

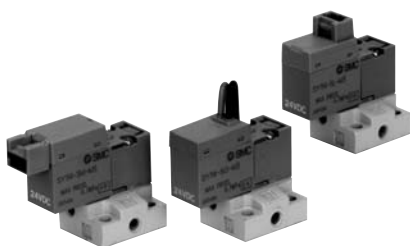
Series 10-SY100

Rubber seal
3 port / Direct operated

Specifications



Body ported



Base mounted

Fluid	Air
Ambient and fluid temperature °C	-10 to 50 (With no freezing. Refer to page 714.)
Response time ms ^{Note 1)}	10 or less
Max. operating frequency (Hz)	20
Manual override	Non-locking push type, Locking slotted type Push-turn locking slotted type Push-turn locking lever type {SY1 $\frac{1}{2}$ 4 and SY1 $\frac{1}{2}$ 4A only}
Lubrication	Not required
Mounting position	Unrestricted
Impact / vibration resistance m/s ² ^{Note 2)}	150/30
Enclosure	Dust tight



Note 1) Based on dynamic performance test, JIS B 8374-1981 (Coil temperature: 20.C, at rated voltage, 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 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 armature in both energized and de-energized states. (Initial value)

Solenoid specifications

Series		10-SY1 $\frac{13}{24}$	10-SY1 $\frac{13}{24}$ A	
Electrical entry		Grommet (G)/(H), L plug connector (L) M plug connector (M)		
Coil rated voltage (V)	DC	24, 12, 6, 5, 3		
	AC ^{50/60} Hz	100, 110, 200, 220	—	
Allowable voltage fluctuation		-10 to +10%		
Power consumption (W)	DC	0.5 (With indicator light: 0.55)	0.75 (With indicator light: 0.8)	
Apparent power (VA)	AC	100V	0.9 (With indicator light: 1.0)	—
		110V [115V]	1.0 (With indicator light: 1.1) [1.1 (with indicator light: 1.2)]	
		200V	1.8 (With indicator light: 1.9)	
		220V [230V]	1.9 (With indicator light: 2.0) [2.2 (with indicator light: 2.3)]	
Surge voltage suppressor		Diode		
Indicator light		LED		



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

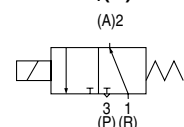
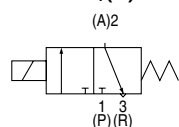
* [Energy saving type [0.22 W] is also available. For details, refer to Best Pneumatics.]

* [Low wattage [0.45 W] is also available. For details, refer to Best Pneumatics.]

JIS Symbol

10-SY11 $\frac{3}{4}$ (A)

10-SY12 $\frac{3}{4}$ (A)



Model

Type of actuation	Valve model	Type	Operating pressure range (MPa)	Vacuum specifications (MPa)		Port size		Effective area (mm ²)	Weight(g) ^{Note 2)}	
				1(P) port	3(R) port	1(P), 3(R) port	2(A) port		Grommet type	L/M plug connector
N.C.	10-SY11 $\frac{3}{4}$	Standard	0 to 0.7	-100kPa to 0.6	-100kPa to 0	M3 x 0.5	M3 x 0.5	0.14		
N.C.	10-SY11 $\frac{3}{4}$ A	Large flow	0 to 0.7	-100kPa to 0.6	-100kPa to 0	M3 x 0.5	M3 x 0.5	0.22		
N.O.	10-SY12 $\frac{3}{4}$ ^{Note 1)}	Standard	0 to 0.7	-100kPa to 0	-100kPa to 0.6	M3 x 0.5	M3 x 0.5	0.14	10-SY1□3(A):13 10-SY1□4(A):24 (12)	10-SY1□3(A): 15 10-SY1□4(A): 26 (14)
N.O.	10-SY12 $\frac{3}{4}$ A ^{Note 1)}	Large flow	0 to 0.7	-100kPa to 0	-100kPa to 0.6	M3 x 0.5	M3 x 0.5	0.22		

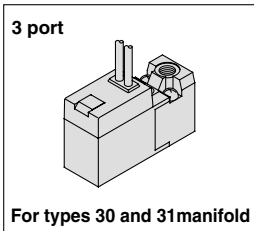


Note 1) For 10-SY12 $\frac{3}{4}$ and 10-SY12 $\frac{3}{4}$ A, supply pressure to port 1 (R) and exhaust from port 3 (P).

Note 2) Value for DC. Add 1g for AC. (): Without sub-plate.

How to Order

Standard type



Type of actuation

1	Normally closed
2	Normally open

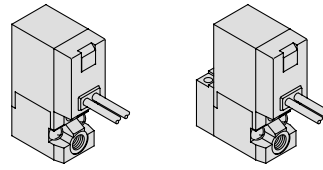
Light/Surge voltage suppressor

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.

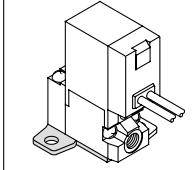
Porting specifications

Nil: For manifold P: For body ported type to P, R, A port



Bracket

Nil: Without bracket F: With bracket

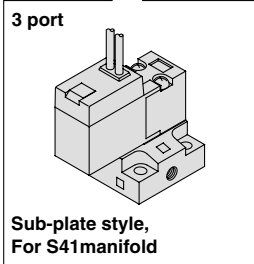


Standard: Body ported

10-SY1 1 3-5 L [] [] M3- []

Standard: Base mounted

10-SY1 1 4-5 M [] [] []



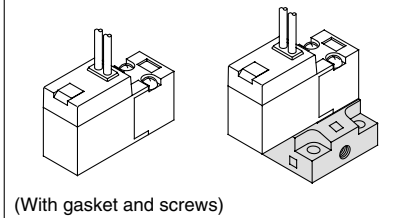
Clean series

Rated voltage

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

Port size

Nil: Without sub-plate M3: With sub-plate



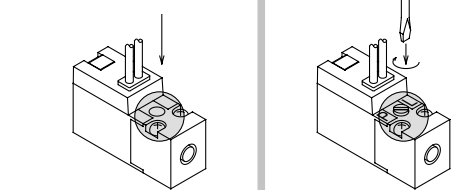
Electrical entry

24, 12, 6, 5, 3 VDC / 100, 110, 200, 220 VAC			
Grommet	L plug connector	M plug 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
H: Lead wire Length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector

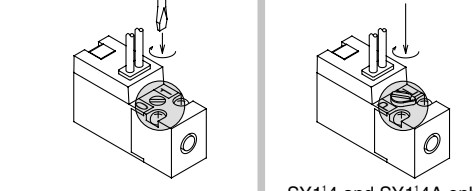
* "LN", "MN" type: with 2 sockets.

Manual override

Nil: Non-locking push type D: Push-turn locking Slotted type



B: Locking slotted type E: Push-turn locking lever type



Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

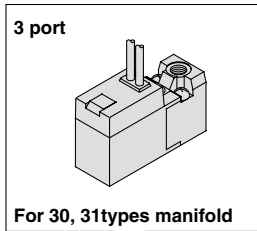
Air preparation equipment

Pressure switch

Clean gas filter

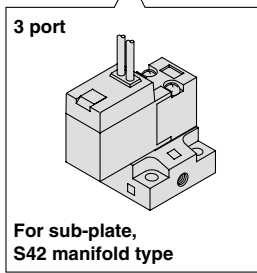
How to Order

Large flow type



Large flow type: Body ported **10-SY1 1 3 A - 5 L** [] [] [] **M3** []

Large flow type: Base mounted **10-SY1 1 4 A - 5 M** [] [] [] []



• Clean series

• Rated voltage

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

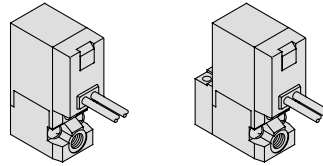
• Large flow type

• Light/surge voltage suppressor

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

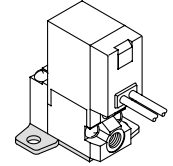
• Porting specifications

Nil: For manifold P: For body ported type to P, R, A port



• Bracket

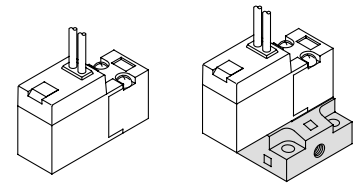
Nil: Without bracket F: With bracket



"P" piping specification only

• Port size

Nil: Without sub-plate M3: With sub-plate



(With gasket and screws)

• Electrical entry

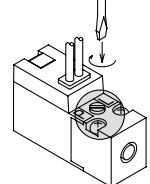
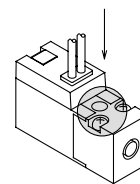
24, 12, 6, 5, 3 VDC			
Grommet	L plug connector	M plug connector	
G: Lead wire Length 300 mm	L: With lead wire (Length 300 mm)	M: With lead wire (Length 300 mm)	MN: Without lead wire
H: Lead wire Length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector

* "LN", "MN" types: with 2 sockets.

• Manual override

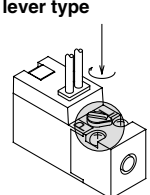
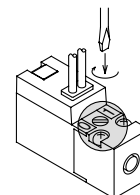
Nil: Non-locking push type

D: Push-turn locking slotted type



B: Locking slotted type

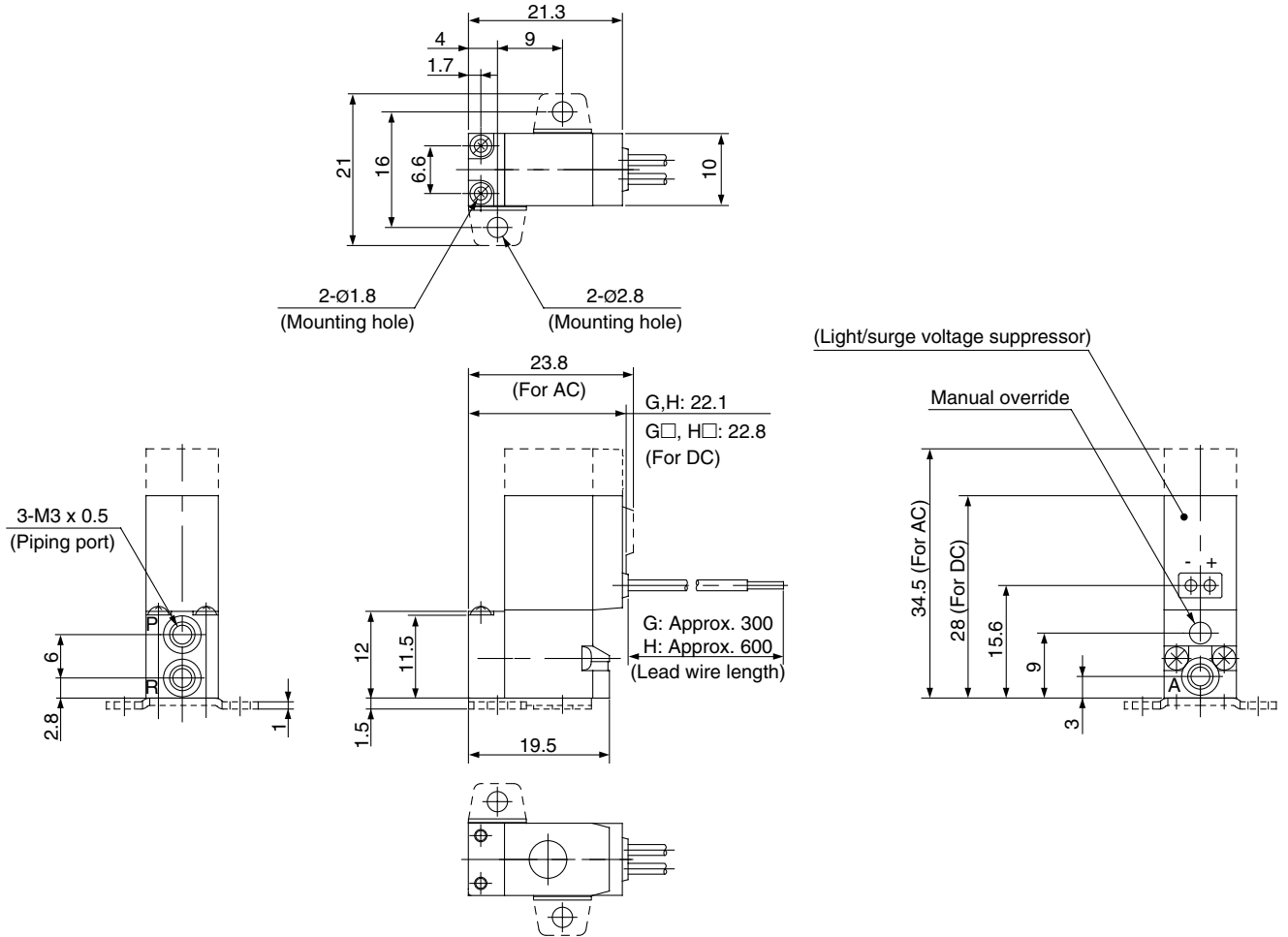
E: Push-turn locking lever type



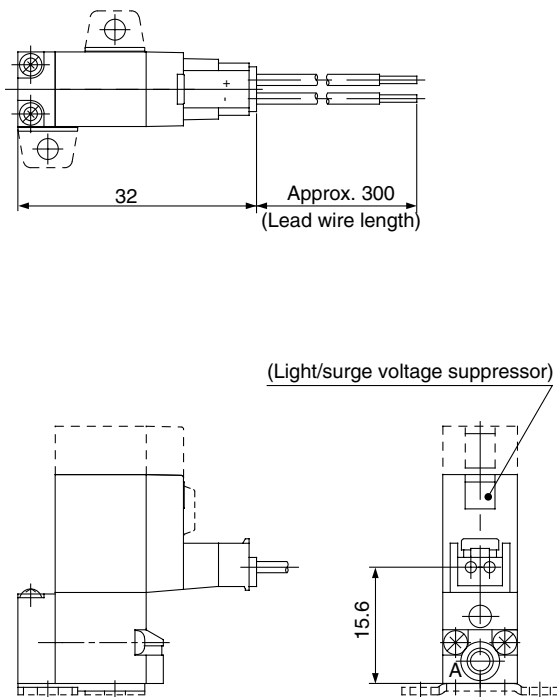
SY1 $\frac{1}{2}$ 4 and SY1 $\frac{1}{4}$ 4A only

Body ported

Grommet (G)/(H): 10-SY1₂3(A)-□^G□□-PM3(-F)

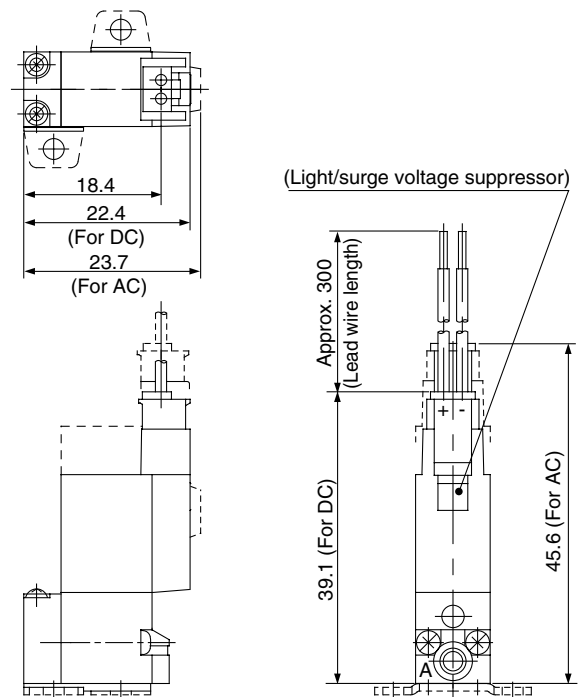


L plug connector (L): 10-SY1₂3(A)-□L□□-PM3(-F)



* Other dimensions are same as grommet style.

M plug connector (M): 10-SY1₂3(A)-□M□□-PM3(-F)

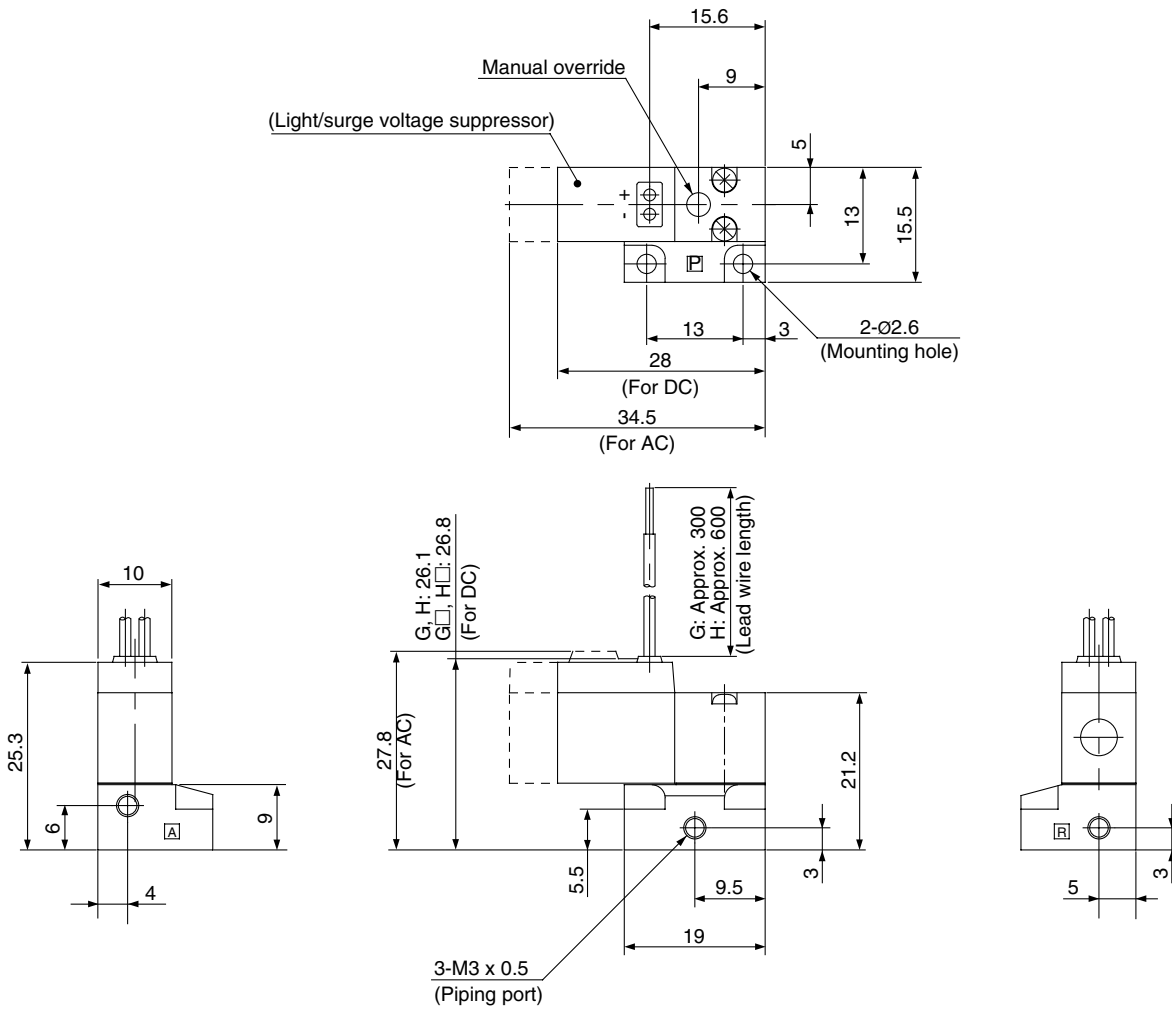


* Other dimensions are same as grommet style.

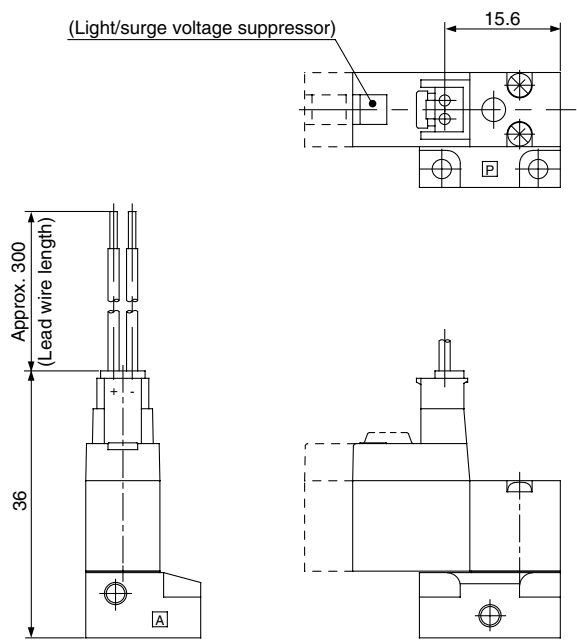
3 port / Direct operated **10-SY100**

Base mounted (With sub-plate)

Grommet (G)/(H): 10-SY1 $\frac{1}{2}$ 4(A)-□ $\frac{G}{H}$ □□-M3

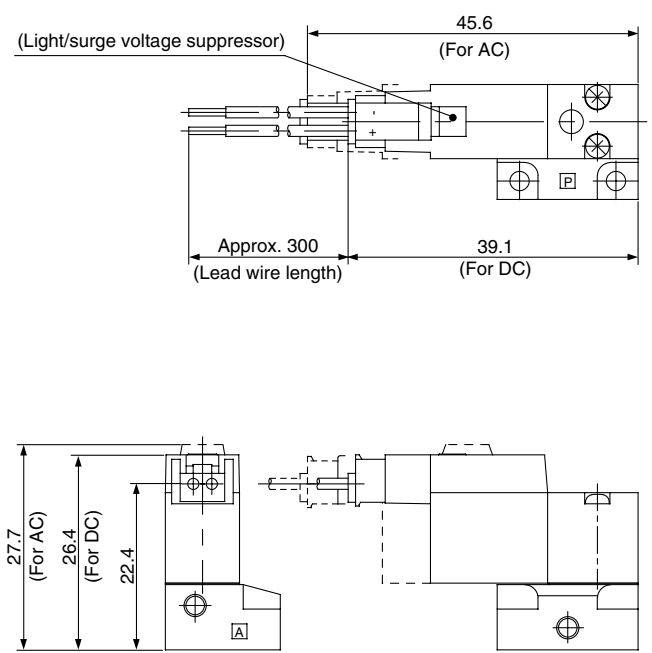


L plug connector (L): 10-SY1 $\frac{1}{2}$ 4(A)-□L□□-M3



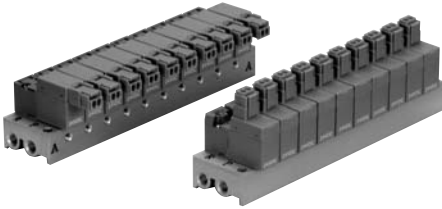
⦿ * Other dimensions are same as grommet style.

M plug connector (M): 10-SY1 $\frac{1}{2}$ 4(A)-□M□□-M3



⦿ * Other dimensions are same as grommet style.

Series 10-SY100 Manifold specifications



Manifold specifications

Model		Type 31	Type S41
Manifold		Single base / B mount	
P(SUP) / R(EXH)		Common SUP / Common EXH	
Stations		2 to 20 stations	
A port piping specifications	Location	Valve	Base
	Direction	Top	Side
Port size	P, R ports	M5 x 0.8	
	A port	M3 x 0.5	M3 x 0.5, M5 x 0.8

10-SY114 (A) and 10-SY124 (A) cannot be mounted on the same manifold.
 Note 2) In the case of 10-SY124 (A), supply pressure to R port and exhaust from P port.

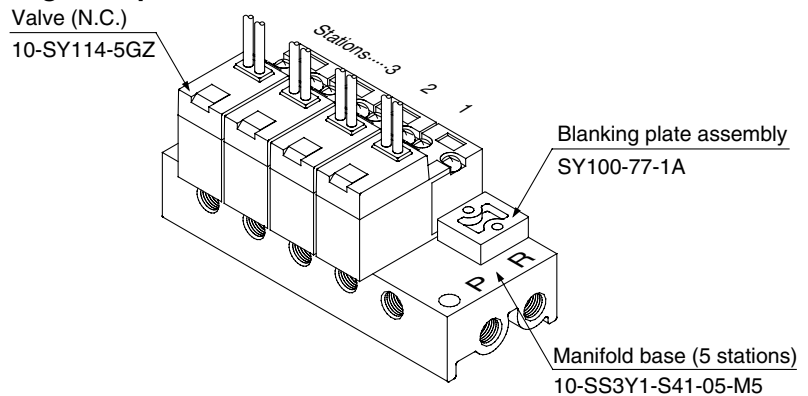
Flow characteristics

Manifold		Port size		Effective area (mm ²)
		1(P), 3(R) port	2(A) port	
Type 10- SS3Y1-31	10-SY1□3	M5 x 0.8	M3 x 0.5	0.14
	10-SY1□3(A)			0.21
Type 10- SS3Y1-S41	10-SY1□4	M5 x 0.8	M3 x 0.5	0.14
	10-SY1□4(A)			0.21
	10-SY1□4	M5 x 0.8	M5 x 0.8	0.14
	10-SY1□4(A)			0.21

Note) Value at manifold base mounted.

How to Order Manifold Assembly (Example)

Ordering example



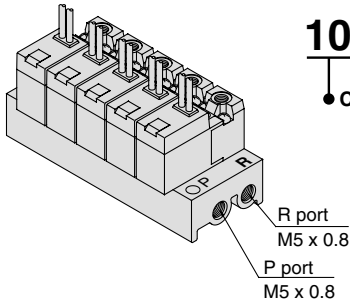
10-SS3Y1-S41-05-M5.....1 set (Type S41 5 station manifold part no.)
 * SY100-77-1A.....1 set (Blanking plate assembly part no.)
 * 10-SY114-5GZ.....4 sets (Valve)
 ↳The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Indicate the part numbers of the valve and option beneath the part number of manifold.

Manifold specifications 10-SY100

Common SUP / Common EXH

Type 31



How to Order

10-SS3Y1-31-05

● Clean series

● Stations

02	2 stations
⋮	⋮
20	20 stations

Applicable solenoid valve ^{Note)}

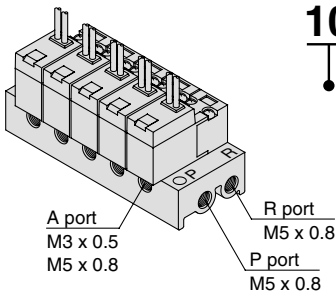
- 10-SY113-□□□□-M3
- 10-SY113A-□□□□-M3
- 10-SY123-□□□□-M3
- 10-SY123A-□□□□-M3

Applicable blanking plate assembly SY100-77-1A



Note) 10-SY113(A) and 10-SY123(A) cannot be mounted on the same manifold.

Type S41



How to Order

10-SS3Y1-S41-05-M3

● Clean series

● Stations

02	2 stations
⋮	⋮
20	20 stations

● A port size

M3	M3 x 0.5
M5	M5 x 0.8

Applicable solenoid valve ^{Note)}

- 10-SY114-□□□□
- 10-SY114A-□□□□
- 10-SY124-□□□□
- 10-SY124A-□□□□

Applicable blanking plate assembly SY100-77-1A



Note) 10-SY114(A) and 10-SY124(A) cannot be mounted on the same manifold.

(Manifold option)

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**

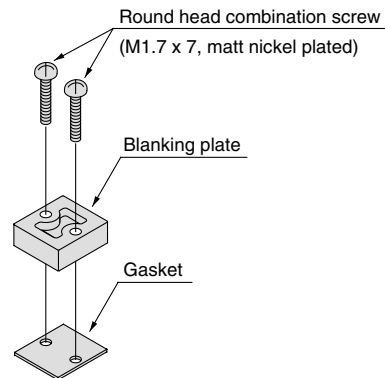
(with connector and 2 pcs. of sockets only)

● Lead wire length

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

Blanking plate assembly

Part no: SY100-77-1A

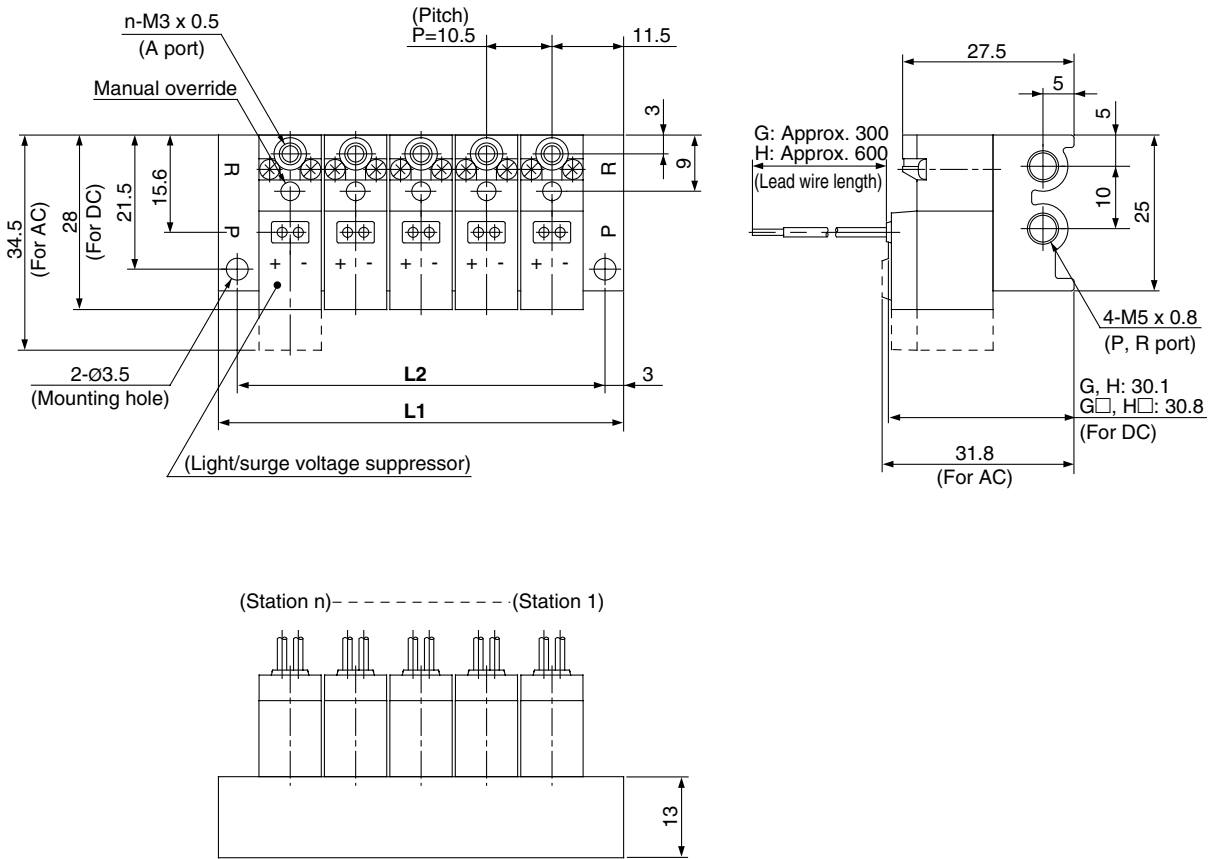


Applicable base

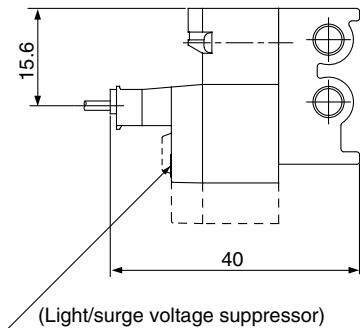
- Sub-plate
 - Type 10-SS3Y1-31
 - Type 10-SS3Y1-S41
- } Manifold base

Type 31 Manifold: Top ported / 10-SS3Y1-31- Stations

Grommet (G), (H)

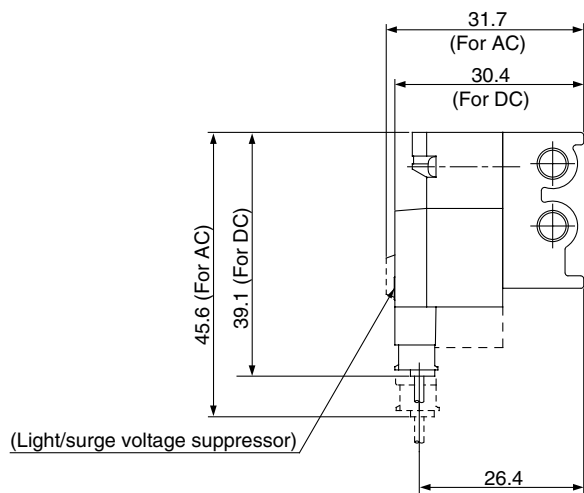


L plug connector (L)



* Other dimensions are same as grommet style.

M plug connector (M)

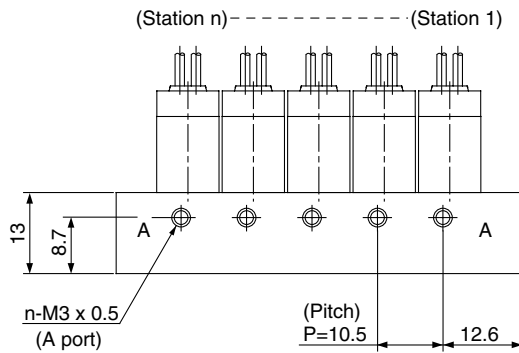
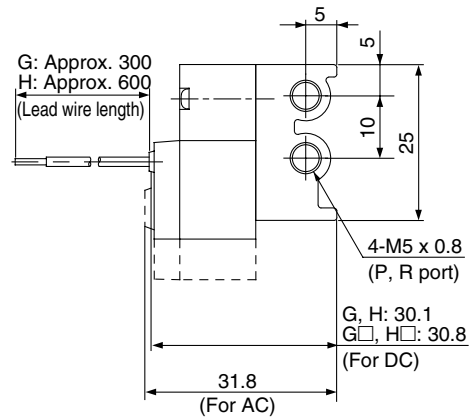
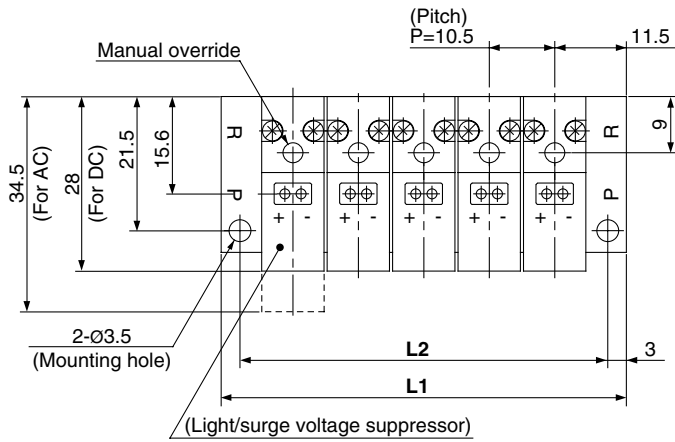


* Other dimensions are same as grommet style.

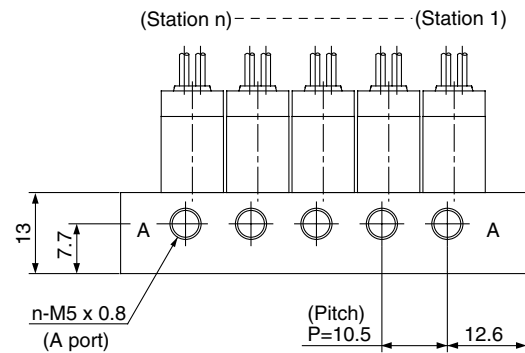
Stations	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	33.5	44	54.5	65	75.5	86	96.5	107	117.5	128	138.5	149	159.5	170	180.5	191	201.5	212	222.5
L2	27.5	38	48.5	59	69.5	80	90.5	101	111.5	122	132.5	143	153.5	164	174.5	185	195.5	206	216.5

Type S41 manifold: Side ported / 10-SS3Y1-S41- Stations -M3/M5

Grommet (G), (H)

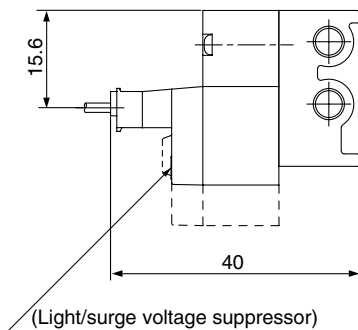


For M3



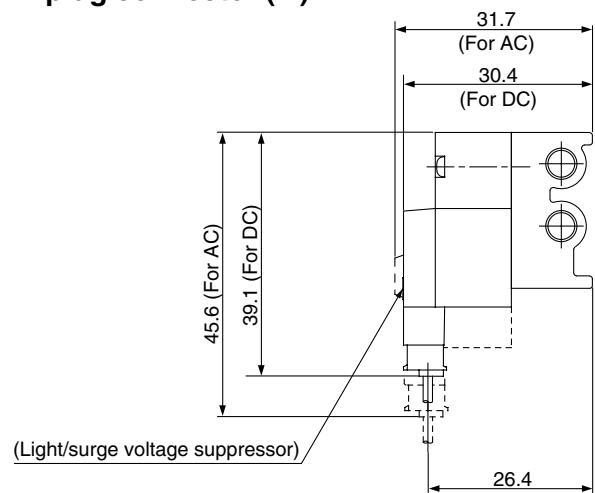
With M5

L plug connector (L)



* Other dimensions are same as grommet style.

M plug connector (M)



* Other dimensions are same as grommet style.

Stations	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	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
L2	27.5	38	48.5	59	69.5	80	90.5	101	111.5	122	132.5	143	153.5	164	174.5	185	195.5	206	216.5