Series **SY3000/5000/7000**

Body Ported Manifold
Bar Stock Type
Individual Wiring
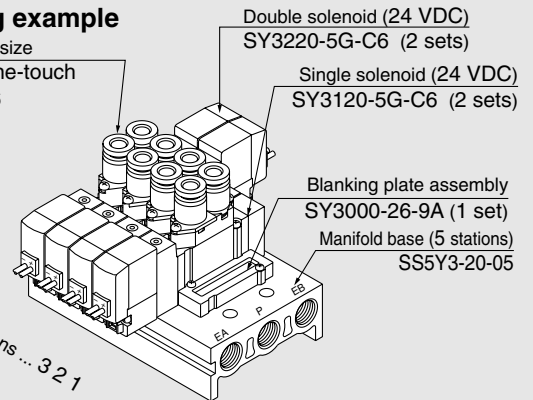
How to Order Manifold

SS5Y [5] **— 20 —** [05] **—** [ ]

Manifold series

3	SY3000
5	SY5000
7	SY7000

Thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

Stations

02	2 stations
⋮	⋮
20	20 stations

∗ This also includes the number of blanking plate assemblies.
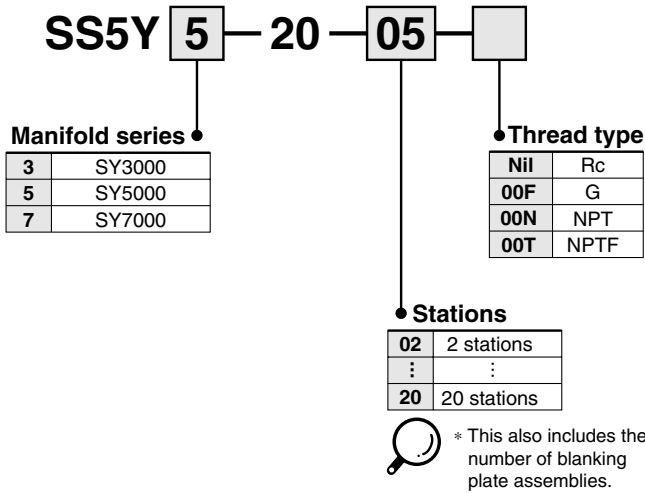
How to Order Valve Manifold Assembly

Ordering example

Cylinder port size
C6: With One-touch fitting for ø6

Double solenoid (24 VDC)
SY3220-5G-C6 (2 sets)

Single solenoid (24 VDC)
SY3120-5G-C6 (2 sets)

Blanking plate assembly
SY3000-26-9A (1 set)

Manifold base (5 stations)
SS5Y3-20-05

Stations … 3 2 1

SS5Y3-20-05	1 set (Type 20, 5 stations manifold base part no.)
∗ SY3000-26-9A	1 set (Blanking plate assembly part no.)
∗ SY3120-5G-C6	2 sets (Single solenoid part no.)
∗ SY3220-5G-C6	2 sets (Double solenoid part no.)

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

Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

⊗SMC

How to Order Valves

SY	5	1	20			5	L			01	

Series

3	SY3000
5	SY5000
7	SY7000

Type of actuation

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

Coil specifications

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

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

Rated voltage

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

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

Manual override

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

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

A, B port size

Thread piping

Symbol	Port size	Applicable series
M5	M5 x 0.8	SY3000
01	1/8	SY5000
02	1/4	SY7000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
C8	One-touch fitting for ø8	SY7000
C10	One-touch fitting for ø10	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
N9	One-touch fitting for ø5/16"	SY7000
N11	One-touch fitting for ø3/8"	

SV
SZ
SY
SYJ
SX

Electrical entry

24, 12, 6, 5, 3 VDC/ 100, 110, 200, 220 VAC				24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 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)	D: With connector	WO: Without connector cable
H: Lead wire length 600 mm	LN: Without lead wire		MN: Without lead wire	DO: Without connector	
	LO: Without connector		MO: Without connector		

∗ "LN", "MN" type: with 2 sockets.
∗ For DIN terminal of SY3000 series, refer to page 1-4-207.
∗ DIN terminal type "Y" conforming to DIN4365C standard is also available. For details, refer to catalog on page 1-4-201.
∗ For connector cable of M8 connector, refer to page 1-4-209.

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.
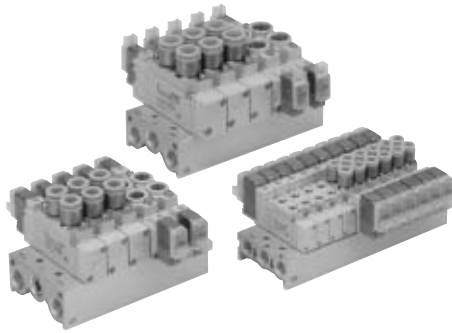(For details, refer to catalog in page 1-4-61.)

Manifold Specifications

Model	SS5Y3-20	SS5Y5-20	SS5Y7-20
Applicable valve	SY3□20	SY5□20	SY7□20
Manifold type	Single base/B mount		
P (SUP)/R (EXH)	Common SUP, Common EXH		
Valve stations	2 to 20 stations [Note 1)]		
A, B port location	Valve		
Port size — P, EA, EB port	⅛	¼	¼
Port size — A, B port	M5 x 0.8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	⅛ C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	¼ C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)
Manifold base weight W (g) n: Stations	W = 13n + 35	W = 36n + 64	W = 43n + 64

Note 1) For more than 10 stations (more than 5 stations in the case of SS5Y7), supply pressure to P port on both sides and exhaust from EA/EB port on both sides.
Note 2) Refer to "Manifold Option" on page 1-4-61.
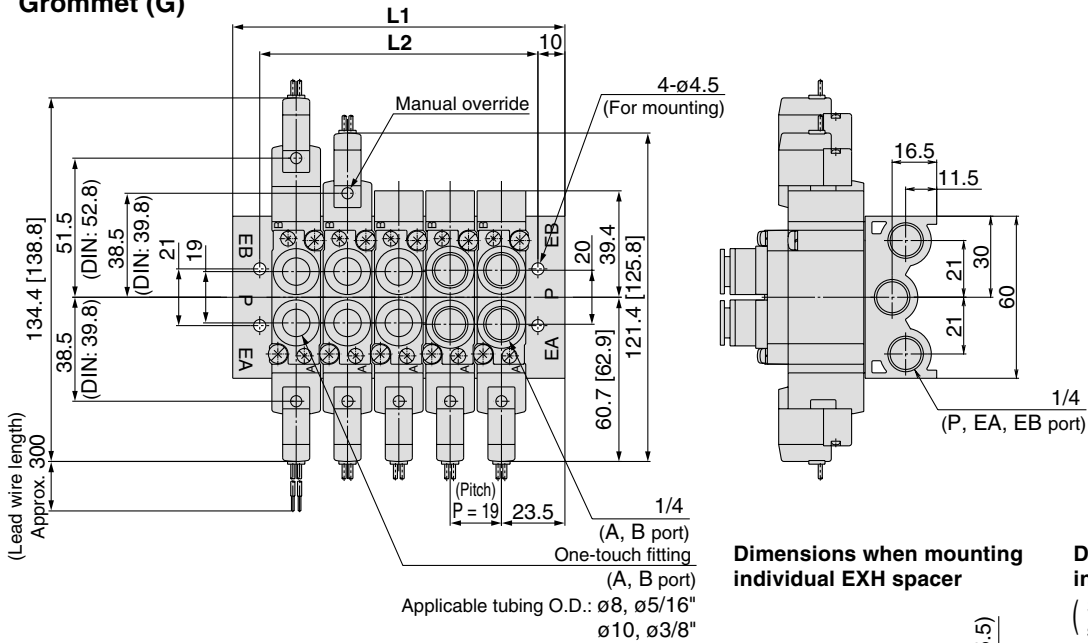
Flow Characteristics

Model	Port size 1, 5, 3 (P, EA, EB)	Port size 4, 2 (A, B)	1 → 4/2 (P → A/B) C (dm³/(s·bar))	b	Cv	4/2 → 5/3 (A/B → EA/EB) C (dm³/(s·bar))	b	Cv
SS5Y3-20	⅛	C6	0.72	0.29	0.18	0.80	0.36	0.21
SS5Y5-20	¼	C8	1.9	0.28	0.48	2.2	0.20	0.53
SS5Y7-20	¼	C10	3.6	0.31	0.93	3.6	0.27	0.88

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

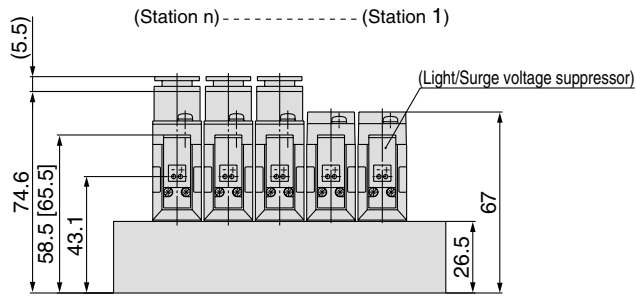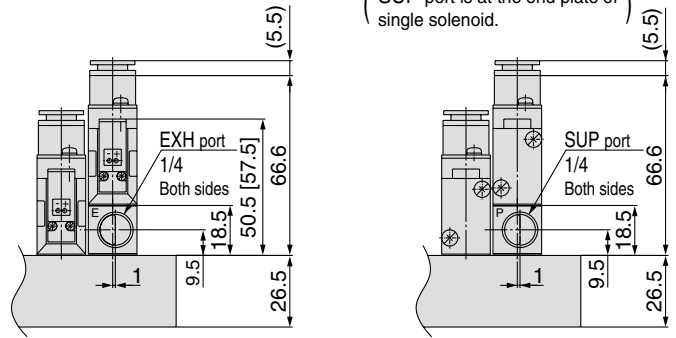**SMC**

SY7000: SS5Y7-20-[Stations]-[ ]

[ ]: AC

Grommet (G)

Manual override

4-ø4.5
(For mounting)

L1
L2
10

134.4 [138.8]
51.5
38.5 (DIN: 52.8)
38.5 (DIN: 39.8)
21
19
EB
P
EA
38.5 (DIN: 39.8)

20
39.4
121.4 [125.8]
60.7 [62.9]

(Lead wire length) Approx. 300

(Pitch) P = 19   23.5

1/4
(A, B port)
One-touch fitting
(A, B port)
Applicable tubing O.D.: ø8, ø5/16"
ø10, ø3/8"

16.5
11.5
21
30
60
21

1/4
(P, EA, EB port)

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

(5.5)
(Light/Surge voltage suppressor)
74.6
58.5 [65.5]
43.1
67
26.5

Dimensions when mounting individual EXH spacer

(5.5)
EXH port
1/4
Both sides
66.6
50.5 [57.5]
18.5
9.5
1
26.5

Dimensions when mounting individual SUP spacer

(SUP port is at the end plate of single solenoid.)

(5.5)
SUP port
1/4
Both sides
66.6
18.5
9.5
1
26.5

L plug connector (L)   **M plug connector (M)**   **DIN terminal (D)**   **M8 connector (WO)**

141.2 [145.6]
154.2 [158.6]
70.6 [72.8]
43.1
58.5 [65.5]
Approx. 300 (Lead wire length)

121.6 [126]
134.6 [139]
60.8 [63]
69.6 [76.6]
Approx. 300 (Lead wire length)

172.4
159.4
79.7
161.2
174.2
80.6
Pg7
Max. 10
74.2
85.5
93
Applicable cable O.D.
ø3.5 to ø7

M8 x 1
152.4
139.4
69.7
124.6
137.6
62.3
45.5
63
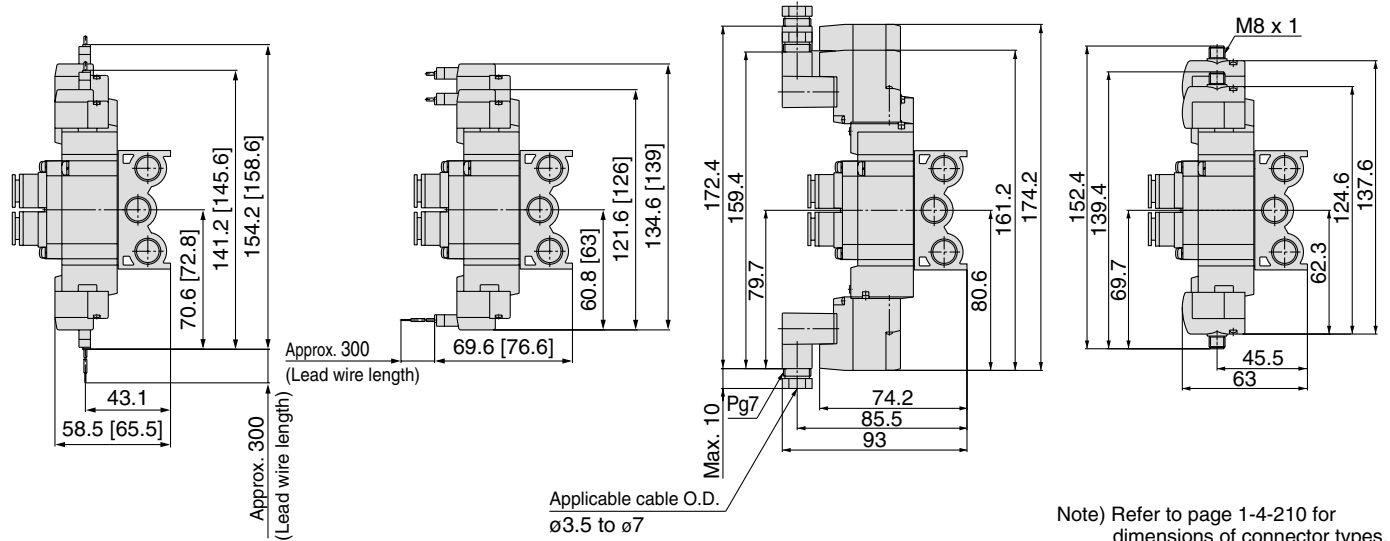
Note) Refer to page 1-4-210 for dimensions of connector types.

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