set (Manifold base)
 * **10-SYJ5123-5G-M5** 2 sets (Valve)
 * **SYJ5000-21-4A** 1 set (Blanking plate assembly)

10-SS5YJ5-43-03-C4 1 set (Manifold base)
 * **10-SYJ5143-5LZ** 1 set (Valve)
 * **10-SYJ5243-5LZ** 1 set (Valve)
 * **SYJ5000-21-4A** 1 set (Blanking plate assembly)

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

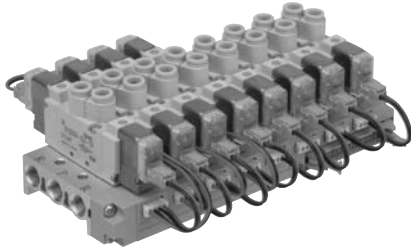
* Use manifold specification sheet.

Flat ribbon cable manifold

• **Multiple valve wiring is simplified through the use of the flat ribbon cable connector.**

• **Clean appearance**

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Flat ribbon cable manifold specifications

Model		Type 20P	Type 41P	Type 43P
Manifold type		Single base / B mount		
P(SUP) / R(EXH)		Common SUP / Common EXH		
Valve stations		3 to 12 stations		
A, B port piping specifications	Location	Valve		Base
	Direction	Top		Side
Port size	P, R port	1/8		1/8
	A, B port	M5 x 0.8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	M5 x 0.8	C4 (One-touch fitting for ø4)
Applicable flat ribbon cable connector		Socket: 26 pins MIL type with strain relief (Conforming to MIL-C-83503)		
Internal wiring		In common between +COM and -COM (Z type: +COM only)		
Rated voltage		12, 24 VDC 100, 110 VAC		

Note) The withstand voltage specification for the wiring section conforms to JIS C0704, Grade 1 or its equivalent.

Flow characteristics

Manifold	Port size	Flow characteristics								
		1→4/2 (P→A/B)			4/2→5/3 (A/B→R)					
		1(P), 5/3(R) port	2(B), 4(A) port	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	
Body ported for internal pilot	10-SS5YJ5-20P	10-SYJ5□23	1/8	M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19
			1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20
Base mounted for internal pilot	10-SS5YJ5-41P	10-SYJ5□43	1/8	M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17
	10-SS5YJ5-43P		1/8	C4	0.55	0.29	0.14	0.74	0.32	0.19

Note) Value at manifold base mounted, 2 position single operating

How to Order Manifolds (Example)

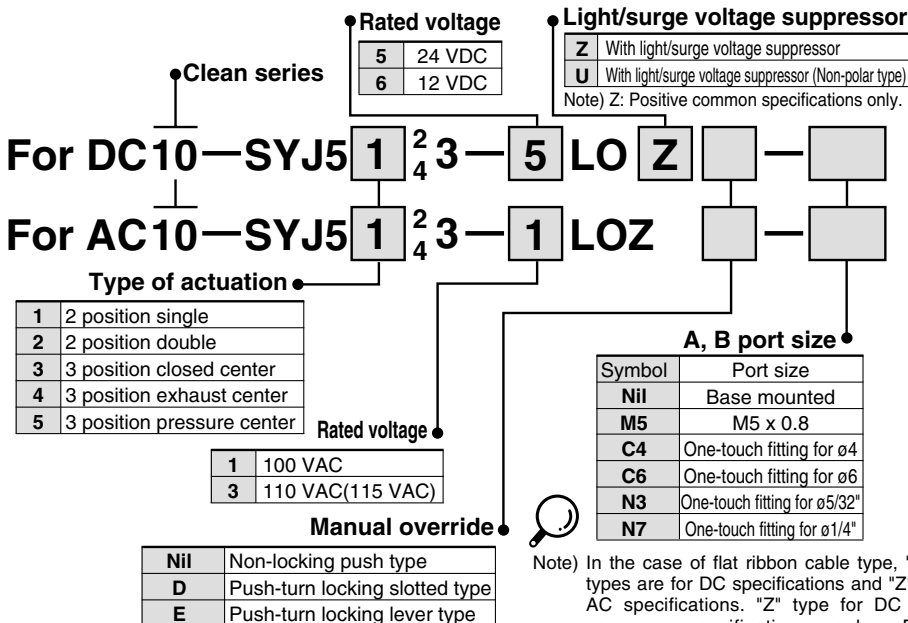
Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model number.

- Example
- 10-SS5YJ5-41P-07-C4 1 set (Manifold base)
 - * 10-SYJ5143-5LOU 3 sets (Valve)
 - * 10-SYJ5243-5LOU 3 sets (Valve)
 - * SYJ5000-21-3A 1 set (Blanking plate assembly)
 - * SY3000-37-28A 3 sets (Connector assembly)
 - * SY3000-37-29A 3 sets (Connector assembly)

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

* Use manifold specification sheet.

How to Order Valves



Note) In the case of flat ribbon cable type, "U" and "Z" types are for DC specifications and "Z" type is for AC specifications. "Z" type for DC is positive common specifications only. For other combinations, please contact SMC.

How to Order Connector Assembly

12, 24 VDC

Single solenoid	SY3000-37-28A
Double solenoid 3 position type	SY3000-37-29A
For single solenoid, individual SUP/EXH spacer	SY3000-37-3A
For double solenoid, 3 position individual SUP/EXH spacer	SY3000-37-4A
For 3 port adaptor plate	SY3000-37-3A

For 100 VAC

For single solenoid	SY3000-37-46A
Double solenoid 3 position type	SY3000-37-47A
For single solenoid, individual SUP/EXH spacer	SY3000-37-32A
For double solenoid, 3 position individual SUP/EXH spacer	SY3000-37-33A
3 port adaptor plate	SY3000-37-32A

For 100 VAC (115 VAC)

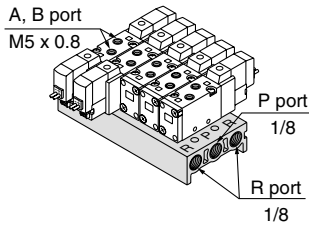
For single solenoid	SY3000-37-54A
Double solenoid 3 position type	SY3000-37-55A
For single solenoid, individual SUP/EXH spacer	SY3000-37-35A
For double solenoid, 3 position individual SUP/EXH spacer	SY3000-37-36A
For 3 port adaptor plate	SY3000-37-35A

Common SUP / Common EXH



Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 20 (5 port / Body ported)



How to Order

10-SS5YJ5-20-05 []

- Clean series
- Number of stations

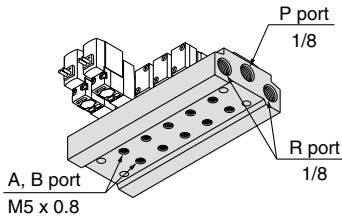
02	2 stations
:	:
20	20 stations
- P, R port thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

Applicable solenoid valve
10-SYJ5□23-□□□□^{M5}_{C4 C6}

Applicable blanking plate assembly
SYJ5000-21-4A
Applicable individual EXH spacer assembly
SYJ5000-17-1A

Type 40 (5 port / Base mounted)



How to Order

10-SS5YJ5-40-05-M5 []

- Clean series
- Number of stations

02	2 stations
:	:
20	20 stations
- A, B port size

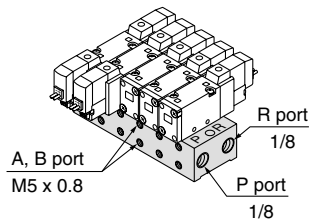
M5	M5 x 0.8
----	----------
- P, R port thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
10-SYJ5□43-□□□□
10-SYJ5□53-□□□□

Applicable blanking plate assembly
SYJ5000-21-4A
Applicable individual EXH spacer assembly
SYJ5000-17-1A

Type 41 (5 port / base mounted)



How to Order

10-SS5YJ5-41-05-M5 []

- Clean series
- Number of stations

02	2 stations
:	:
20	20 stations
- A, B port size

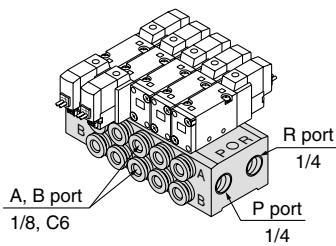
M5	M5 x 0.8
----	----------
- P, R port thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
10-SYJ5□43-□□□□
10-SYJ5□53-□□□□

Applicable blanking plate assembly
SYJ5000-21-4A
Applicable individual EXH spacer assembly
SYJ5000-17-1A
Applicable individual SUP spacer assembly
SYJ5000-16-2A

Type 42 (5 port / base mounted)



How to Order

10-SS5YJ5-42-05-C6 []

- Clean series
- Number of stations

02	2 stations
:	:
20	20 stations
- A, B port size

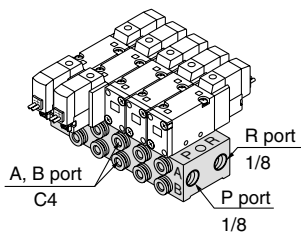
01	1/8
C6	One-touch fitting for ø6
N7	One-touch fitting for ø1/4"
- Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
10-SYJ5□43-□□□□
10-SYJ5□53-□□□□

Applicable blanking plate assembly
SYJ5000-21-4A
Applicable individual EXH spacer assembly
SYJ5000-17-1A
Applicable individual SUP spacer assembly
SYJ5000-16-2A

Type 43 (5 port / base mounted)



How to Order

10-SS5YJ5-43-05-C4 []

- Clean series
- Manifold stations

02	2 stations
:	:
20	20 stations
- A, B port size

C4	One-touch fitting for ø4
N3	One-touch fitting for ø5/32"
- P, R port thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

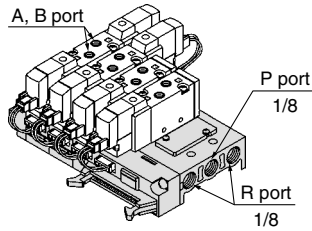
Manifold specifications 10-SYJ5000

Flat ribbon cable manifold

Common SUP / Common EXH

Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 20P (5 port / body ported)



How to Order

10-SS5YJ5-20P-05

• Clean series

Number of stations	•
03	3 stations
:	:
12	12 stations

• P, R port thread type

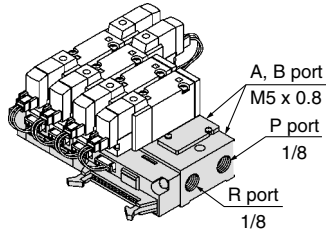
Nil	Rc
00F	G
00N	NPT
00T	NPTF

Applicable solenoid valve
Refer to page 526.

Applicable blanking plate assembly
SYJ5000-21-3A

Applicable connector assembly
Refer to page 526.

Type 41P (5 port / base mounted)



How to Order

10-SS5YJ5-41P-05-M5

• Clean series

Number of stations	•
03	3 stations
:	:
12	12 stations

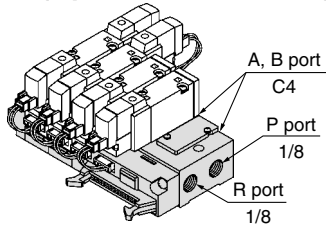
• P, R port size

Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
Refer to page 526.

Applicable blanking plate assembly
SYJ5000-21-3A

Type 43P (5 port / base mounted)



How to Order

10-SS5YJ5-43P-05-C4

• Clean series

Number of stations	•
03	3 stations
:	:
12	12 stations

• A, B port size

C4	One-touch fitting for ø4
N3	One-touch fitting for ø5/32"

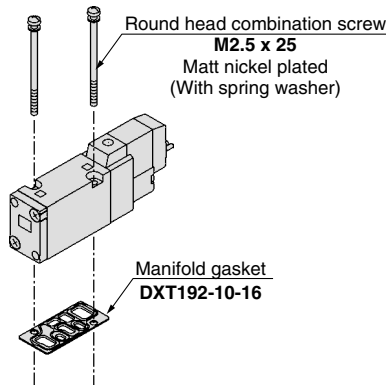
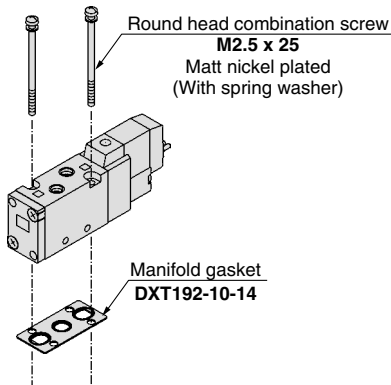
• P, R port thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Applicable connector assembly
Refer to page 526.

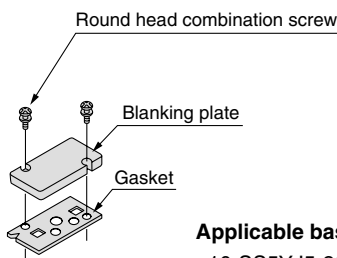
<Manifold option>

Combinations of solenoid valve, manifold gasket and manifold base



Blanking plate assembly

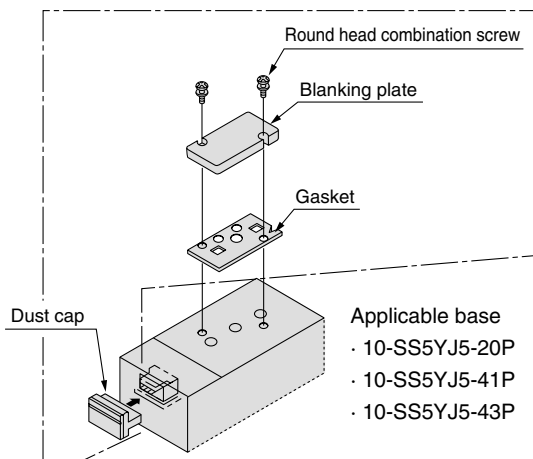
SYJ5000-21-4A



Applicable base

- 10-SS5YJ5-20
- 10-SS5YJ5-40
- 10-SS5YJ5-41
- 10-SS5YJ5-42
- 10-SS5YJ5-43

SYJ5000-21-3A



Applicable base

- 10-SS5YJ5-20P
- 10-SS5YJ5-41P
- 10-SS5YJ5-43P

⚠ Caution

Mounting screw tightening torque

M2.5: 0.45N·m

Use caution to the assembly orientation for solenoid valve, gasket, and optional parts.

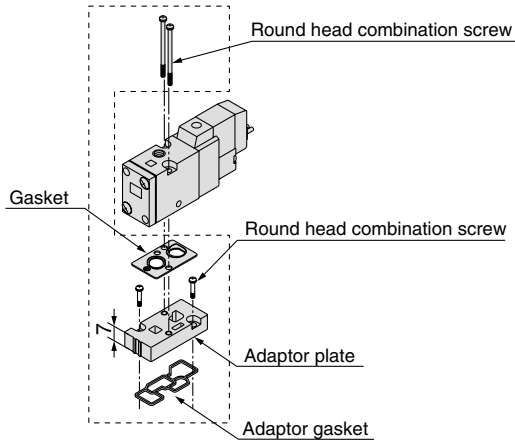
<Manifold option>

Mix installation of the 10-SYJ500 and the 10-SYJ5000 valves on the same manifold

- Use of an adapter plate makes it possible to mount Series 10-SYJ500 on the manifold bases of series 10-SYJ5000.
- When mounting the 10-SYJ500 valve on the 10-SYJ5000 manifold, the 10-SYJ500 solenoid must be positioned on the same side of the manifold as a single solenoid of 10-SYJ5000.
- For base mounted style, the A port of the 3 port valve flows out the B port of manifold base.

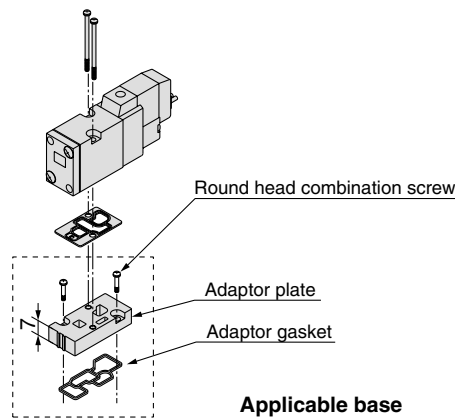
Adaptor plate assembly

SYJ500-3-2A



Applicable base
 · 10-SS5YJ5-20

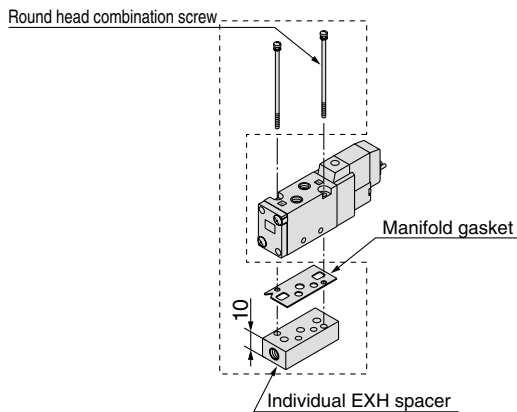
SYJ500-3-1A



Applicable base
 · 10-SS5YJ5-40
 · 10-SS5YJ5-41
 · 10-SS5YJ5-42
 · 10-SS5YJ5-43

Individual EXH spacer assembly

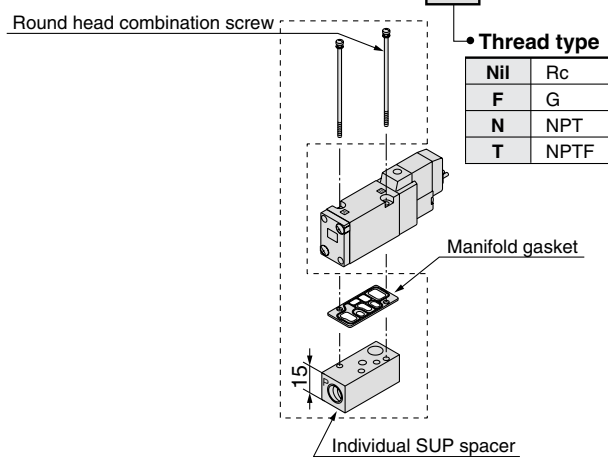
SYJ5000-17-1A



Applicable base
 · 10-SS5YJ5-20
 · 10-SS5YJ5-40
 · 10-SS5YJ5-41
 · 10-SS5YJ5-42
 · 10-SS5YJ5-43

Individual SUP spacer assembly

SYJ5000-16-2 A



Applicable base
 · 10-SS5YJ5-41
 · 10-SS5YJ5-42
 · 10-SS5YJ5-43

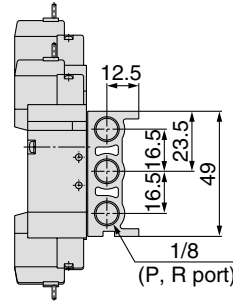
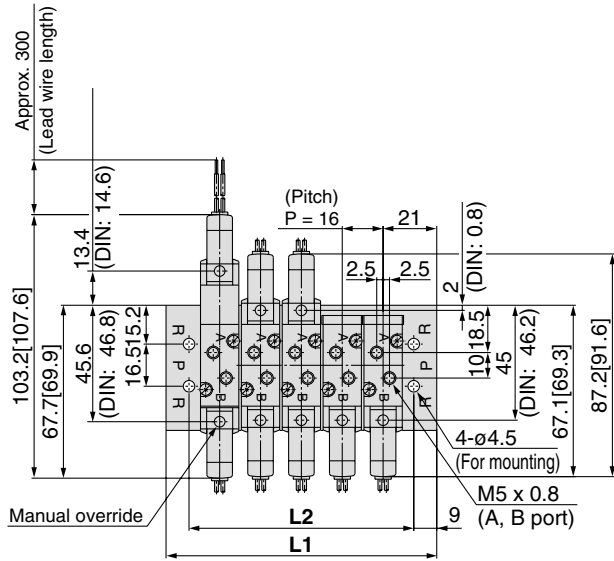
Caution

Mounting screw tightening torque

M2.5: 0.45N·m

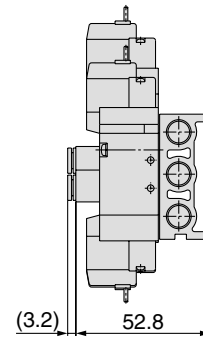
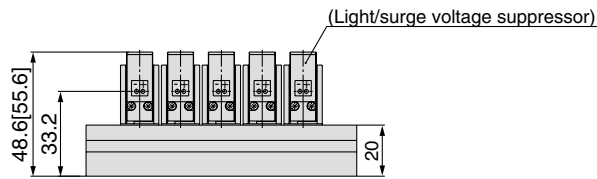
Use caution to the assembly orientation for solenoid valves, gasket, and optional parts.

Grommet (G)



Built-in One-touch fitting

(Station n)----- (Station 1)

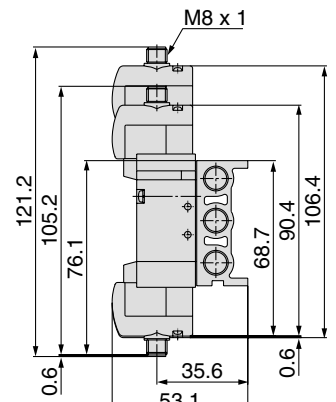
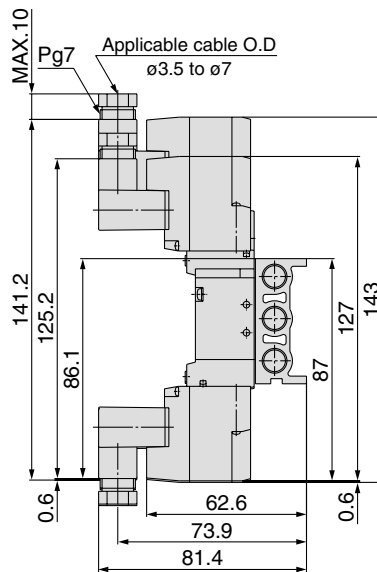
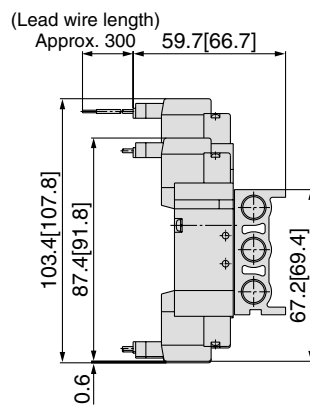
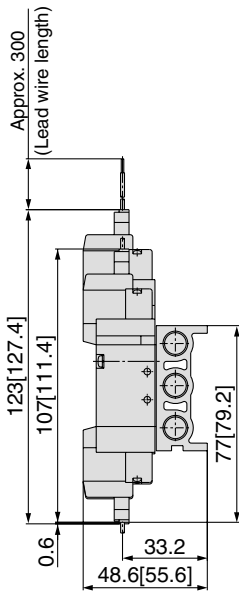


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



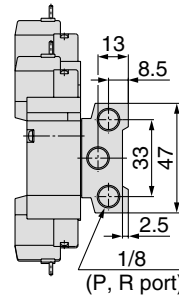
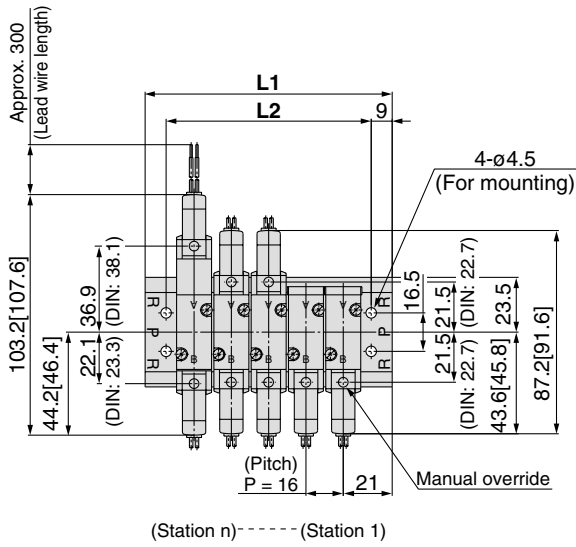
* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330	346
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

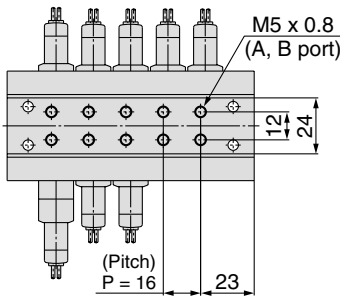
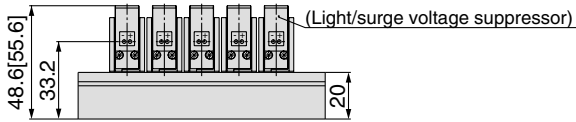
Type 40: Bottom ported / 10-SS5YJ5-40- **Stations** -M5□



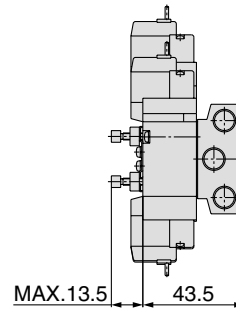
Grommet (G)



(Station n)----- (Station 1)



Built-in speed controller

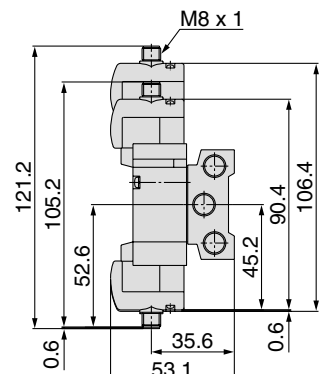
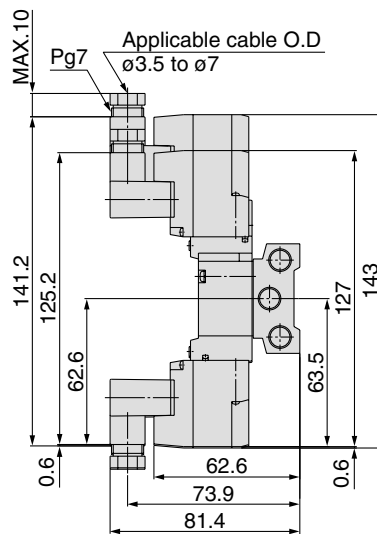
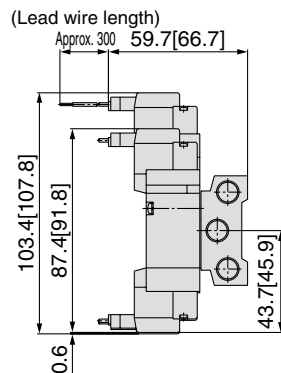
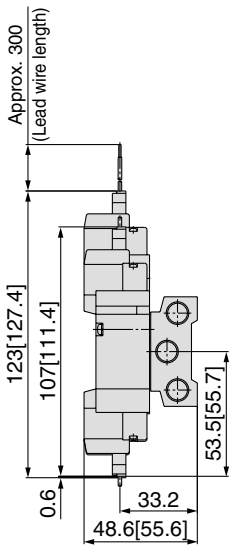


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330	346
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

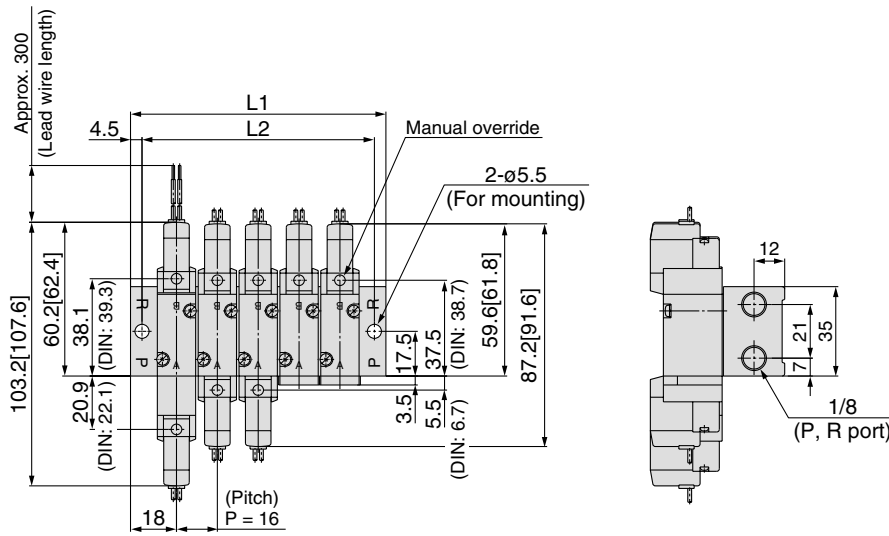
Air preparation equipment

Pressure switch

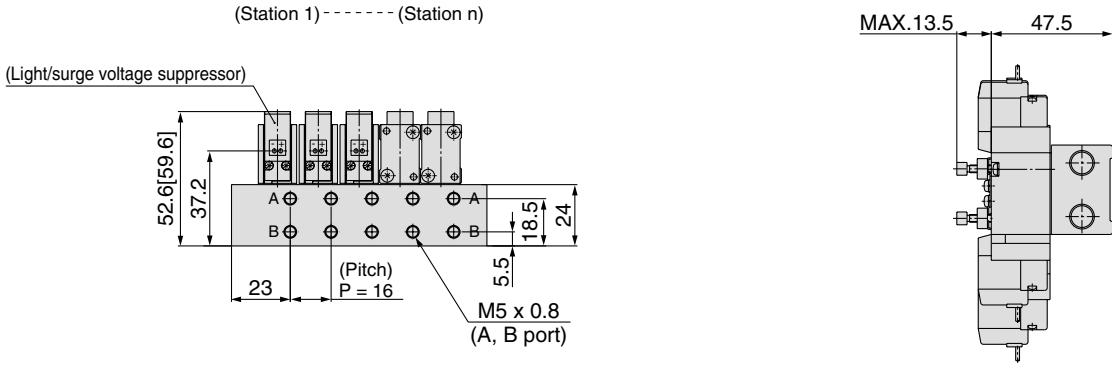
Clean gas filter

Type 41: Side ported / 10-SS5YJ5-41- Stations -M5

Grommet (G)



Built-in speed controller

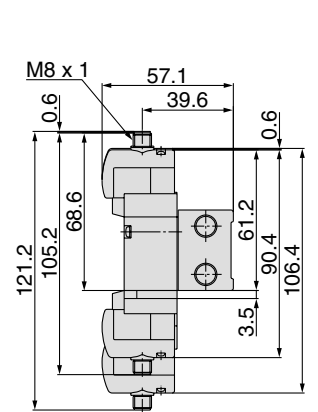
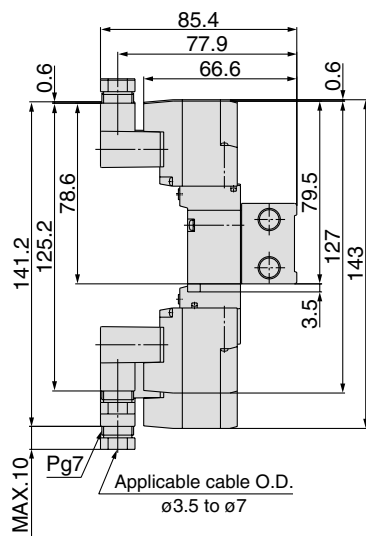
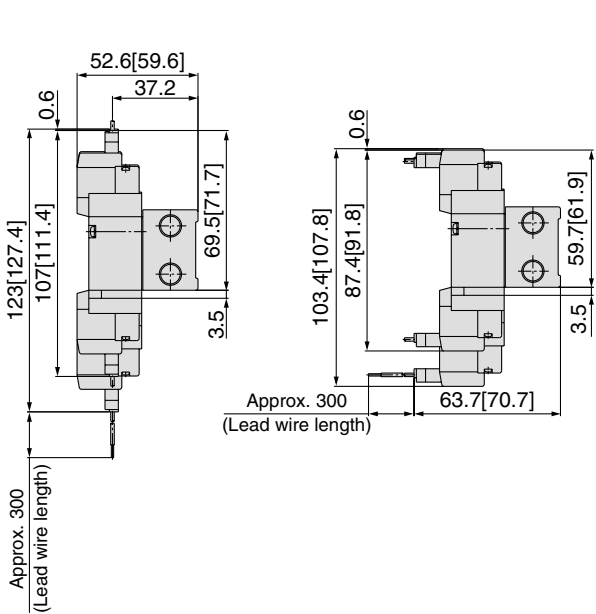


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



* Refer to page 563 for dimensions with connector cable.

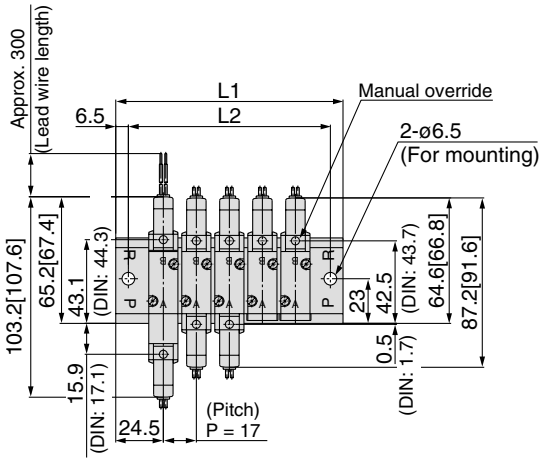
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331

Type 42: Side ported / 10-SS5YJ5-42- Stations -01, **C6** **N7**

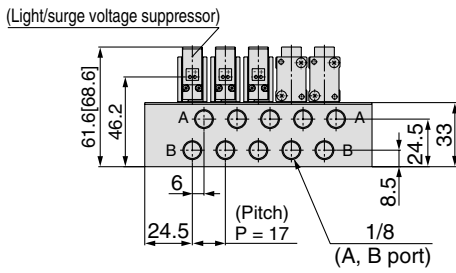
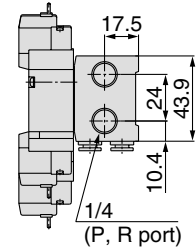
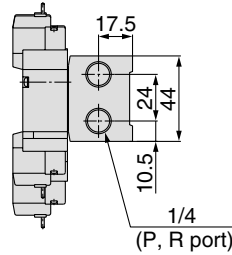


Grommet (G)
01

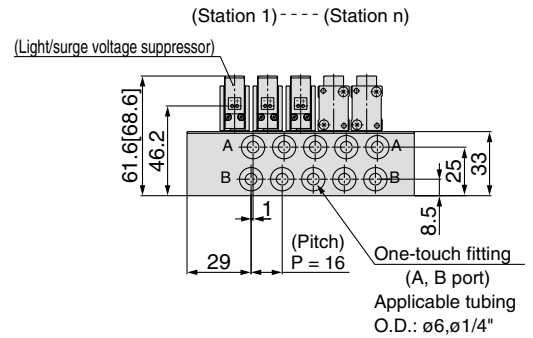
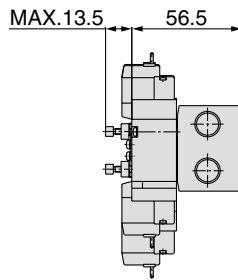
C6 **N7** (With built-in One-touch fitting)



(Station 1) ---- (Station n)



Built-in speed controller



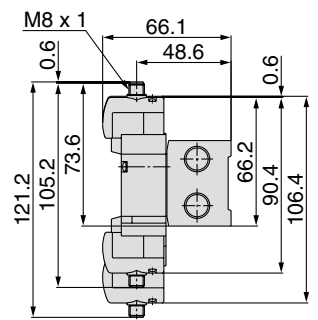
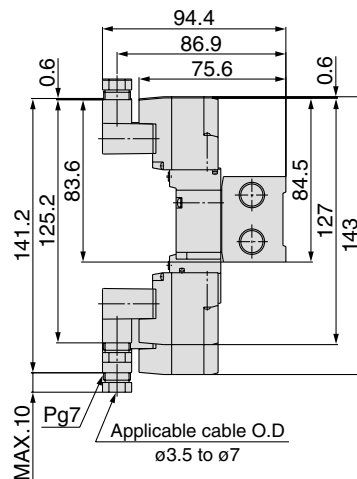
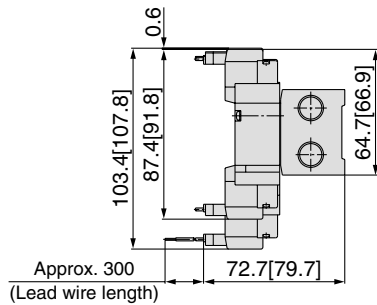
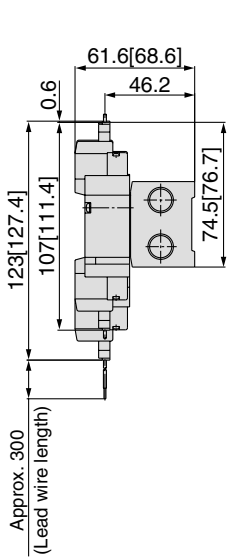
* Other dimensions are the same as the grommet type.

L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



* Refer to page 563 for dimensions with connector cable.

A, B port size	Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
1/8	L1	66	83	100	117	134	151	168	185	202	219	236	253	270	287	304	321	338	355	372
	L2	53	70	87	104	121	138	155	172	189	206	223	240	257	274	291	308	325	342	359
C6/N7	L1	65	81	97	113	129	145	161	177	193	209	225	241	257	273	289	305	321	337	353
	L2	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

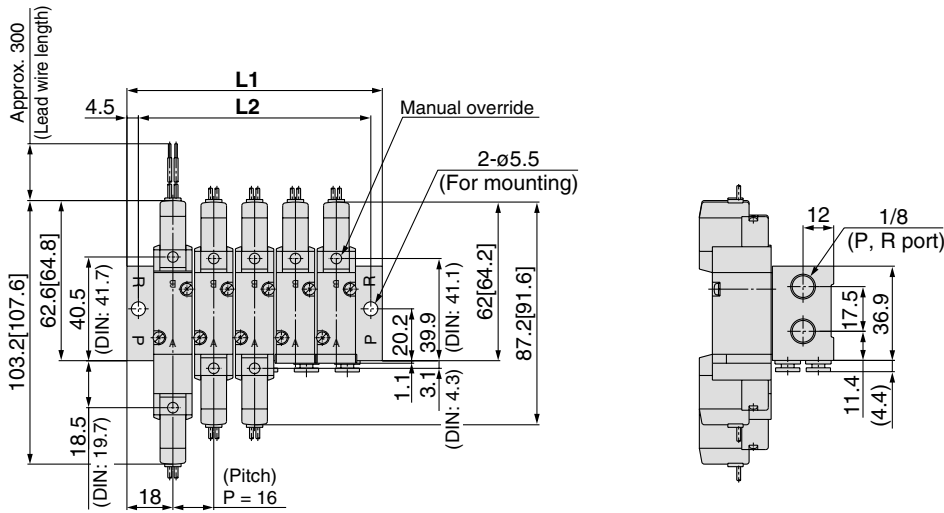
Fittings & Tubing

Air preparation equipment

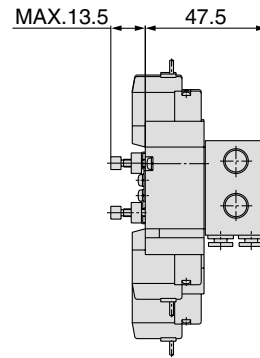
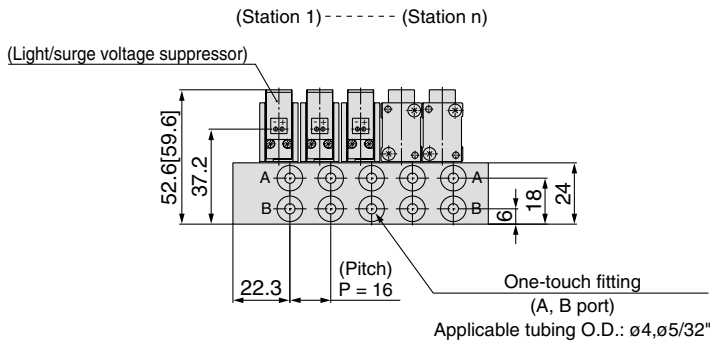
Pressure switch

Clean gas filter

Grommet (G)



Built-in speed controller

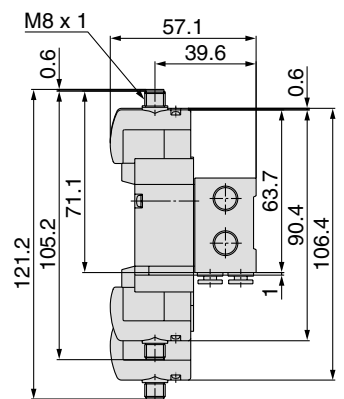
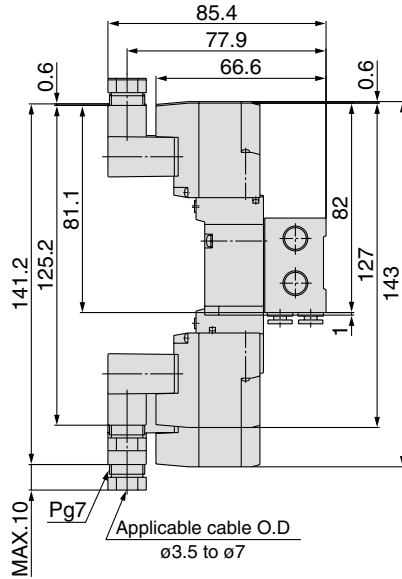
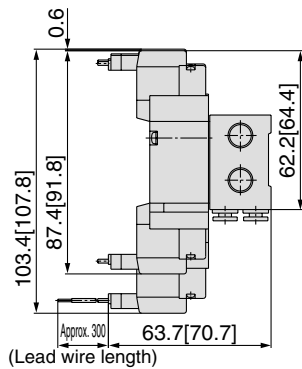
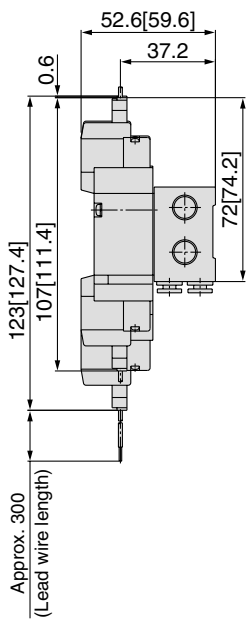


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



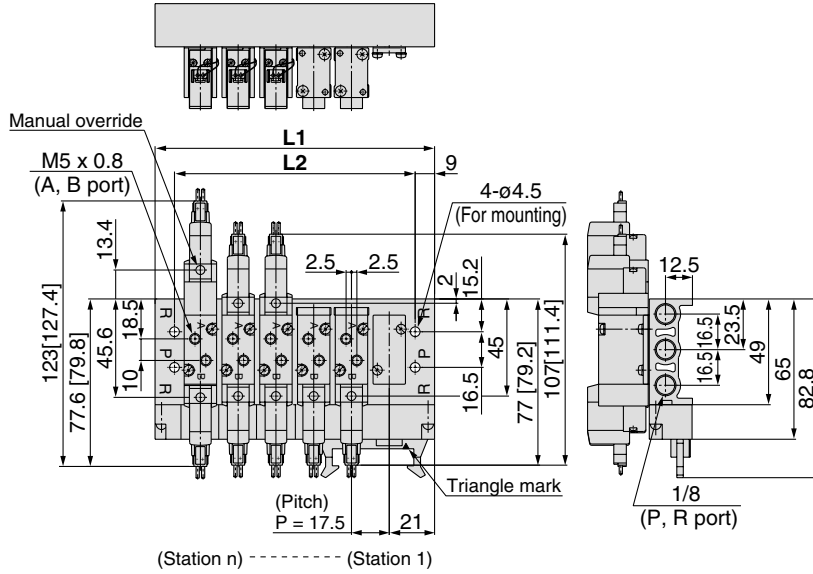
* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331

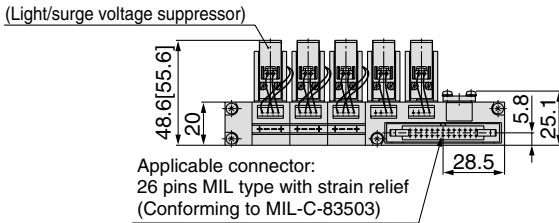
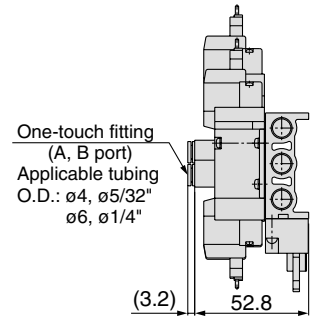


Flat ribbon cable manifold

10-SS5YJ5-20P- Stations -00

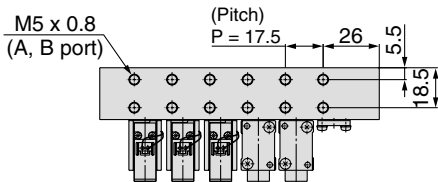


**C4, N3
C6, N7
(With built-in One-touch fitting)**

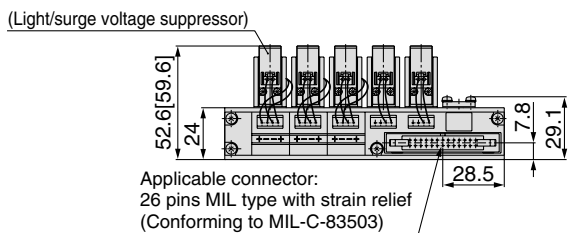
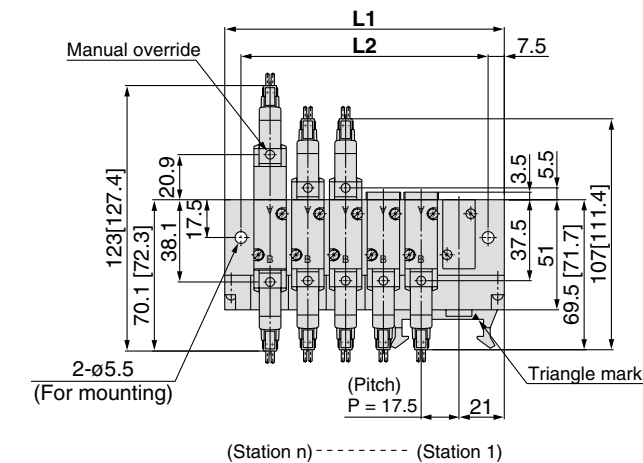
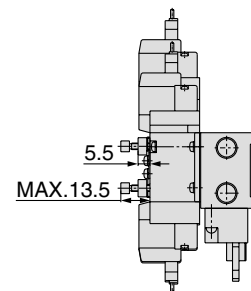


Stations n	3 stations	4	5	6	7	8	9	10	11	12 stations
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	59	76.5	94	111.5	129	146.5	164	181.5	199	216.5

10-SS5YJ5-41P- Stations -M5



Built-in speed controller



Stations n	3 stations	4	5	6	7	8	9	10	11	12 stations
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

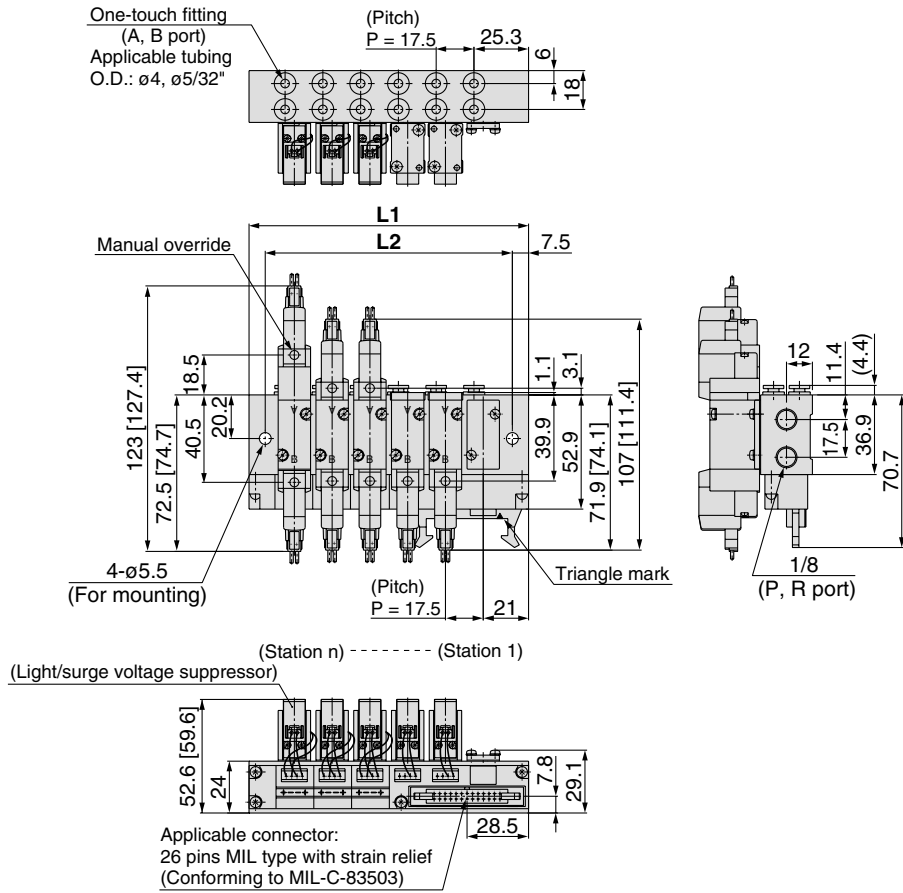
Air preparation equipment

Pressure switch

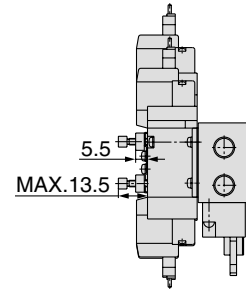
Clean gas filter

Flat ribbon cable manifold

10-SS5YJ5-43P- Stations C4 N3 □

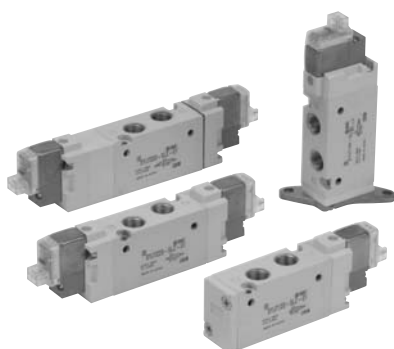


Built-in speed controller



Stations n	3 stations	4	5	6	7	8	9	10	11	12 stations
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5

Series 10-SYJ7000 Rubber seal 5 port solenoid valve



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	0.15 to 0.7
Ambient and fluid temperature (°C)	-10 to 50 (with no freezing. Refer to page 714.)	
Response time ms (0.5MPa) <small>Note 1</small>	2 position single, double	30 or less
	3 position	60 or less
Max. operating frequency (Hz)	2 position single, double	5
	3 position	3
Manual override (Manual operation)	Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type	
Pilot exhaust method	Common exhaust for the pilot and main valve	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Impact/Vibration resistance m/s² <small>Note 2</small>	150/30	
Enclosure	Dustproof (*DIN terminal, M8 connector conforms to IP65.)	

* Based on IEC60529
 Note 1) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature : 20°C, at rated voltage, without surge voltage suppressor)
 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 between 45 and 2000Hz. Test was performed 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)

Solenoid specifications

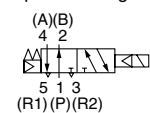
Electrical entry	Grommet (G), (H) L plug connector (L) M plug connector (M) DIN terminal (D) M8 connector (W)	
	G, H, L, M, W	D
Coil rated voltage V	DC	24, 12, 6, 5, 3
	AC 50/60Hz	100, 110, 200, 220
Allowable voltage fluctuation	±10% of rated voltage *	
Power consumption (W)	DC	Standard 0.35 (With indicator light: 0.4 (DIN connector with indicator light: 0.45)) With power saving circuit 0.1 (With indicator light only)
	AC	100V 0.78 (With indicator light: 0.81) 0.78 (With indicator light: 0.87) 110V 0.86 (With indicator light: 0.89) 0.86 (With indicator light: 0.97) [115V] [0.94 (With indicator light: 0.97)] [0.94 (With indicator light: 1.07)] 200V 1.18 (With indicator light: 1.22) 1.15 (With indicator light: 1.30) 220V 1.30 (With indicator light: 1.34) 1.27 (With indicator light: 1.46) [230V] [1.42 (With indicator light: 1.46)] [1.39 (With indicator light: 1.60)]
Apparent power (VA) *	Surge voltage suppressor Diode (DIN terminal, varistor for non-polar type)	
	Indicator light LED (Neon light when AC with DIN terminal)	

* In common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC.
 * For 115 and 230 VAC, the allowable voltage fluctuation is -15% to +5% of rated voltage.
 * For the allowable voltage fluctuation for S, Z and T types (with power saving circuit), please observe the following range because they have voltage drop due to internal circuit.
 S and Z types 24 VDC: -7% to +10%
 12 VDC: -4% to +10%
 T type 24 VDC: -8% to +10%
 12 VDC: -6% to +10%

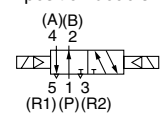
JIS Symbol

Body ported

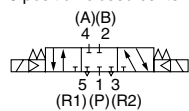
2 position single



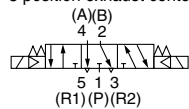
2 position double



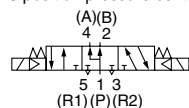
3 position closed center



3 position exhaust center

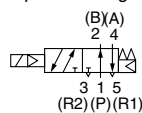


3 position pressure center

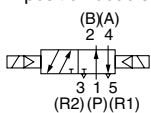


Base mounted

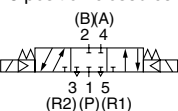
2 position single solenoid



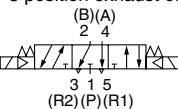
2 position double solenoid



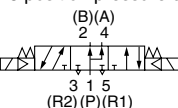
3 position closed center



3 position exhaust center



3 position pressure center



Made to order specifications (Refer to page 557 for details.)

5 port solenoid valve Series 10-SYJ7000

Flow characteristics / Weight

Valve model	Type of actuation	Port size		Flow characteristics ^{Note 1)}						Weight (g) ^{Note 2, 3)}							
		1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	L/M plug connector	DIN terminal	M8 connector				
				C[dm ³ /(s·bar)]	b	Cv	C[dm ³ /(s·bar)]	b	Cv								
Body ported	10-SYJ7□23-□01	2 position	Single	1/8	1/8	2.2	0.36	0.58	2.4	0.34	0.63	85	86	107	90		
			Double														
		3 position	Closed center			1.8	0.37	0.45	2.0	0.35	0.49						
			Exhaust center			1.2	0.50	0.34	3.0[1.3]	0.35[0.52]	0.73[0.39]						
	Body ported	10-SYJ7□23-□C6	2 position	Single	1/8	C6 (One-touch fitting for ø6)	1.6	0.33	0.4	2.2	0.32	0.53	96	97	98	101	
				Double													
			3 position	Closed center			1.4	0.27	0.35	1.9	0.33	0.49					
				Exhaust center			1.1	0.37	0.27	2.5[1.3]	0.32[0.54]	0.61[0.38]					
		Body ported	10-SYJ7□23-□C8	2 position	Single	1/8	C8 (One-touch fitting for ø8)	2.0	0.39	0.52	2.3	0.34	0.61	96	97	98	101
					Double												
				3 position	Closed center			1.7	0.35	0.42	2.0	0.29	0.49				
					Exhaust center			1.2	0.38	0.33	2.6[1.3]	0.35[0.49]	0.67[0.38]				
Base mounted			10-SYJ7□43-□01	2 position	Single	1/8	1/8	2.3	0.45	0.57	2.8	0.37	0.71	165(85)	166(86)	187(107)	170(90)
					Double												
				3 position	Closed center			1.9	0.36	0.48	2.1	0.46	0.57				
					Exhaust center			1.2	0.48	0.35	3.4[1.3]	0.36[0.57]	0.86[0.41]				
	Base mounted		10-SYJ7□43-□02	2 position	Single	1/4	1/4	2.3	0.41	0.61	2.9	0.35	0.74	165(85)	166(86)	187(107)	170(90)
					Double												
				3 position	Closed center			1.9	0.46	0.50	2.2	0.44	0.60				
					Exhaust center			1.3	0.45	0.35	3.7[1.4]	0.27[0.56]	0.87[0.43]				
		Base mounted	10-SYJ7□43-□02	2 position	Single	1/4	1/4	3.6[0.83]	0.23[0.55]	0.84[0.25]	2.1	0.47	0.58	188(108)	190(110)	232(152)	198(118)
					Double												
				3 position	Closed center			1.9	0.46	0.50	2.2	0.44	0.60				
					Exhaust center			1.3	0.45	0.35	3.7[1.4]	0.27[0.56]	0.87[0.43]				



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

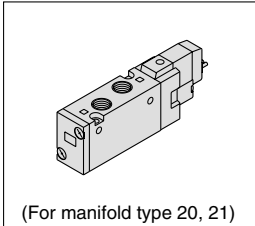
Note 2) (): Without sub-plate

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

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

Electrical entry for G, H, L, M, W

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)

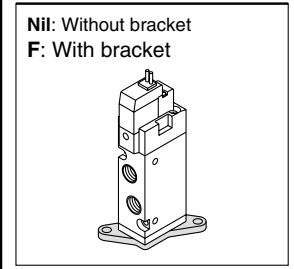
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.
 * For "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Electrical entry for D

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

* "DOZ" is not available.
 * For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Bracket



Note) Do not remove the factory installed bracket from models with the bracket option. Removal of the bracket will cause the valve to leak. Brackets cannot be retrofitted.

Rated voltage

DC specifications		AC specifications (50/60Hz)	
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		

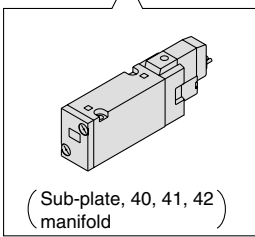
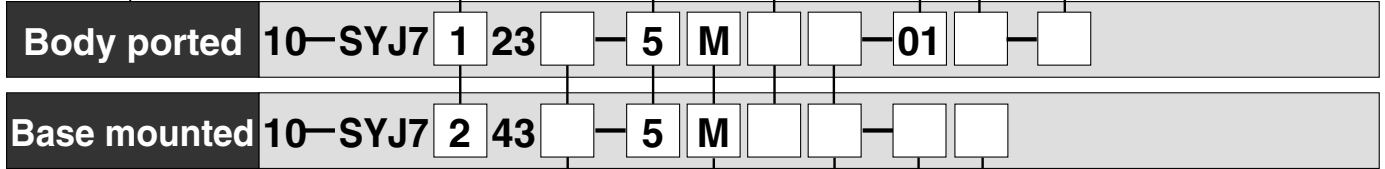
* DC specifications of type "D" and "DO" is only available with 12 and 24 V DC.
 * For type "W□", DC voltage is only available.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A, B port size

01	1/8
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16"

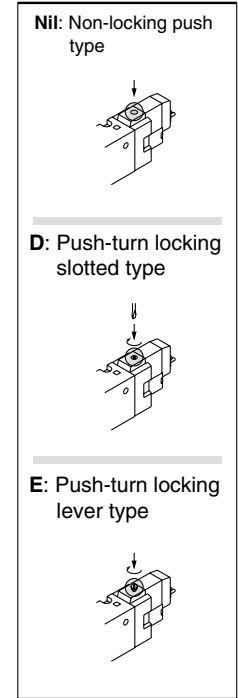


Coil specifications

Nil	Standard
T	With power saving circuit <For 24 and 12 VDC only>

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

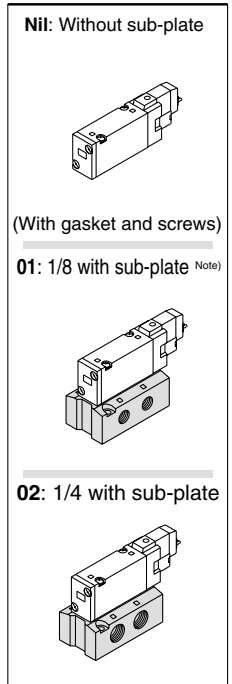
Manual override



Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Port size



Electrical entry

24, 12, 6, 5, 3 VDC / 100, 110, 200, 220 VAC				24, 12 VDC, 100, 110, 200, 220 VAC		24, 12 VDC, 6, 5, 3 VDC	
Grommet	L plug connector	M plug connector		DIN terminal	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	D: With connector	WO: Without connector		
H: Lead wire length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector	DO: Without connector	W□: With connector cable (Note 1)		

Note 1) Be sure to enter a symbol of the cable length with reference to page 562.
 Note) R1, R2 ports : 1/4

* "LN", "MN" type : with 2 sockets.
 * DIN terminal type "Y" conforming to EN-175301-803C (former DIN43650C) is also available. For details, refer to page 557.
 * For connector cable of M8 connector, refer to page 562.

Air cylinder
 Rotary actuator
 Air gripper
 Directional control valve
 Flow control equipment
 Filter, Pressure control equipment
 Fittings & Tubing
 Air preparation equipment
 Pressure switch
 Clean gas filter

How to Order Pilot Valve Assembly

10—V111 — **5** **G**

• Clean series

• Coil specifications

Nil	Standard
T	With power saving circuit <24 and 12 VDC only>

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

• 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 "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

• Rated voltage

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

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

• Electrical entry

G	Grommet (Lead wire length 300 mm)
H	Grommet (Lead wire length 600 mm)
L	L plug connector
LN	L plug connector
LO	L plug connector
M	M plug connector
MN	M plug connector
MO	M plug connector
WO	M8 connector
W□	connector

With lead wire
Without lead wire
Without connector
With lead wire
Without lead wire
Without connector
Without connector cable
With connector cable ^{Note 1)}

* For connector cable of M8 connector, refer to page 562.

10—V115 — **5** **D**

• Clean series

• Rated voltage

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

• Light/surge voltage suppressor

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

* "DOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

• Electrical entry

D	DIN terminal	With connector
DO	terminal	Without connector

Note) Do not replace 10-V111 (G, H, L, M, W) to 10-V115 (DIN terminal) and vice versa when replacing pilot valve assembly only.

Note 1) Be sure to enter a symbol of the cable length with reference to page 562.

How to Order L/M Plug Connector Assembly

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 (With connector and 2 of sockets only): **SY100-30-A**

• Lead wire length

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

How to Order M8 Connector Cable

V100-49-1- □

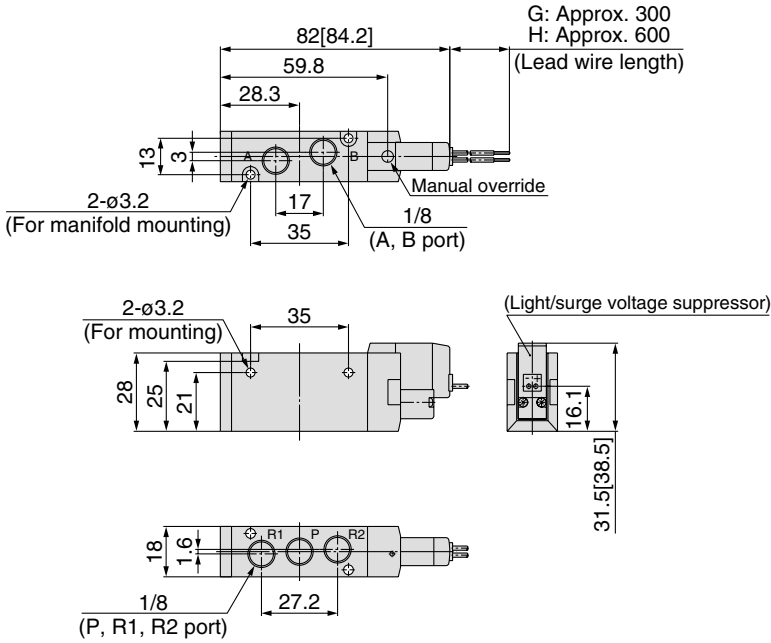
• Cable length

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

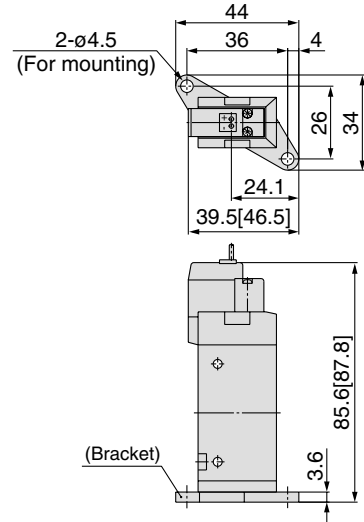


2 position single

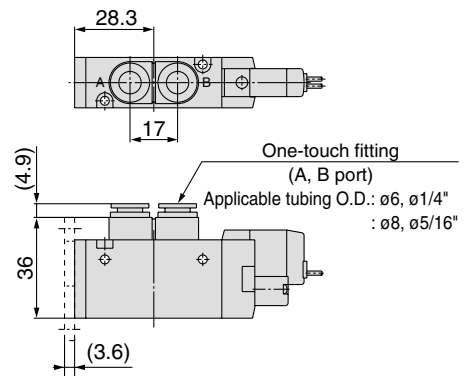
Grommet (G), (H): 10-SYJ7123-□^G□□-01□



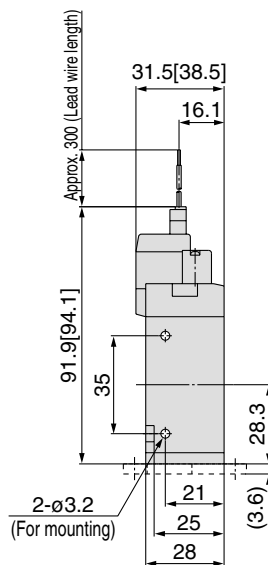
With bracket
10-SYJ7123-□^G□□-01□-F



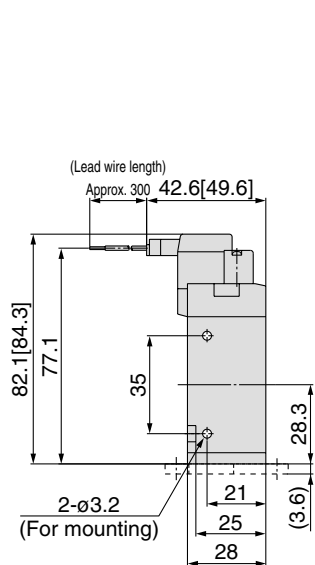
Built-in One-touch fitting:
10-SYJ7123-□^G□□-C₆, N₇ □ (-F)
□^H□□-C₈, N₉ □ (-F)



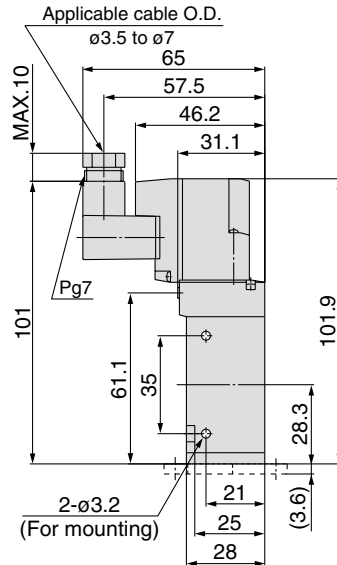
L plug connector (L)
10-SYJ7123-□L□□-01□ (-F)



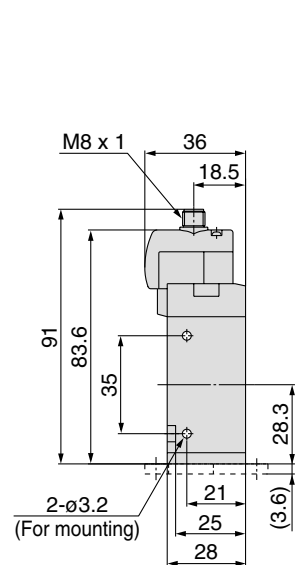
M plug connector (M)
10-SYJ7123-□M□□-01□ (-F)



DIN Terminal (D):
10-SYJ7123-□D□□-01□ (-F)



M8 connector (WO):
10-SYJ7123-□WO□□-01□ (-F)



* Refer to page 563 for dimensions with connector cable.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

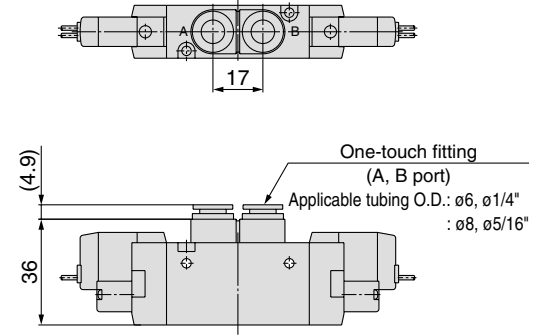
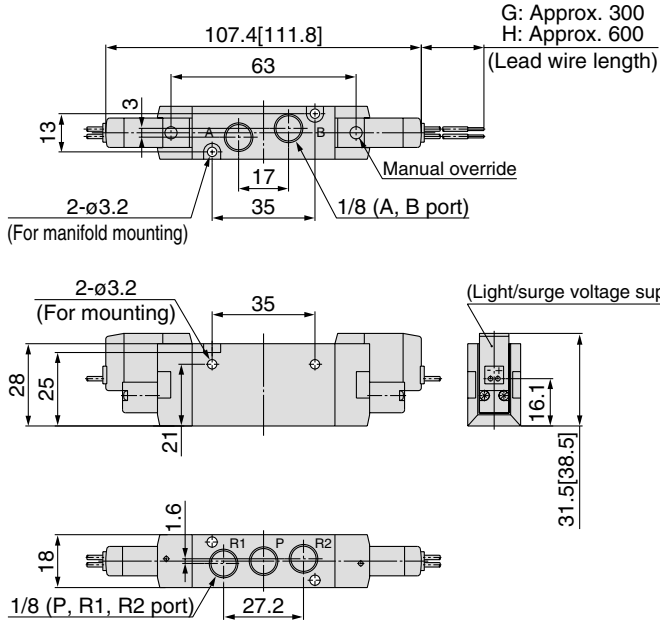
Pressure switch

Clean gas filter

2 position double

Grommet (G), (H): 10-SYJ7223-□^G□□-01□

Built-in One-touch fitting:
10-SYJ7223-□^G□□-^{C6, N7}_{C8, N9}□

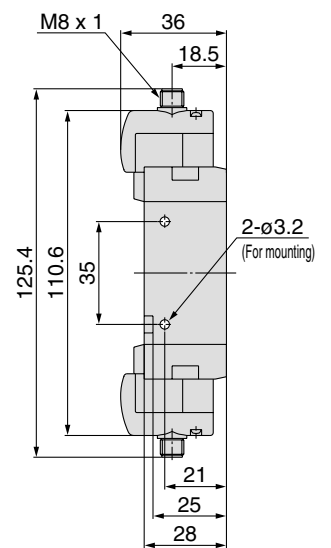
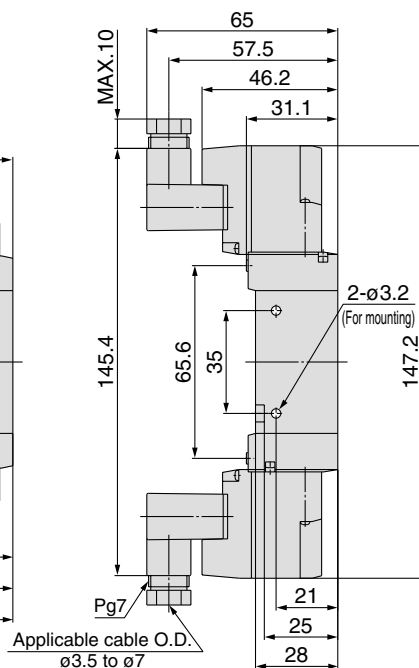
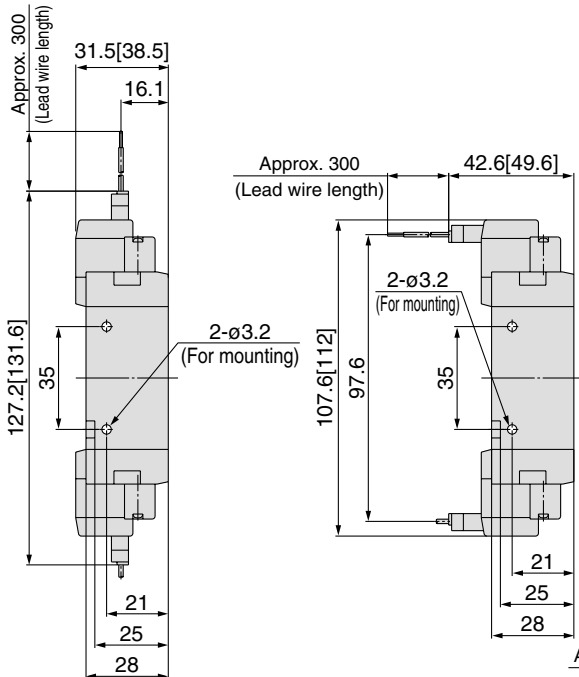



L plug connector (L):
10-SYJ7223-□^L□□-01□

M plug connector (M):
10-SYJ7223-□^M□□-01□

DIN Terminal (D):
10-SYJ7223-□^D□□-01□

M8 connector (WO):
10-SYJ7223-□^{WO}□□-01□



 * Refer to page 563 for dimensions with connector cable.



3 position closed center / Exhaust center / Pressure center

Grommet (G), (H): 10-SYJ7³/₅23-□^G□□-01□

Built-in One-touch fitting:
10-SYJ7³/₅23-□^G□□-^{C6, N7}/_{C8, N9}□

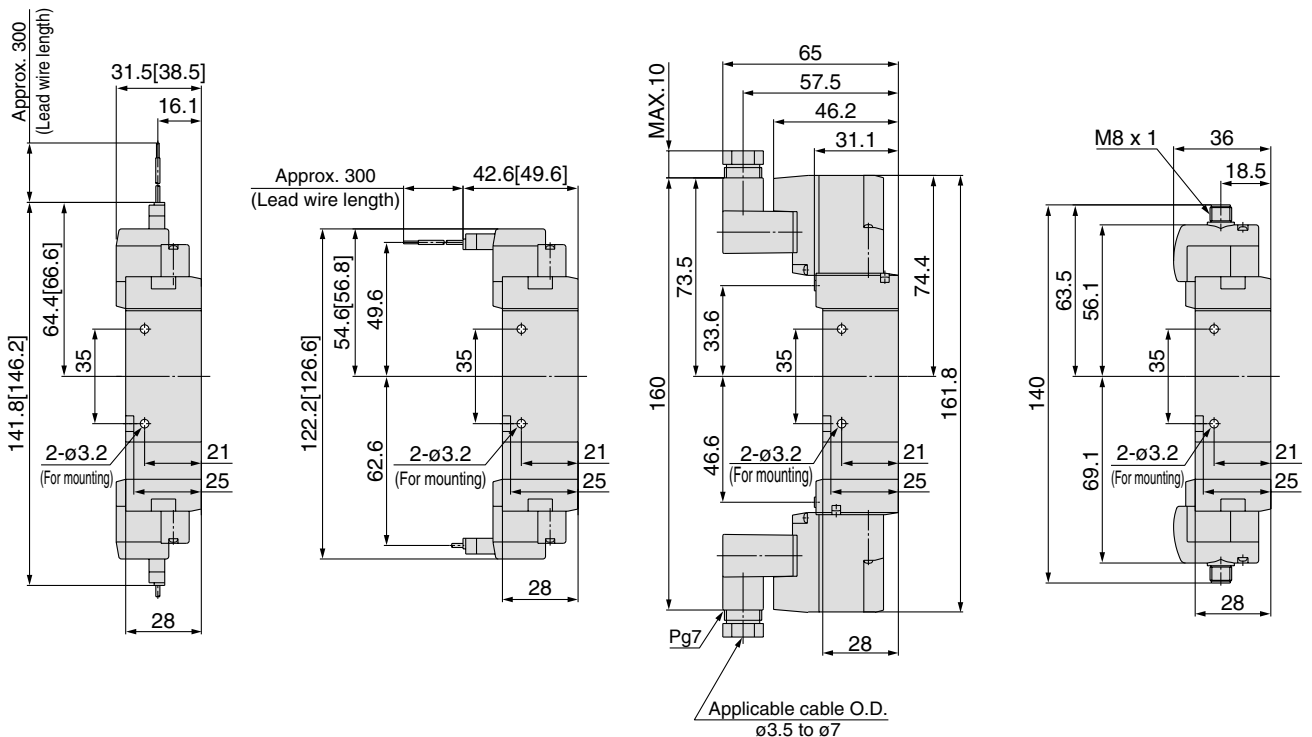


L plug connector (L):
10-SYJ7³/₅23-□^L□□-01□

M plug connector (M):
10-SYJ7³/₅23-□^M□□-01□

DIN Terminal (D):
10-SYJ7³/₅23-□^D□□-01□

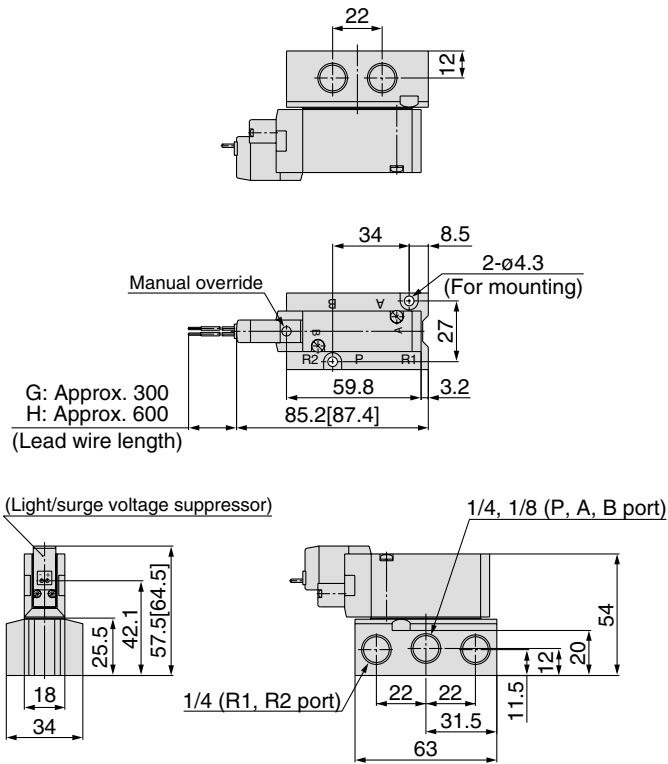
M8 connector (WO):
10-SYJ7³/₅23-□^{WO}□□-01□



* Refer to page 563 for dimensions with connector cable.

2 position single

Grommet (G), (H): 10-SYJ7143-□^G□□□-01□₀₂□

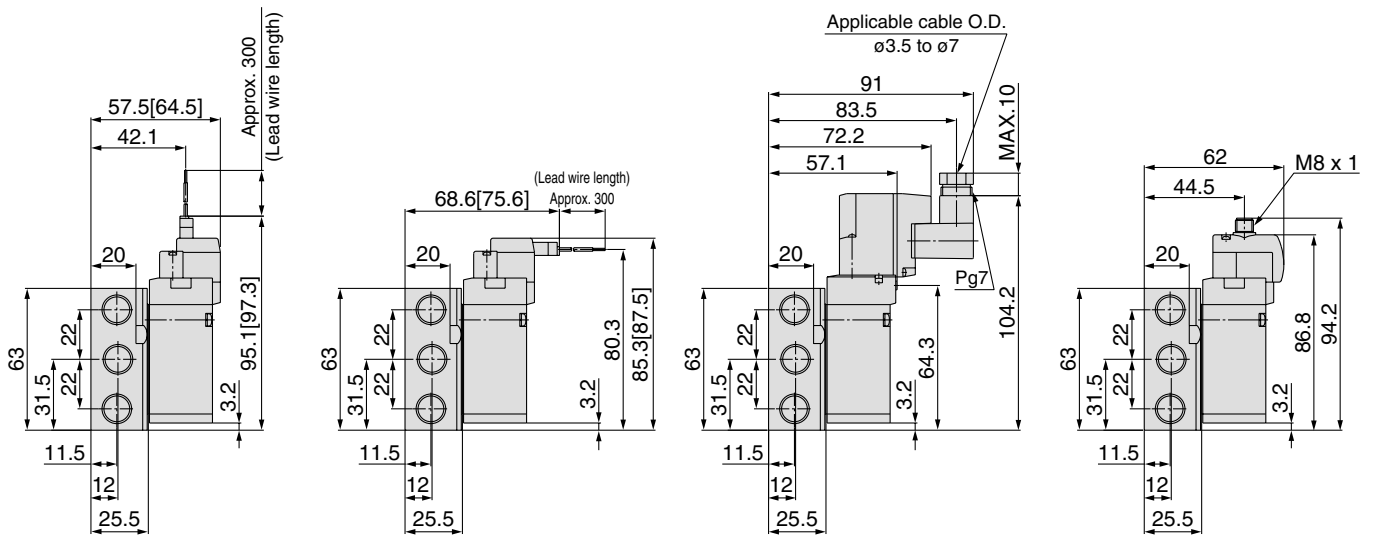


L plug connector (L):
10-SYJ7143-□L□□□-01□₀₂□

M plug connector (M):
10-SYJ7143-□M□□□-01□₀₂□

DIN Terminal (D):
10-SYJ7143-□D□□□-01□₀₂□

M8 connector (WO):
10-SYJ7143-□WO□□□-01□₀₂□

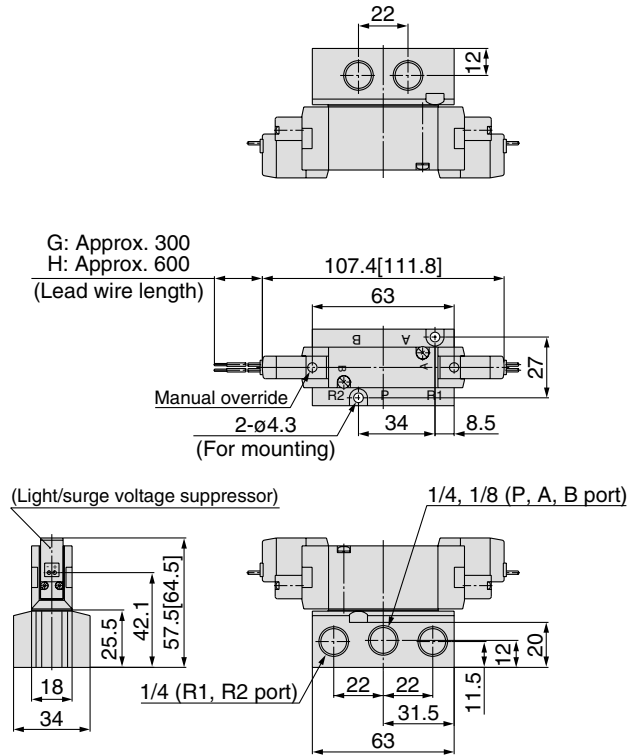


* Refer to page 563 for dimensions with connector cable.



2 position double

Grommet (G), (H): 10-SYJ7243-□G□□-01□□

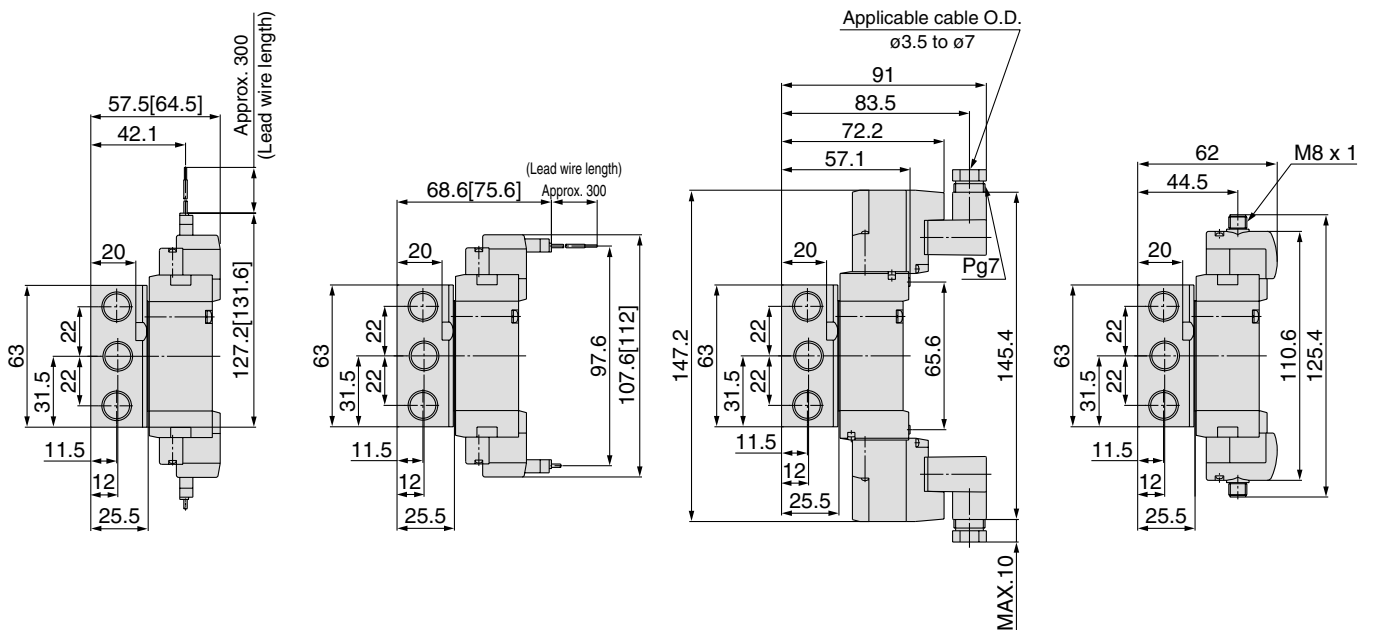


L plug connector (L): 10-SYJ7243-□L□□-01□□

M plug connector (M): 10-SYJ7243-□M□□-01□□

DIN Terminal (D): 10-SYJ7243-□D□□-01□□

M8 connector (WO): 10-SYJ7243-□WO□□-01□□



* Refer to page 563 for dimensions with connector cable.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

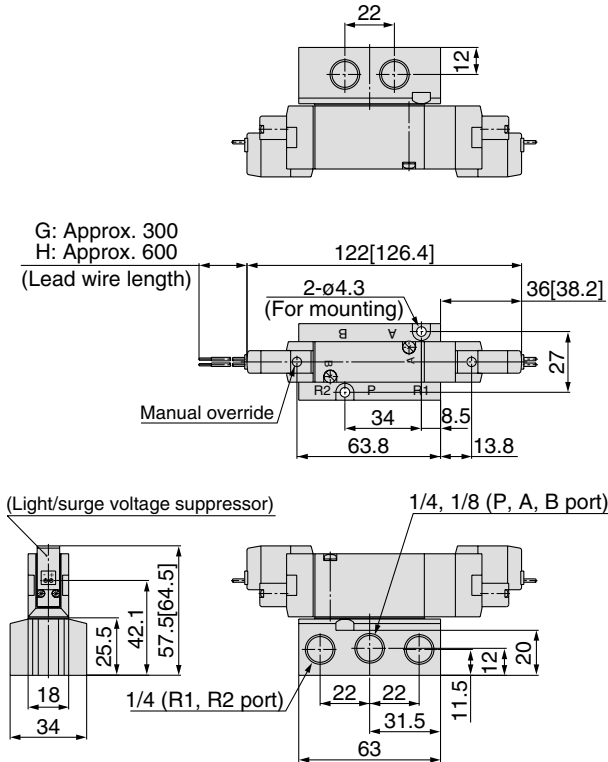
Clean gas filter

5 port solenoid valve Series **10-SYJ7000**

3 position closed center / Exhaust center / Pressure center



Grommet (G), (H): 10-SYJ7³/₅43-□G□□-⁰¹/₀₂□

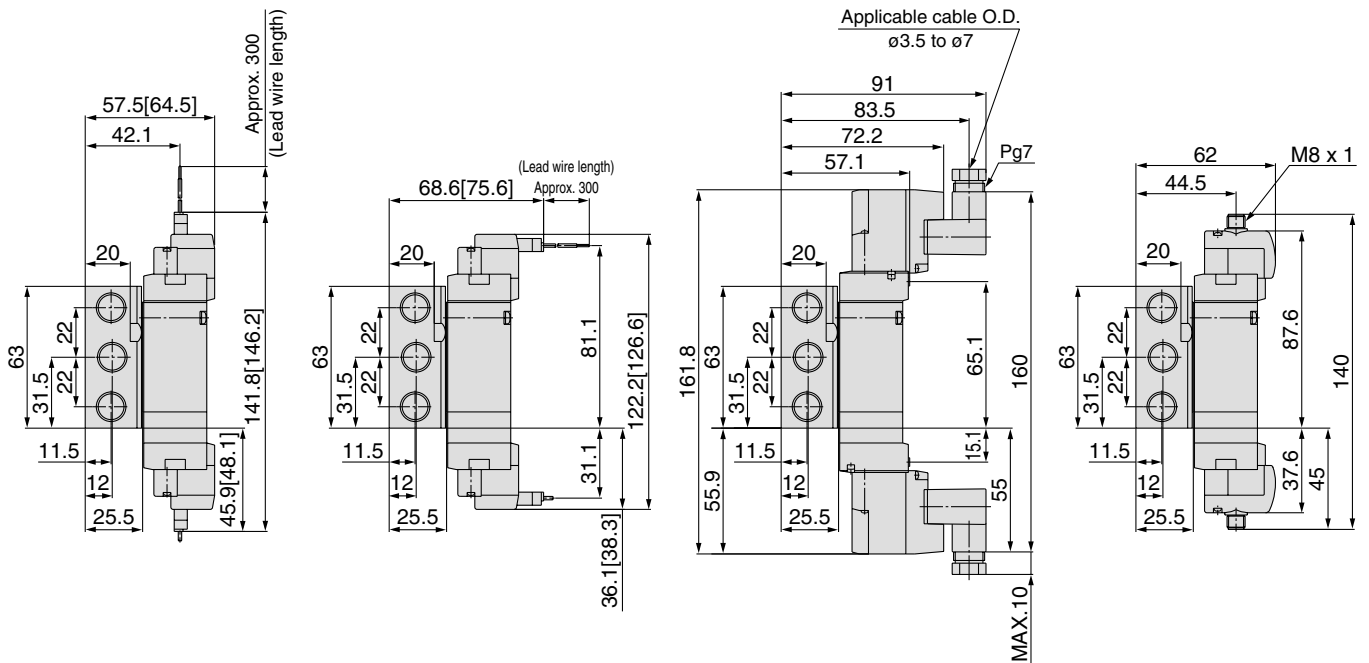


L plug connector (L):
10-SYJ7³/₅43-□L□□-⁰¹/₀₂□

M plug connector (M):
10-SYJ7³/₅43-□M□□-⁰¹/₀₂□

DIN Terminal (D):
10-SYJ7³/₅43-□D□□-⁰¹/₀₂□

M8 connector (WO):
10-SYJ7³/₅43-□WO□□-⁰¹/₀₂□

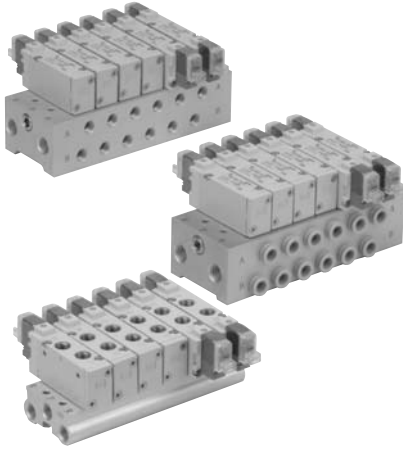


* Refer to page 563 for dimensions with connector cable.

Series 10-SYJ7000

Manifold specifications

Manifold standard



Manifold specifications

Model		Type 20	Type 21	Type 40	Type 41	Type 42
Manifold type		Single base / B mount				
P (SUP) / R (EXH)		Common SUP / Common EXH				
Valve stations		2 to 15 stations		2 to 20 stations		
A, B port porting specifications	Location	Valve		Base	Base	
	Direction	Top		Bottom	Side	
Port size	P, R port	1/8		1/4		
	A, B port	1/8 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)		1/8		C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)

Flow characteristics

Manifold			Port size		Flow characteristics					
					1→4/2 (P→A/B)			4/2→5/3 (A/B→R)		
			1(P), 5/3(R) port	2(B), 4(A) port	C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv
Body ported for internal pilot	10-SS5YJ7-20	10-SYJ7□23	1/8	1/8	2.2	0.35	0.57	2.3	0.26	0.55
			1/8	C6	1.4	0.32	0.37	2.0	0.25	0.49
			1/8	C8	1.7	0.38	0.45	2.1	0.25	0.51
	10-SS5YJ7-21		1/4	1/8	2.1	0.36	0.55	2.3	0.26	0.54
			1/4	C6	1.4	0.32	0.36	2.1	0.24	0.50
			1/4	C8	1.8	0.37	0.50	2.1	0.20	0.50
Base mounted for internal pilot	10-SS5YJ7-40	10-SYJ7□43	1/4	1/8	2.1	0.28	0.51	2.5	0.23	0.59
	10-SS5YJ7-41		1/4	1/8	2.0	0.30	0.50	2.2	0.30	0.55
	10-SS5YJ7-42-C6		1/4	C6	1.5	0.32	0.38	2.2	0.23	0.52
	10-SS5YJ7-42-C8		1/4	C8	1.9	0.24	0.46	2.2	0.26	0.53

Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model number.

- Example
- 10-SS5YJ7-20-03 1 set (Manifold base)
 - * 10-SYJ7123-5G-01 2 sets (Valve)
 - * SYJ7000-21-1A 1 set (Blanking plate assembly)
 - 10-SS5YJ7-41-03-01 .. 1 set (Manifold base)
 - * 10-SYJ7143-5LZ 1 set (Valve)
 - * 10-SYJ7243-5LZ 1 set (Valve)
 - * SYJ7000-21-1A 1 set (Blanking plate assembly)

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

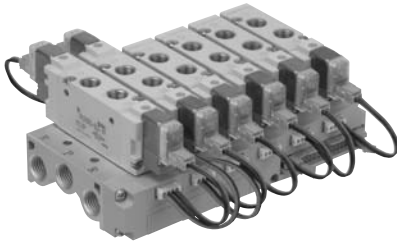
* Use manifold specification sheet.

Flat ribbon cable manifold

• **Multiple valve wiring is simplified through the use of the flat ribbon cable connector.**

• **Clean appearance**

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Flat ribbon cable manifold specifications

Model		Type 21P
Manifold type		Single base / B mount
P(SUP) / R(EXH)		Common SUP / Common EXH
Valve stations		3 to 12 stations
A, B port porting specifications		Valve
Port size	P, R port	1/4
	A, B port	1/8, C6, C8
Applicable flat ribbon cable connector		Socket: 26 pins MIL type with strain relief (Conforming to MIL-C-83503) (MIL-C-83503 compliant)
Internal wiring		In common between +COM and -COM (Z type: +COM only)
Rated voltage		24, 12 VDC

Note) The value is for manifold base and individually operated 2 position type.
 Note 2) The withstand voltage specification for the wiring unit section is JIS C0704, Grade 1 or its equivalent.

Flow characteristics

Manifold	Port size	Flow characteristics							
		1→4/2 (P→A/B)			4/2→5/3 (A/B→R)				
		C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv		
Body ported for internal pilot	10-SS5YJ7-21P-01	1/4	1/8	2.1	0.36	0.55	2.3	0.26	0.54
	10-SS5YJ7-21P-C6	1/4	C6	1.4	0.32	0.36	2.1	0.24	0.50
	10-SS5YJ7-21P-C8	1/4	C8	1.8	0.37	0.50	2.1	0.20	0.50

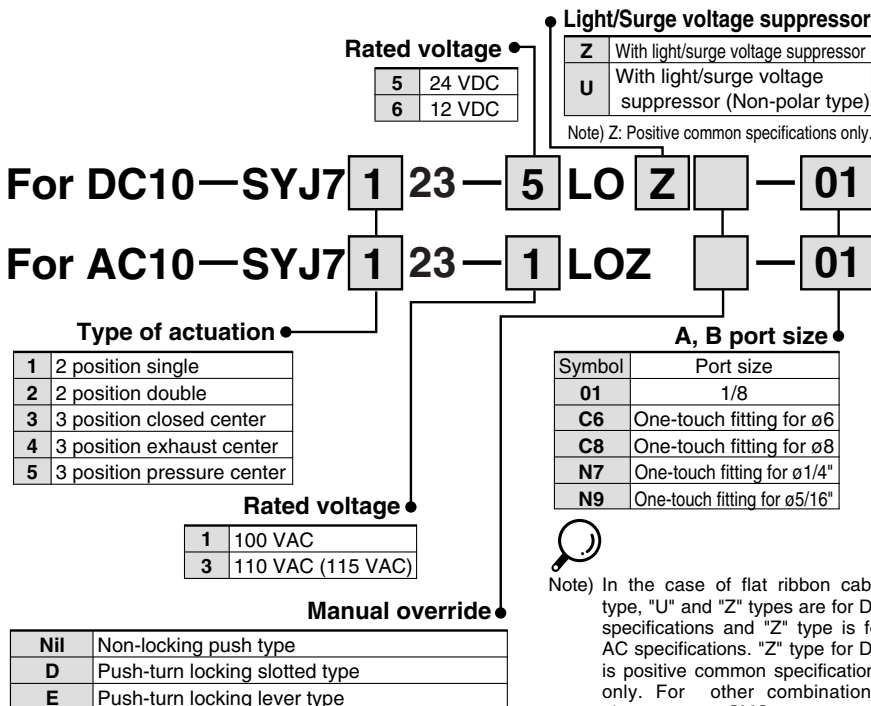
Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold (Example)

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model number.
 (Example) ● 10-SS5YJ7-21P-07 1 set (Manifold base)
 * 10-SYJ7123-5LOU-C83 sets (Valve)
 * 10-SYJ7223-5LOU-C83 sets (Valve)
 * SYJ7000-21-3A 1 set (Blanking plate assembly)
 * SY3000-37-3A 3 sets (Connector assembly)
 * SY3000-37-4A 3 sets (Connector assembly)
 ↳ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

* Use manifold specification sheet.

How to Order Valve



How to Order Connector Assembly

12V, 24 VDC

For single solenoid	SY3000-37-3A
For double solenoid 3 position type	SY3000-37-4A
For single solenoid, individual SUP/EXH spacer	SY3000-37-3A
For double solenoid, 3 position individual SUP/EXH spacer	SY3000-37-6A
3 port adaptor plate	SY3000-37-3A

100 VAC

For single solenoid	SY3000-37-32A
For double solenoid 3 position type	SY3000-37-33A
For single solenoid, individual SUP/EXH spacer	SY3000-37-15A
For double solenoid, 3 position individual SUP/EXH spacer	SY3000-37-34A
3 port adaptor plate	SY3000-37-32A

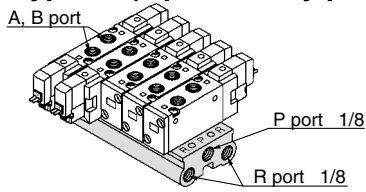
100 VAC (115 VAC)

For single solenoid	SY3000-37-35A
For double solenoid 3 position type	SY3000-37-36A
For single solenoid, individual SUP/EXH spacer	SY3000-37-19A
For double solenoid, 3 position individual SUP/EXH spacer	SY3000-37-37A
3 port adaptor plate	SY3000-37-35A

Note) In the case of flat ribbon cable type, "U" and "Z" types are for DC specifications and "Z" type is for AC specifications. "Z" type for DC is positive common specifications only. For other combinations, please contact SMC.

Manifold standard
Common SUP / Common EXH

Type 20 (5 port / Body ported)



How to Order

10-SS5YJ7-20-05 - [] P, R port thread type

Stations	
02	2 stations
:	:
15	15 stations

P, R port thread type	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

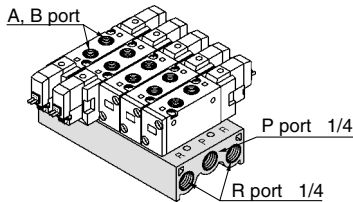
Applicable solenoid valve
10-SYJ7□23-□□□□⁰¹-C6
C8

Applicable blanking plate assembly
SYJ7000-21-1A

Applicable individual EXH spacer assembly
SYJ7000-17-1A

Note) For more than 6 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 21 (5 port / Body ported)



How to Order

10-SS5YJ7-21-05 - []

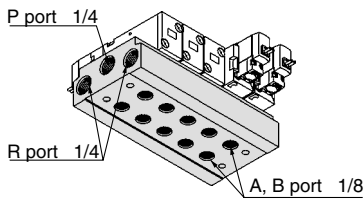
Stations	
02	2 stations
:	:
20	20 stations

P, R port thread type	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

Applicable individual EXH spacer assembly
SYJ7000-17-1A

Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 40 (5 port / Base mounted)



How to Order

10-SS5YJ7-40-05 - 01 []

Stations	
02	2 stations
:	:
20	20 stations

A, B port size	
01	1/8

Thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
10-SYJ7□43-□□□□

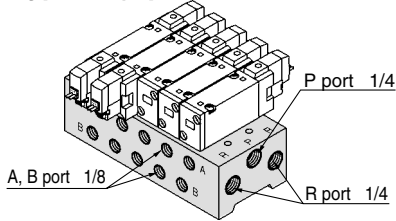
Applicable blanking plate assembly
SYJ7000-21-1A

Applicable individual EXH spacer assembly
SYJ7000-17-2A

Applicable individual SUP spacer assembly
SYJ7000-16-2A

Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 41 (5 port / Base mounted)



How to Order

10-SS5YJ7-41-05 - 01 []

Stations	
02	2 stations
:	:
20	20 stations

A, B port size	
01	1/8

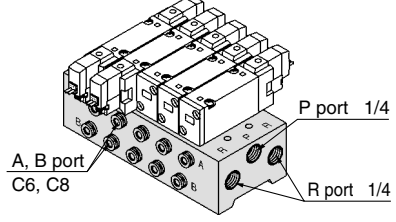
Thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

Applicable individual EXH spacer assembly
SYJ7000-17-2A

Applicable individual SUP spacer assembly
SYJ7000-16-2A

Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 42 (5 port / Base mounted)



How to Order

10-SS5YJ7-42-05 - C6 []

Stations	
02	2 stations
:	:
20	20 stations

A, B port size	
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16"

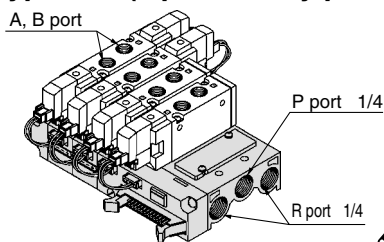
Thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

Applicable individual SUP spacer assembly
SYJ7000-16-2A

Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Flat ribbon cable manifold
Common SUP / Common EXH

Type 21P (5 port / Body ported)



How to Order

10-SS5YJ7-21P - 05 - []

Stations	
03	3 stations
:	:
12	12 stations

P, R port thread type	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

Applicable solenoid valve
Refer to page 548.

Applicable blanking plate assembly
SYJ7000-21-3A

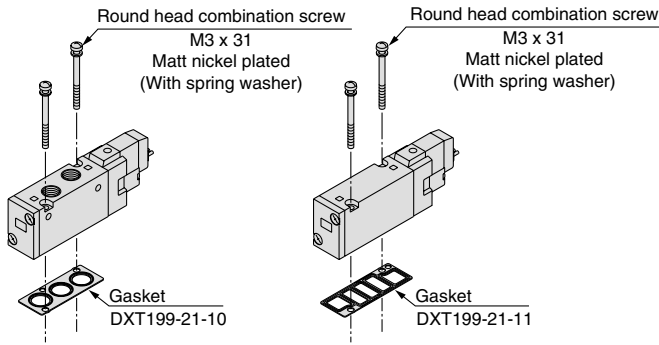
Applicable connector assembly
Refer to page 548.

Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Manifold specifications 10-SYJ7000

<Manifold option>

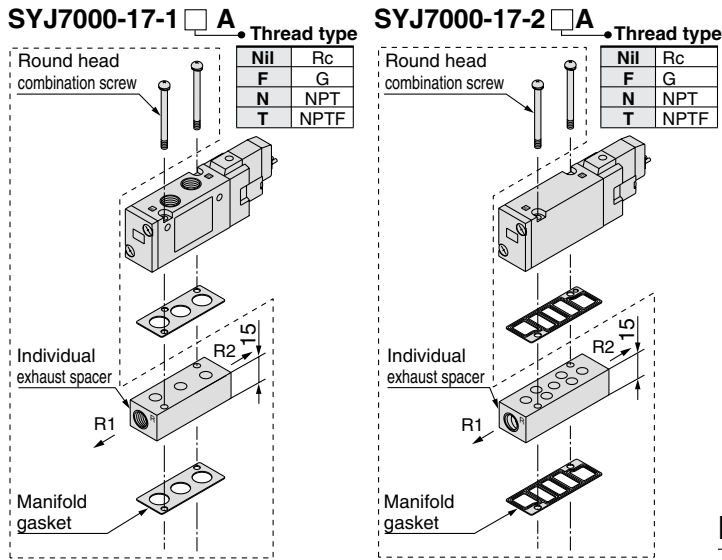
Combinations of solenoid valve, manifold gasket and manifold base



Applicable base
 · 10-SS5YJ7-20
 · 10-SS5YJ7-21

Applicable base
 · Sub-plate
 · 10-SS5YJ7-40
 · 10-SS5YJ7-41
 · 10-SS5YJ7-42

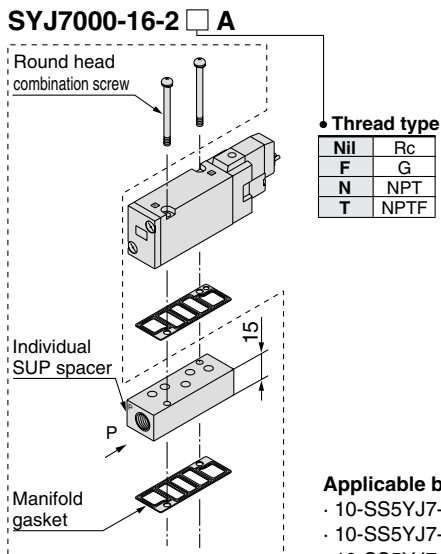
Individual EXH spacer assembly



Applicable base
 · 10-SS5YJ7-20
 · 10-SS5YJ7-21

Applicable base
 · 10-SS5YJ7-40
 · 10-SS5YJ7-41
 · 10-SS5YJ7-42

Individual SUP spacer assembly



Applicable base
 · 10-SS5YJ7-40
 · 10-SS5YJ7-41
 · 10-SS5YJ7-42

⚠ Caution

Mounting screw tightening torque
 M3: 0.8N·m

Use caution to the assembly orientation of solenoid valves, gasket, and optional parts.

Mix installation of 10-SYJ700 and 10-SYJ7000 valves on the same manifold

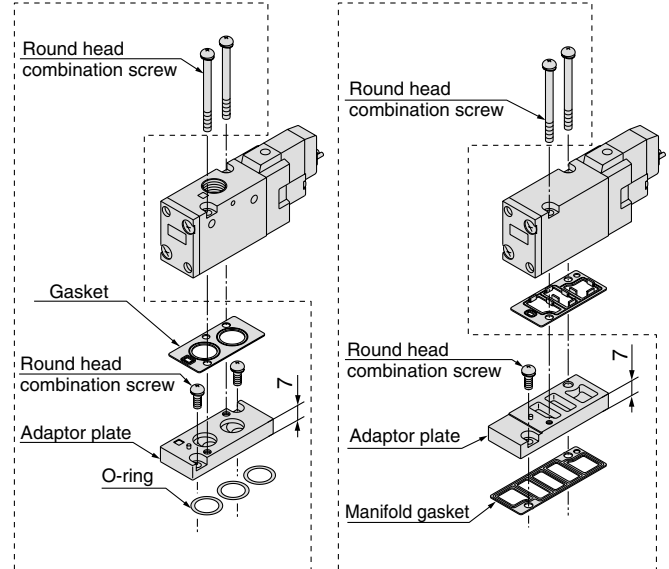
- Use of an adapter plate makes it possible to mount series 10-SYJ700 on the manifold bases of series 10-SYJ7000.
- When mounting the 10-SYJ700 valve on the 10-SYJ7000 manifold, the 10-SYJ700 solenoid must be positioned on the same side of a single solenoid of the 10-SYJ7000.
- For base mounted style, the A port of the 3 port valve become the B port of manifold base.

Adaptor plate assembly SYJ700-3-1A

Series 10-SYJ700 body ported type

Adaptor plate assembly SYJ700-3-2A

Series 10-SYJ700 base mounted type

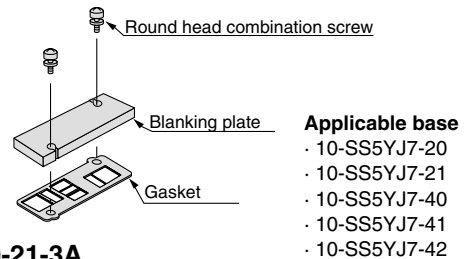


Applicable base
 · 10-SS5YJ7-20
 · 10-SS5YJ7-21

Applicable base
 · 10-SS5YJ7-40
 · 10-SS5YJ7-41
 · 10-SS5YJ7-42

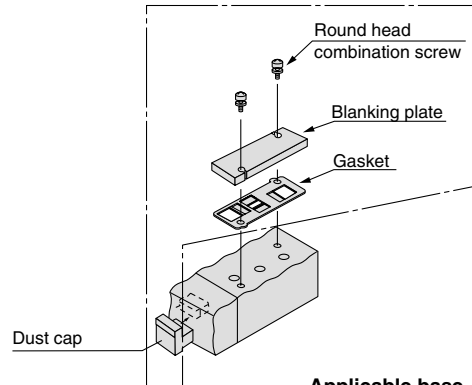
Blanking plate assembly

SYJ7000-21-1A



Applicable base
 · 10-SS5YJ7-20
 · 10-SS5YJ7-21
 · 10-SS5YJ7-40
 · 10-SS5YJ7-41
 · 10-SS5YJ7-42

SYJ7000-21-3A

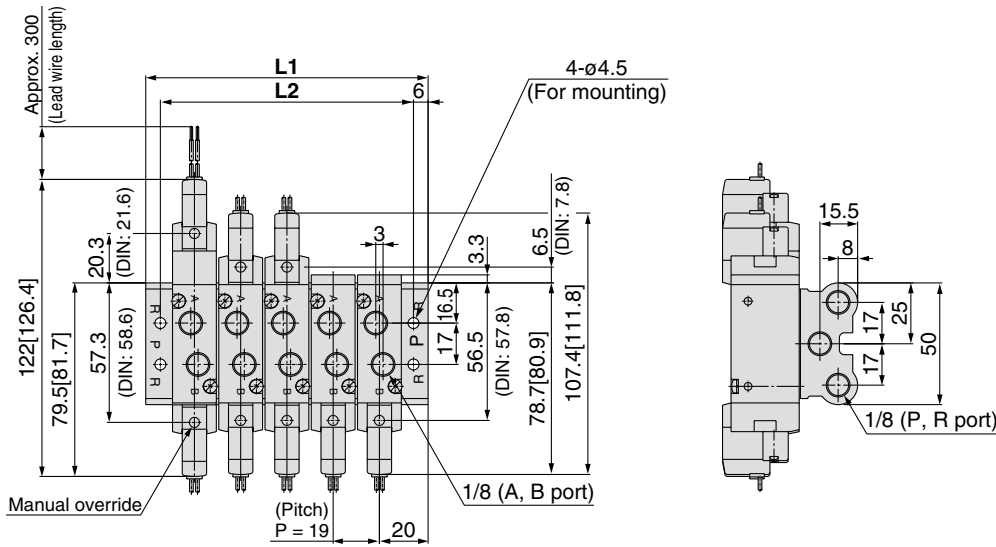


Applicable base
 · 10-SS5YJ7-21P

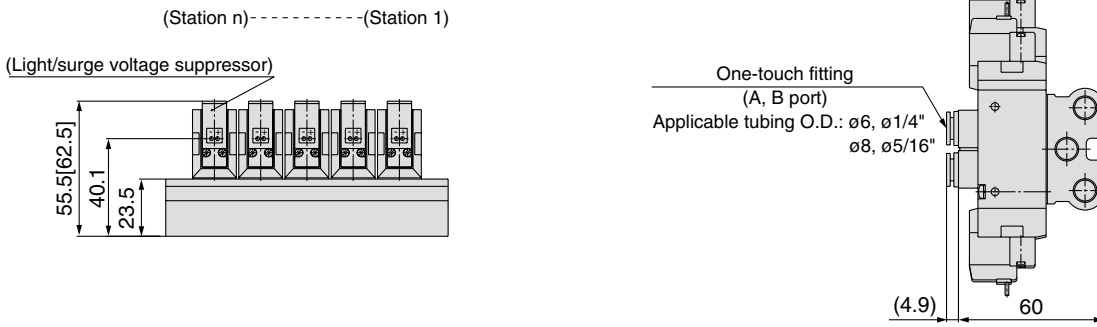
Type 20: Top ported / 10-SS5YJ7-20- **Stations** -00



Grommet (G)



Built-in One-touch fitting

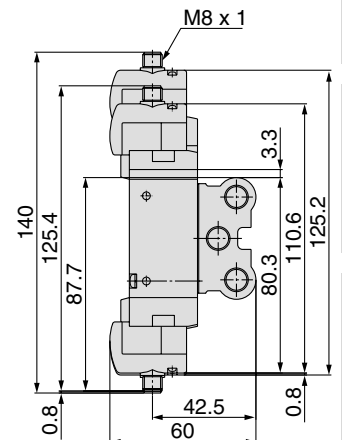
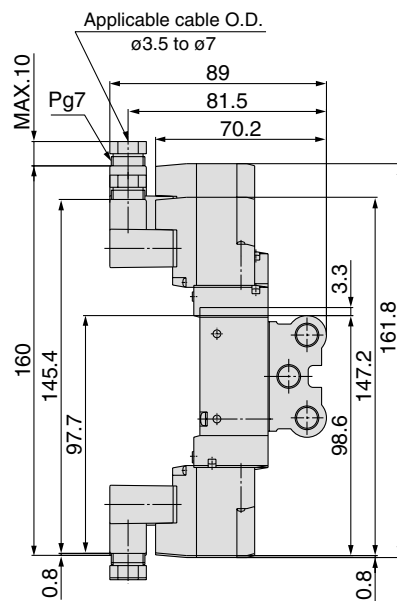
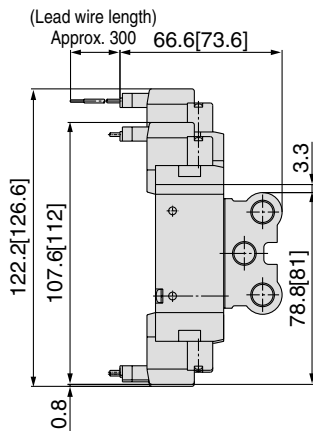
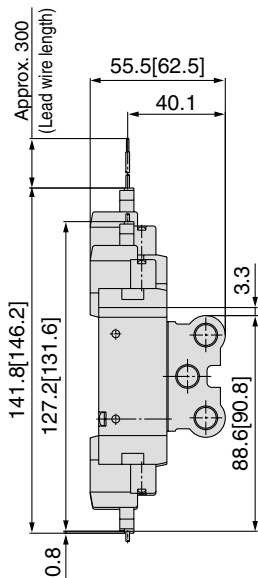


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15 stations
L1	59	78	97	116	135	154	173	192	211	230	249	268	287	306
L2	47	66	85	104	123	142	161	180	199	218	237	256	275	294

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

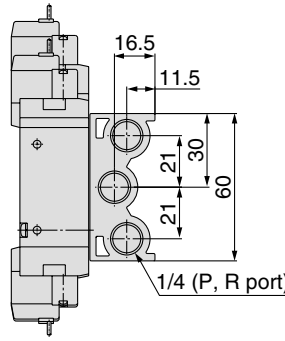
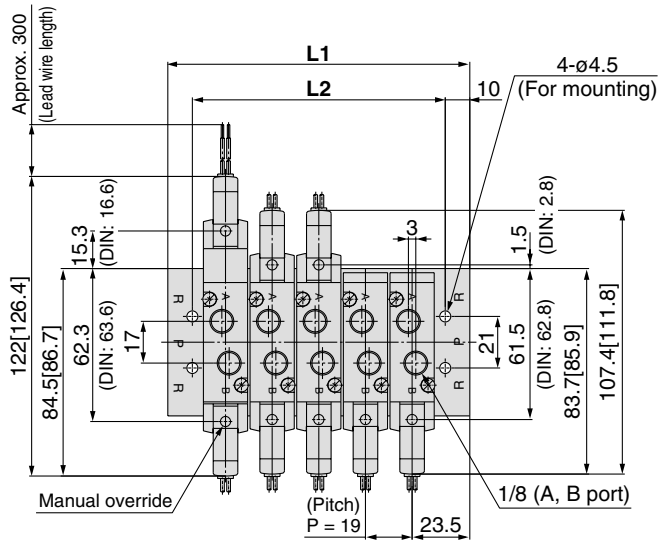
Fittings & Tubing

Air preparation equipment

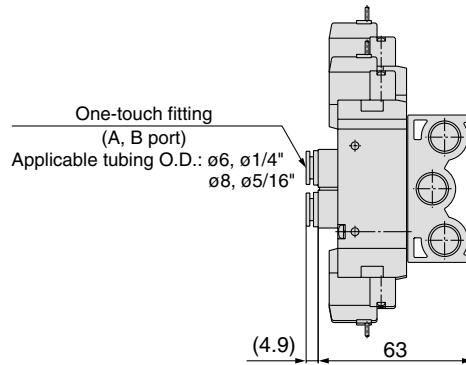
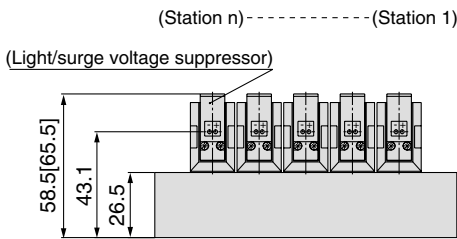
Pressure switch

Clean gas filter

Grommet (G)



Built-in One-touch fitting

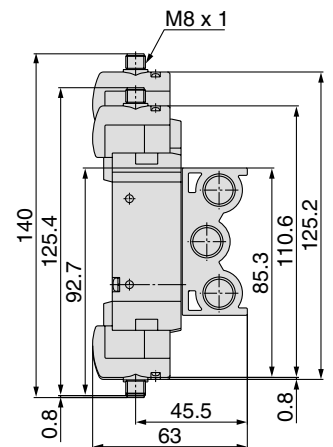
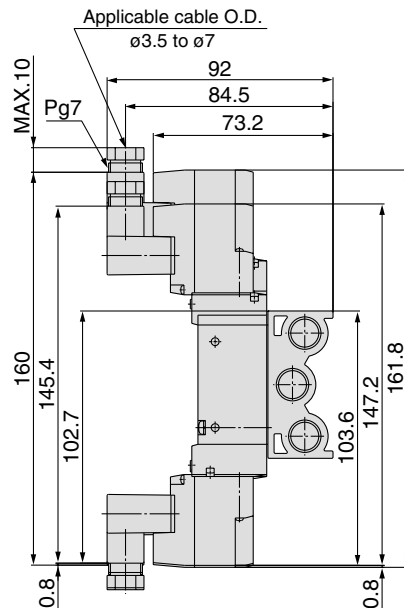
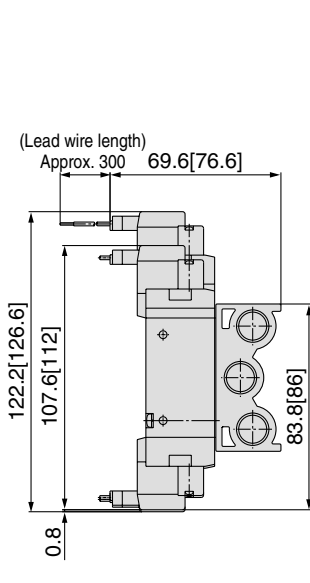
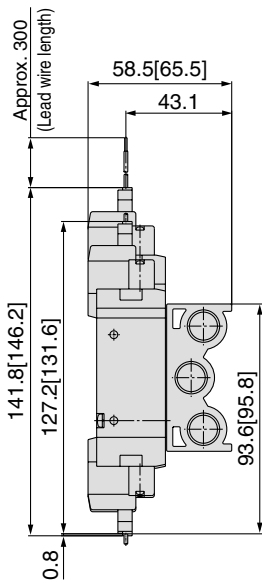


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



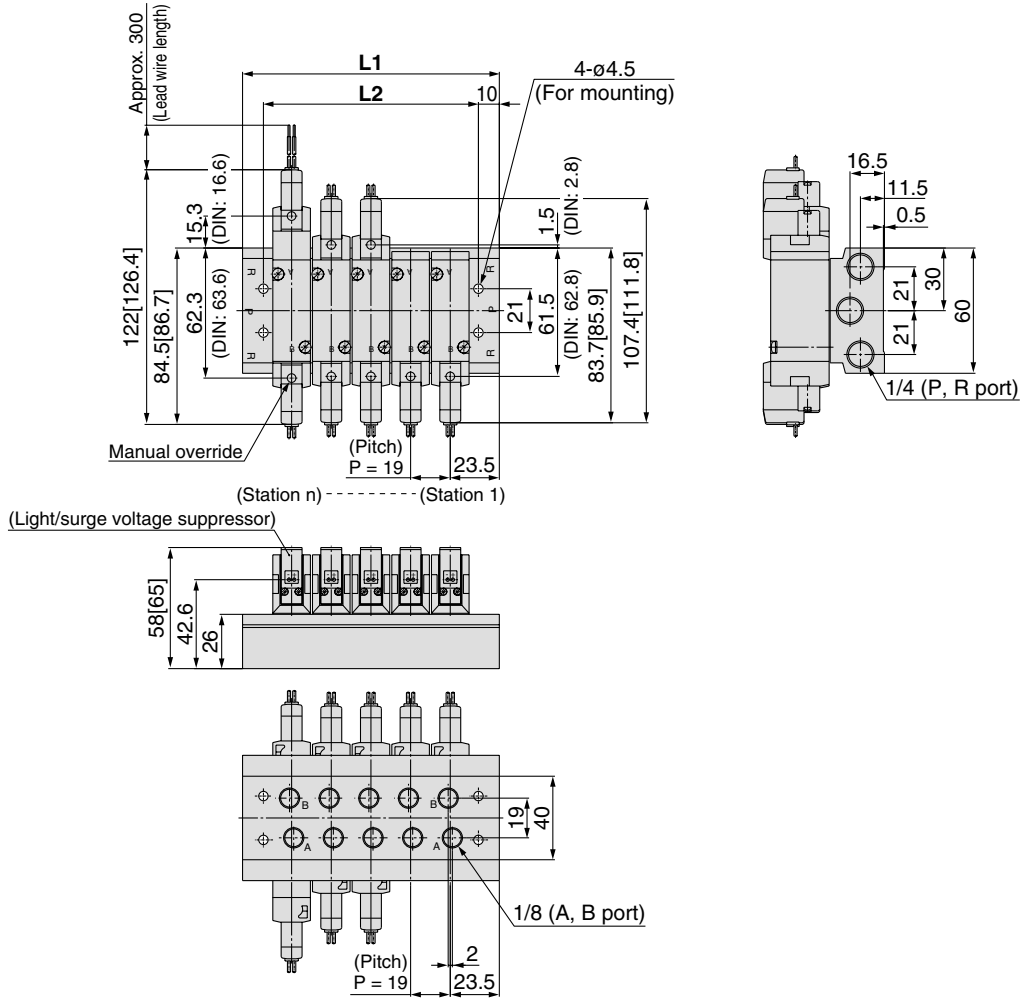
* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389	408
L2	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388

Type 40: Bottom ported / 10-SS5YJ7-40- **Stations -01**



Grommet (G)

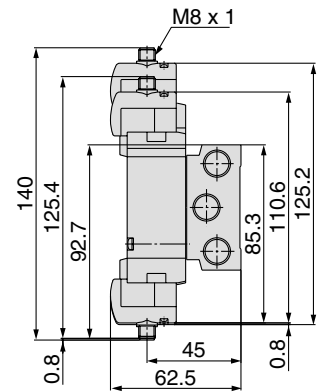
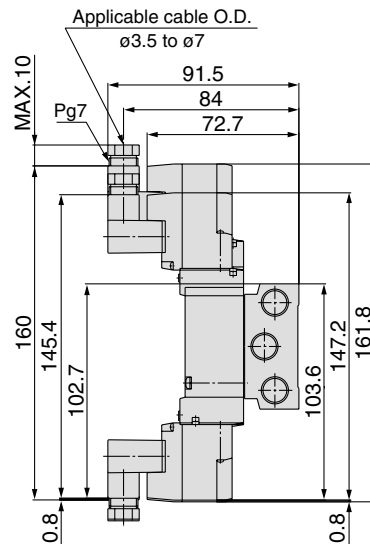
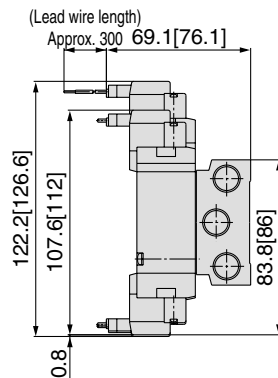
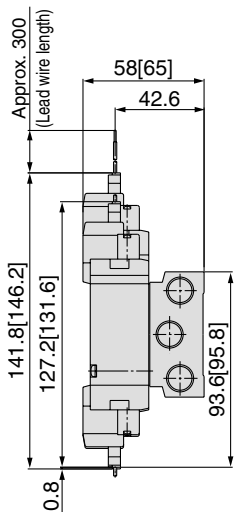


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389	408
L2	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

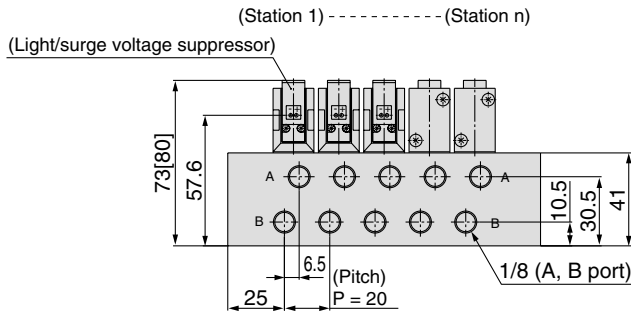
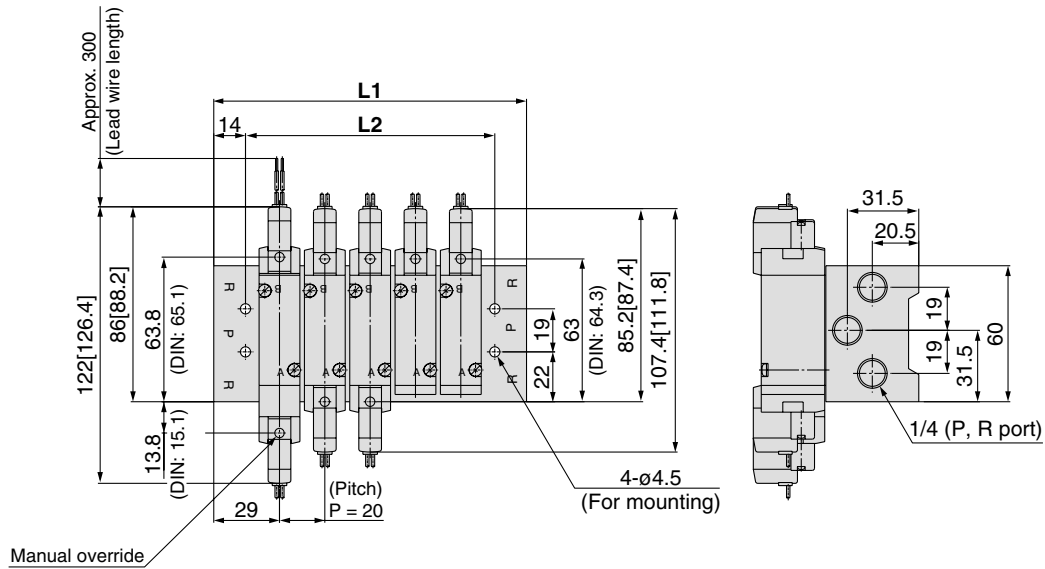
Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

Grommet (G)

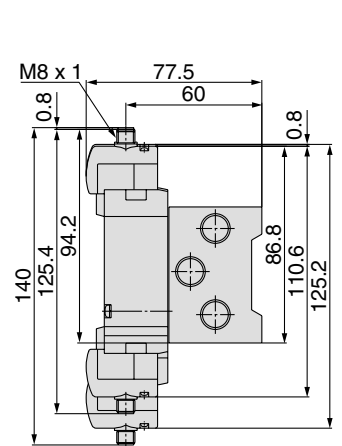
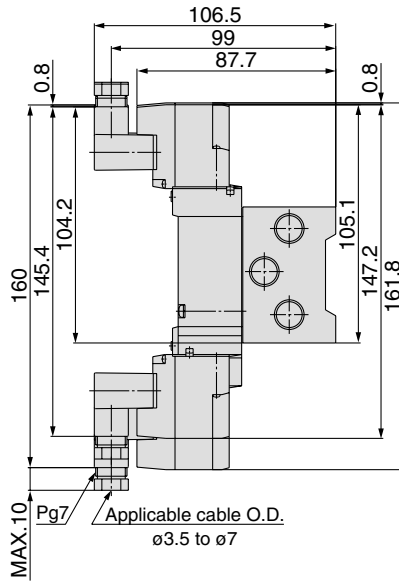
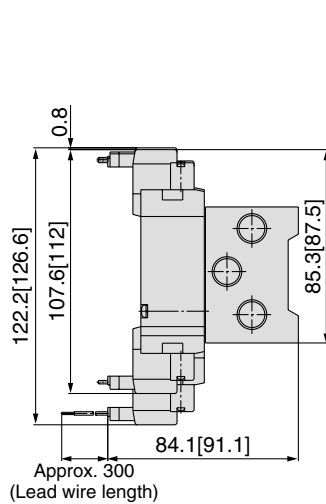
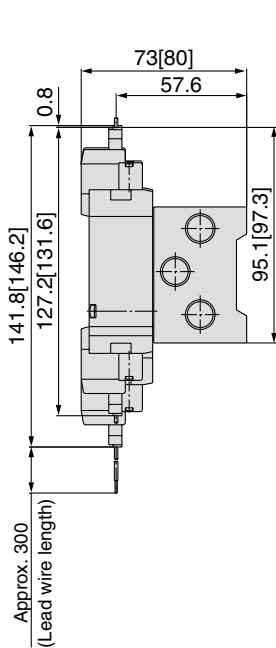


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



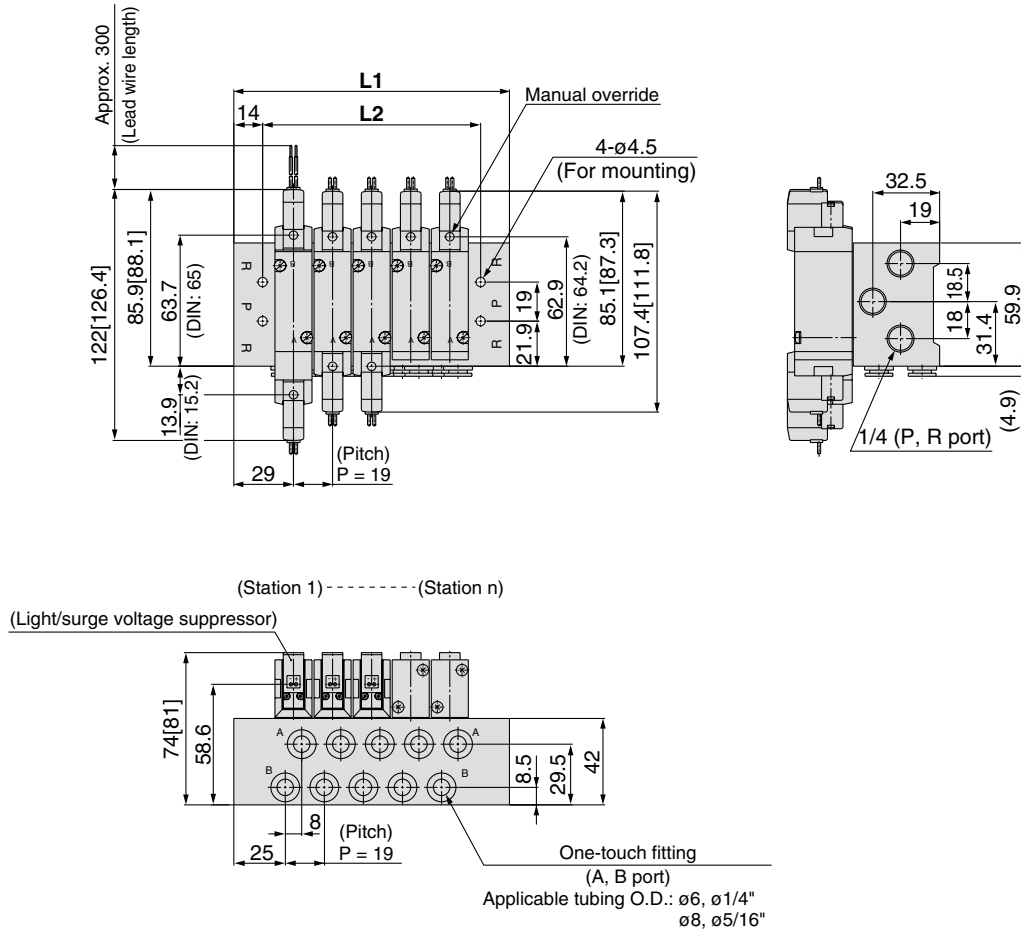
* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	78	98	118	138	158	178	198	218	238	258	278	298	318	338	358	378	398	418	438
L2	50	70	90	110	130	150	170	190	210	230	250	270	290	310	330	350	370	390	410

Type 42: Side ported / 10-SS5YJ7-42- Stations - C6,N7
C8,N9



Grommet (G)

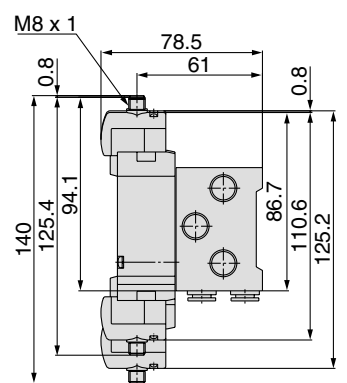
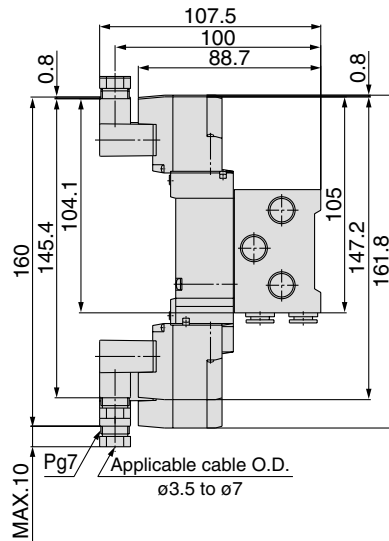
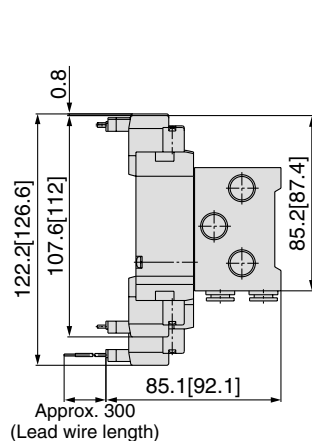
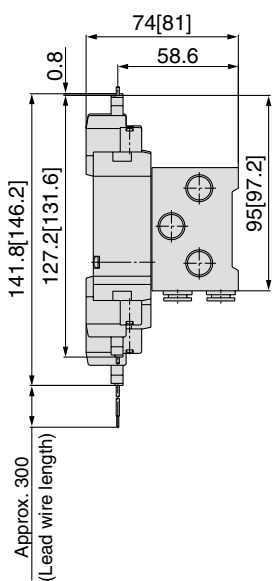


L plug connector (L)

M plug connector (M)

DIN Terminal (D)

M8 connector (WO)



* Refer to page 563 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	77	96	115	134	153	172	191	210	229	248	267	286	305	324	343	362	381	400	419
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

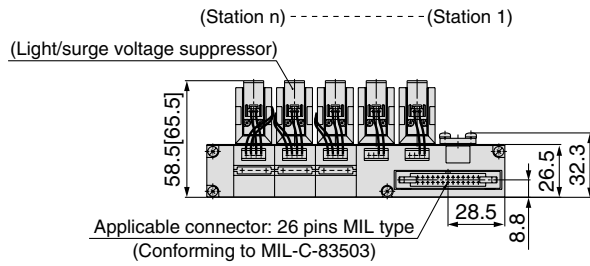
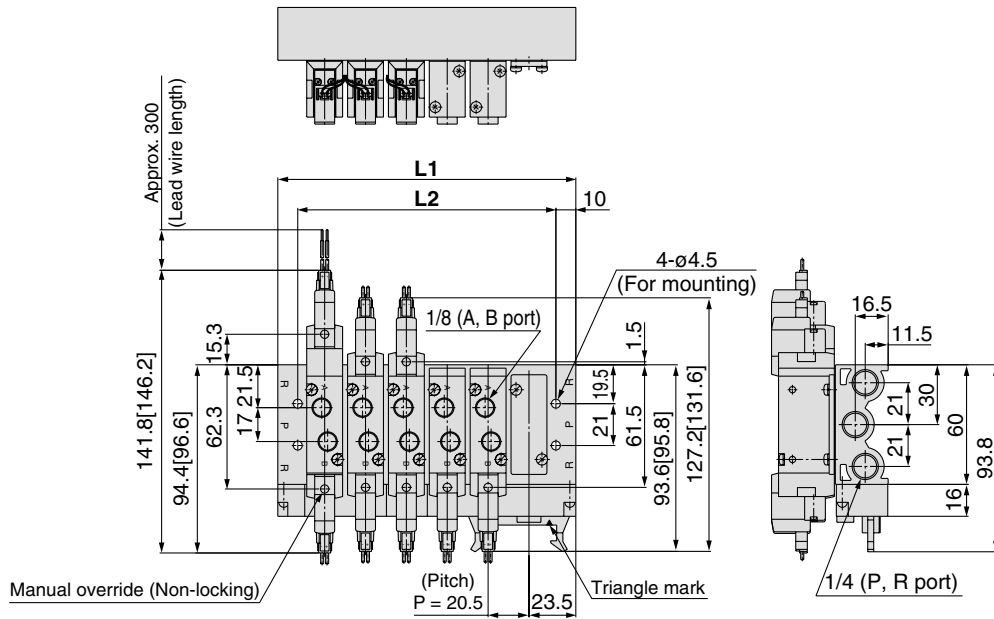
Air preparation equipment

Pressure switch

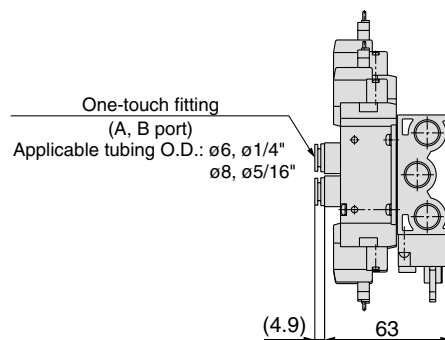
Clean gas filter

Flat ribbon cable manifold

10-SS5YJ7-21P- Stations (-00)



With built-in One-touch fitting



Stations n	3 stations	4	5	6	7	8	9	10	11	12 stations
L1	88	108.5	129	149.5	170	190.5	211	231.5	252	272.5
L2	68	88.5	109	129.5	150	170.5	191	211.5	232	252.5

Series 10-SYJ5000/7000

Made to order specifications
DIN terminal connector conforming to EN-175301-803C
(former DIN 43650C) standard

DIN terminal type conforming to DIN 43650C (DIN pitch 8mm) standard

How to Order Valves

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

* "YOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Rated voltage

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

A, B port size

M5	M5 x 0.8
O1	1/8 (10- SYJ7000 only)
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
N3	One-touch fitting for ø5/32"
N7	One-touch fitting for ø1/4

Bracket

Nil	Without bracket
F	With bracket

Note) Do not remove the factory installed bracket from models with the bracket option. Removal of the bracket will cause air leakage.

Body ported 10-SYJ 5 1 23-5 Y [] [] M5 [] []

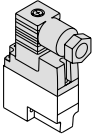
Base mounted 10-SYJ 5 2 43-5 Y [] [] [] []

Series

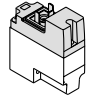
5	10-SYJ5000
7	10-SYJ7000

Electrical entry

Y: With connector



YO: Without connector



Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Port size

Nil	Without sub-plate	
1	1/8	10-SYJ5000
		10-SYJ7000
2	1/4	10-SYJ7000

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

How to Order Pilot Valve Assembly

10-V115-5 Y []

Rated voltage

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

Light/surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

* "YOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Electrical entry

Y	DIN terminal	With connector
YO		Without connector

DIN connector part no.

Without light		SY100-82-1
With light		
Rated voltage	Voltage symbol	Part no.
24 VDC	24VN	SY100-82-3-05
12 VDC	12VN	SY100-82-3-06
100 VAC	100VN	SY100-82-3-01
200 VAC	200VN	SY100-82-3-02
110 VAC [115 VAC]	110VN	SY100-82-3-03
220 VAC [230 VAC]	220VN	SY100-82-3-04

Caution

- Use caution in wiring because it won't meet the IP65 (enclosure) standard if you use the other cord than prescribed cable of size (ø3.5 to ø7). Also be sure to tighten the ground nut and set screw within the specified range of torque.
For how to use DIN terminal (wiring procedures, procedures for changing electrical entries, precautions, applicable cable, circuit diagram), refer to page 560.
- D type DIN connector with 9.4 mm pitch between terminals is not interchangeable.
- DIN connector except D type has the "N" indication in the end of voltage symbol. In case of DIN connector without light, "N" is not indicated. Please refer to the name plate to distinguish.
- Dimensions are completely the same as D type connector.
- When exchanging the pilot valve assembly only, "10-V115-□D" is interchangeable with "10-V115-□Y". Do not replace 10-V114 (G, H, L, M, W) to 10-V115-□D/□Y (DIN terminal), and vice versa.



Series 10-SYJ3000/5000/7000 Specific Product Precautions 1

Be sure to read before handling.

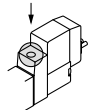
Manual override operation

⚠ Warning

When the manual override is operated, connected equipment will be actuated. Confirm safety before operating.

■ Non-locking push type (Standard)

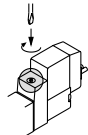
Press in the direction of the arrow.



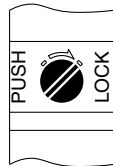
■ Push-turn locking slotted [Type D]

While pressing, turn in the direction of the arrow.

If it is not turned, it can be operated in the same way as the non-locking type.



Locked position



⚠ Caution

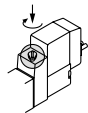
When handling the locking type D with a screwdriver, turn it gently using a watchmaker's screwdriver.

[Torque: 0.1 N·m or less]

■ Push-turn locking lever [Type E]

While pressing, turn in the direction of the arrow.

If it is turned, it can be operated in the same way as the non-locking type.



Locked position



⚠ Caution

When locking the manual override on the push-turn locking types (D, E), be sure to push it down before turning.

Turning without first pushing it down can cause damage to the manual override and trouble such as air leakage, etc.

Solenoid valve for 200/220 VAC specifications

⚠ Warning

Solenoid valves with grommet and L/M type plug connector AC specifications have a built-in rectifier circuit in the pilot section to operate the DC coil.

With 200/220 VAC specification pilot valves, this built-in rectifier generates heat when energized. The surface may become hot depending on the energized condition. Therefore, do not touch the solenoid valves.

Series 10-SYJ3000, 5000, 7000 Mixed installation of 3 port and 5 port valves on the same manifold.

⚠ Caution

Series 10-SYJ3000/5000/7000 and Series 10-SYJ300/500/700 can be mounted on the same manifold. How to mount on the same manifold is shown on the following pages.

10-SYJ3000, 10-SYJ300 Page 507

10-SYJ5000, 10-SYJ500 Page 529

10-SYJ7000, 10-SYJ700 Page 550

If 4 or 5 port valve is used as a 3 port valve

Series 10-SY 3000/5000/7000 may be used as a N.C. or N.O. 3 port valve by plugging one of the A, B ports. Be sure not to plug the exhaust ports (R). Can be used when a double solenoid, 3 port valve is required.

Plug position		B port	A port
Type of actuation		N.C.	N.O.
Number of solenoids	Single		
	Double		

(JIS Symbols above: Series 10-SYJ5000)



Series 10-SYJ3000/5000/7000 Specific Product Precautions 2

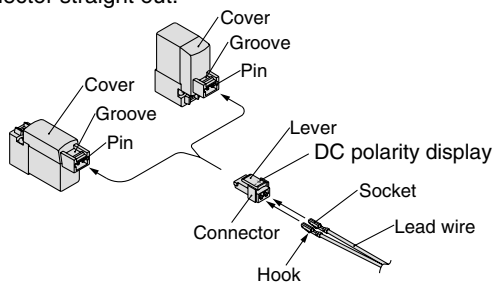
Be sure to read before handling.

How to use plug connector

⚠ Caution

1. Attaching and detaching connectors

- To attach a connector, hold the lever and connector unit between your fingers and insert straight onto the pins of the solenoid valve so that the lever's pawl is pushed into the groove and locks.
- To detach a connector, remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.



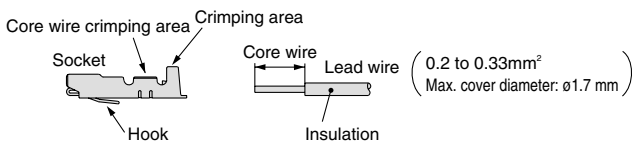
2. Crimping of lead wires and sockets

Strip 3.2 to 3.7 mm at the end of the lead wires, insert the ends of the core wires evenly into the sockets, and then crimp with a crimping tool.

When this is done, take care that the coverings of the lead wires do not enter the core wire crimping area.

Use an exclusive crimping tool for crimping.

(For special crimping tools, please contact SMC.)



3. Attaching and detaching sockets with lead wires

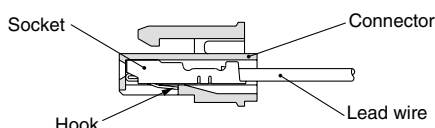
● Attaching

Insert the sockets into the square holes of the connector (+ and - indication), and continue to push the sockets all the way in until they lock by hooking into the seats in the connector. (When they are pushed in, their hooks open and they are locked automatically.) Then confirm that they are locked by pulling lightly on the lead wires.

● Detaching

To detach a socket from a connector, pull out the lead wire while pressing the socket's hook with a stick having a thin tip (approx. 1 mm).

If the socket will be used again, first spread the hook outward.



Plug connector lead wire length

⚠ Caution

Standard length is 300 mm, but the following lengths are also available.

How to Order Connector Assembly

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

How to Order

Specify the connector assembly part number together with the part number for the plug connector's solenoid valve without connector.

<Example> Lead wire length 2000 mm

(For DC)

10-SYJ3123-5LO-M3
SY100-30-4A-20

For AC

10-SYJ3123-1LO-M3
SY100-30-1A-20



Series 10-SYJ3000/5000/7000 Specific Product Precautions 3

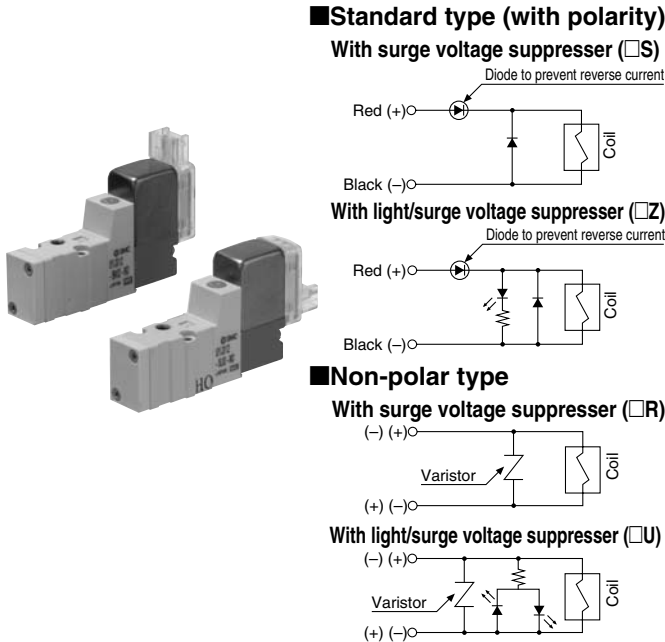
Be sure to read before handling.

Surge voltage suppressor

Caution

(For DC)

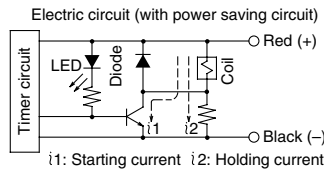
Grommet, L/M plug connector type



- Connect the standard type in accordance with the +, - polarity indication. (The non-polar type can be used with the connections made either way.)
- Since voltage specifications other than standard 24 and 12 VDC do not have diodes for polarity protection, be careful not to make errors in the polarity.
- Be careful about the allowable voltage fluctuation since the valves with a diode to prevent reverse current has about a 1V voltage drop. (Refer to the solenoid specifications of each valve for details.)
- When wiring is done at the factory, positive (+) is red and negative (-) is black.

With power saving circuit

Power consumption is decreased by 1/4 by reducing the wattage required to hold the valve in an energized state. (Effective energizing time is over 62 ms at 24 VDC.)



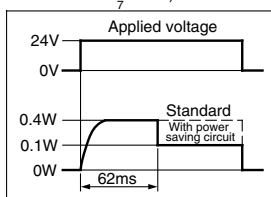
Working principle

With the above circuit, the current consumption when holding is reduced to save energy. Please refer to the electric wave data to the right.

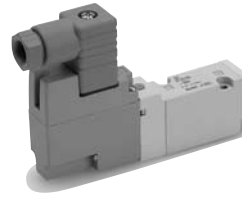
• When a power saving circuit is installed, a diode to prevent reverse current is not provided. Therefore, use caution not to connect in reverse.

• Be careful about the allowable voltage fluctuation since voltage drop of about 0.5V occurs due to a transistor. (Refer to the solenoid specifications of each valve for details.)

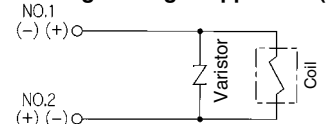
(Energy saving type's electrical power waveform : SYJ₃□□0T)



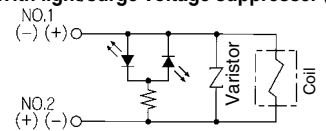
DIN terminal



With surge voltage suppressor (DS)

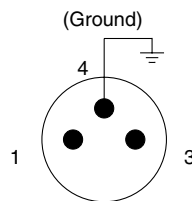


With light/surge voltage suppressor (DZ)



DIN terminal has no polarity.

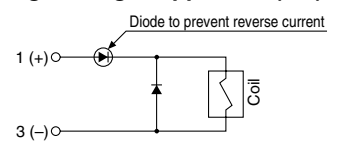
M8 connector type



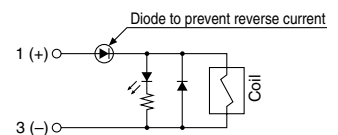
Solenoid valve side Pin wiring diagram

Standard type (with polarity)

With surge voltage suppressor (□S)

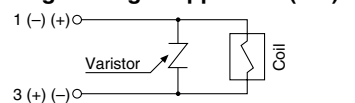


With light/surge voltage suppressor (□Z)

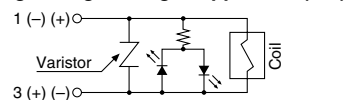


Non-polar type

With surge voltage suppressor (□R)



With light/surge voltage suppressor (□U)



Solenoid valve side Pin wiring diagram

- In the case of standard type, connect + to 1 and - to 3 according to the polarity.
- For DC voltages other than standard 12/24 VDC, use caution not to mistake the polarity because a diode to prevent reverse current is not provided.
- Be careful about the allowable voltage fluctuation since the valves with a diode to prevent reverse current has about a 1V voltage drop. (Refer to the solenoid specifications of each valve for details.)



Series 10-SYJ3000/5000/7000 Specific Product Precautions 4

Be sure to read before handling.

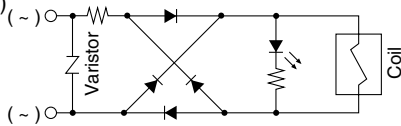
Surge voltage suppressor

<For AC>

(There is no "S" type because the generation of surge voltage is prevented by a rectifier.)

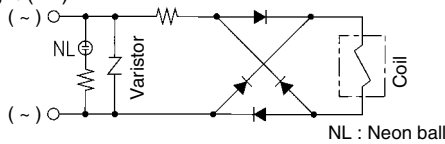
Grommet, L/M plug connector

With indicator light (□Z)



DIN terminal

With indicator light (DZ)



NL : Neon ball

Note) Surge voltage suppressor of varistor has residual voltage corresponding to the protective element and rated voltage. Therefore, protect the controller side from the surge. The residual voltage of the diode is approximately 1 V.

How to use DIN Terminal

⚠ Caution

Connection

1. Loosen the holding screw and pull the connector out of the solenoid valve terminal block.
2. After removing the holding screw, insert a flat head screwdriver, etc. into the notch on the bottom of the terminal block and pry it open, separating the terminal block and the housing.
3. Loosen the terminal screws (slotted screws) on the terminal block, insert the cores of the lead wires into the terminals according to the connection method, and fasten them securely with the terminal screws.
4. Secure the cord by fastening the ground nut.

⚠ Caution

When making connections, note that using other than the supported size ($\phi 3.5$ to $\phi 7$) cable will not satisfy IP65 (enclosure) standards.

Also, be sure to tighten the ground nut and holding screw within their specified torque ranges.

⚠ Caution

Changing the entry direction

After separating the terminal block and housing, the cord entry can be changed by attaching the housing in the desired direction (4 directions at 90° intervals).

* When equipped with an indicator light, be careful not to damage the light with the cord's lead wires.

Precautions

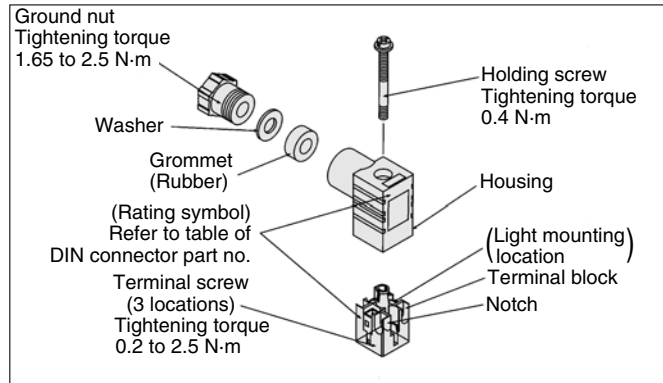
Plug in and pull out the connector vertically without tilting to one side.

Compatible cable

Cord O.D.: $\phi 3.5$ to $\phi 7$

(Reference) 0.5 mm², 2 core or 3 core, equivalent to JIS C 3306

How to use DIN Terminal

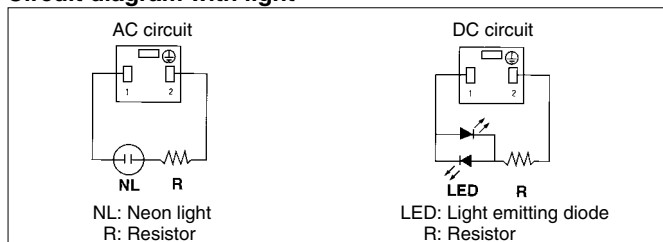


DIN connector part no.

⚠ Caution

Without light	SY100-61-1	
With light	Rated voltage	Part no.
	24 VDC	SY100-61-3-05
	12 VDC	SY100-61-3-06
	100 VAC	SY100-61-2-01
	200 VAC	SY100-61-2-02
	110 VAC	SY100-61-2-03
	220 VAC	SY100-61-2-04

Circuit diagram with light



Note) Refer to page 557 for DIN connector (Y) conforming to EN-175301-803C (former DIN 43650C).



Series 10-SYJ3000/5000/7000 Specific Product Precautions 5

Be sure to read before handling.

Connector assembly with cover

⚠ Caution

Connector assembly with dustproof protective cover

- Effective to prevent short circuit failure due to the entry of foreign matter into the connector
- Chloroprene rubber for electrical use, which provides outstanding weather resistance and electrical insulation, is used for the cover material. However, do not allow contact with cutting oil, etc.
- Simple and unencumbered appearance by adopting round-shaped cord.

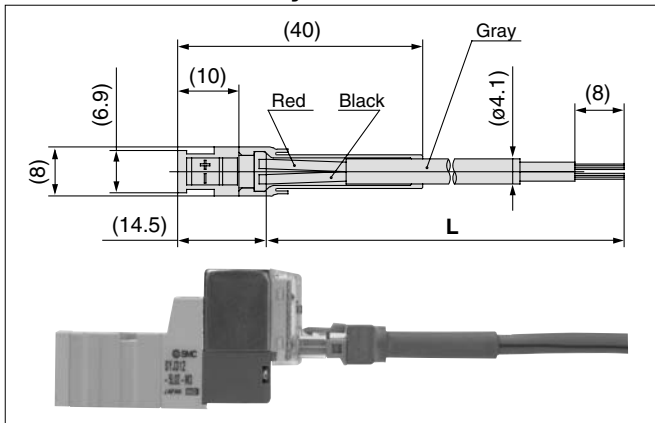
How to Order

SY100-68-A

• Lead wire length

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

Connector assembly with cover: Dimensions



How to Order

Enter the part number for a plug connector solenoid valve without connector together with the part number for a connector assembly with cover.

<Example 1> Lead wire length 2000 mm
10-SYJ3123-5LOZ-M3
SY100-68-A-20

<Example 2> Lead wire length 300mm (Standard)
10-SYJ3123-5LPZ-M3

Symbol for connector assembly with cover

* In this case, the part number for the connector assembly with cover is not required.

M8 connector

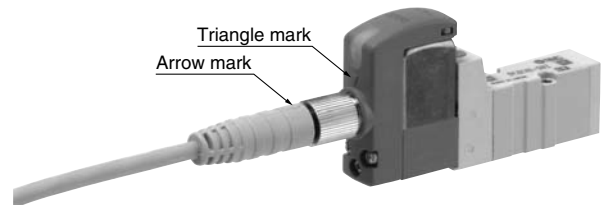
⚠ Caution

1. M8 connector types have an IP65 (enclosure) rating, offering protection from dust and water. However please note that these products are not intended for use in water. Select a SMC connector cable (V100-49-1-□) or a FA sensor type connector, with M8 threaded 3 pin specifications conforming to Nippon Electric Control Equipment Association Standard, NECA4202 (IEC60947-5-2). Make sure the connector O.D. is 10.5 mm or less when used with the Series 10-SY3000 manifold. If more than 10.5mm, it cannot be mounted due to the size.
2. Do not use a tool to mount the connector, as this may cause damage. Only tighten by hand. (0.4 to 0.6N)
3. Do not apply excessive power greater than 30N to the connector cable, otherwise IP65 cannot be satisfied.

⚠ Caution

Failure to meet IP65 performance may result if using alternative connectors than shown above, or when insufficiently tightened.

- Connector cable mounting



Note) Connector cable should be mounted in the correct direction. Make sure that the arrow symbol on the connector is facing the triangle symbol on the valve when using SMC connector cable (V100-49-1-□).

Be careful not to squeeze it in the wrong direction, as problems such as pin damage may occur.

MConnector cable

- Connector cable for M8 can be ordered as follows:

How to Order

1. To order solenoid valve and connector cable at the same time. (Connector cable will be included in the shipment of the solenoid valve.)

10-SYJ³₇□□3-□□□□-□□

• Electrical entry

- W1: Cable length 300 mm
- W2: Cable length 500 mm
- W3: Cable length 1000 mm
- W4: Cable length 2000 mm
- W7: Cable length 5000 mm

(Example 1) Cable length 300 mm
10-SYJ3123-5W1ZE-M3

Symbol for electrical entry

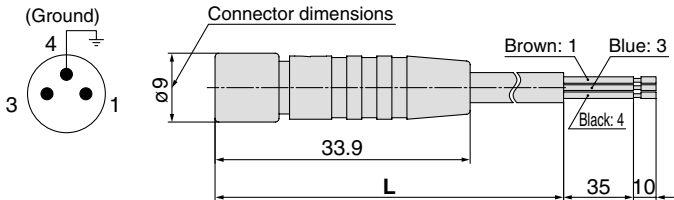


Series 10-SYJ3000/5000/7000 Specific Product Precautions 6

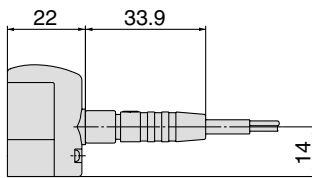
Be sure to read before handling.

M8 connector

2. To order connector cable only



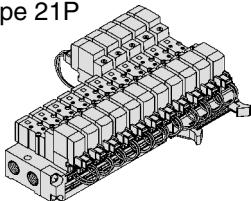
Cable length (L)	Part no.
300mm	V100-49-1-1
500mm	V100-49-1-2
1000mm	V100-49-1-3
2000mm	V100-49-1-4
5000mm	V100-49-1-7



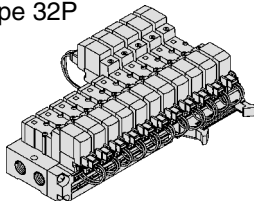
Flat ribbon cable manifold

Caution

Type 21P



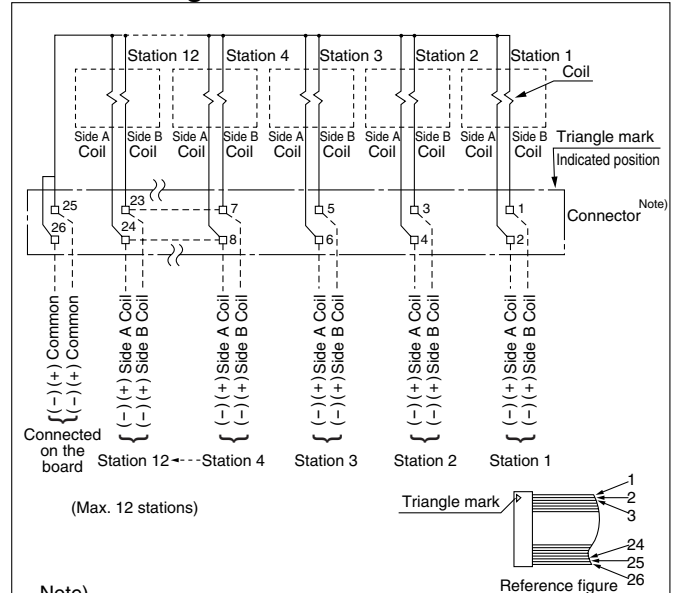
Type 32P



- In the manifold valves, the wiring to the individual valves is provided on a printed circuit board, and the connection to the external wires is consolidated through the use of a flat cable.
- A single MIL flat cable connects the entire manifold to your power source. This greatly reduces installation time and provides clean appearance.

Flat ribbon cable manifold

Internal wiring of manifold



Note)

Terminal no. is not indicated on the connector. The terminal no. indicated in the connection schematic of connector, as shown in the reference, means a correlation of 1, 2, 3...26 from the triangle mark side on the flat ribbon cable of connector.

- For more than 10 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid B side.
- The maximum number of stations that can be accommodated is 12. Please contact SMC for more stations.
- Only non-polar valves are available for the DC flat ribbon cable manifold, therefore negative COM or positive COM wiring of the manifold is possible. The valve does not switch with negative COM if a Z type is used. Be sure to use positive COM.

Bracket

Caution

For 10-SYJ3000 (Single) or 10-SYJ7000 with bracket, do not use it without bracket.

Replacement of solenoid valve

Caution

Mount it so that there is no slippage or deformation in gaskets, and tighten with the tightening torque as shown below.

Model	Thread size	Tightening torque
10-SYJ3000	M1.7	0.12N·m
10-SYJ5000	M2.5	0.45N·m
10-SYJ7000	M3	0.8N·m



Series 10-SYJ3000/5000/7000 Specific Product Precautions 7

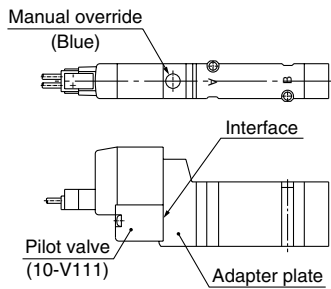
Be sure to read before handling.

Replacement of pilot valve

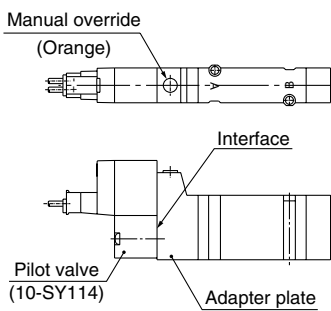
Caution

Pilot valves in this series are improved to provide excellent energy saving results. However, following this improvement, these new valves are no longer compatible with the conventional pilot valve used at the interface. Please consult with SMC when you need to exchange these pilot valves, in the case of manual override (marked in orange) of the adapter plate.

New type


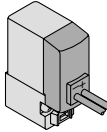

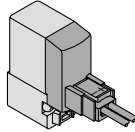

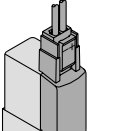

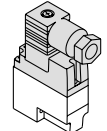





Conventional type



Series 10-SYJ300/500/700 Rubber seal 3 port solenoid valve

Variations

	Series	Port size	Sonic conductance C[dm ³ /(s·bar)]	Type of actuation	Voltage	Electrical entry	Option	Manual override											
							Light/Surge voltage suppressor												
Body ported	10-SYJ300  P.659	M3 x 0.5	[Effective area 0.9 mm ² { 2→3 } { (A→R) }]	· N.C. · N.O.		Grommet 													
	10-SYJ500  P.671	M5 x 0.8	0.66 { 2→3 } { (A→R) }						For DC ■24 VDC 12 VDC 6 VDC 5 VDC 3 VDC	L plug connector 	For DC ■With surge voltage suppressor ■Non-locking push type								
	10-SYJ700  P.684	1/8	2.5 { 2→3 } { (A→R) }									For AC ■100 VAC ^{50/60} Hz 110 VAC ^{50/60} Hz 200 VAC ^{50/60} Hz 220 VAC ^{50/60} Hz	M plug connector 	■With light/surge voltage suppressor For AC ^{Note)} ■With light/surge voltage suppressor					
Base mounted	10-SYJ300  P.659	M5 x 0.8	0.36 { 2→3 } { (A→R) }												· N.C. · N.O.		DIN terminal  (SYJ500, 700 only)	■Push-turn locking slotted type	
	10-SYJ500  P.671	1/8	1.2 { 2→3 } { (A→R) }																■Push-turn locking lever type
	10-SYJ700  P.684	1/8-1/4	2.7 { 2→3 } { (A→R) }																

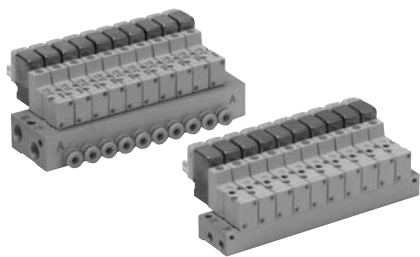
 Note) All standard AC voltage models have built-in surge voltage suppressor.

Air cylinder
 Rotary actuator
 Air gripper
 Directional control valve
 Flow control equipment
 Filter, Pressure control equipment
 Fittings & Tubing
 Air preparation equipment
 Pressure switch
 Clean gas filter

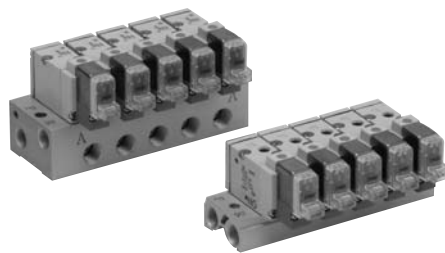
3 port solenoid valve 10-SYJ300/500/700

Manifold variations

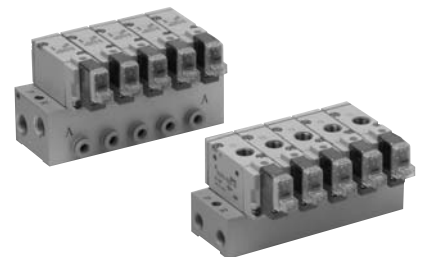
Valve series	A port location	P, R port size	A port size									
			M3	M5	1/8	With one-touch fitting						
						Applicable tubing O.D.						
						ø4	ø6	ø8	N3	N7	N9	
Body ported	10-SYJ300	Top	M5 x 0.8	●	—	—	—	—	—	—	—	—
	10-SYJ500	Top	1/8	—	●	—	—	—	—	—	—	—
	10-SYJ700	Top	1/8	—	—	●	—	—	—	—	—	—
			1/4	—	—	●	—	—	—	—	—	—
Base mounted	10-SYJ300	Side	M5 x 0.8	●	—	—	—	—	—	—	—	—
			1/8	—	●	—	●	—	—	●	—	—
	10-SYJ500	Bottom	1/8	—	●	●	—	—	—	—	—	—
		Side		—	●	●	●	●	—	●	●	—
	10-SYJ700	Bottom	1/8	—	—	●	—	—	—	—	—	—
			1/4	—	—	●	—	—	—	—	—	—
Side		1/4	—	—	●	—	●	●	—	●	●	



Series 10-SYJ300

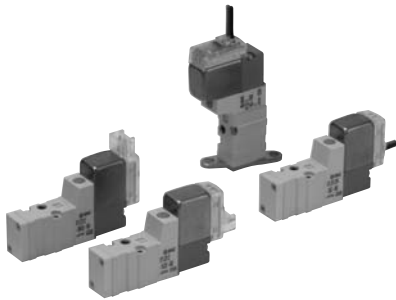


Series 10-SYJ500

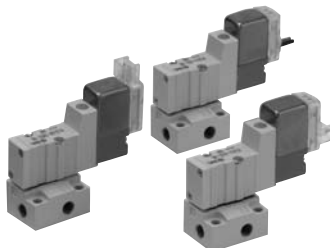


Series 10-SYJ700

Series 10-SYJ300 Rubber seal 3 Port / Pilot operated solenoid valve



Body ported

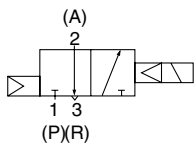


Base mounted

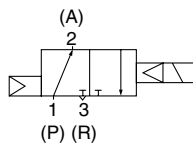
JIS symbol

Internal pilot

10-SYJ31₄²



10-SYJ32₄²



Made to Order Specifications
(For details, refer to page 698.)

Specifications

Fluid		Air
Operating pressure range (MPa)	Internal pilot	0.15 to 0.7
Ambient and fluid temperature (°C)		-10 to 50 (No freezing. Refer to page 714.)
Response time ms (at 0.5 MPa)^{Note 1)}		15 or less
Max. operating frequency (Hz)		10
Manual override (Manual operation)		Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type
Pilot exhaust method		Common exhaust for the main and pilot valve
Lubrication		Not required
Mounting orientation		Unrestricted
Impact / Vibration resistance (m/s²)^{Note 2)}		150/30
Enclosure		Dust tight (* M8 connector conforms to IP65.)



* Based on IEC60529

Note 1) Based on dynamic performance test, JIS B 8375-1981. (With coil temperature of 20°C, at rated voltage and without surge voltage suppressor)

Note 2) Impact resistance: No malfunction occurred when it is tested 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. (Initial value)

Vibration resistance: No malfunction occurred in one sweep between 45 and 2000Hz. Test was performed in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states. (Initial value)

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 type only)
	AC	100V 0.78 (With indicator light: 0.81) 110V 0.86 (With indicator light: 0.89) [115V] [0.94 (With indicator light: 0.97)] 200V 1.18 (With indicator light: 1.22) 220V 1.30 (With indicator light: 1.34) [230V] [1.42 (With indicator light: 1.46)]
Surge voltage suppressor		Diode (varistor for non-polar type)
Indicator light		LED



* 110VAC and 115VAC are common, as are 220VAC and 230VAC.


* For 115VAC and 230VAC, the allowable voltage is -15% to +5% of rated voltage. Since S, Z and T types (with power saving circuit) have a voltage drop due to internal circuit, observe the following allowable voltage fluctuation range.

S and Z types 24VDC: -7% to +10%
12VDC: -4% to +10%
T type 24VDC: -8% to +10%
12VDC: -6% to +10%

3 port / Pilot operated solenoid valve **10-SYJ300**

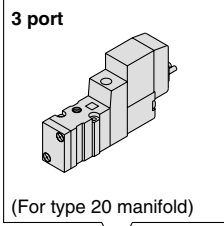
Flow characteristics / Weight

Valve model		Type of actuation	Port size	Flow characteristics						Effective area (mm ²)	Weight (g) ^{Note)}		
				1→2(P→A)			2→3(A→R)				Grommet	L/M plug connector	M8 connector
				C[dm ³ /(s·bar)]	b	Cv	C[dm ³ /(s·bar)]	b	Cv				
Body ported	10-SYJ312	N.C.	M3 x 0.5	—	—	—	—	—	—	0.9	32	33	37
	10-SYJ322	N.O.		—	—	—	—	—	—				
Base mounted (with sub-plate)	10-SYJ314	N.C.	M5 x 0.8	0.41	0.18	0.086	0.35	0.33	0.086	—	53(32)	54(33)	58(37)
	10-SYJ324	N.O.		0.36	0.31	0.089	0.36	0.31	0.089				

 Note) Value for DC. Add 1 g for AC. (): Without sub-plate.

How to Order

3 port



(For type 20 manifold)

Type of actuation

1	Normally closed
2	Normally open

Rated voltage

For DC

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

AC (50/60Hz)

1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

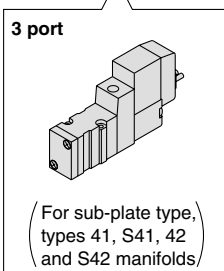
* For type "W□", DC voltage is only available.

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 "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

3 port



(For sub-plate type, types 41, S41, 42 and S42 manifolds)

Clean series

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.

Port size

Nil	Without sub-plate
M5	M5 port with sub-plate

(With gasket and screws)

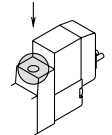
Electrical entry

24, 12, 6, 5, 3 VDC / 100, 110, 200, 220 VAC				24, 12 VDC 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	W□: With connector cable (Note 1)	

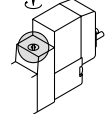
* "LN", "MN" types: with 2 sockets.
* For connector cable of M8 connector, refer to page 703.
Note 1) Be sure to enter a symbol of the cable length in □ with reference to page 704.

Manual override

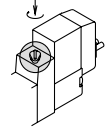
Nil: Non-locking push type



D: Push-turn locking slotted type



E: Push-turn locking lever type



Body ported 10-SYJ3 1 2M □ 5 M □ □ M3 □

Base mounted 10-SYJ3 1 4M □ 5 M □ □ □ □

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

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 666.)

How to Order Pilot Valve Assembly

10—V111 — **5** **G**

• Clean series

• 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.

• Rated voltage

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC
1	100 VAC50/60Hz
2	200 VAC50/60Hz
3	110 VAC50/60Hz [115 VAC50/60Hz]
4	220 VAC50/60Hz [230 VAC50/60Hz]

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

• Electrical entry

G	Grommet (Lead wire length 300 mm)
H	Grommet (Lead wire length 600 mm)
L	With lead wire
LN	L plug connector Without lead wire
LO	Without connector
M	With lead wire
MN	M plug connector Without lead wire
MO	Without connector
WO	Without connector cable
W□	M8 Connector With connector cable ^{Note 1)}

* For connector cable of M8 connector, refer to page 703.

• 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 "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

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

How to Order M8 Connector Cable

V100-49-1-

• Cable length

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

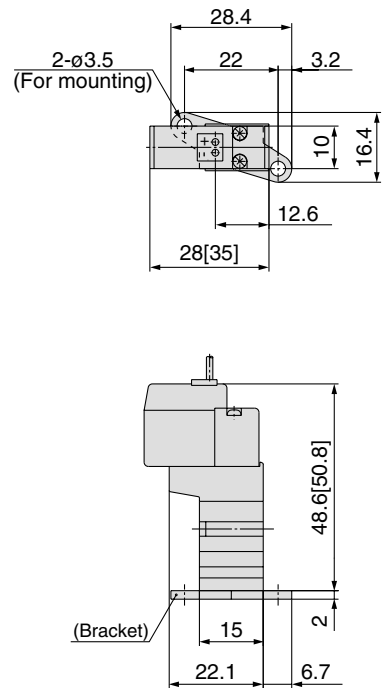
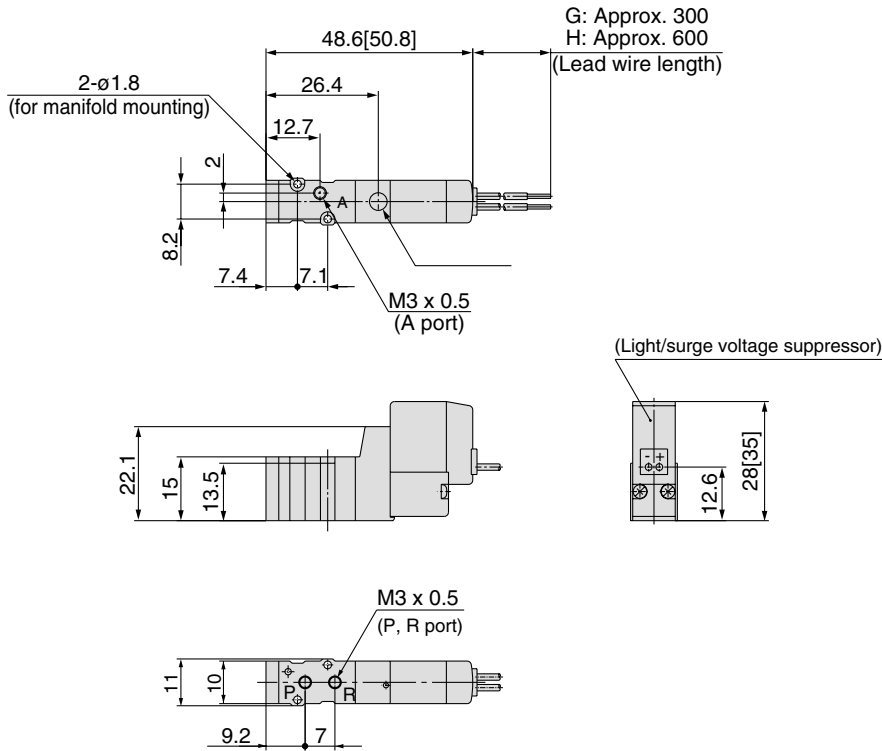
Note 1) Be sure to enter a symbol of the cable length in □ with reference to page 704.



Body ported

Grommet (G), (H): 10-SYJ3□2M-□^G□□-M3

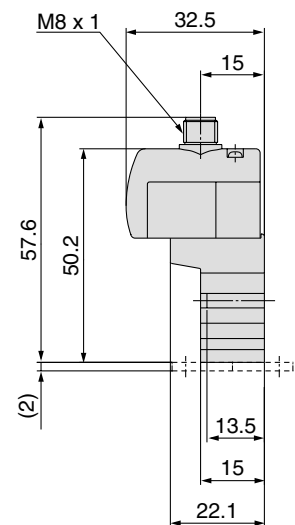
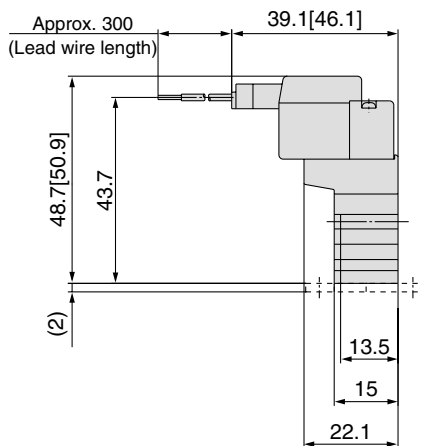
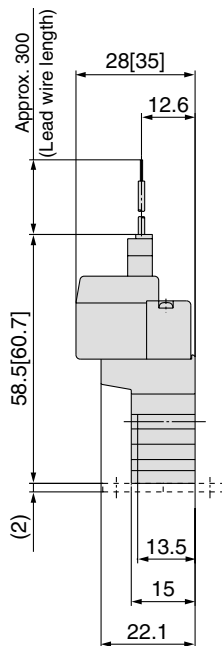
With bracket:
10-SYJ3□2M-□^G□□-M3-F



L plug connector (L):
10-SYJ3□2M-□L□□-M3

M plug connector (M):
10-SYJ3□2M-□M□□-M3

M8 connector (WO):
10-SYJ3□2M-□WO□□-M3



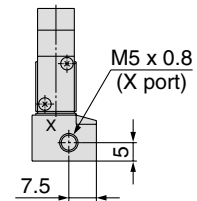
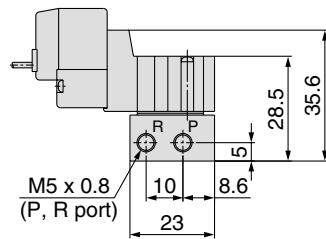
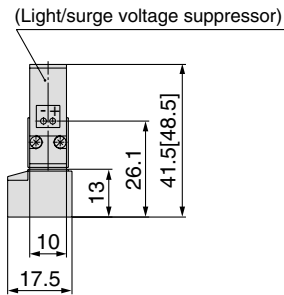
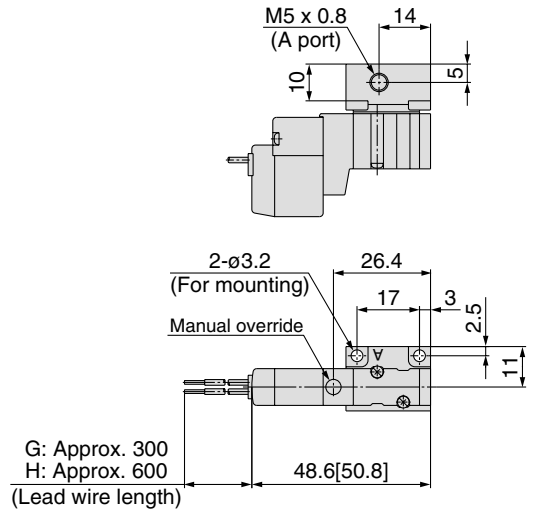
* Refer to page 704 for dimensions with connector cable.

3 port / Pilot operated solenoid valve **10-SYJ300**



Base mounted (With sub-plate)

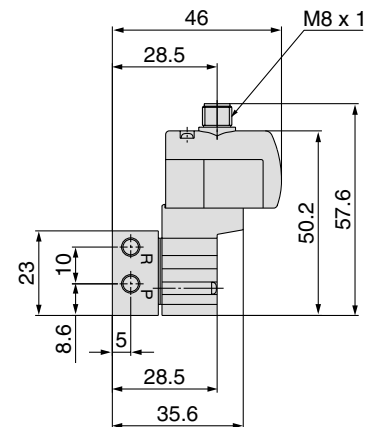
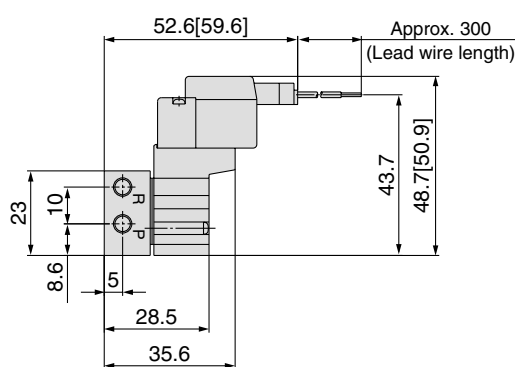
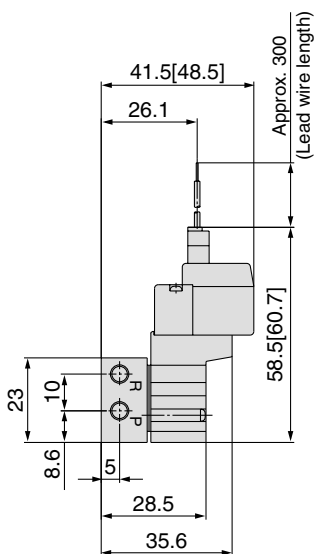
Grommet (G), (H): 10-SYJ3□4M-□^G□□-M5



L plug connector (L):
10-SYJ3□4M-□L□□-M5

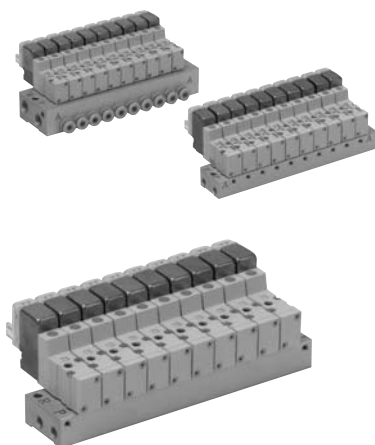
M plug connector (M):
10-SYJ3□4M-□M□□-M5

M8 connector (WO):
10-SYJ3□4M-□WO□□-M5



* Refer to page 704 for dimensions with connector cable.

Series 10-SYJ300 Manifold specifications



Manifold specifications

Model	For internal pilot	Type 20	Type 41, S41	Type 42, S42
Manifold type		Single base / B mount		
P (SUP), R (EXH)		Common SUP / Common EXH		
Valve stations		2 to 20 stations		
A port Porting specifications	Location	Valve	Base	
	Direction	Top	Side	
Port size	P, R port	M5 x 0.8 1/8	M5 x 0.8	1/8
	A port	M3 x 0.5	M3 x 0.5	M5 x 0.8 C4 (One-touch fitting for ø4)

Flow characteristics

Manifold			Port size		Flow characteristics						Effective area (mm ²)
					1→2(P→A)			2→3(A→R)			
Body ported for internal pilot	Type 10-SS3YJ3-20	10-SYJ3□2M	1 (P), 3 (R) port	2 (A) port	C	b	Cv	C	b	Cv	
					[dm ³ /(s·bar)]			[dm ³ /(s·bar)]			
			M5 x 0.8	M3 x 0.5	—	—	—	—	—	—	0.9
Base mounted for internal pilot	Type 10-SS3YJ3-41	10-SYJ3□4M	M5 x 0.8	M3 x 0.5	—	—	—	—	—	—	1.5
	Type 10-SS3YJ3-42-M5	10-SYJ3□4M	1/8	M5 x 0.8	0.31	0.17	0.075	0.32	0.11	0.072	—
	Type 10-SS3YJ3-42-C4			C4	0.33	0.36	0.086	0.33	0.2	0.082	—
	Type 10-SS3YJ3-S42-M5	10-SYJ3□4M	1/8	M5 x 0.8	0.32	0.3	0.079	0.33	0.35	0.086	—
Type 10-SS3YJ3-S42-C4	C4			0.35	0.17	0.082	0.35	0.26	0.086	—	

Note) Value at manifold base mounted, 2 position single operating.

How to Order Manifold (Example)

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

Example

10-SS3YJ3-20-03 1 set (Manifold base)

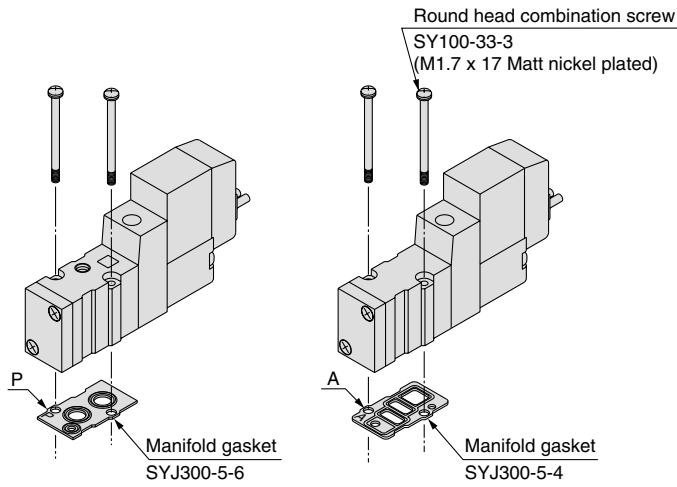
* **10-SYJ312M-5LZ-M3** ... 2 sets (Valve)

* **SYJ300-10-1A** 1 set (Blanking plate assembly)

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

<Manifold option>
**Combinations of solenoid valve,
 manifold gasket and manifold base**

Body ported (10-SYJ3□2M) Base mounted (10-SYJ3□4M)



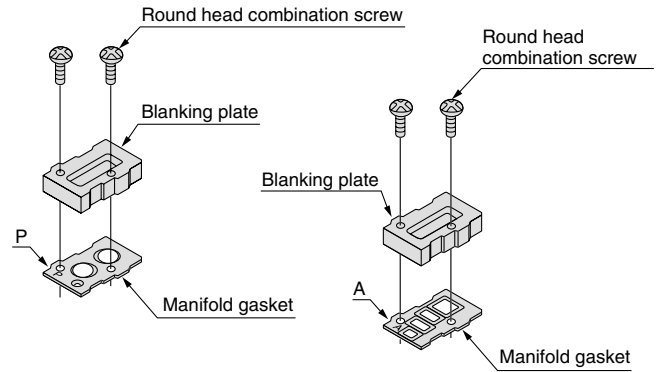
Applicable base
 10-SS3YJ3-20 } Manifold base

Applicable base sub-plate
 10-SS3YJ3-41 }
 10-SS3YJ3-S41 } Manifold base
 10-SS3YJ3-42 }
 10-SS3YJ3-S42 }

Blanking plate assembly

Part no.: SYJ300-10-1A

Part no.: SYJ300-10-2A



Applicable base
 10-SS3YJ3-20 } Manifold base

Applicable base sub-plate
 10-SS3YJ3-41 }
 10-SS3YJ3-S41 } Manifold base
 10-SS3YJ3-42 }
 10-SS3YJ3-S42 }

⚠ Caution

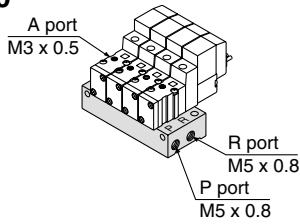
Mounting screw tightening torque

M1.7: 0.12N·m

**Use caution to the assembly orientation of
 solenoid valve, gasket and optional parts.**

How to Order Manifolds

Type 20



How to Order

10-SS3YJ3-20-05

• Clean series

Stations

02	2 stations
:	:
20	20 stations

• Bracket

Nil	Without bracket
F	With bracket

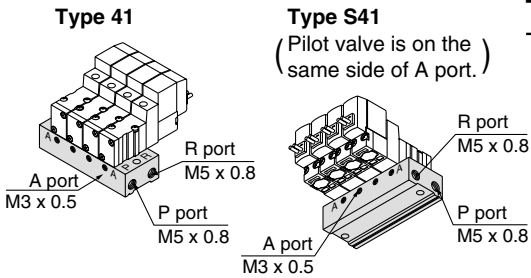
Applicable solenoid valve
10-SYJ312M-□□□□-M3
10-SYJ322M-□□□□-M3

Applicable blanking plate assembly
SYJ300-10-1A



Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 41



How to Order

10-SS3YJ3-41-05-M3

• Clean series

Valve

mounting direction

Nil	Pilot valve is on the opposite side of A port.
S	Pilot valve is on the same side of A port.

• Stations

02	2 stations
:	:
20	20 stations

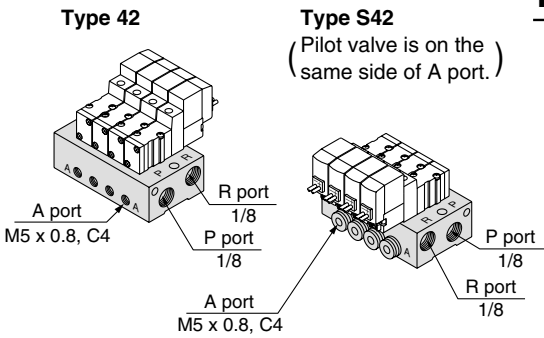
Applicable solenoid valve
10-SYJ314M-□□□□
10-SYJ324M-□□□□

Applicable blanking plate assembly
SYJ300-10-2A



Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 42



How to Order

10-SS3YJ3-42-05-M5

• Clean series

Valve

mounting direction

Nil	Pilot valve is on the opposite side of A port.
S	Pilot valve is on the same side of A port.

• Stations

02	2 stations
:	:
20	20 stations

• A port size

M5	M5 x 0.8
C4	One-touch fitting for ø4
N3	One-touch fitting for ø5/32"

Applicable solenoid valve
10-SYJ314M-□□□□
10-SYJ324M-□□□□

Applicable blanking plate assembly
SYJ300-10-2A

• P, R port thread type

Nil	Rc
F	G
N	NPT
T	NPTF



Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

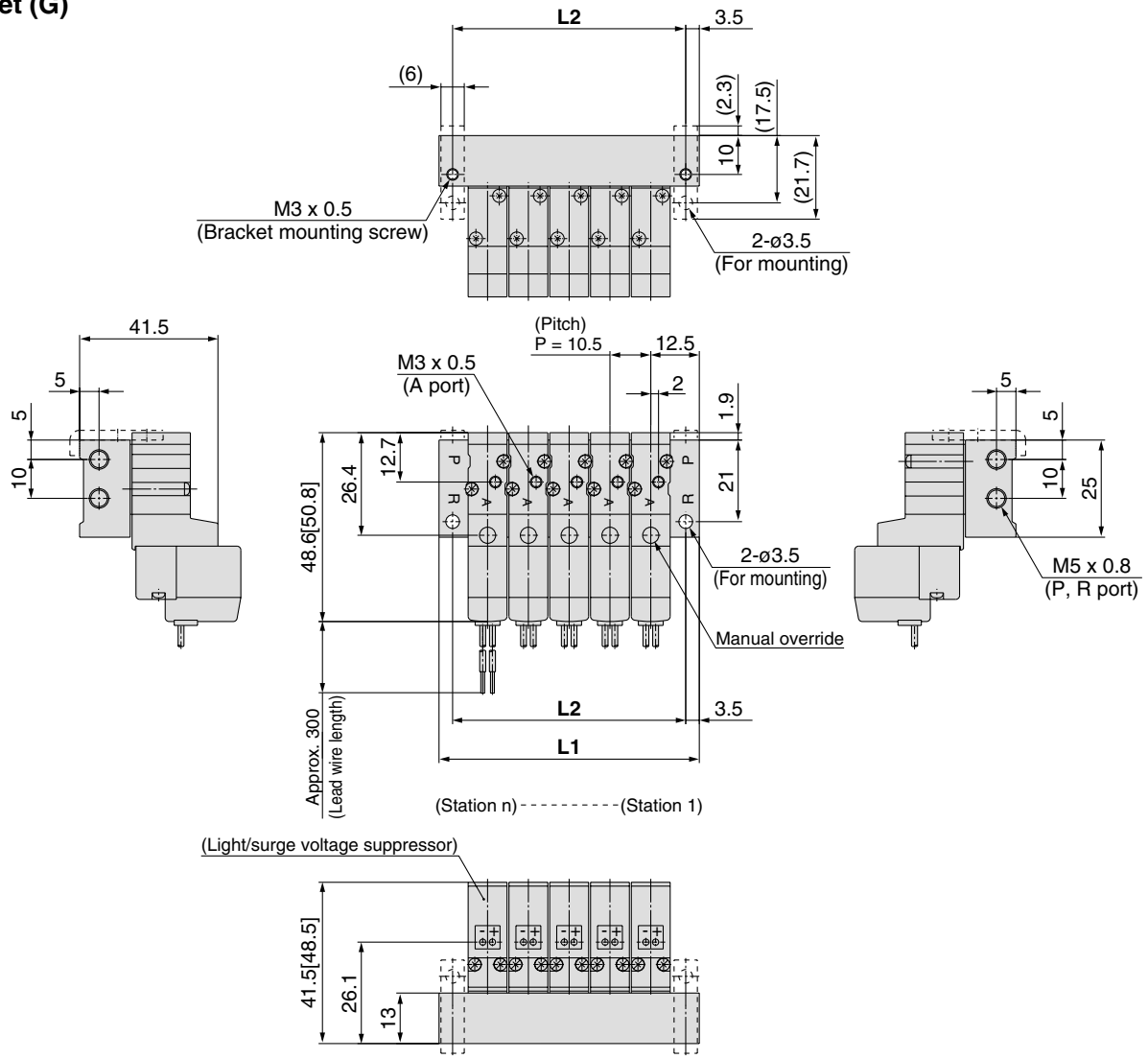
Fittings & Tubing

Air preparation equipment

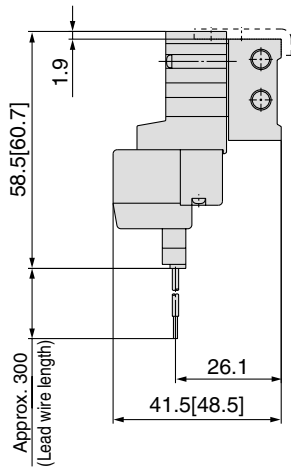
Pressure switch

Clean gas filter

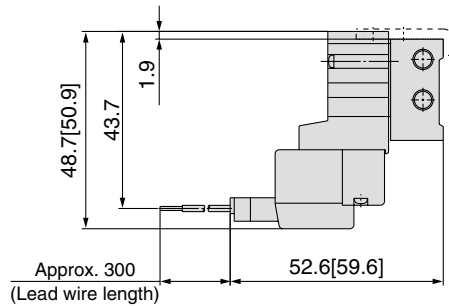
Grommet (G)



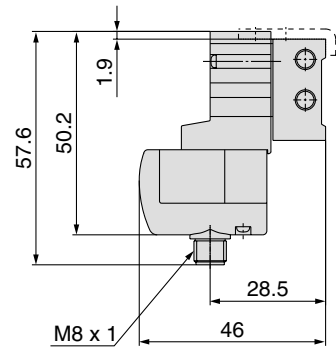
L plug connector (L)



M plug connector (M)



M8 connector (WO)



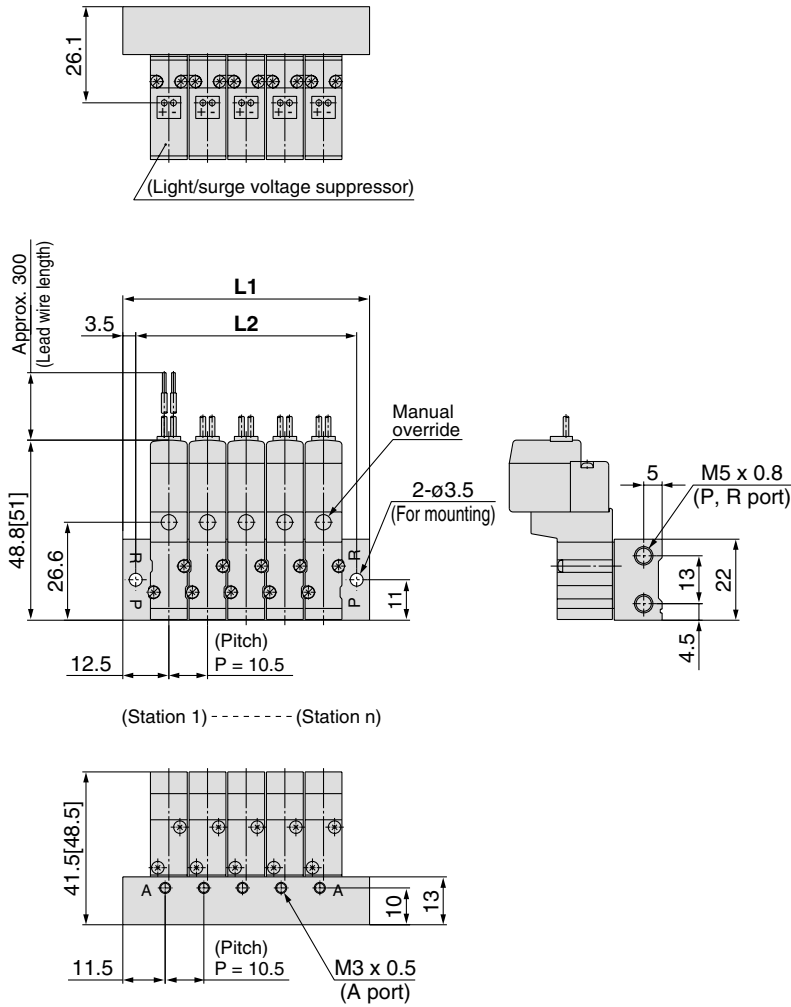
* Refer to page 704 for dimensions with connector cable.

Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	35.5	46	56.5	67	77.5	88	98.5	109	119.5	130	140.5	151	161.5	172	182.5	193	203.5	214	224.5
L2	28.5	39	49.5	60	70.5	81	91.5	102	112.5	123	133.5	144	154.5	165	175.5	186	196.5	207	217.5

Type 41 manifold: Side ported / 10-SS3YJ3-41-Station -M3

Note) []: AC

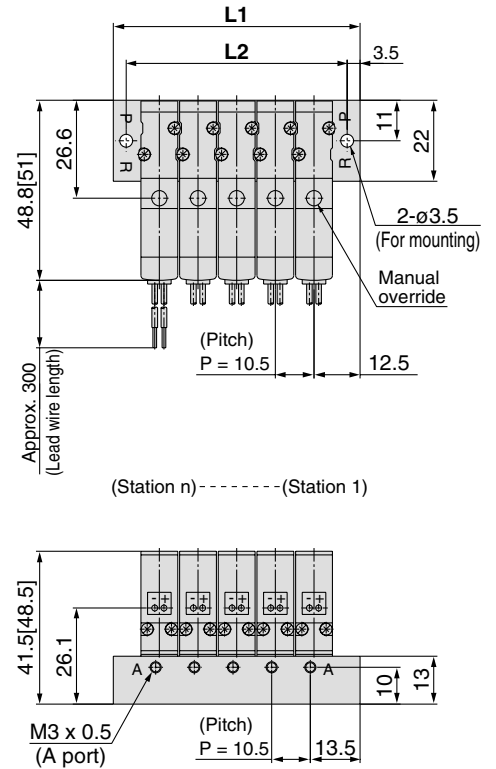
Grommet (G)



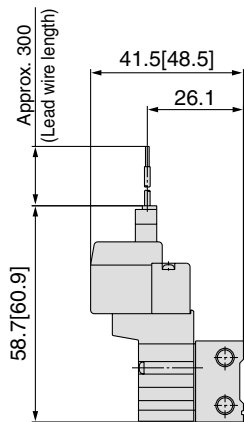
Type S41 manifold: Side ported

(Pilot valve is on the same side of A port.)

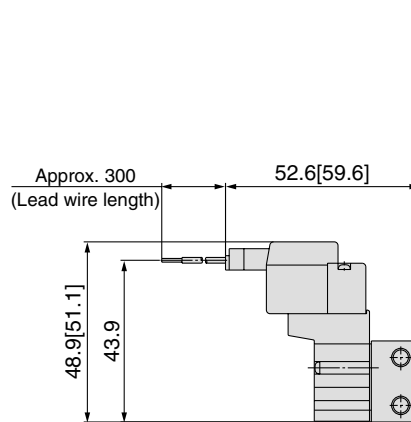
10-SS3YJ3-S41-Stations -M3



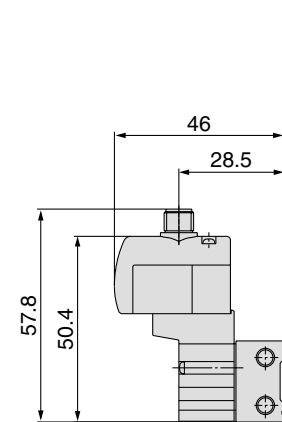
L plug connector (L)



M plug connector (M)



M8 connector (WO)



* Refer to page 704 for dimensions with connector cable.

Stations n	2 Stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 Stations
L1	35.5	46	56.5	67	77.5	88	98.5	109	119.5	130	140.5	151	161.5	172	182.5	193	203.5	214	224.5
L2	28.5	39	49.5	60	70.5	81	91.5	102	112.5	123	133.5	144	154.5	165	175.5	186	196.5	207	217.5

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

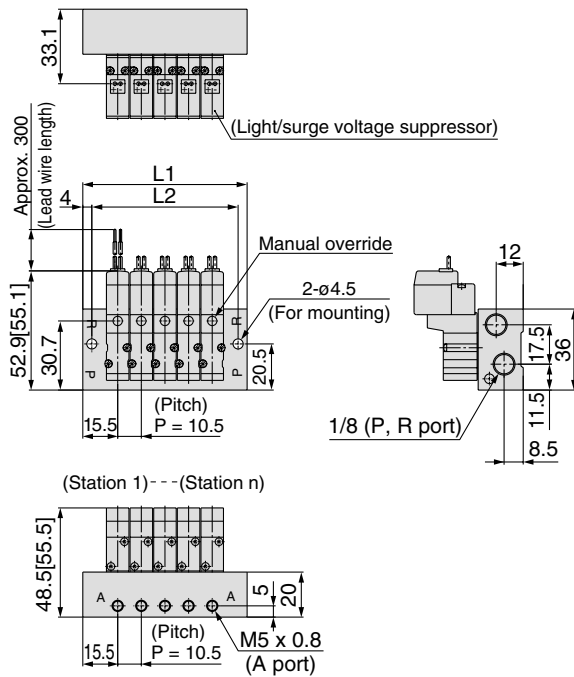
Fittings & Tubing

Air preparation equipment

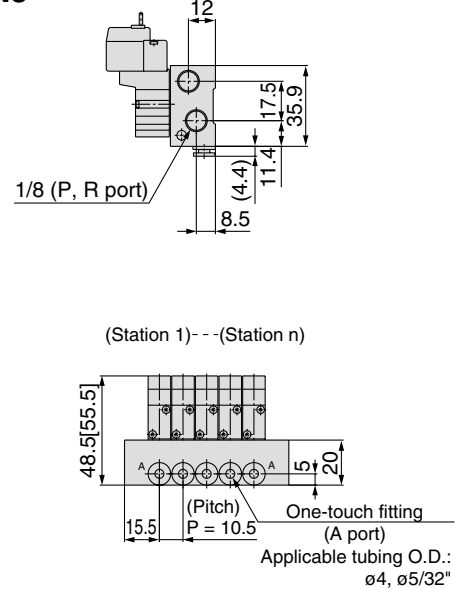
Pressure switch

Clean gas filter

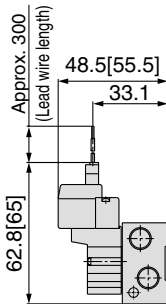
Grommet (G)
M5



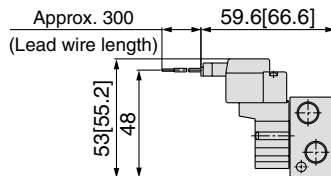
C4 **N3** (With built-in one-touch fitting)



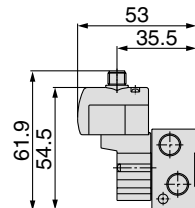
L plug connector (L)



M plug connector (M)



M8 connector (WO)

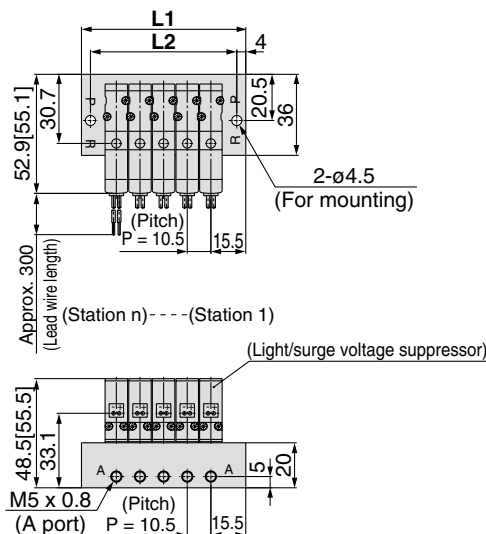


* Refer to page 704 for dimensions with connector cable.

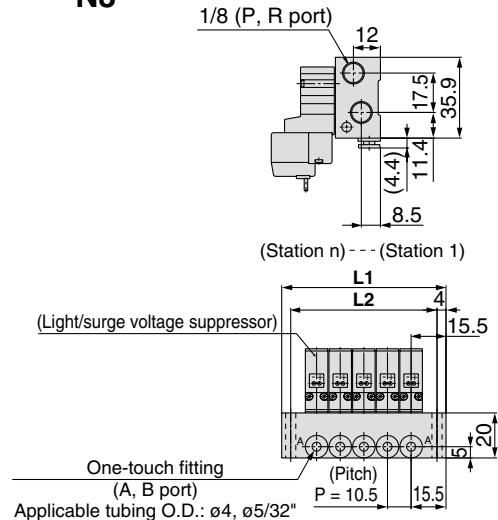
Type S42 manifold: Side ported (Pilot valve is on the same side of A port.)

M5 10-SS3YJ3-S42- Stations -M5, **C4 **N3****

Grommet (G)
M5

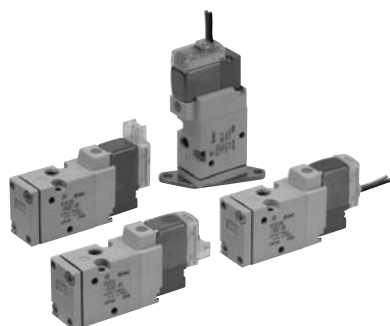


C4 **N3** (With built-in one-touch fitting)

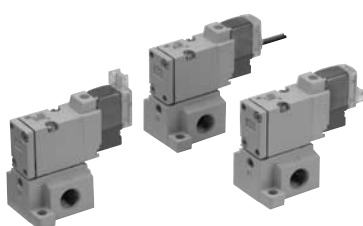


Stations n	2 Stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 Stations
L1	41.5	52	62.5	73	83.5	94	104.5	115	125.5	136	146.5	157	167.5	178	188.5	199	209.5	220	230.5
L2	33.5	44	54.5	65	75.5	86	96.5	107	117.5	128	138.5	149	159.5	170	180.5	191	201.5	212	222.5

Series 10-SYJ500 Rubber seal 3 port / Pilot operated solenoid valve



Body ported



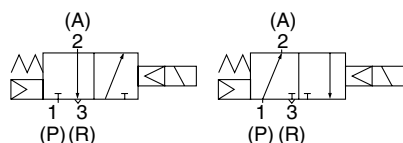
Base mounted

JIS Symbol

Internal pilot

10-SYJ51 $\frac{1}{2}$ M

10-SYJ52 $\frac{1}{2}$ M



Made to Order Specifications
(Refer to page 698 for details.)

Specifications

Fluid	Air	
Operating pressure range (MPa)	Internal pilot	0.15 to 0.7
Ambient and fluid temperature (°C)	-10 to 50 (No freezing. Refer to page 714.)	
Response time ms (0.5MPa) ^{Note 1)}	25 or less	
Max. operating frequency (Hz)	5	
Manual override (Manual operation)	Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type	
Pilot exhaust method	Common exhaust type for main and pilot valves	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Impact / Vibration resistance m/s² ^{Note 2)}	150/30	
Enclosure	Dust tight (* DIN terminal, M8 connector conforms to IP65.)	

- * Based on IEC60529
- Note 1) Based on dynamic performance test, JIS B 8374-1981. (With coil temperature of 20°C, at rated voltage and without surge voltage suppressor)
- Note 2) Impact resistance: No malfunction occurred when it is tested 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. (Initial value)
- Vibration resistance: No malfunction occurred in one sweep between 45 and 2000Hz. Test was performed in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states. (Initial value)

Solenoid specifications

Electrical entry		Grommet(G)/(H), L plug connector (L), M plug connector (M), DIN terminal (D), M8 connector (W)	
		G, H, L, M, W	D
Rated coil 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 (DIN terminal with indicator light: 0.45))
		With power saving circuit	0.1 (With indicator light only)
Apparent power * (VA)	AC	100V	0.78 (With indicator light: 0.81) 0.78 (With indicator light: 0.87)
		110V [115V]	0.86 (With indicator light: 0.89) 0.86 (With indicator light: 0.97) [0.94 (With indicator light: 1.07)]
		200V	1.18 (With indicator light: 1.22) 1.15 (With indicator light: 1.30)
		220V [230V]	1.30 (With indicator light: 1.34) 1.27 (With indicator light: 1.46) [1.42 (With indicator light: 1.46)] [1.39 (With indicator light: 1.60)]
Surge voltage suppressor		Diode (Varistor for DIN terminal and non-polar type)	
Indicator light		LED (Neon bulb for DIN terminal AC)	

- * 110VAC and 115VAC are common, as are 220VAC and 230VAC.
- * For 115 VAC and 230 VAC, the allowable voltage fluctuation is -15% to +5% of rated voltage.
- * Since S, Z and T types (with a power saving circuit) have a voltage drop due to internal circuit, observe the following allowable voltage fluctuation range.
- S and Z types, 24VDC: -7% to +10%
12VDC: -4% to +10%
- T type, b 24VDC: -8% to +10%
12VDC: -6% to +10%

3 port/Pilot operated solenoid valve **10-SYJ500**

Flow characteristics / Weight

Valve model		Type of actuation	Port size	Flow characteristics						Weight (g) ^{Note)}			
				1→2(P→A)			2→3(A→R)			Grommet	L/M plug connector	DIN terminal	M8 connector
				C[dm ³ /(s·bar)]	b	Cv	C[dm ³ /(s·bar)]	b	Cv				
Body ported	10-SYJ512M	N.C.	M5 x 0.8	0.53	0.45	0.14	0.47	0.39	0.12	46	47	68	51
	10-SYJ522M	N.O.		0.66	0.45	0.18	0.66	0.45	0.18				
Base mounted (With sub-plate)	10-SYJ514M	N.C.	1/8	1.2	0.41	0.32	1.1	0.46	0.32	60(46)	61(47)	82(68)	65(51)
	10-SYJ524M	N.O.		1.3	0.37	0.33	1.2	0.48	0.34				



Note) Value for DC. Add 3 g for AC. (): Without sub-plate.

How to Order

Rated voltage

For DC

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

* DC specifications of type "D" and "DO" is only available with 12 and 24 VDC.

AC specifications (50/60Hz)

1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

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

Type of actuation

1	Normally closed
2	Normally open

Light/surge voltage suppressor

Electrical entry for G, H, L, M, W

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 "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

Electrical entry for D

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

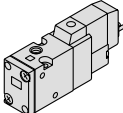
* "DOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Bracket

Nil: Without bracket
F: With bracket

* Brackets are not installed.

3 port

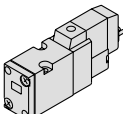


(For type 20 manifold)

Body ported 10-SYJ5 1 2M □ 5 M □ □ M5 □

Base mounted 10-SYJ5 1 4M □ 5 M □ □ 01 □

3 port



(For sub-plate type, Type 40, 41 manifolds)

Clean series

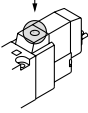
Coil specifications

Nil	Standard
T	With power saving circuit <24 and 12 VDC only>

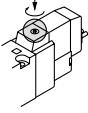
* Power saving circuit is not available in the case of "D", "DO" or "W□" type.

Manual override

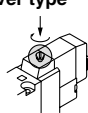
Nil: Non-locking push type



D: Push-turn locking slotted type

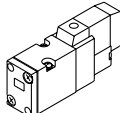


E: Push-turn locking lever type

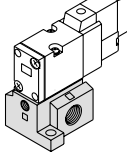


Port size

Nil: Without sub-plate



01: With 1/8 port sub-plate



(With gasket and screws)

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Electrical entry

24, 12, 6, 5, 3 VDC / 100, 110, 200, 220 VAC				24, 12 VDC / 100, 110, 200, 220 VAC	24, 12 VDC / 6, 5, 3 VDC
Grommet	L plug connector	M plug connector		DIN terminal	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	D: With connector	WO: Without connector cable
H: Lead wire length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector	DO: Without connector	W□: With connector cable (Note 1)

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 catalog in page 678.)

* "LN", "MN" types: with 2 sockets.
* DIN terminal type "Y" conforming to EN-175301-803C (former DIN43650C) is also available. For details, refer to page 698.
* For connector cable of M8 connector, refer to page 703.
Note 1) Be sure to enter a symbol of the cable length with reference to page 704.

Air cylinder
Rotary actuator
Air gripper
Directional control valve
Flow control equipment
Filter, Pressure control equipment
Fittings & Tubing
Air preparation equipment
Pressure switch
Clean gas filter

How to Order Pilot Valve Assembly

How to Order L/M Plug Connector Assembly

10—V111 **5** **G**

Coil specifications

Nil	Standard
T	With power saving circuit 24 and 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 VAC50/60Hz
2	200 VAC50/60Hz
3	110 VAC50/60Hz [115 VAC50/60Hz]
4	220 VAC50/60Hz [230 VAC50/60Hz]

* 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 "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

Electrical entry

G	Grommet (Lead wire length 300 mm)	
H	Grommet (Lead wire length 600 mm)	
L	With lead wire	
LN	L plug connector	Without lead wire
LO	Without connector	
M	With lead wire	
MN	M plug connector	Without lead wire
MO	Without connector	
WO	M8	Without connector cable
W□	connector	With connector cable ^{Note 1)}

* For connector cable of M8 connector, refer to page 703.

Note 1) Be sure to enter a symbol of the cable length with reference to page 704.

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
(with connector and 2 of sockets only) : **SY100-30-A**

Lead wire length

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

10—V115 **5** **D**

Rated voltage

5	24 VDC
6	12 VDC
1	100 VAC50/60Hz
2	200 VAC50/60Hz
3	110 VAC50/60Hz [115 VAC50/60Hz]
4	220 VAC50/60Hz [230 VAC50/60Hz]

* DC specifications of types "D" and "DO" is only available with 12 and 24 VDC.

* Power saving circuit is not available in the case of "D", "DO" type.

Light/surge voltage suppressor

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

* "DOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Electrical entry

D	DIN terminal	With connector
DO	Without connector	

Note) Do not replace 10-V111 (G, H, L, M, W) with 10-V115 (DIN terminal) and vice versa when replacing pilot valve assembly only.

V100-49-1-

Cable length

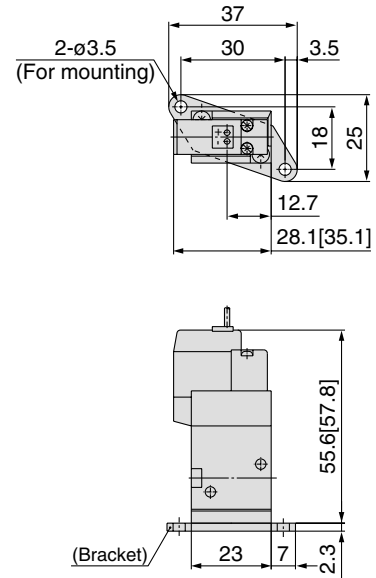
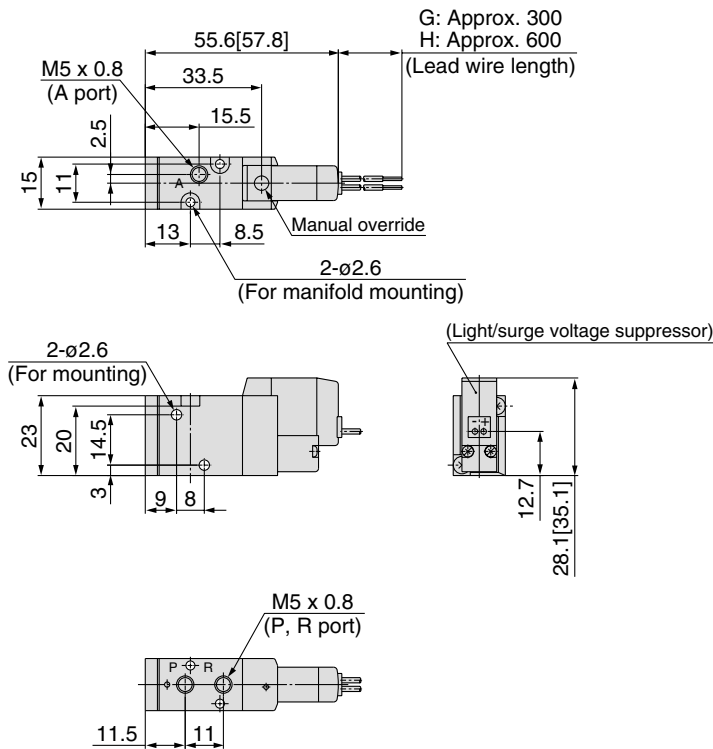
1	300mm
2	500mm
3	1000mm
4	2000mm
7	5000mm



Body ported

Grommet (G), (H): 10-SYJ5□2M-□G□□-M5

With bracket:
10-SYJ5□2M-□G□□-M5-F



L plug connector (L):

10-SYJ5□2M-□L□□-M5 (-F)

M plug connector (M):

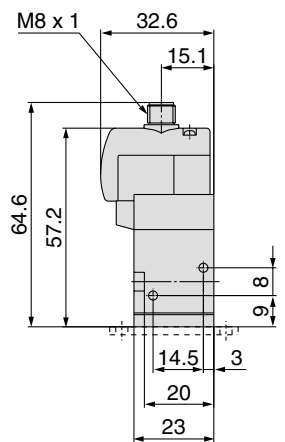
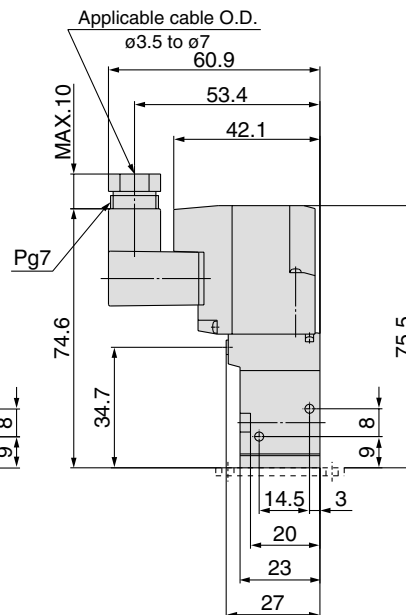
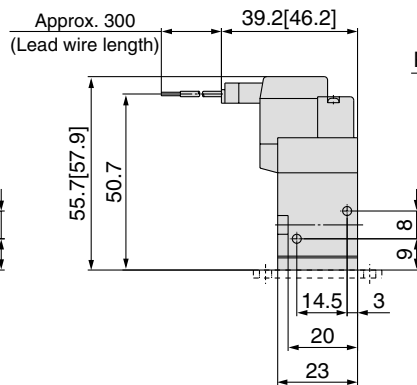
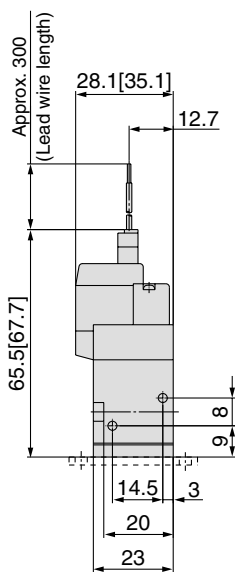
10-SYJ5□2M-□M□□-M5 (-F)

DIN Terminal (D):

10-SYJ5□2M-□D□□-M5 (-F)

M8 connector (WO):

10-SYJ5□2M-□WO□□-M5 (-F)



* Refer to page 704 for dimensions with connector cable.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

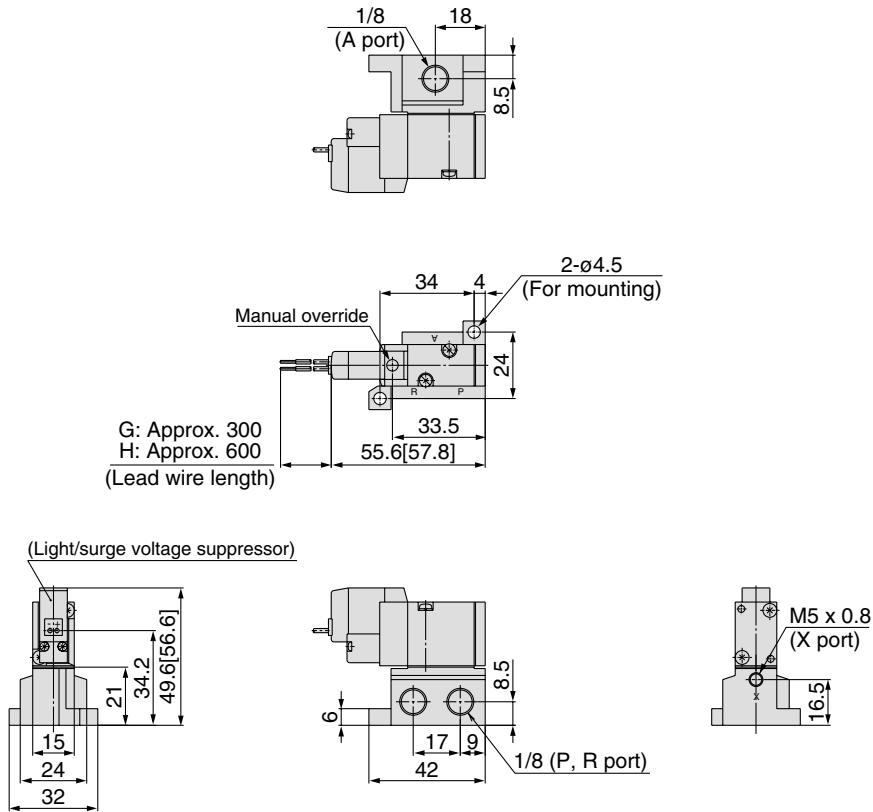
Clean gas filter

3 port / Pilot operated solenoid valve **10-SYJ500**



Base mounted (With sub-plate)

Grommet (G), (H): 10-SYJ5□4M-□G□□-01□

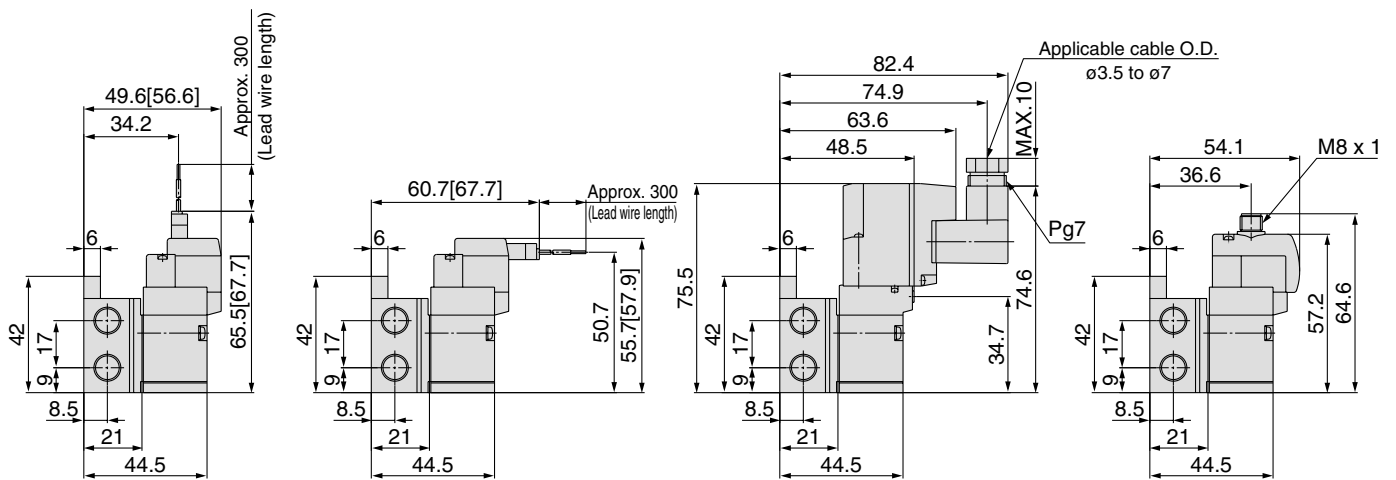


L plug connector (L):
10-SYJ5□4M-□L□□-01□

M plug connector (M):
10-SYJ5□4M-□M□□-01□

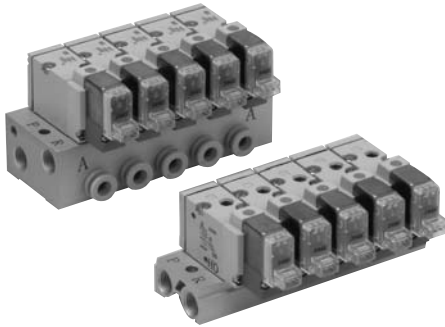
DIN terminal (D):
10-SYJ5□4M-□D□□-01□

M8 connector (WO):
10-SYJ5□4M-□WO□□-01□



* Refer to page 704 for dimensions with connector cable.

Series 10-SYJ500 Manifold specifications



Manifold specifications

Model	For internal pilot	Type 20	Type 40	Type 41
Manifold type		Single base type / B mount		
P(SUP) / R(EXH)		Common SUP / Common EXH		
Stations		2 to 20 stations		
A port Porting specifications	Location	Valve	Base	
	Direction	Top	Bottom	Side
Port size	P, R port	1/8	1/8	1/8
	A port	M5 x 0.8	M5 x 0.8 1/8	M5 x 0.8, 1/8, C4(One-touch fitting for ø4), C6(One-touch fitting for ø6)

Flow characteristics

Manifold			Port size		Flow characteristics					
					1→2(P→A)			2→3(A→R)		
			1(P), 3(R) port	2(A) port	C [dm ³ /(sbar)]	b	Cv	C [dm ³ /(sbar)]	b	Cv
Body ported for internal pilot	10-SS3YJ5-20	10-SYJ5□2M	1/8	M5 x 0.8	0.47	0.43	0.13	0.74	0.32	0.19
			1/8	M5 x 0.8	0.71	0.52	0.21	0.81	0.28	0.20
Base mounted for internal pilot	10-SS3YJ5-40-M5	10-SYJ5□4M	1/8	1/8	0.98	0.36	0.25	0.92	0.24	0.22
			1/8	M5 x 0.8	0.71	0.49	0.20	0.80	0.23	0.19
			1/8	1/8	1.0	0.37	0.26	0.96	0.25	0.24
			1/8	C4	0.68	0.35	0.17	1.0	0.25	0.24
			1/8	C6	1.0	0.27	0.25	1.0	0.30	0.26



Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold (Example)

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

(Example)

10-SS3YJ5-20-031 set (Manifold base)

* 10-SYJ512M-5LZ-M5 ... 2 sets (Valve)

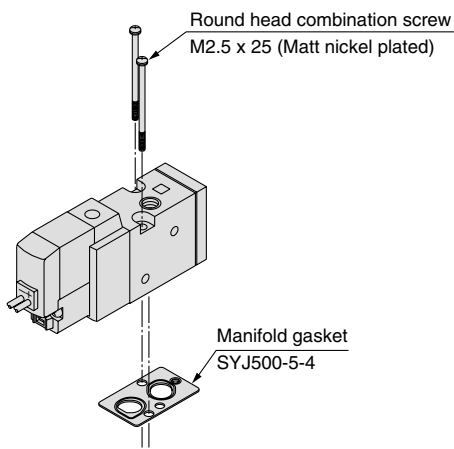
* SYJ500-10-1A.....1 set (Blanking plate assembly.)

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

<Manifold option>

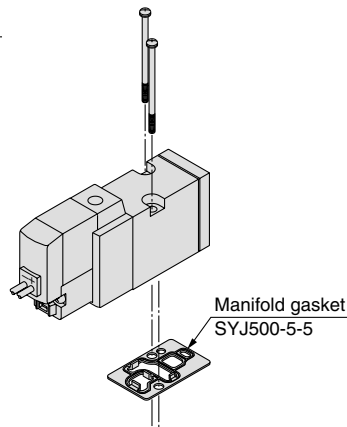
Combinations of solenoid valve, manifold gasket and manifold base

Body ported (10-SYJ5□2M)



Applicable base
10-SS3YJ5-20
Manifold base

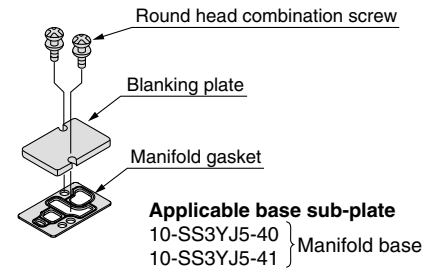
Base mounted (10-SYJ5□4M)



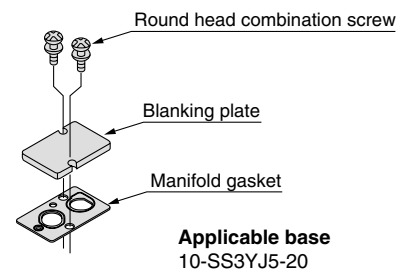
Applicable base sub-plate
10-SS3YJ5-40 } Manifold base
10-SS3YJ5-41 }

Blanking plate assembly

Part no.: SYJ500-10-3A



Part no.: SYJ500-10-1A



⚠ Caution

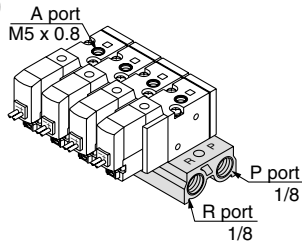
Mounting screw tightening torque

M2.5: 0.45N·m

Use caution to the assembly orientation of solenoid valve (blanking plate) and manifold gasket.

How to Order Manifolds

Type 20



How to Order

10-SS3YJ5-20-05 [] []

• Clean series

Stations	
02	2 stations
:	:
20	20 stations

P, R port thread type	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

Bracket	
Nil	Without bracket
F	With bracket

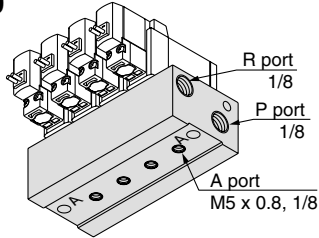
Applicable solenoid valve
10-SYJ512M-□□□□-M5
10-SYJ522M-□□□□-M5

Applicable blanking plate assembly
SYJ500-10-1A



Note) For more than 6 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 40



How to Order

10-SS3YJ5-40-05-M5 [] []

• Clean series

Stations	
02	2 stations
:	:
20	20 stations

A port size	
M5	M5 x 0.8
01	1/8

P, R port thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

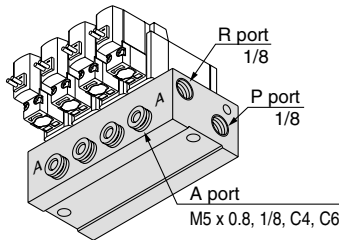
Applicable solenoid valve
10-SYJ514M-□□□□
10-SYJ524M-□□□□

Applicable blanking plate assembly
SYJ500-10-3A



Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 41



How to Order

10-SS3YJ5-41-05-C6 [] []

• Clean series

Stations	
02	2 stations
:	:
20	20 stations

A port size	
M5	M5 x 0.8
01	1/8
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
N3	One-touch fitting for ø5/32"
N7	One-touch fitting for ø1/4"

P, R port thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
10-SYJ514M-□□□□
10-SYJ524M-□□□□

Applicable blanking plate assembly
SYJ500-10-3A



Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

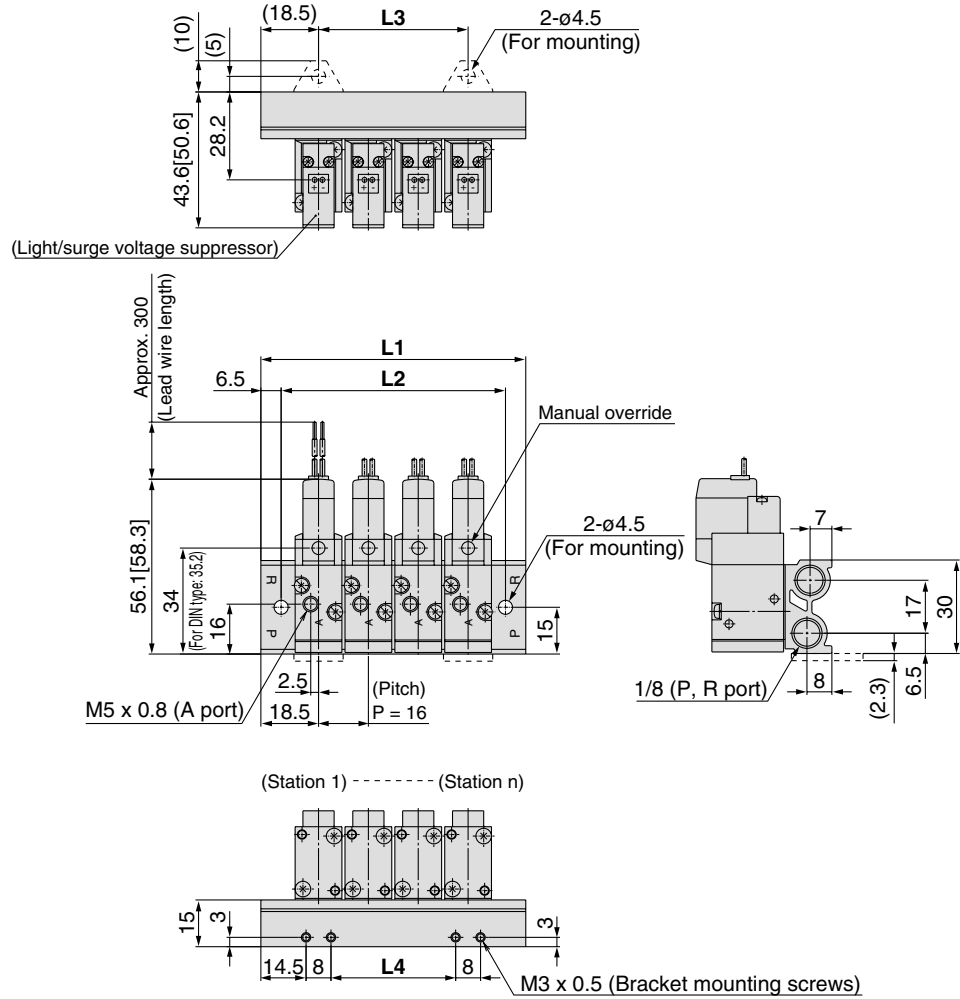
Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

Grommet (G)

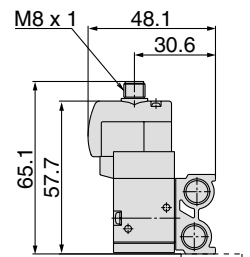
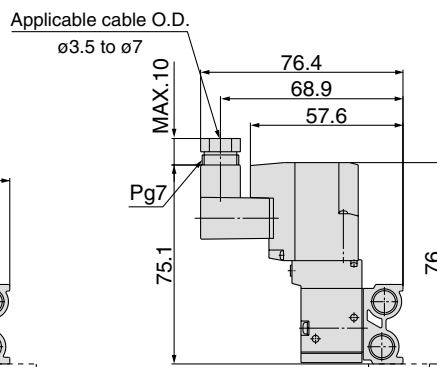
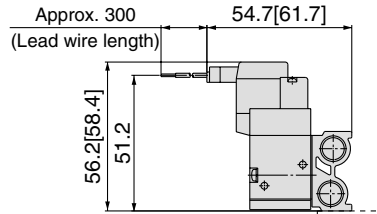
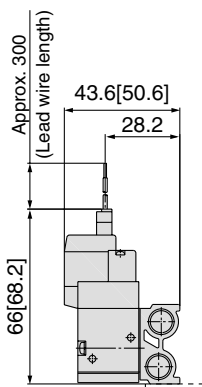


L plug connector (L)

M plug connector (M)

DIN terminal (D)

M8 connector (WO)



* Refer to page 704 for dimensions with connector cable.

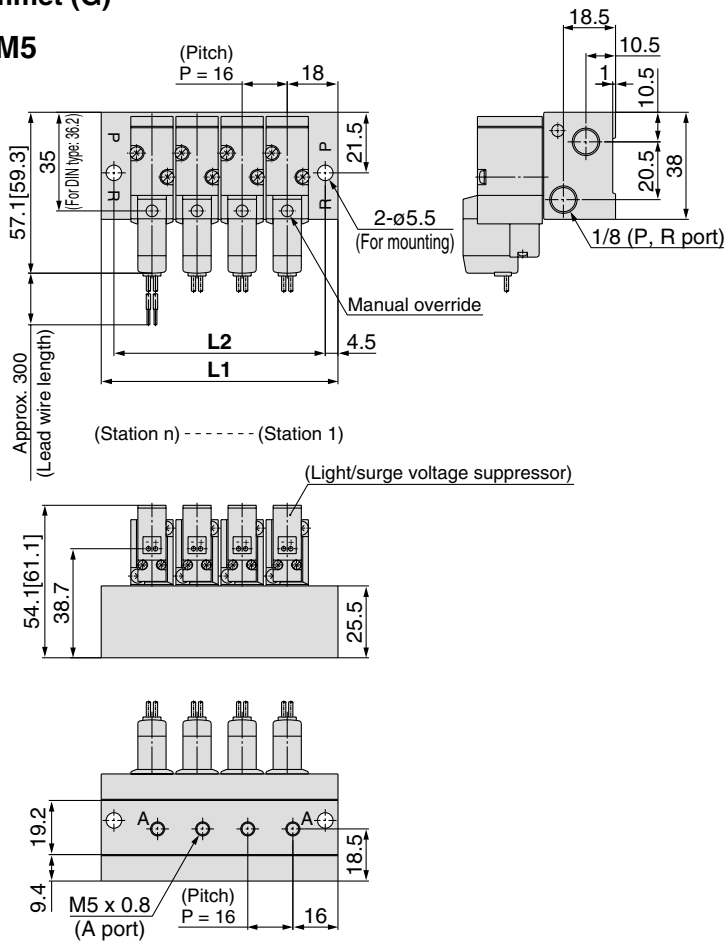
Stations n	2 Stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 Stations
L1	53	69	85	101	117	133	149	165	181	197	213	229	245	261	277	293	309	325	341
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328
L3	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304
L4	8	24	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296

Type 40 manifold: Bottom ported / 10-SS3YJ5-40-**Stations** -M5, 01□

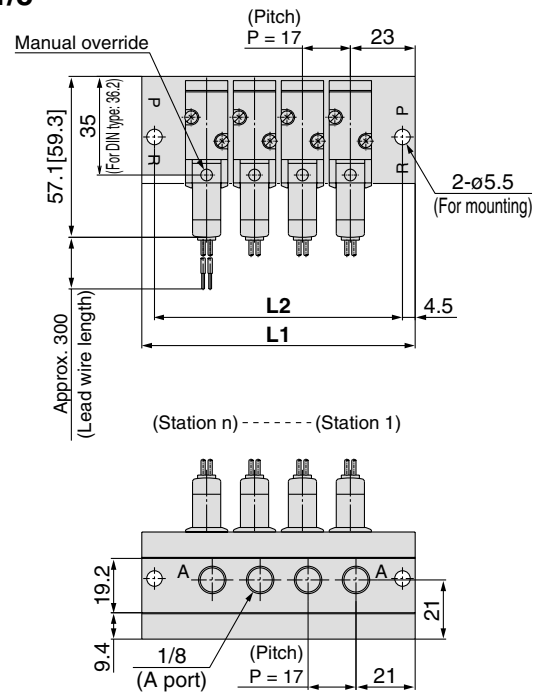


Grommet (G)

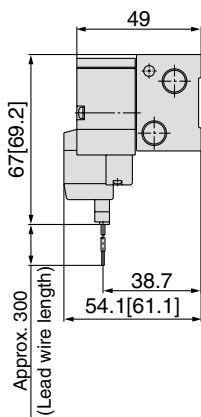
M5



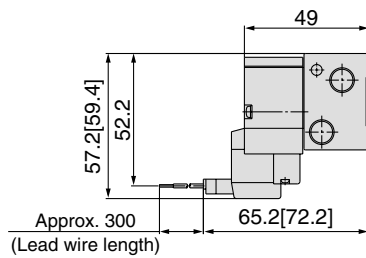
1/8



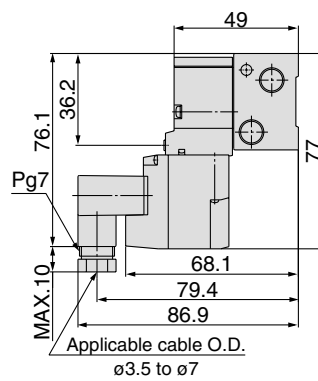
L plug connector (L)



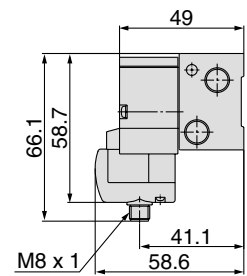
M plug connector (M)



DIN terminal (D)



M8 connector (WO)



* Refer to page 704 for dimensions with connector cable.

Port size	Stations n	2 Stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 Stations
	M5	L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324
	L2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331
1/8	L1	63	80	97	114	131	148	165	182	199	216	233	250	267	284	301	318	335	352	369
	L2	54	71	88	105	122	139	156	173	190	207	224	241	258	275	292	309	326	343	360

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

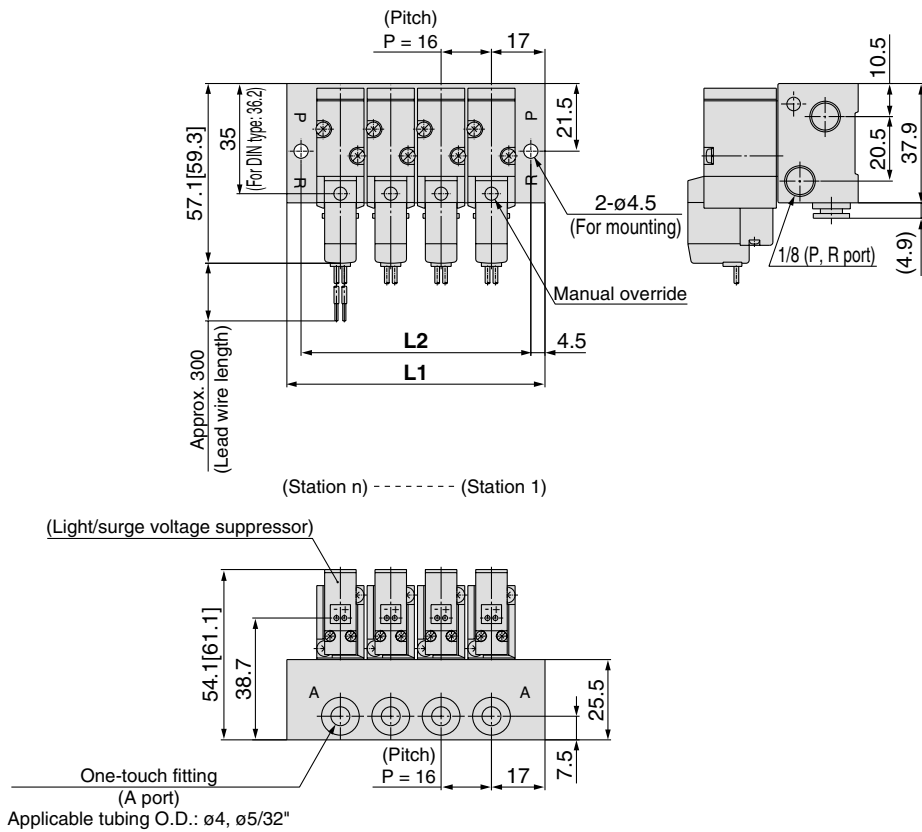
Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

Grommet (G)

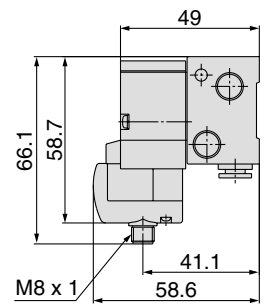
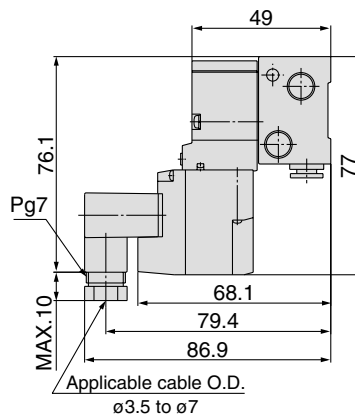
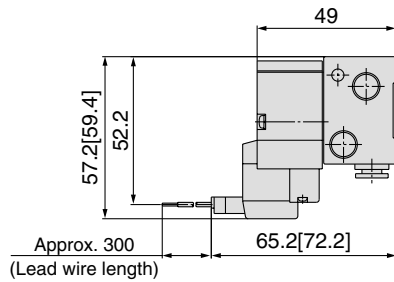
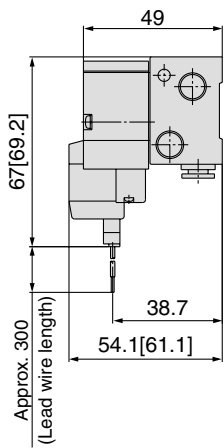


L plug connector (L)

M plug connector (M)

DIN terminal (D)

M8 connector (WO)



* Refer to page 704 for dimensions with connector cable.

Port size	Stations	2 Stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 Stations
One-touch fitting	L1	50	66	82	98	114	130	146	162	178	194	210	226	242	258	274	290	306	322	338
	L2	41	57	73	89	105	121	137	153	169	185	201	217	233	249	265	281	297	313	329

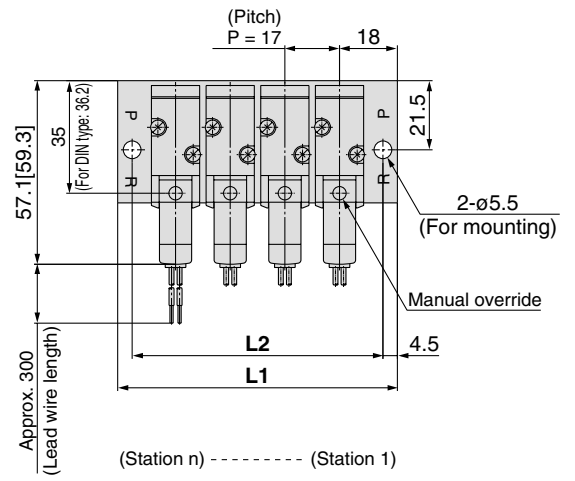
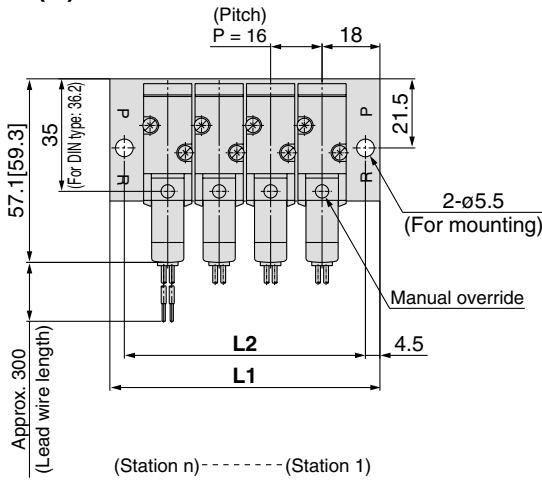
Type 41 manifold: Side ported / 10-SS3YJ5-41- **Stations** -M5, 01□



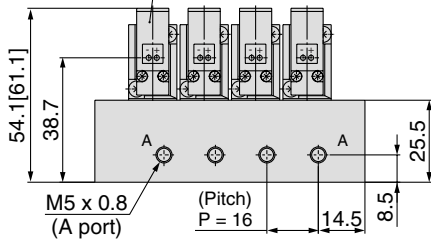
Grommet (G)

1/8

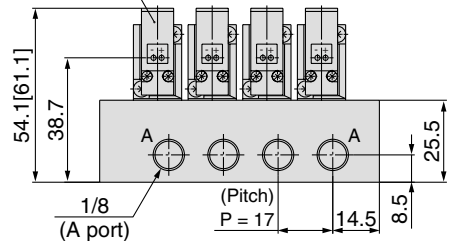
M5



(Light/surge voltage suppressor)



(Light/surge voltage suppressor)



Port size	Stations n	2 Stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 Stations
	M5	L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324
	L2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331
1/8	L1	53	70	87	104	121	138	155	172	189	206	223	240	257	274	291	308	325	342	359
	L2	44	61	78	95	112	129	146	163	180	197	214	231	248	265	282	299	316	333	350

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

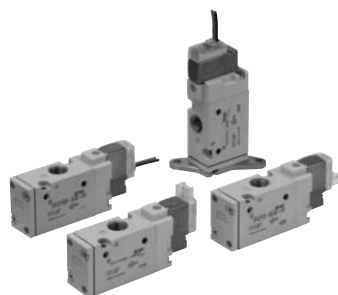
Air preparation equipment

Pressure switch

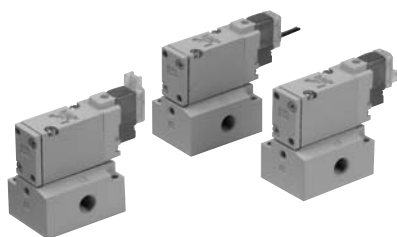
Clean gas filter

Series 10-SYJ700

Rubber seal
3 port / Pilot operated
solenoid valve



Body ported

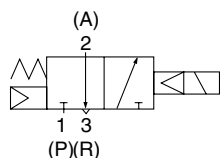


Base mounted

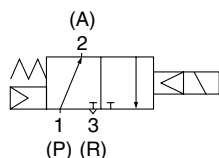
JIS Symbol

Internal pilot

10-SYJ71 $\frac{1}{2}$ M



10-SYJ72 $\frac{1}{2}$ M



Specifications

Fluid	Air	
Operating pressure range (MPa)	Internal pilot	0.15 to 0.7
Ambient and fluid temperature (°C)	-10 to 50 (No freezing. Refer to page 714.)	
Response time ms (0.5MPa) ^{Note 1)}	30 or less	
Max. operating frequency (Hz)	5	
Manual override (Manual operation)	Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type	
Pilot exhaust method	Common exhaust type for main and pilot valves	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Impact / Vibration resistance m/s² ^{Note 2)}	150/30	
Enclosure	Dust tight (*DIN terminal, M8 connector conforms to IP65.)	



* Based on IEC60529

Note 1) Based on dynamic performance test, JIS B 8375-1981. (With coil temperature of 20°C, at rated voltage and without surge voltage suppressor)

Note 2) Impact resistance: No malfunction occurred when it is tested 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. (Initial value)

Vibration resistance: No malfunction occurred in one sweep between 45 and 2000Hz. Test was performed in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states. (Initial value)

Solenoid specifications

Electrical entry		Grommet(G)/(H), L plug connector (L), M plug connector (M), DIN terminal (D), M8 connector (W)	
		G, H, L, M, W	D
Coil rated voltage V	DC	24, 12, 6, 5, 3	
	AC 50/60Hz	100, 110, 200, 220	
Allowable voltage fluctuation		±10% of rated voltage *	
Power consumption (W)	DC	Standard	0.35 (With indicator light: 0.4 (DIN terminal with indicator light: 0.45))
		With power saving circuit	0.1 (With indicator light only)
Apparent power * (VA)	AC	100V	0.78 (With indicator light: 0.81) 0.78 (With indicator light: 0.87)
		110V	0.86 (With indicator light: 0.89) 0.86 (With indicator light: 0.97)
		[115V]	[0.94 (With indicator light: 0.97)] [0.94 (With indicator light: 1.07)]
		200V	1.18 (With indicator light: 1.22) 1.15 (With indicator light: 1.30)
		220V [230V]	1.30 (With indicator light: 1.34) 1.27 (With indicator light: 1.46) [1.42 (With indicator light: 1.46)] [1.39 (With indicator light: 1.60)]
Surge voltage suppressor		Diode (Varistor for DIN terminal and non-polar type)	
Indicator light		LED (Neon bulb for DIN terminal AC)	



* 110VAC and 115VAC are common, as are 220VAC and 230VAC.

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

* Since S, Z and T types (with a power saving circuit) have a voltage drop due to internal circuit, do not exceed the following allowable voltage fluctuation range.

S and Z types, 24VDC: -7% to +10%

12VDC: -4% to +10%

T type 24VDC: -8% to +10%


12VDC: -6% to +10%



Made to Order Specifications
(Refer to page 698 for details.)

Flow characteristics / Weight

Valve model		Type of actuation	Port size	Flow characteristics						Weight (g) ^{Note)}			
				1→2(P→A)			2→3(A→R)			Grommet	L/M plug connector	DIN terminal	M8 connector
				C[dm ³ /(s·bar)]	b	Cv	C[dm ³ /(s·bar)]	b	Cv				
Body ported	10-SYJ712M	N.C.	1/8	2.8	0.43	0.77	2.5	0.51	0.76	75	76	97	80
	10-SYJ722M	N.O.		2.7	0.38	0.72	2.4	0.42	0.69				
Base mounted (With sub-plate)	10-SYJ714M	N.C.	1/8	2.9	0.32	0.71	2.7	0.34	0.69	135(75)	136(76)	157(97)	140(80)
	10-SYJ724M	N.O.		2.8	0.21	0.70	2.3	0.45	0.63				
	10-SYJ714M	N.C.	1/4	3.0	0.31	0.74	2.6	0.33	0.66				
	10-SYJ724M	N.O.		2.7	0.31	0.68	2.3	0.48	0.64				

 Note) Value for DC. Add 3 g for AC. (): Without sub-plate.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

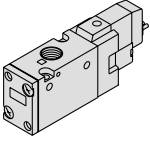
Pressure switch

Clean gas filter

How to Order

Type of actuation

1	Normally closed
2	Normally open



(For type 20 manifold)

Rated voltage

For DC

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

* DC specifications of type "D" and "DO" is only available with 12 and 24 VDC.

AC specifications (50/60Hz)

1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

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

Light/surge voltage suppressor

Electrical entry for G, H, L, M, W

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 "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

Electrical entry for D

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

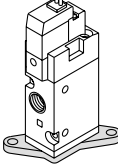
* "DOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Bracket

Nil: Without bracket
F: With bracket



* Brackets are not installed.

Body ported 10-SYJ7 1 2M □ 5 M □ □ 01 □ □

Base mounted 10-SYJ7 1 4M □ 5 M □ □ 01 □ □

Clean series

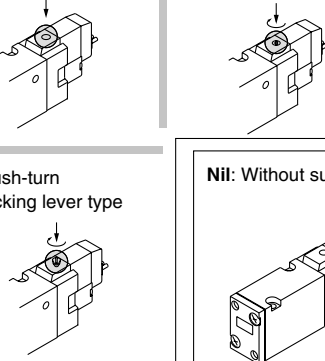
Coil specifications

Nil	Standard
T	With power saving circuit <24 and 12 VDC only>

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

Manual override

Nil: Non-locking push type
D: Push-turn locking slotted type
E: Push-turn locking lever type

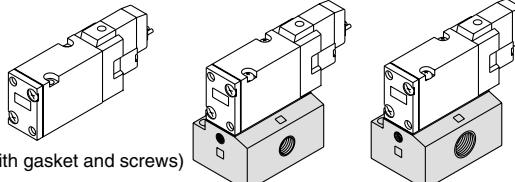


Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

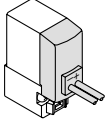
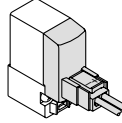
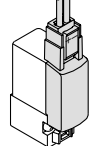
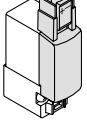
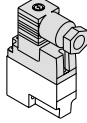
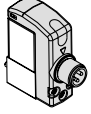
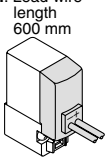
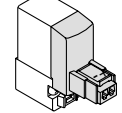
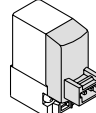
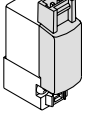

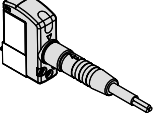
Port size

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



(With gasket and screws)

Electrical entry

24, 12, 6, 5, 3 VDC / 100, 110, 200, 220 VAC				24, 12 VDC 100, 110, 200, 220 VAC	24, 12 VDC 6, 5, 3 VDC
Grommet	L plug connector (length 300 mm)	M plug connector		DIN terminal	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	D: With connector	WO: Without connector cable
					
H: Lead wire length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector	DO: Without connector	W□: With connector cable ^{Note 1)}
					

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 catalog in page 691.)

* "LN", "MN" types : with 2 sockets.
* DIN terminal type "Y" conforming to EN-175301-803C (former DIN43650C) is also available. For details, refer to page 698.
* For connector cable of M8 connector, refer to page 703.
Note 1) Be sure to enter a symbol of the cable length in □ with reference to page 704.

How to Order Pilot Valve Assembly

10—V111—5—G—

• Clean series

• Coil specifications

Nil	Standard
T	With power saving circuit <24 and 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 VAC50/60Hz
2	200 VAC50/60Hz
3	110 VAC50/60Hz [115 VAC50/60Hz]
4	220 VAC50/60Hz [230 VAC50/60Hz]

* 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 "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

• Electrical entry

G	Grommet (Lead wire length 300 mm)	
H	Grommet (Lead wire length 600 mm)	
L	L plug connector	With lead wire
LN		Without lead wire
LO		Without connector
M	M plug connector	With lead wire
MN		Without lead wire
MO		Without connector
WO	M8 connector	Without connector cable
W□		With connector cable ^{Note 1)}

* For connector cable of M8 connector, refer to page 703.
Note 1) Be sure to enter a symbol of the cable length in □ with reference to page 704.

10—V115—5—D—

• Clean series

• Rated voltage

5	24 VDC
6	12 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]

* DC specifications of type "D" and "DO" is only available with 12 and 24 V DC.

* Power saving circuit is not available in the case of "D", "DO" type.

• Light/surge voltage suppressor

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

* "DOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

• Electrical entry

D	DIN terminal	With connector
DO		Without connector

Note) Do not replace 10-V111 (G, H, L, M, W) with 10-V115 (DIN terminal) and vice versa when replacing pilot valve assembly only.

How to Order L/M Plug Connector Assembly

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

How to Order M8 Connector Cable

V100-49-1-

• Cable length

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

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

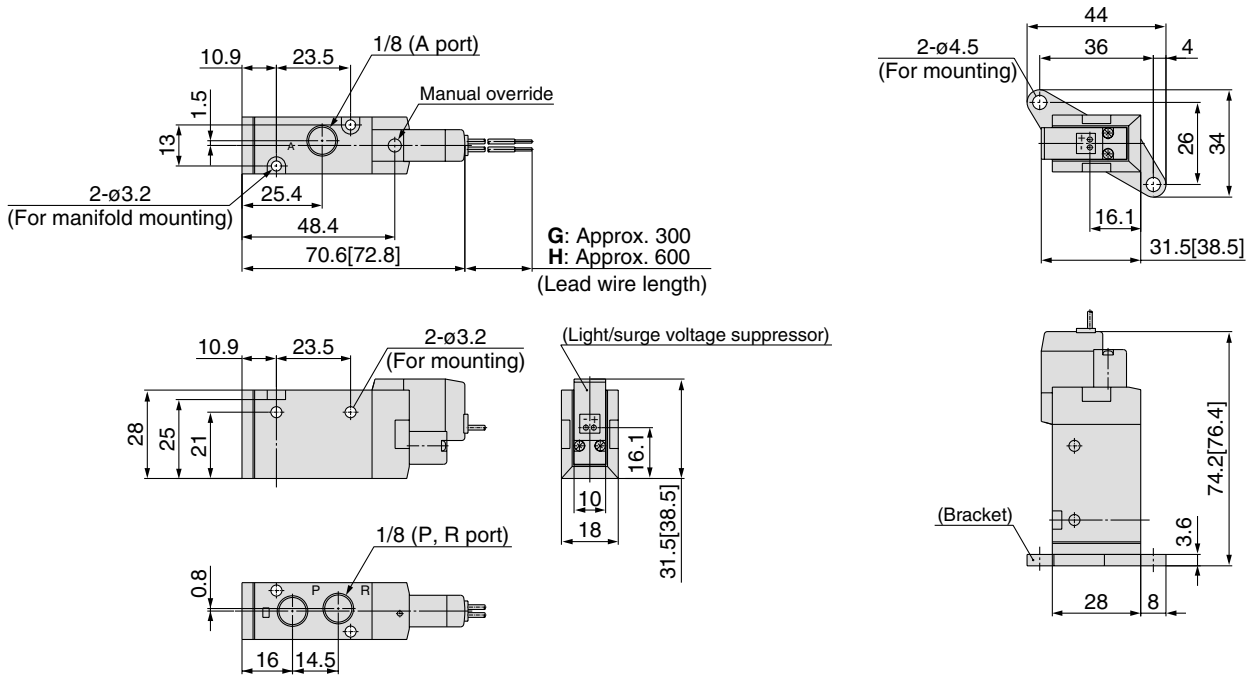
3 port / Pilot operated solenoid valve **10-SYJ700**

Body ported



Grommet (G), (H): 10-SYJ7□4M-□□□□-01□

With bracket: 10-SYJ7□2M-□□□□-01□-F

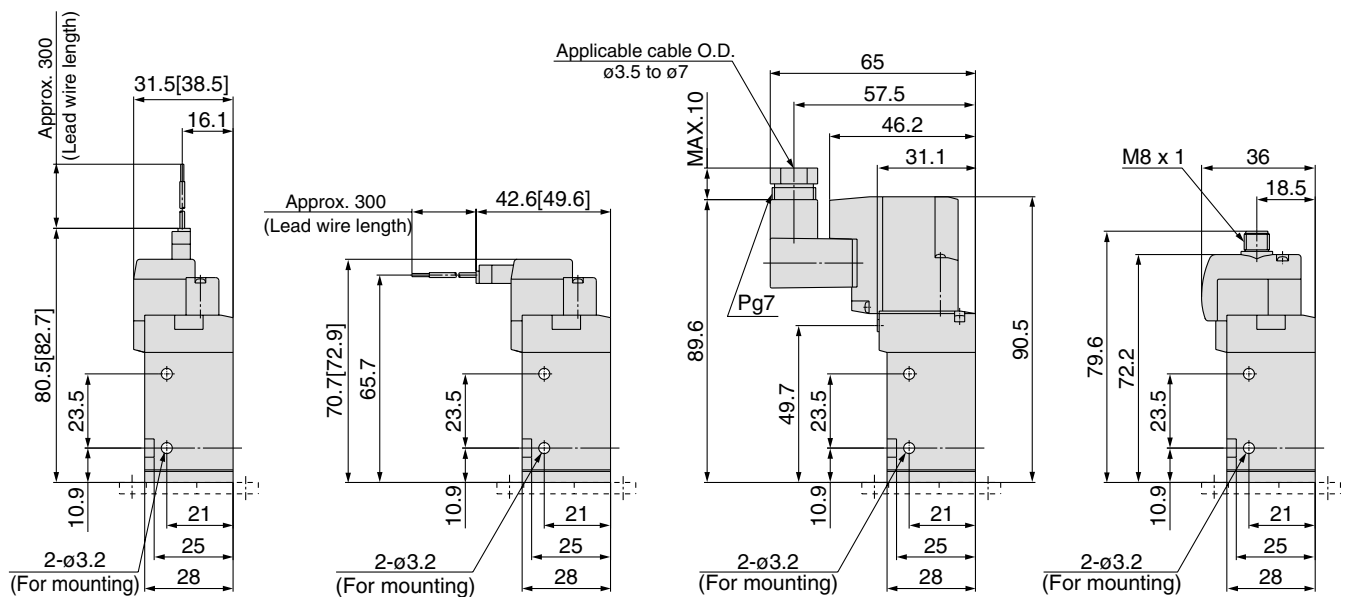


L plug connector (L):
10-SYJ7□2M-□□□□-01□ (-F)

M plug connector (M):
10-SYJ7□2M-□□□□-01□ (-F)

DIN terminal (D):
10-SYJ7□2M-□□□□-01□ (-F)

M8 connector (WO):
10-SYJ7□2M-□□□□-01□ (-F)

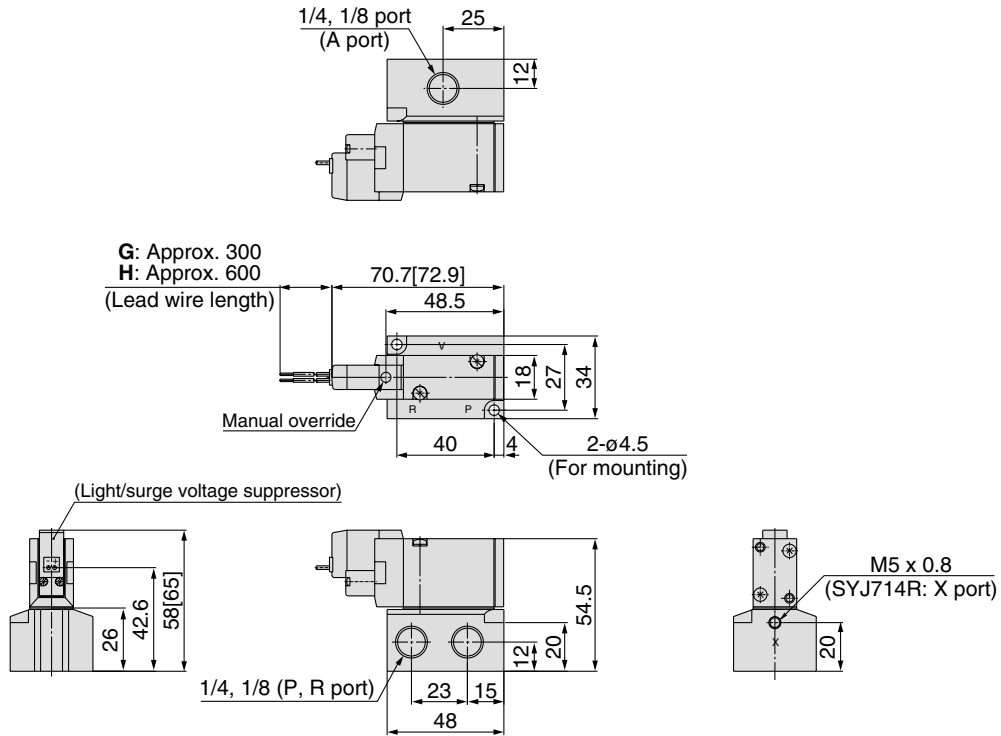


* Refer to page 704 for dimensions with connector cable.



Base mounted (With sub-plate)

Grommet (G), (H): 10-SYJ7□4M-□_G□□□-⁰¹₀₂□

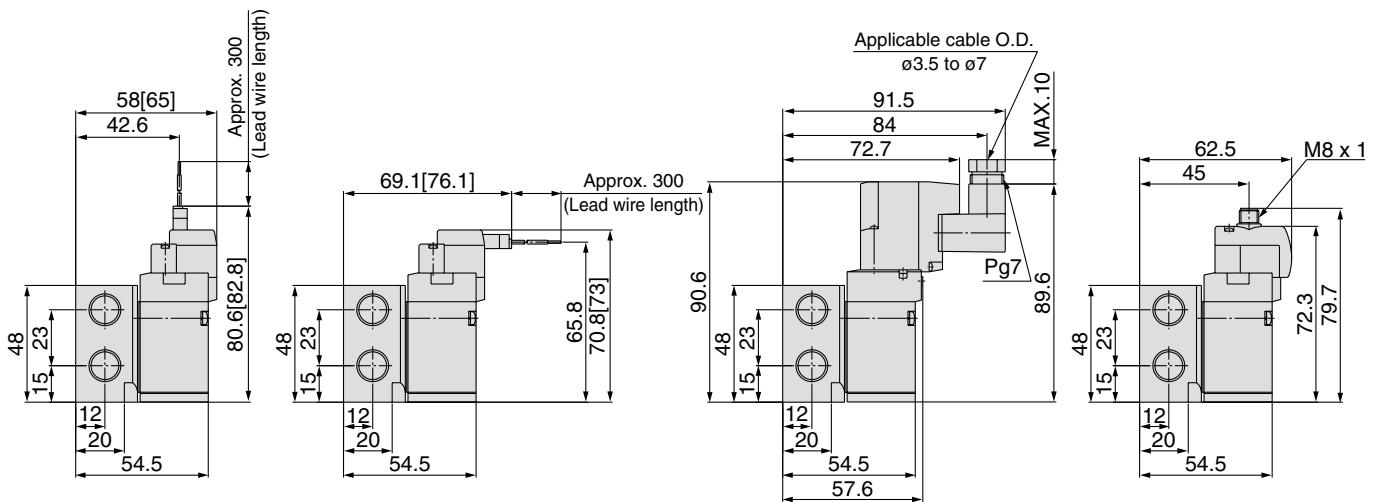


L plug connector (L):
10-SYJ7□4M-□L□□□-⁰¹₀₂□

M plug connector (M):
10-SYJ7□4M-□M□□□-⁰¹₀₂□

DIN terminal (D):
10-SYJ7□4M-□D□□□-⁰¹₀₂□

M8 connector (WO):
10-SYJ7□4M-□WO□□□-⁰¹₀₂□



* Refer to page 704 for dimensions with connector cable.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

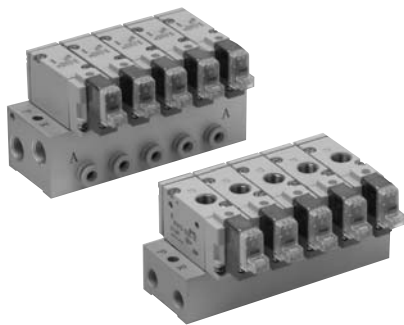
Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

Series 10-SYJ700 Manifold specifications



Manifold specifications

Model	For internal pilot	Type 20	Type 21	Type 40	Type 41	Type 42
Manifold type		Single base type / B mount				
P(SUP) / R(EXH)		Common SUP / Common EXH				
Stations		2 to 20 stations				
A port Porting specifications	Location	Valve	Valve	Base	Base	Base
	Direction	Top	Top	Bottom	Bottom	Side
Port size	P, R port	1/8	1/4	1/8	1/4	1/4
	A port	1/8	1/8	1/8	1/8	1/8 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)

Flow characteristics

Manifold			Port size		Flow characteristics					
					1→2(P→A)			2→3(A→R)		
			1(P), 3(R) port	2(A) port	C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv
Body ported for internal pilot	10-SS3YJ7-20	10-SYJ7□2M	1/8	1/8	2.2	0.34	0.55	2.3	0.27	0.59
	10-SS3YJ7-21		1/4	1/8	2.2	0.39	0.59	2.4	0.32	0.62
Base mounted for internal pilot	10-SS3YJ7-40	10-SYJ7□4M	1/8	1/8	2.1	0.35	0.59	2.3	0.27	0.54
	10-SS3YJ7-41		1/4	1/8	2.2	0.35	0.59	2.4	0.36	0.66
	10-SS3YJ7-42-01		1/4	1/8	2.0	0.27	0.47	2.2	0.32	0.56
	10-SS3YJ7-42-C6		1/4	C6	1.6	0.32	0.39	2.2	0.27	0.54
	10-SS3YJ7-42-C8		1/4	C8	2.1	0.24	0.51	2.3	0.31	0.59



Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold (Example)

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

(Example)

10-SS3YJ7-20-03 1 set (Manifold base)

* 10-SYJ712M-5LZ-01 2 sets (Valve)

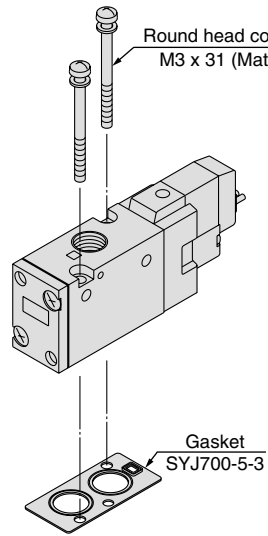
* SYJ700-10-1A 1 set (Blanking plate assembly)

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

<Manifold option>

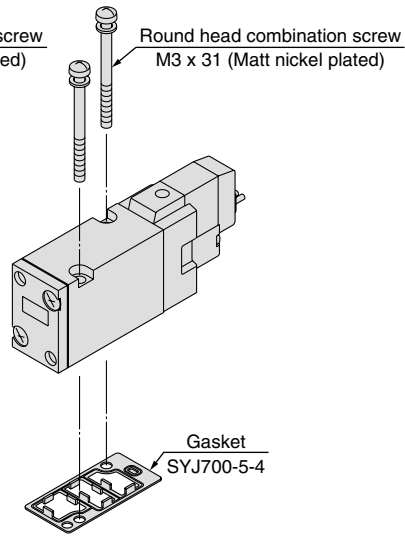
Combinations of solenoid valve, manifold gasket and manifold base

Body ported (10-SYJ7□2M)



Applicable base
 10-SS3YJ7-20 } Manifold base
 10-SS3YJ7-21 }

Base mounted (10-SYJ7□4M)

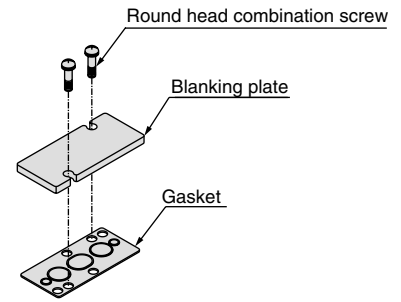


Applicable base sub-plate
 10-SS3YJ7-40 } Manifold base
 10-SS3YJ7-41 }
 10-SS3YJ7-42 }

Blanking plate assembly

Part no.: SYJ700-10-2A

(For both body ported type and base mounted type)



⚠ Caution

Mounting screw tightening torque

M3: 0.8N·m

Use caution to the assembly orientation of solenoid valve, gasket and optional parts.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

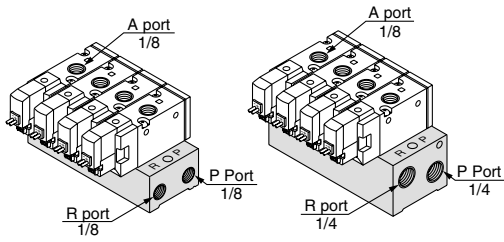
Air preparation equipment

Pressure switch

Clean gas filter

How to Order Manifolds

Type 20/21



How to Order

10-SS3YJ7-20-05- []

• Clean series

Manifold type	
20	Type 20
21	Type 21

Stations	
02	2 stations
:	:
20	20 stations

P, R port thread	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

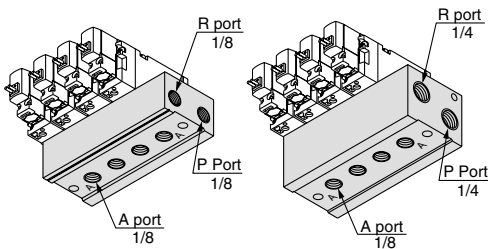
Applicable solenoid valve
10-SYJ712M-□□□□-01
10-SYJ722M-□□□□-01
 Applicable blanking plate assembly

SYJ700-10-2A



Note) For more than 6 stations for type 20 and more than 9 stations for type 21, supply air to both sides of P port and exhaust air from both sides of R port.

Type 40/41



How to Order

10-SS3YJ7-40-05-01- []

• Clean series

Manifold	
40	Type 40
41	Type 41

Stations	
02	2 stations
:	:
20	20 stations

A port size	
01	1/8

P, R port thread	
Nil	Rc
F	G
N	NPT
T	NPTF

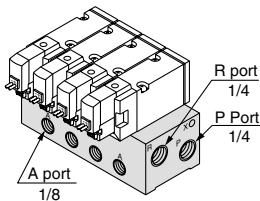
Applicable solenoid valve
10-SYJ714M-□□□□
10-SYJ724M-□□□□
 Applicable blanking plate assembly

SYJ700-10-2A



Note) For more than 6 stations for type 40 and more than 9 stations for type 41, supply air to both sides of P port and exhaust air from both sides of R port.

Type 42



How to Order

10-SS3YJ7-42-05-C6- []

• Clean series

Stations	
02	2 stations
:	:
20	20 stations

A port size	
01	Rc1/8
C6	One-touch fitting for øf6
C8	One-touch fitting for ø8
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16"

P, R port thread	
Nil	Rc
F	G
N	NPT
T	NPTF

Applicable solenoid valve
10-SYJ714M-□□□□
10-SYJ724M-□□□□
 Applicable blanking plate assembly

SYJ700-10-2A

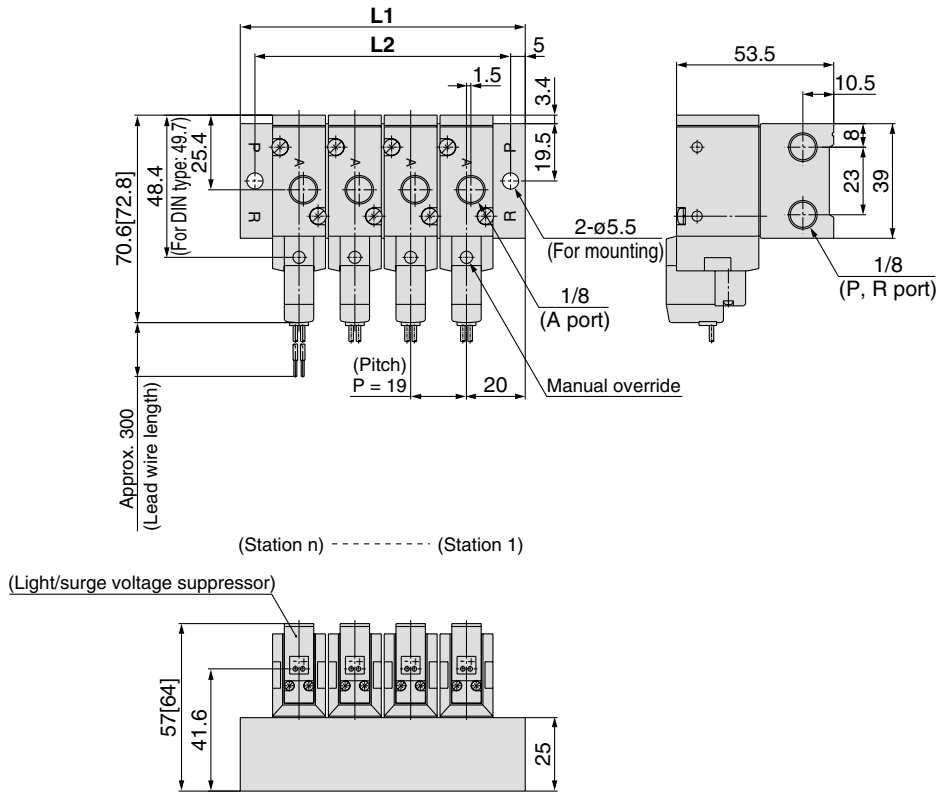


Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Type 20 manifold: Top ported / 10-SS3YJ7-20- **Stations** (-00□)



Grommet (G)

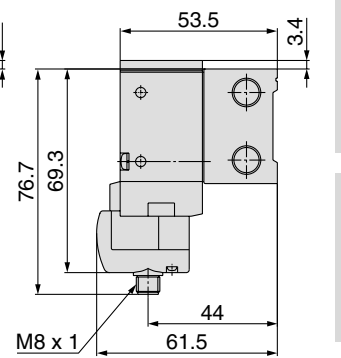
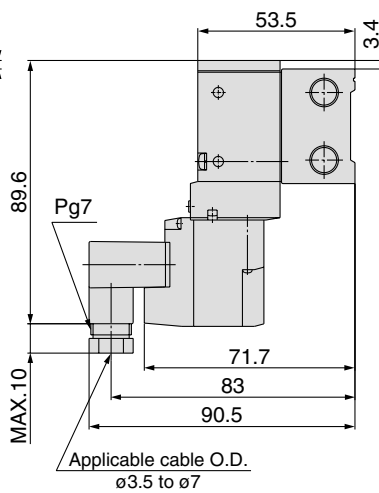
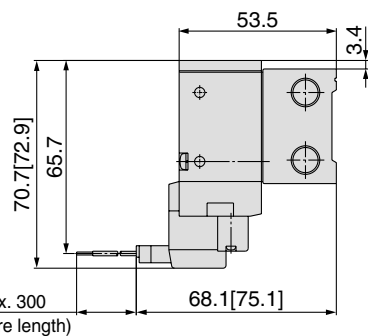
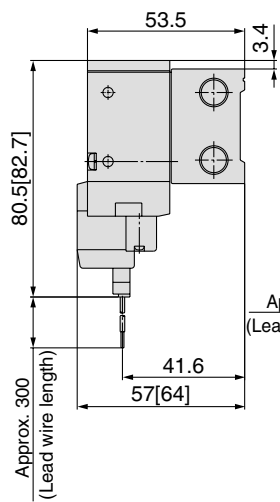


L plug connector (L)

M plug connector (M)

DIN terminal (D)

M8 connector (WO)



* Refer to page 704 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	59	78	97	116	135	154	173	192	211	230	249	268	287	306	325	344	363	382	401
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

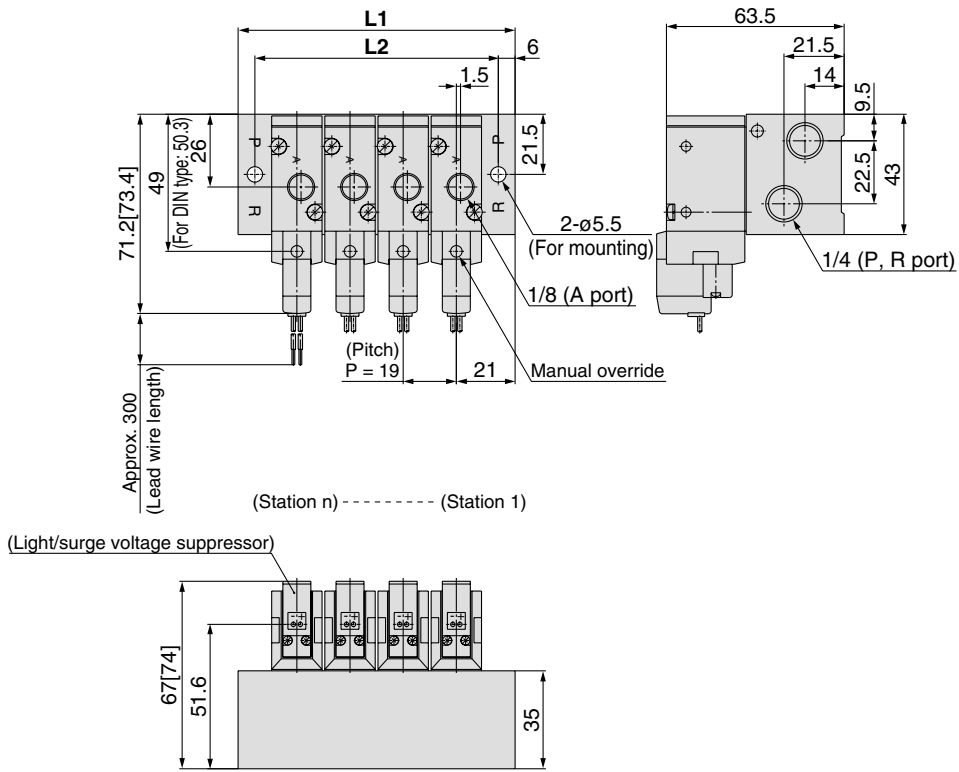
Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

Grommet (G)

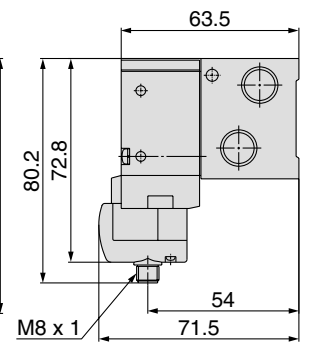
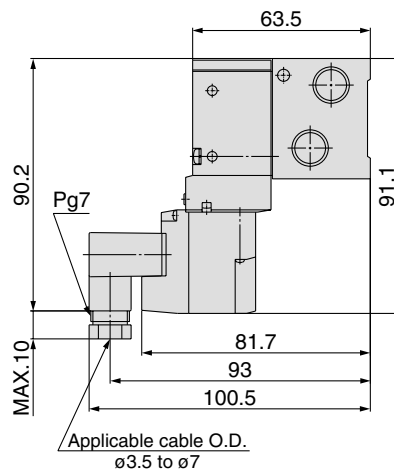
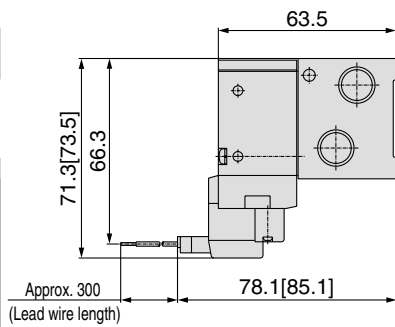
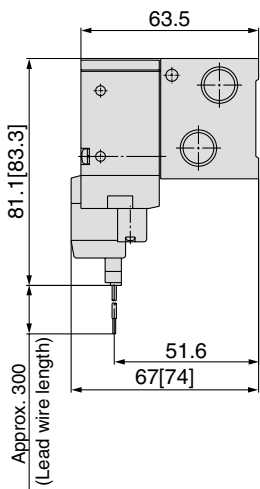


L plug connector (L)

M plug connector (M)

DIN terminal (D)

M8 connector (WO)



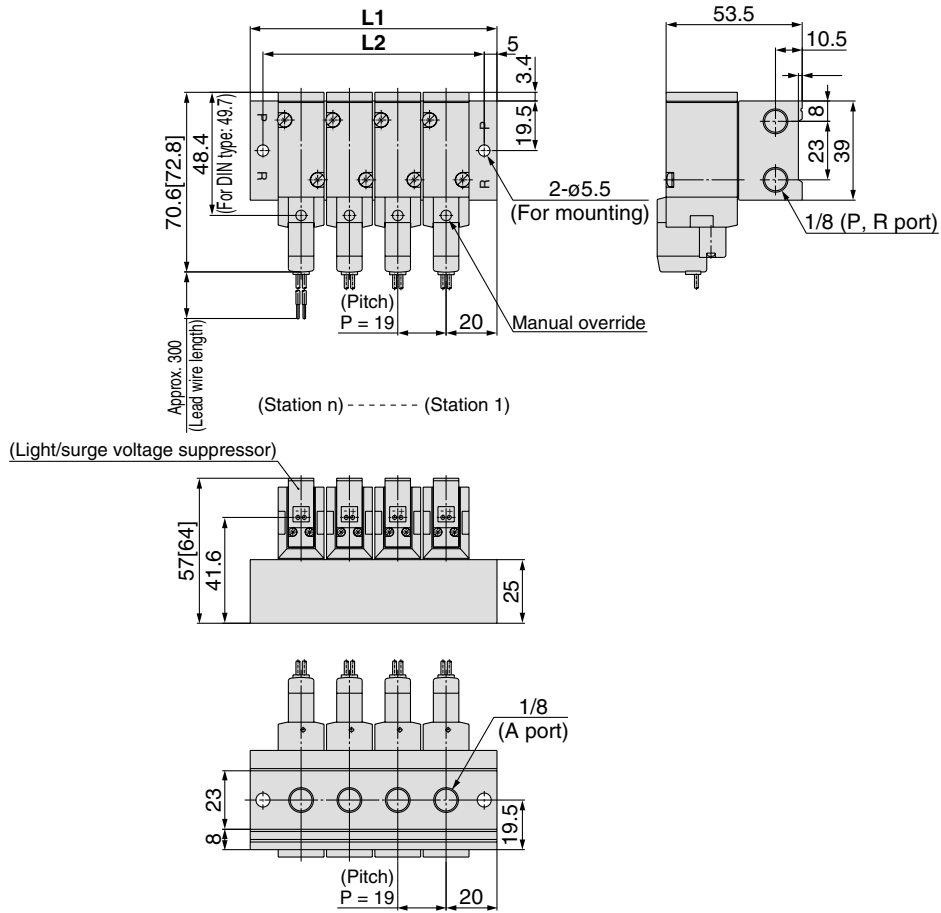
* Refer to page 704 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

Type 40 manifold: Bottom ported / 10-SS3YJ7-40-**Stations** - 01□



Grommet (G)

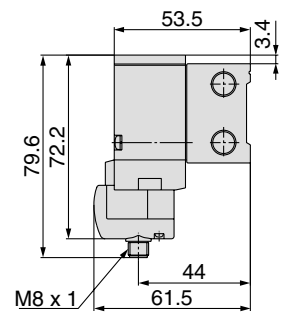
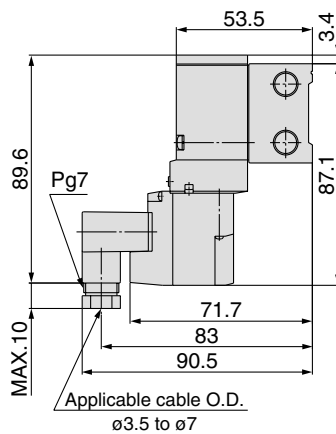
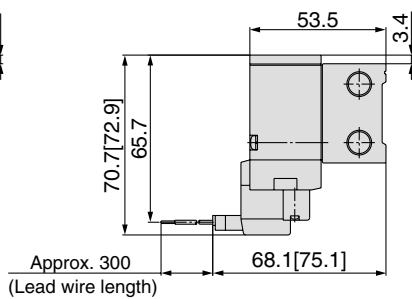
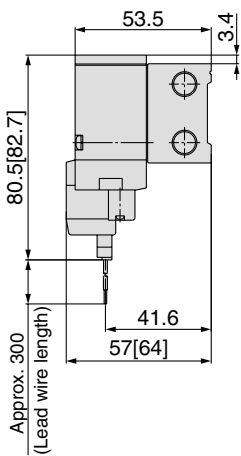


L plug connector (L)

M plug connector (M)

DIN terminal (D)

M8 connector (WO)



* Refer to page 704 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	59	78	97	116	135	154	173	192	211	230	249	268	287	306	325	344	363	382	401
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

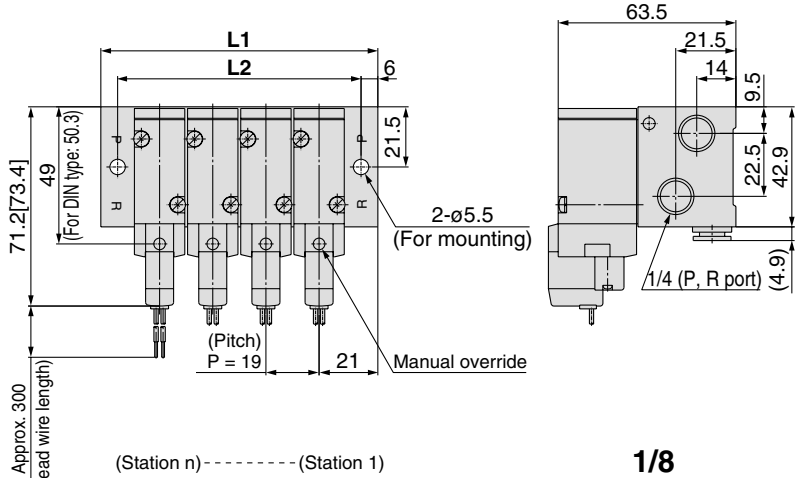
Air preparation equipment

Pressure switch

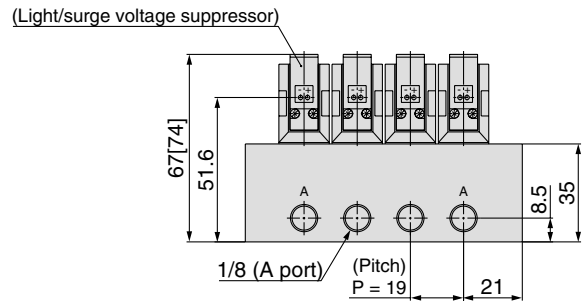
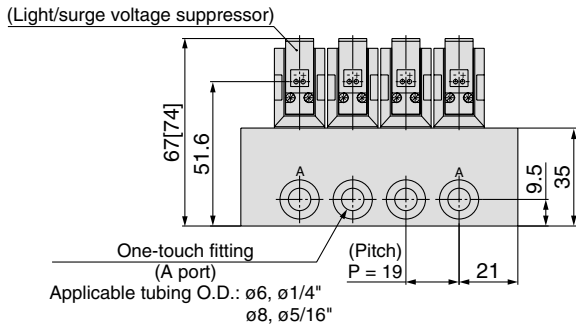
Clean gas filter

Grommet (G)

C6, N7 (With built-in one-touch fitting)
 C8, N9



1/8

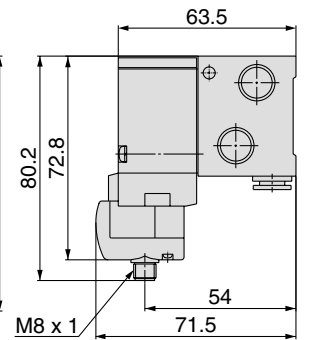
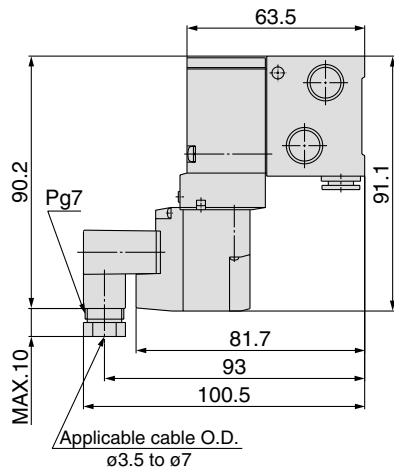
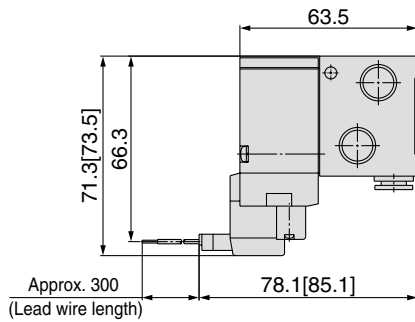
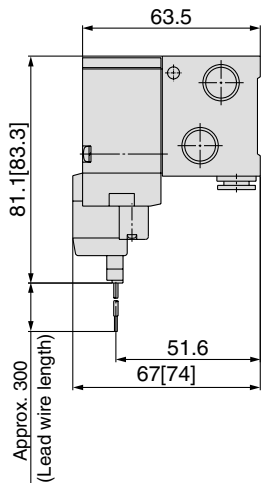


L plug connector (L)

M plug connector (M)

DIN terminal (D)

M8 connector (WO)



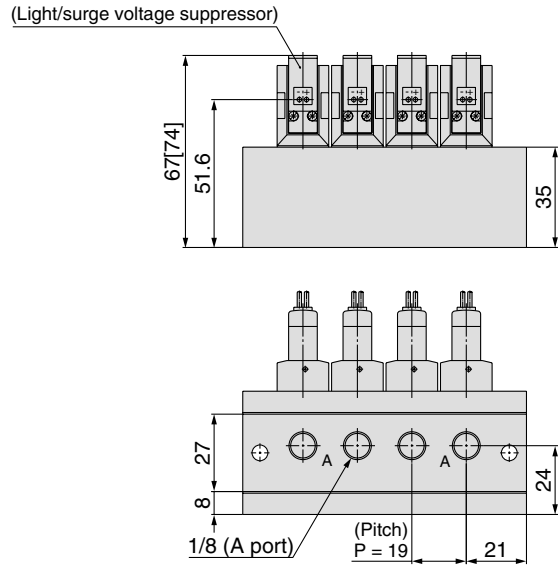
* Refer to page 704 for dimensions with connector cable.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

Type 41 manifold: Bottom ported / 10-SS3YJ7-41-**Stations**-01□



Grommet (G)



Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter

Series 10-SYJ500/700

Made to Order Specifications
DIN connector conforming to
EN-175301-803C (former DIN 43650C)

DIN terminal type conforming to DIN 43650C (DIN pitch 8mm) standard

How to Order Valves

Rated voltage

DC		AC (50/60Hz)	
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		

Light/surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

* "YOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Bracket

Nil	Without bracket
F	With bracket

Note) Mounting brackets are supplied unattached.

Series

5	10-SYJ500
7	10-SYJ700

Type of actuation

1	Normally closed
2	Normally open

Port size

M5	M5 x 0.8
01	1/8 (SYJ700 only)

Body ported 10-SYJ 5 1 2M-5 Y [] [] M5

Base mounted 10-SYJ 5 1 4M-5 Y [] [] 01

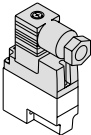
3 port (For type 20 manifold)

3 port (For sub-plate type, types 40 and 41 manifolds)

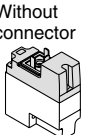
Clean series

Electrical entry

Y: With connector



YO: Without connector



Port size

Nil	Without sub-plate
01	1/8 port with sub-plate
02	1/4 port with sub-plate (SYJ700 only)

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

How to Order Pilot Valve Assembly

10-V115-5 Y []

Clean series

Rated voltage

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

Light/surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

* "YOZ" is not available.
* For AC voltage valves, there is no "S" option. It is already built-in to the rectifier circuit.

Electrical entry

Y	DIN terminal	With connector
YO		Without connector

DIN connector part no.

Without indicator light		SY100-82-1
With indicator light		
Rated voltage	Voltage symbol	Part no.
24 VDC	24VN	SY100-82-3-05
12 VDC	12VN	SY100-82-3-06
100 VAC	100VN	SY100-82-3-01
200 VAC	200VN	SY100-82-3-02
110 [115] VAC	110VN	SY100-82-3-03
220 [230] VAC	220VN	SY100-82-3-04

Caution

- Use caution in wiring because it won't meet the IP65 (enclosure) standard if you use the other cord than prescribed cable of size (ø3.5 to ø7). Also be sure to tighten the ground nut and holding screw with the prescribed torque range. For how to use DIN terminal (wiring procedures, procedures for changing electrical entries, precautions, applicable cable circuit diagram), refer to page 702.
- Type D, DIN terminal with 9.4 mm pitch between terminals is not interchangeable.
- DIN terminal except type D has the "N" indication in the end of voltage symbol. In case of DIN terminal without indicator light, "N" is not indicated. Please refer to the name plate to distinguish.
- Dimensions are completely the same as type D connector.
- When exchanging the pilot valve assembly only, "10-V115-□D" is interchangeable with "10-V115-□Y". Do not replace 10-V111 (G, H, L, M, W) with 10-V115-□D/□Y (DIN terminal), and vice versa.



Series 10-SYJ300/500/700

Specific Product Precautions 1

Be sure to read before handling.

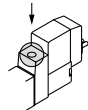
Manual override operation

⚠ Warning

When the manual override is operated, connected equipment will be actuated. Confirm safety before operating.

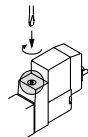
■ Non-locking push type (Standard)

Press in the direction of the arrow.

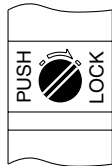


■ Push-turn locking slotted type [Type D]

While pressing, turn in the direction of the arrow. If it is not turned, it can be operated in the same way as the non-locking push type.



Locked position



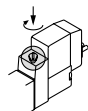
⚠ Caution

When operating the locking type D with a screwdriver, turn it gently using a watchmaker's screwdriver.

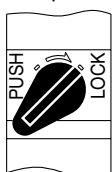
[Torque: 0.1 N·m or less]

■ Push-turn locking lever type [Type E]

While pressing, turn in the direction of the arrow. If it is not turned, it can be operated in the same way as the non-locking push type.



Locked position



⚠ Caution

When locking the manual override on the push-turn locking types (D, E), be sure to push it down before turning.

Turning without first pushing it down can cause damage to the manual override and other trouble such as air leakage, etc.

Solenoid valve for 200/220 VAC specification

⚠ Warning

Solenoid valves with grommet and L/M plug connector AC specifications have a built-in rectifier circuit in the pilot section to operate the DC coil.

For 200/220 VAC specification pilot valves, the built-in rectifier generates heat when energized, and the surface may become hot depending on the energized condition. Therefore, do not touch the solenoid valves.

Bracket

⚠ Caution

For the 10-SYJ300 with bracket, do not use it without bracket.

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter



Series 10-SYJ300/500/700

Specific Product Precautions 2

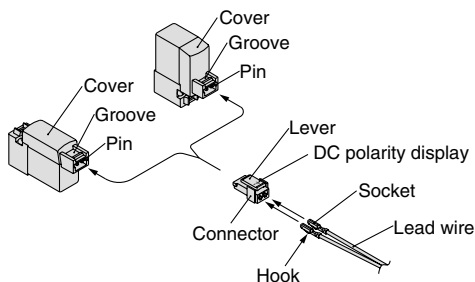
Be sure to read before handling.

How to Use Plug Connector

⚠ Caution

1. Attaching and detaching connectors

- To attach a connector, hold the lever and connector unit between your fingers and insert straight onto the pins of the solenoid valve so that the lever's pawl is pushed into the groove and locks.
- To detach a connector, remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.



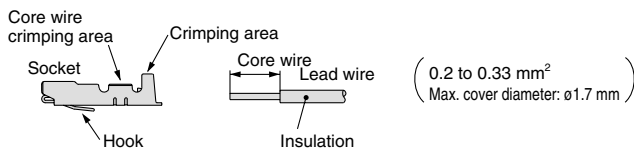
2. Crimping of lead wires and sockets

Strip approximately 3.2 to 3.7 mm at the end of the lead wires, insert the ends of the core wires evenly into the sockets, and then crimp with a crimping tool.

Take care that the coverings of the lead wires do not enter the core wire crimping area.

Use an exclusive crimping tool for crimping.

(For exclusive crimping tools, please contact SMC.)



3. Attaching and detaching a socket with lead wire

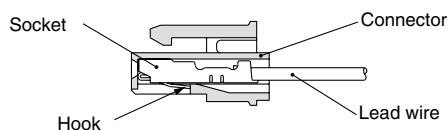
• Attaching

Insert a socket into the square hole of the connector (with ⊕ and ⊖ indication), and continue to push the socket all the way in until they lock by hooking into the seat in the connector. (When it is pushed in, their hook opens and it is locked automatically.) Then confirm that it is locked by pulling lightly on the lead wire.

• Detaching

To detach a socket from a connector, pull out the lead wire while pressing the socket's hook with a stick having a thin tip (approx. 1 mm).

If the socket will be used again, first spread the hook outward.



Plug connector lead wire length

⚠ Caution

Standard length is 300 mm, but the following lengths are also available.

How to Order Connector Assembly

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

How to Order

Include the connector assembly part number together with the part number for the plug connector's solenoid valve without connector.

<Example> Lead wire length 2000 mm

For DC

10-SYJ312M-5LO-M3
SY100-30-4A-20

For AC

10-SYJ312M-1LO-M3
SY100-30-1A-20

Series 10-SYJ300/500/700

Specific Product Precautions 3



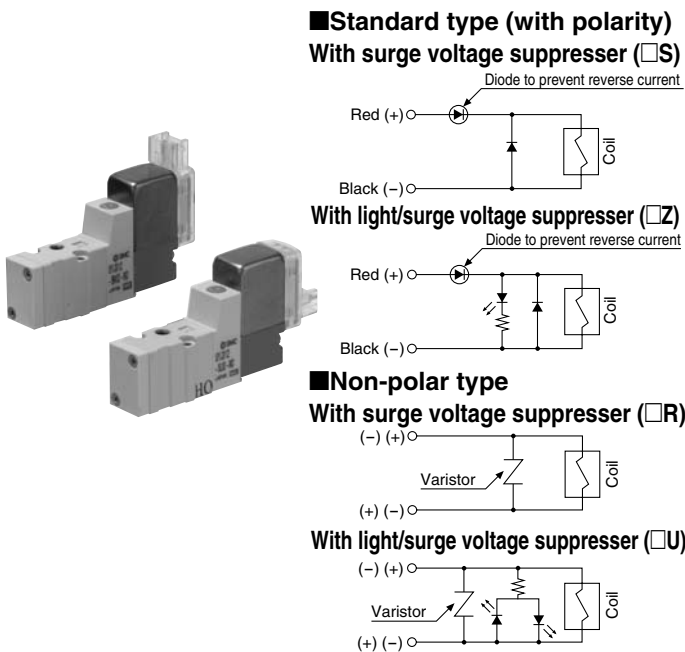
Be sure to read before handling.

Surge voltage suppressor

Caution

(For DC)

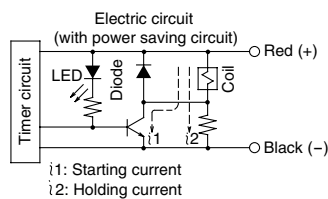
Grommet, L/M plug connector



- Connect the standard type in accordance with the + (positive) and – (negative) polarity indication.
 (The non-polar type can be used with the connections made either way.)
 - Since voltage specifications other than standard 24/12 VDC do not have diodes to prevent reverse current, be careful not to make errors in the polarity.
 - Be careful about the allowable voltage fluctuation since valves with diode to prevent reverse current have an approx. 1V voltage drop. (Refer to the solenoid specifications of each valve for details.)
- When wiring is done at the factory, positive (+) is red and negative (–) is black.

With power saving circuit

Power consumption is decreased by 1/4 by reducing the wattage required to hold the valve in an energized state. (Effective energizing time is over 62 ms at 24 VDC.)

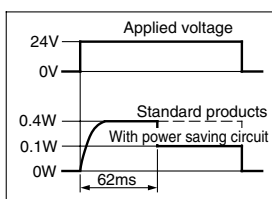


Working principle

With the above circuit, the current consumption when holding is reduced to save energy. Please refer to the electrical waveform to the right.

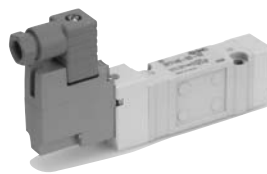
- When a power saving circuit is installed, a diode to prevent reverse current is not provided. Therefore, use caution not to connect in reverse.

(Energy saving type's electrical waveform for SYJ₃□□□T)

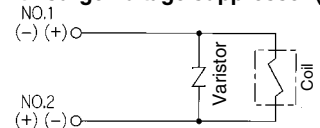


- Be careful about the allowable voltage fluctuation since voltage drop of about 0.5V occurs due to a transistor. (Refer to the solenoid specifications of each valve for details.)

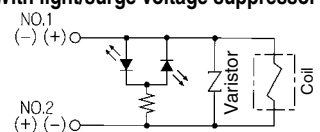
DIN terminal



With surge voltage suppressor (DS)

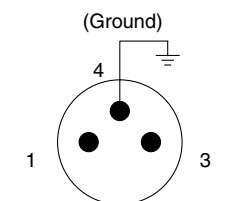


With light/surge voltage suppressor (DZ)



DIN terminal has no polarity.

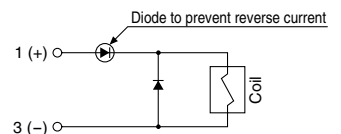
M8 connector type



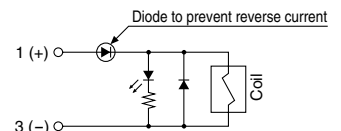
Solenoid valve side pin wiring diagram

Standard type (with polarity)

With surge voltage suppressor (□S)

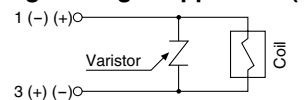


With light/surge voltage suppressor (□Z)

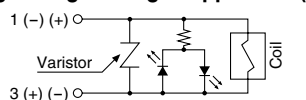


Non-polar type

With surge voltage suppressor (□R)



With light/surge voltage suppressor (□U)



Solenoid valve side pin wiring diagram

- In the case of standard type, connect + to 1 and – to 3 according to the polarity.
- For DC voltages other than 12 and 24 VDC, do not connect in reverse because a diode to prevent reverse current is not installed.
- Be careful about the allowable voltage fluctuation since valves with diode to prevent reverse current have an approx. 1V voltage drop. (Refer to the solenoid specifications of each valve for details.)

Series 10-SYJ300/500/700

Specific Product Precautions 4



Be sure to read before handling.

Surge voltage suppressor

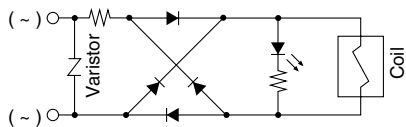
<For AC>

(There is no "S" type because the generation of surge voltage is prevented by a rectifier.)

Caution

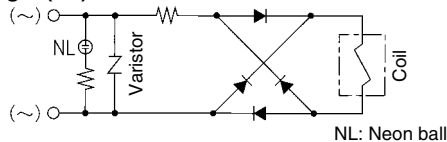
Grommet, L and M plug connector

With indicator light (□Z)



DIN terminal

With indicator light (DZ)



NL: Neon ball

Note) Surge voltage suppressor of varistor has residual voltage corresponding to the protective element and rated voltage. Therefore, protect the controller side from the surge. The residual voltage of the diode is approximately 1V.
The residual voltage of the diode is approximately 1V.

How to Use DIN Terminal

Caution

Connection

1. Loosen the holding screw and pull the connector out of the solenoid valve terminal block.
2. After removing the holding screw, insert a flat head screwdriver, etc. into the notch on the bottom of the terminal block and pry it open, separating the terminal block and the housing.
3. Loosen the terminal screws (slotted screws) on the terminal block, insert the cores of the lead wires into the terminals according to the connection method, and fasten them securely with the terminal screws.
4. Secure the cord by fastening the ground nut.

Caution

When making connections, take note that using other than the supported size ($\phi 3.5$ to $\phi 7$) cable will not satisfy IP65 (enclosure) standards.

Also, be sure to tighten the ground nut and holding screw within their specified torque ranges.

Changing the entry direction

After separating the terminal block and housing, the cord entry can be changed by attaching the housing in the desired direction (4 directions at 90 intervals).

*When equipped with an indicator light, be careful not to damage the light with the cord's lead wires.

How to Use DIN Terminal

Caution

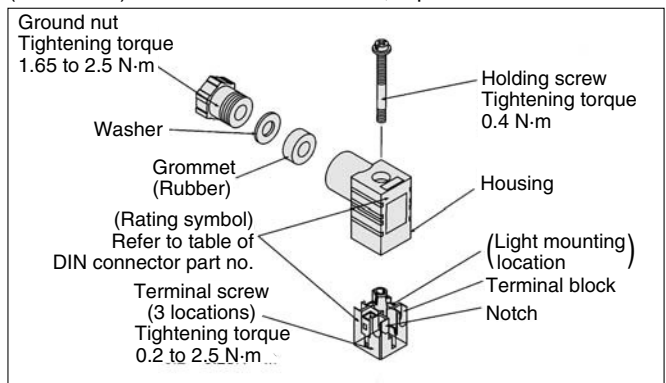
Precautions

Plug in and pull out the connector vertically without tilting to one side.

Compatible cable

Cord O.D.: $\phi 3.5$ to $\phi 7$

(Reference) 0.5 mm² 2-core or 3-core, equivalent to JIS C 3306



Solenoid valve mounting

Caution

Mount it so that there is no slippage or deformation in gaskets, and tighten with the tightening torque as shown below.

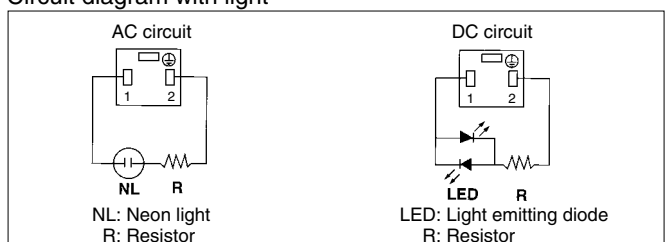
Model	Thread size	Tightening torque
10-SYJ300	M1.7	0.12N·m
10-SYJ500	M2.5	0.45N·m
10-SYJ700	M3	0.8N·m

DIN terminal part no.

Caution

Without light		SY100-61-1
With light		
Rated voltage	Voltage symbol	Part no.
24 VDC	24 VDC	SY100-61-3-05
12 VDC	12 VDC	SY100-61-3-06
100 VAC	100 VAC	SY100-61-2-01
200 VAC	200 VAC	SY100-61-2-02
110 VAC	110 VAC	SY100-61-2-03
220 VAC	220 VAC	SY100-61-2-04

Circuit diagram with light



Note) For DIN connector (Y) conforming to EN-175301-803C(former DIN 43650C), refer to page 698.

Series 10-SYJ300/500/700

Specific Product Precautions 5



Be sure to read before handling.

Connector assembly with cover

⚠ Caution

Connector assembly with dust proof protective cover

- Effective to prevention of short circuit failure due to the entry of foreign matter into the connector.
- Chloroprene rubber for electrical use, which provides outstanding weather resistance and electrical insulation, is used for the cover material. However, do not allow contact with cutting oil, etc.
- Simple and unencumbered appearance by adopting round-shaped cord.

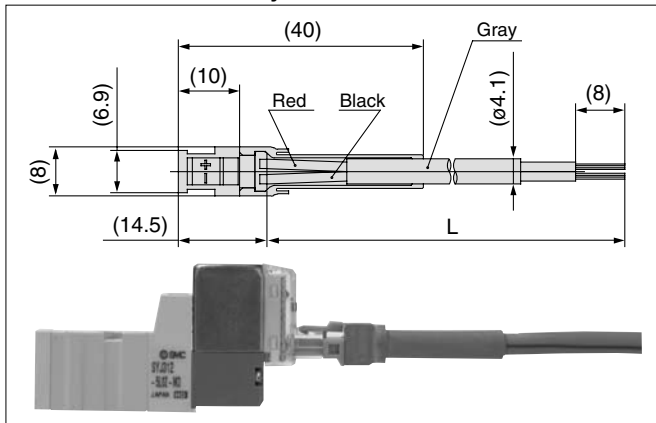
How to Order

SY100-68-A

• Lead wire length

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

Connector assembly with cover: Dimensions



How to Order

Specify the part no. for a solenoid valve without connector together with part no. for a connector assembly with cover.

<Example 1> Lead wire length 2000 mm
10-SYJ312-5LOZ-M3
SY100-68-A-20

<Example 2> Lead wire length 300mm (Standard)
10-SYJ312-5LPZ-M3

Symbol for connector assembly with cover

* In this case, the part number for the connector assembly with cover is not required.

M8 connector

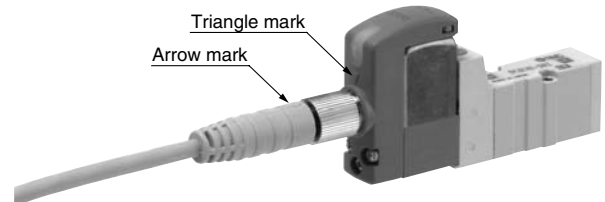
⚠ Caution

1. M8 connector types have an IP65 (enclosure) rating, offering protection from dust and water. However please note that these products are not intended for use in water. Select a SMC connector cable (V100-49-1-□) or a FA sensor type connector, with M8 threaded 3 pin specifications confirming to Nippon Electric Control Equipment Association Standard, NECA4202 (IEC60947-5-2). Make sure the connector O.D. is 10.5 mm or less when used with the Series 10-SY300 manifold. If more than 10.5mm, it cannot be mounted due to the size.
2. Do not use a tool to mount the connector, as this may cause damage. Only tighten by hand. (0.4 to 0.6N·m)
3. Do not apply excessive force over 30N to the connector cables because IP65 will not be satisfied.

⚠ Caution

Failure to meet IP65 performance may result if using alternative connectors than those shown above, or when insufficiently tightened.

• Connector cable mounting



Note) Connector cable should be mounted in the correct direction. Make sure that the arrow symbol on the connector is facing the triangle symbol on the valve when using SMC connector cable (V100-49-1-□). Be careful not to squeeze it in the wrong direction, as problems such as pin damage may occur.



Series 10-SYJ300/500/700

Specific Product Precautions 6

Be sure to read before handling.

M8 connector

■ Connector cable

- Connector cable for M8 can be ordered as follows:

How to Order

1. To order solenoid valve and connector cable at the same time.
(Connector cable will be included in the shipment of the solenoid valve.)

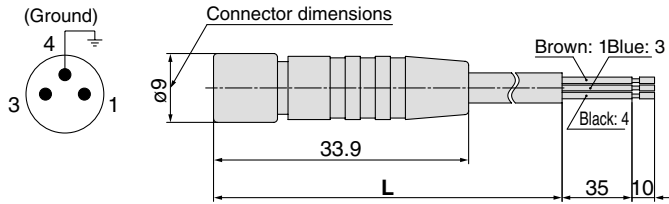
10-SYJ³₇□□ M - □□□□□ - □□

- Electrical entry
- W1: Cable length 300 mm
- W2: Cable length 500 mm
- W3: Cable length 1000 mm
- W4: Cable length 2000 mm
- W7: Cable length 5000 mm

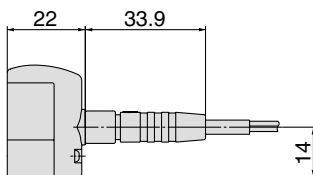
(Example 1) Cable length 300 mm
10-SYJ312M-5W1ZE-M3

↳ Symbol for electrical entry

2. To order connector cable only



Cable length (L)	Part no.
300mm	V100-49-1-1
500mm	V100-49-1-2
1000mm	V100-49-1-3
2000mm	V100-49-1-4
5000mm	V100-49-1-7



Replacement of pilot valve

⚠ Caution

Pilot valves in this series are improved to provide excellent energy saving results. However, following this improvement, these new valves are no longer compatible with the conventional pilot valves used at the interface. Please consult with SMC when you need to exchange these pilot valves, in the case of manual override (marked in orange) of the adapter plate.

