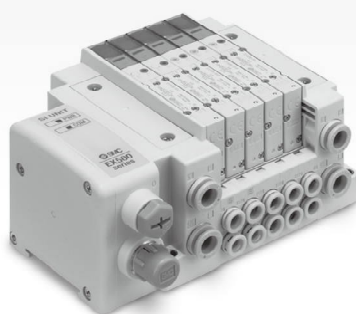
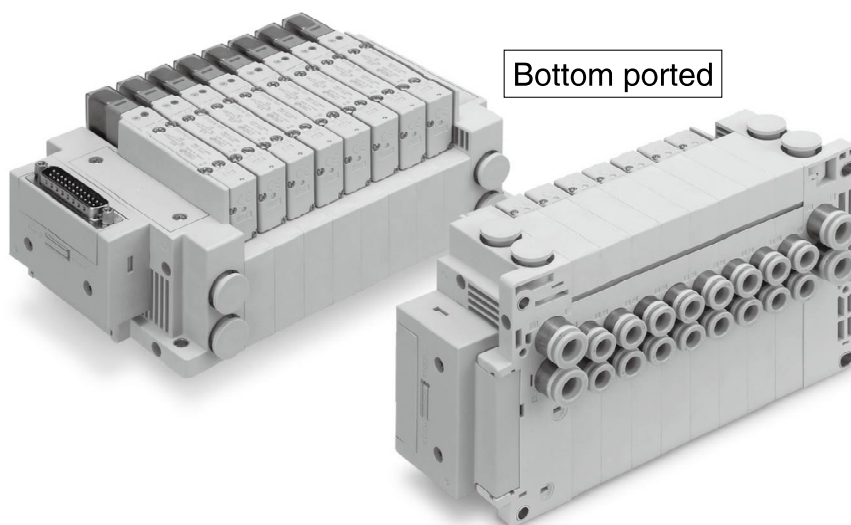


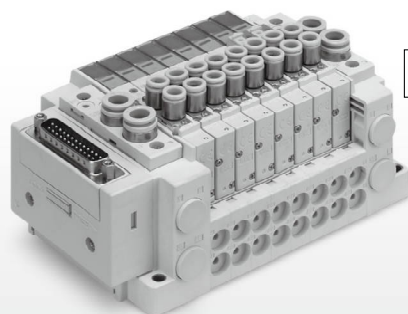
Plug-in Connector Connecting Base



Side ported



Bottom ported



Top ported

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

Series SY3000/5000/7000 Type 10, 11, 12 Plug-in Connector Connecting Base



Manifold Specifications

Model	D-sub connector		Flat ribbon cable			Terminal block box	Lead wire	Circular connector	Serial wiring		
	F type	FW type	P type	PG type J type G type	PH type	T type	L type	M type	S6□ type (EX600)	SA2 type (EX500) S4□ type (EX126)	SA3 type (EX500) S□ type (EX250) (EX260)
Manifold type	Plug-in connector connecting base										
SUP/EXH port type	Common SUP/EXH (Common for 3/5 port)										
Valve stations	2 to 24 stations		2 to 18 stations (J/G type: 2 to 16 stations)	2 to 8 stations	2 to 20 stations	2 to 24 stations		2 to 16 stations	2 to 24 stations	2 to 16 stations	
Applicable connector	D-sub connector Conforming to MIL-C-24308 JIS-X-5101 (Refer to page 111.)	Dedicated connector (Refer to page 111.)	Flat ribbon cable connector with strain relief Conforming to MIL-C-83503 (Refer to page 113.)			—					
			Socket: 26 pins MIL type	Socket: 20 pins MIL type	Socket: 10 pins MIL type						
Internal wiring	Positive common, Negative common										
Port size	1(P), 3/5(E) port	SY3000	ø8 One-touch fitting ø5/16" One-touch fitting								
		SY5000	ø10 One-touch fitting ø3/8" One-touch fitting								
		SY7000	ø12 One-touch fitting ø1/2" One-touch fitting								
	4(A), 2(B) port	SY3000	ø2 One-touch fitting, ø3.2 One-touch fitting, ø4 One-touch fitting, ø6 One-touch fitting ø1/8" One-touch fitting, ø5/32" One-touch fitting, ø1/4" One-touch fitting								
		SY5000	ø4 One-touch fitting, ø6 One-touch fitting, ø8 One-touch fitting ø5/32" One-touch fitting, ø1/4" One-touch fitting, ø5/16" One-touch fitting								
		SY7000	ø6 One-touch fitting, ø8 One-touch fitting, ø10 One-touch fitting, ø12 One-touch fitting ø1/4" One-touch fitting, ø5/16" One-touch fitting, ø3/8" One-touch fitting								
Enclosure (Based on IEC60529)	IP40	IP67*1	IP40			IP67*1		IP67*1 (I/O Unit: partially IP40)	IP67*1 (EX500 GW Unit, Input Unit: IP65)	IP67*1 (EX260 D-sub communication connector: IP40) (EX500 GW Unit: IP65)	IP20

*1: In the case of a metal seal, there are restrictions in the operating environment. Refer to the Specific Product Precautions (page 266).

Manifold Flow Rate Characteristics^{*1}/Manifold Weight**Valve Seal Type: Rubber Seal**

Model	Port size		Valve flow rate characteristics				Weight: W [g] ^{*2} (n: stations)
	1, 3/5 (P, E)	4, 2 (A, B)	1→4/2 (P→A/B)		4/2→5/3 (A/B→E)		
			C [dm ³ /(s·bar)]	b	C [dm ³ /(s·bar)]	b	
SS5Y3-10 (Side ported)	C8	C6	1.4	0.30	1.6	0.19	28.9n + 293
SS5Y3-12 (Top ported)	C8	C6	1.2	0.29	1.3	0.19	25.1n + 314
SS5Y5-10 (Side ported)	C10	C8	3.3	0.30	3.6	0.17	74.7n + 398
SS5Y5-11 (Bottom ported)	C10	C8	3.3	0.29	4.2	0.26	76.8n + 445
SS5Y5-12 (Top ported)	C10	C8	2.8	0.27	3.8	0.23	66.3n + 417
SS5Y7-10 (Side ported)	C12	C12	6.2	0.23	5.9	0.20	106.6n + 496
SS5Y7-11 (Bottom ported)	C12	C12	6.2	0.25	6.6	0.21	117.9n + 532
SS5Y7-12 (Top ported)	C12	C12	5.6	0.31	5.7	0.24	84.1n + 519

Valve Seal Type: Metal Seal

Model	Port size		Valve flow rate characteristics				Weight: W [g] ^{*2} (n: stations)
	1, 3/5 (P, E)	4, 2 (A, B)	1→4/2 (P→A/B)		4/2→5/3 (A/B→E)		
			C [dm ³ /(s·bar)]	b	C [dm ³ /(s·bar)]	b	
SS5Y3-10 (Side ported)	C8	C6	1.2	0.19	1.3	0.18	28.9n + 293
SS5Y3-12 (Top ported)	C8	C6	1.2	0.16	1.3	0.18	25.1n + 314
SS5Y5-10 (Side ported)	C10	C8	2.7	0.24	3.1	0.17	74.7n + 398
SS5Y5-11 (Bottom ported)	C10	C8	2.8	0.25	3.5	0.15	76.8n + 445
SS5Y5-12 (Top ported)	C10	C8	2.6	0.18	3.0	0.16	66.3n + 417
SS5Y7-10 (Side ported)	C12	C12	4.4	0.14	4.4	0.17	106.6n + 496
SS5Y7-11 (Bottom ported)	C12	C12	4.6	0.16	4.7	0.18	117.9n + 532
SS5Y7-12 (Top ported)	C12	C12	3.9	0.21	4.1	0.14	84.1n + 519

*1: The value is for manifold base with 5 stations and individually operated 2-position type.

*2: Weight: W is the value of the internal pilot, and D-sub connector manifold with One-touch fitting straight piping type.

To obtain the weight with valves attached, add the valve weights given on page 15 for the appropriate number of stations.

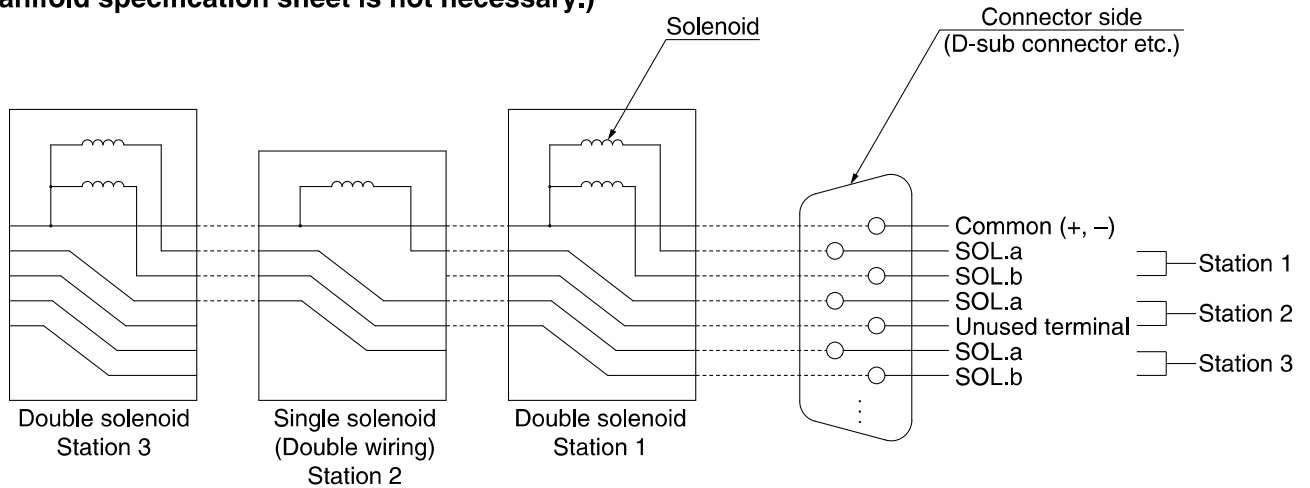
*: Calculation of effective area S and sonic conductance C: $S = 5.0 \times C$

Series SY3000/5000/7000

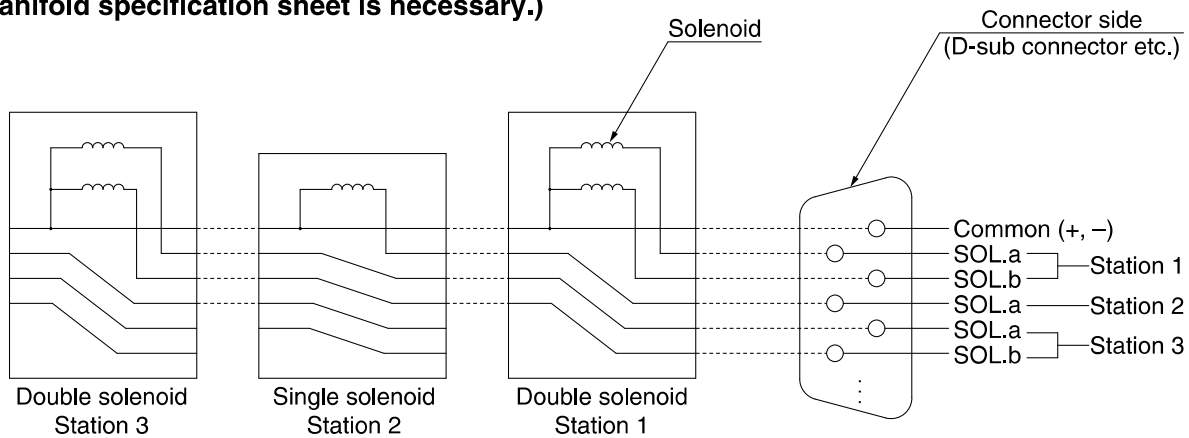
Connector Wiring Layout

For both serial and parallel wiring, additional valves are sequentially assigned pins on the connector. This makes it completely unnecessary to disassemble the connector unit.

■ Single solenoid valve is installed to all double wiring. (in the case of all double wiring) (Manifold specification sheet is not necessary.)



■ Single/double wiring are mixed. (Manifold specification sheet is necessary.)



*: These diagrams are for the purpose of explanation, and differ from the connector wiring used for testing.

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

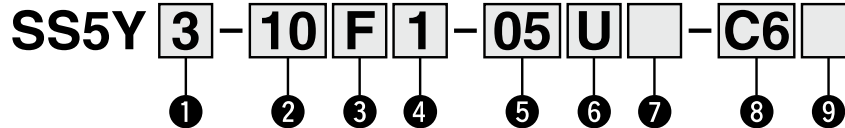
D-sub Connector Flat Ribbon Cable PC Wiring

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

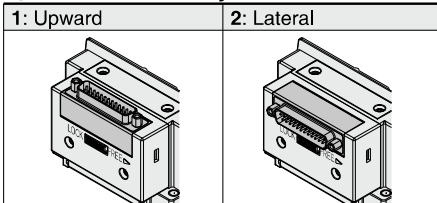
3	SY3000
5	SY5000
7	SY7000

2 Type

10	Side ported
11	Bottom ported*1

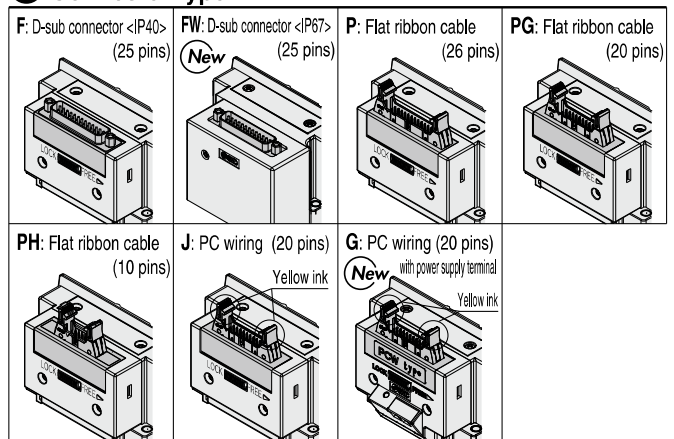
*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Mounting Type Manifold" (from page 213).

4 Connector entry direction



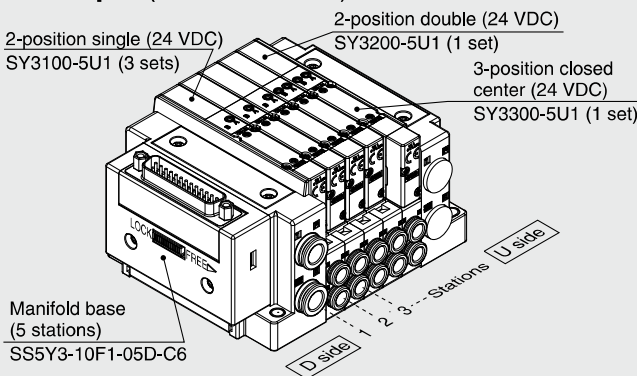
*: The connector entry direction for connector type "FW" D-sub connector <IP67> can not be rotated. If it is necessary to change, order connector block assembly (page 231) separately.

3 Connector type



How to Order Manifold Assembly

Example (SS5Y3-10F1-□)



SS5Y3-10F1-05D-C6 ... 1 set (Type 10 5-station manifold base part no.)
 *SY3100-5U1 3 sets (2-position single part no.)
 *SY3200-5U1 1 set (2-position double part no.)
 *SY3300-5U1 1 set (3-position closed center part no.)

The asterisk denotes the symbol for assembly. Prefix it to the part numbers of the valve etc.

- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

*: When mixing top ported configurations, select from page 110. In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.

5 Valve stations

F/FW: D-sub connector (25 pins)

Symbol	Stations	Note
02	2 stations	Double wiring*1
∴	∴	
12	12 stations	Specified layout*2 (Available up to 24 solenoids)
02	2 stations	
∴	∴	
24	24 stations	

P: Flat ribbon cable (26 pins)

Symbol	Stations	Note
02	2 stations	Double wiring*1
∴	∴	
12	12 stations	Specified layout*2 (Available up to 24 solenoids)
02	2 stations	
∴	∴	
24	24 stations	

PG: Flat ribbon cable (20 pins)

Symbol	Stations	Note
02	2 stations	Double wiring*1
∴	∴	
09	9 stations	Specified layout*2 (Available up to 18 solenoids)
02	2 stations	
∴	∴	
18	18 stations	

PH: Flat ribbon cable (10 pins)

Symbol	Stations	Note
02	2 stations	Double wiring*1
∴	∴	
04	4 stations	Specified layout*2 (Available up to 8 solenoids)
02	2 stations	
∴	∴	
08	8 stations	

J/G: PC wiring (20 pins)

Symbol	Stations	Note
02	2 stations	Double wiring*1
∴	∴	
08	8 stations	Specified layout*2 (Available up to 16 solenoids)
02	2 stations	
∴	∴	
16	16 stations	

*1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

*2: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.)

*: This also includes the number of blanking plate assembly.

6 P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 24 stations)

7 SUP/EXH block assembly

Nil	Internal pilot
S	Internal pilot, Built-in silencer
R	External pilot

*: 3/5(E) port is plugged for the built-in silencer type.

9 Mounting and Option

Symbol	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D □	DIN rail mounting	—	—
A □		●	●
B □		●	—

DIN Rail Option

Nil	Direct mounting
0	Without DIN rail (with bracket)
3	For 3 stations
:	:
24	For 24 stations

Specify a longer rail than the total length of specified stations.

*: Enter the number of stations inside □ when it is larger than the number of valve stations. (Refer to "DIN Rail Option" above.)

*: Only direct mounting is available for Type 11 (Bottom ported).

*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

8 A, B port size (Metric/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported		
		SY3000	SY5000	SY7000	SY5000	SY7000	
C2	ø2	●	—	—	—	—	
C3	ø3.2	●	—	—	—	—	
C4	ø4	●	●	—	●	—	
C6	ø6	●	●	●	●	●	
C8	ø8	—	●	●	●	●	
C10	ø10	—	—	●	—	●	
C12	ø12	—	—	●	—	●	
CM^{*1}	Straight port, mixed sizes	●	●	●	●	●	
L4	Upward	ø4	●	●	—	—	
L6		ø6	●	●	—	—	
L8		ø8	—	●	●	—	—
L10		ø10	—	—	●	—	—
L12	ø12	—	—	●	—	—	
B4	Downward	ø4	●	●	—	—	
B6		ø6	●	●	●	—	—
B8		ø8	—	●	●	—	—
B10		ø10	—	—	●	—	—
B12	ø12	—	—	●	—	—	
LM^{*1}	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—	
P, E port size (One-touch fittings)		ø8	ø10	ø12	ø10	ø12	

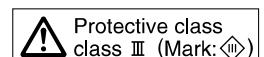
A, B port size (Inch/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
N1	ø1/8"	●	—	—	—	—
N3	ø5/32"	●	●	—	●	—
N7	ø1/4"	●	●	●	●	●
N9	ø5/16"	—	●	●	●	●
N11	ø3/8"	—	—	●	—	●
CM^{*1}	Straight port, mixed sizes	●	●	●	●	●
LN3	Upward	ø5/32"	●	—	—	—
LN7		ø1/4"	●	●	—	—
LN9		ø5/16"	—	●	—	—
LN11	ø3/8"	—	—	●	—	—
BN3	Downward	ø5/32"	●	—	—	—
BN7		ø1/4"	●	●	—	—
BN9		ø5/16"	—	●	—	—
BN11	ø3/8"	—	—	●	—	—
LM^{*1}	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"

*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

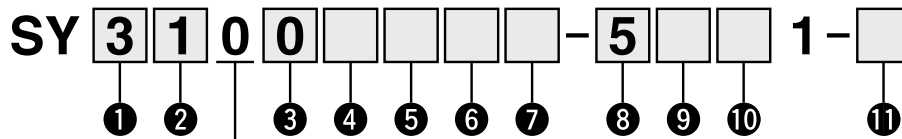
The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



● Base mounted

1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1	2-position	Single
2		Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual	N.C./N.C.
B*1		N.O./N.O.
C*1		3-port

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

5	24 VDC
6	12 VDC

*: Connector type "G" (PC wiring with power supply terminal) of the manifold type is only available in 24 VDC.

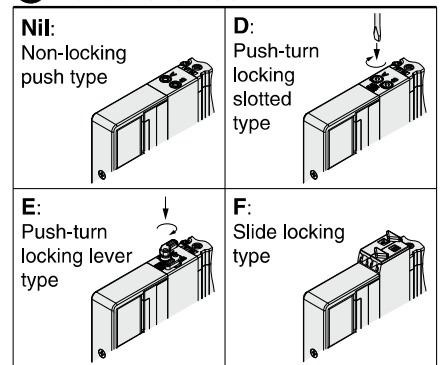
9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
Nil	—	—	Non-polar
R	—	●	
U	●		
S	—		Positive common
Z	●		
NS	—	Negative common	
NZ	●		

*: Only "Z" and "NZ" types are available for with the power saving circuit.

*: For connector type "G" (PC wiring with power supply terminal) of the manifold type, select non-polar or positive common.

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service.

Refer to page 244 for part numbers of the base gasket and mounting screw.

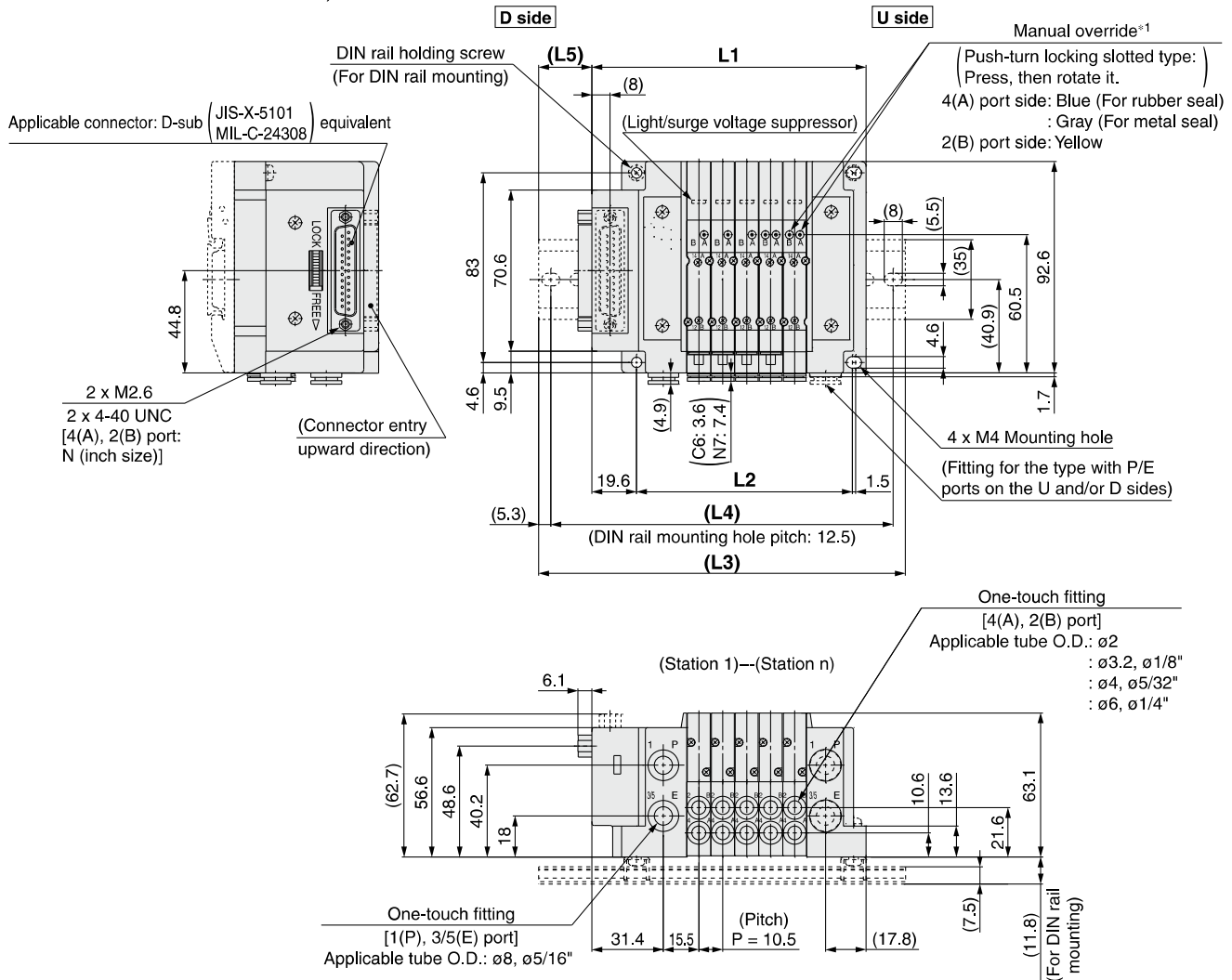
*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

Dimensions: Series **SY3000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
D-sub Connector (IP40)

SS5Y3-10F₂¹ - Stations $\begin{matrix} \text{U} \\ \text{D} \\ \text{B} \end{matrix}$ - $\begin{matrix} \text{C2} \\ \text{C3} \\ \text{C4} \\ \text{C6}, \text{N7} \end{matrix}$ N1 (D)
N3



*1: Refer to page 205 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
 *: These figures show the "SS5Y3-10F2-05D-C6".
 *: Refer to page 210 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	88.6	99.1	109.6	120.1	130.6	141.1	151.6	162.1	172.6	183.1	193.6	204.1	214.6	225.1	235.6	246.1	256.6	267.1	277.6	288.1	298.6	309.1	319.6
L2	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.5	189	199.5	210	220.5	231	241.5	252	262.5	273	283.5	294
L3	123	135.5	148	160.5	160.5	173	185.5	198	210.5	223	223	235.5	248	260.5	273	285.5	298	298	310.5	323	335.5	348	360.5
L4	112.5	125	137.5	150	150	162.5	175	187.5	200	212.5	212.5	225	237.5	250	262.5	275	287.5	287.5	300	312.5	325	337.5	350
L5	20.5	21.5	22.5	23.5	18	19	20	21	22	23	18	19	20	21	22	23	23.5	18.5	19.5	20.5	21.5	22.5	23.5

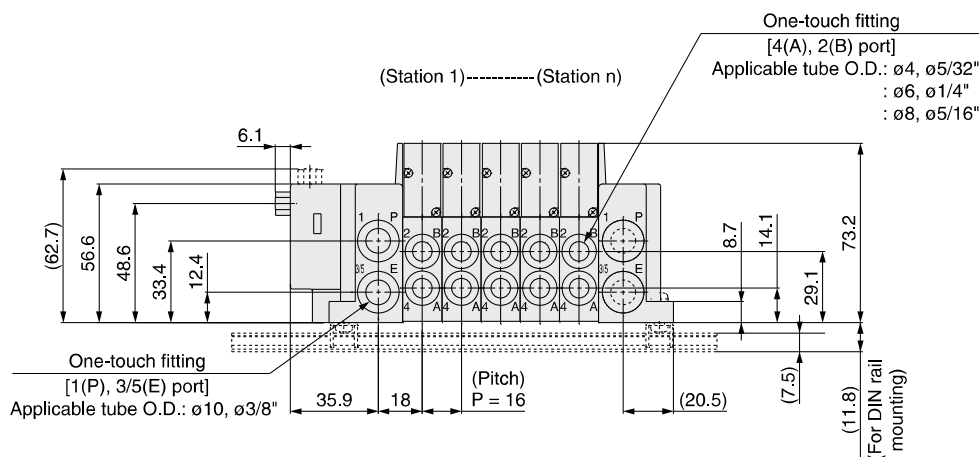
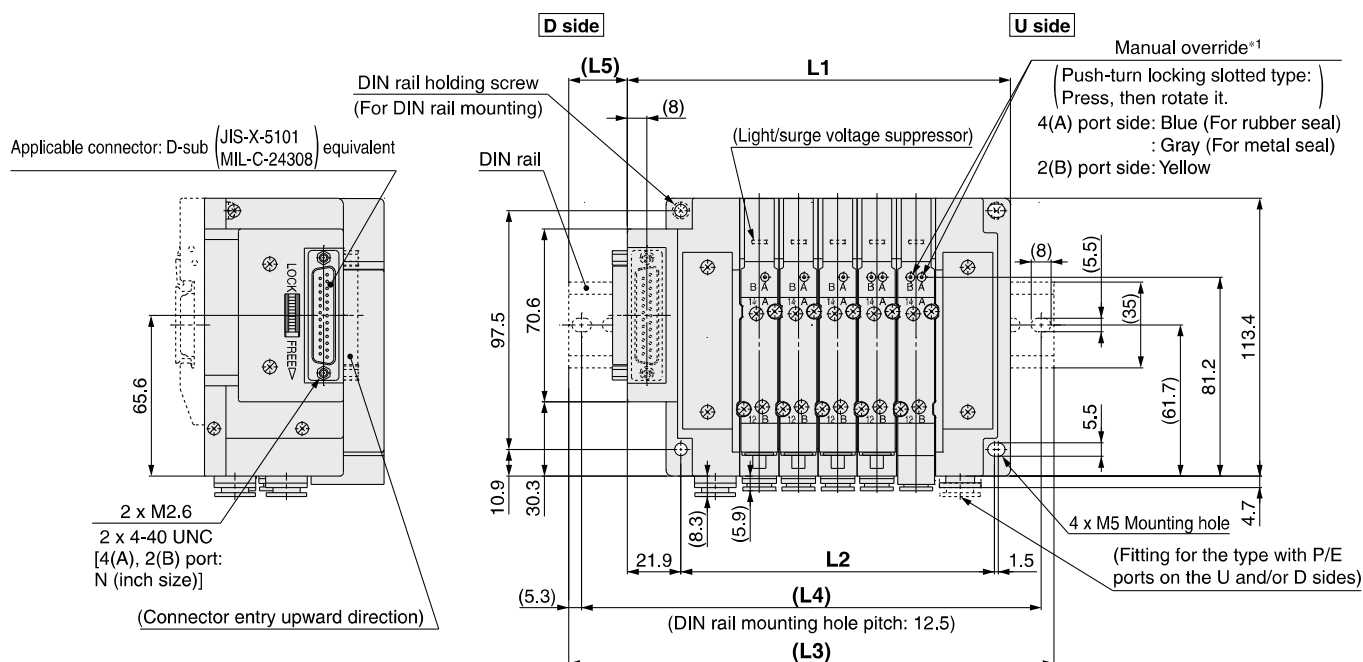
Series SY3000/5000/7000

Dimensions: Series SY5000

Plug-in Connector Connecting Base

Type 10/Side Ported D-sub Connector (IP40)

SS5Y5-10F₁-Stations $\begin{matrix} \text{U} & \text{C4, N3} \\ \text{D} & \text{C6, N7 (D)} \\ \text{B} & \text{C8, N9} \end{matrix}$



*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y5-10F2-05D-C8".
*: Refer to page 211 for dimensions of A or B port top-ported type.

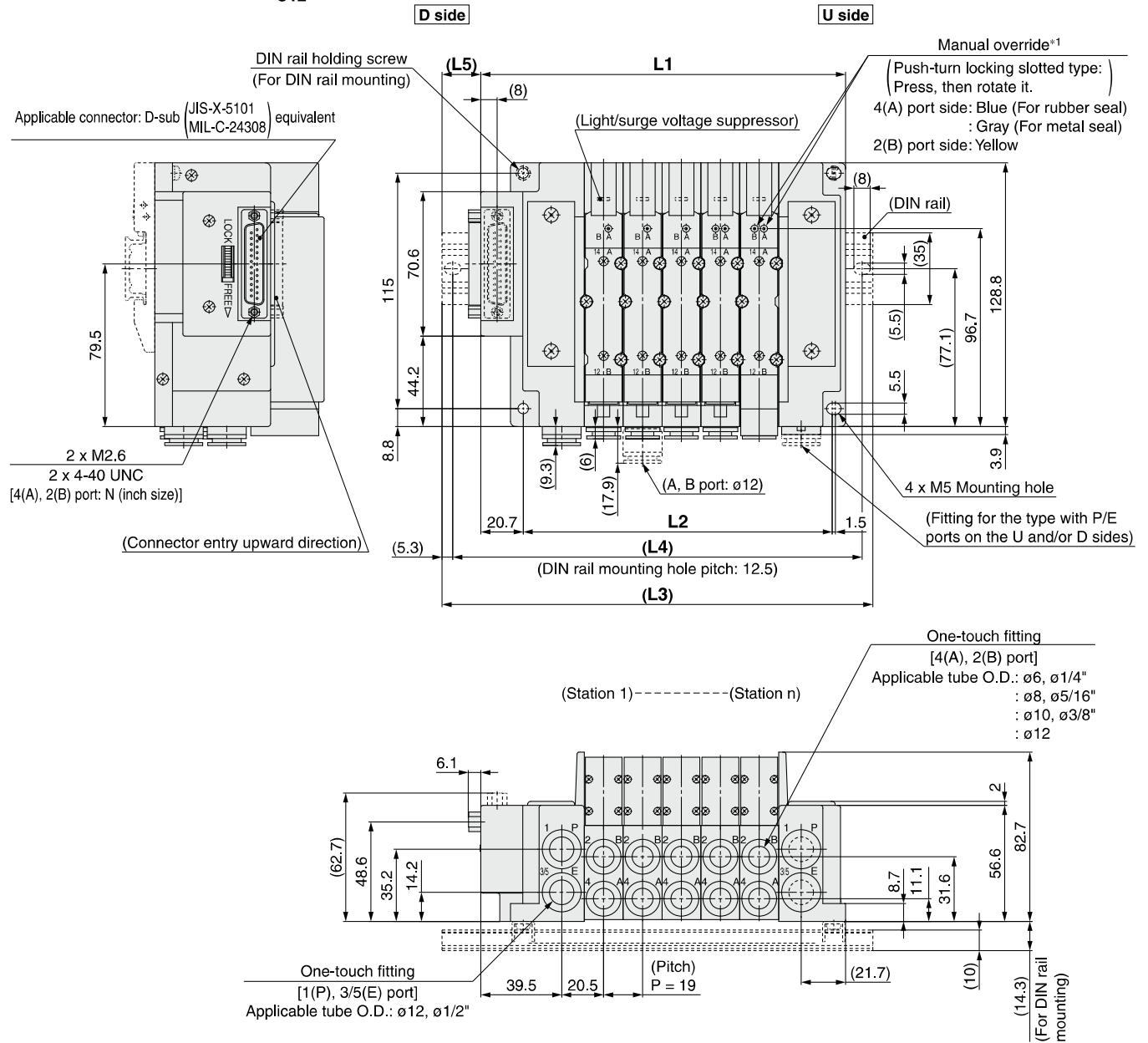
n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	108.4	124.4	140.4	156.4	172.4	188.4	204.4	220.4	236.4	252.4	268.4	284.4	300.4	316.4	332.4	348.4	364.4	380.4	396.4	412.4	428.4	444.4	460.4
L2	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304	320	336	352	368	384	400	416	432
L3	148	160.5	173	198	210.5	223	235.5	260.5	273	285.5	298	323	335.5	348	373	385.5	398	410.5	435.5	448	460.5	485.5	498
L4	137.5	150	162.5	187.5	200	212.5	225	250	262.5	275	287.5	312.5	325	337.5	362.5	375	387.5	400	425	437.5	450	475	487.5
L5	23	21	19.5	24	22	20.5	18.5	23	21.5	19.5	18	22.5	20.5	19	23.5	21.5	20	18	22.5	21	19	23.5	22

Dimensions: Series **SY7000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
D-sub Connector (IP40)

SS5Y7-10F₂-Stations $\begin{matrix} \text{U} & \text{C6, N7} \\ \text{D} & \text{C8, N9} \\ \text{B} & \text{C10, N11(D)} \\ & \text{C12} \end{matrix}$



*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
 *: These figures show the "SS5Y7-10F2-05D-C10".
 *: Refer to page 212 for dimensions of A or B port top-ported type.

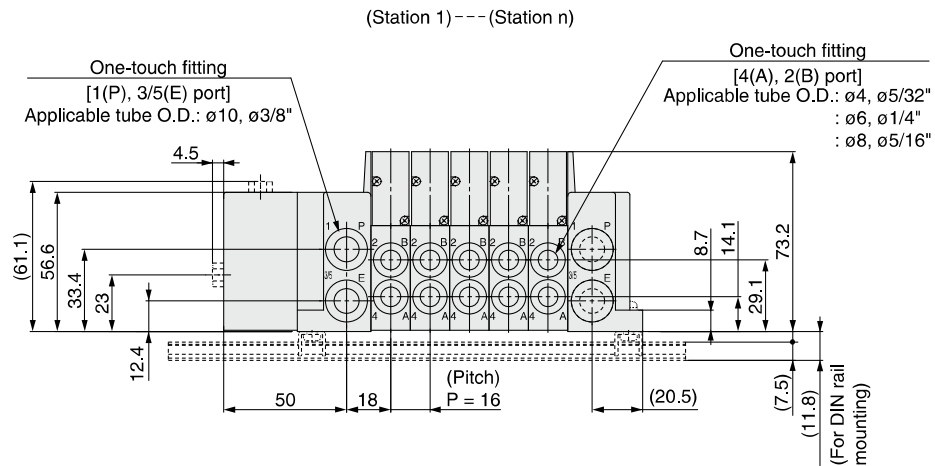
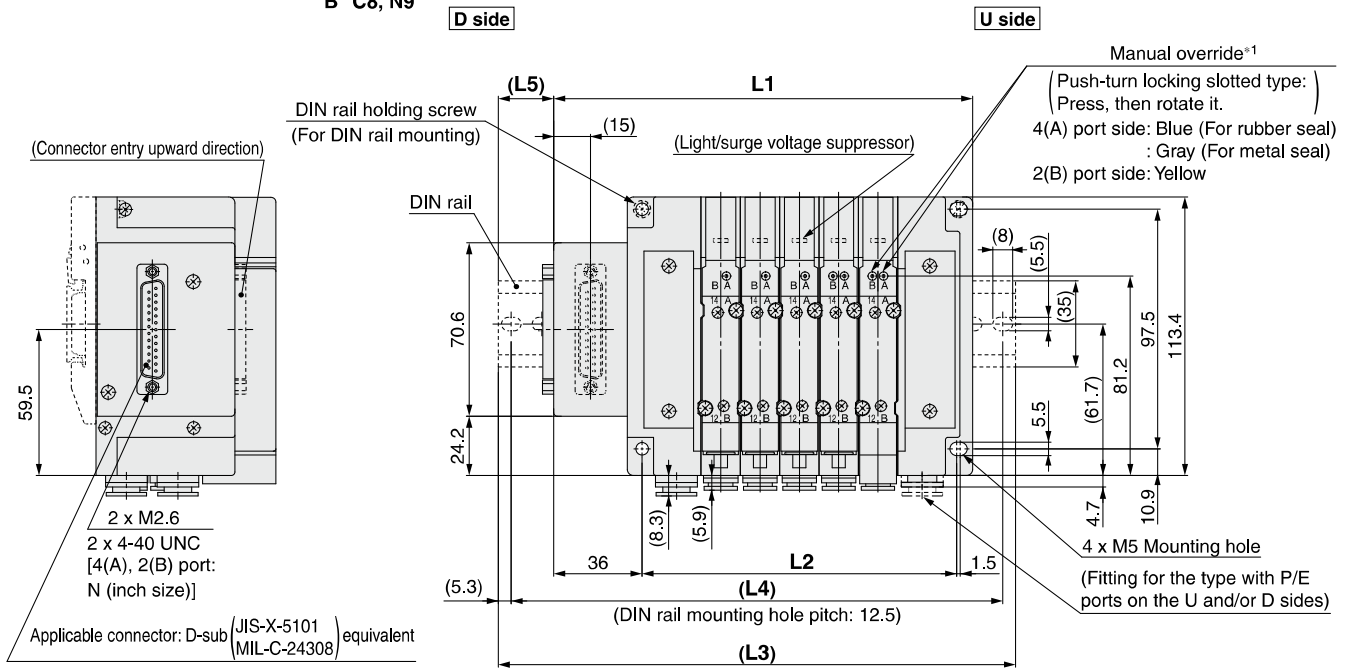
n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	121.2	140.2	159.2	178.2	197.2	216.2	235.2	254.2	273.2	292.2	311.2	330.2	349.2	368.2	387.2	406.2	425.2	444.2	463.2	482.2	501.2	520.2	539.2
L2	94	113	132	151	170	189	208	227	246	265	284	303	322	341	360	379	398	417	436	455	474	493	512
L3	160.5	173	198	210.5	235.5	248	273	285.5	310.5	323	348	360.5	385.5	398	423	435.5	460.5	485.5	498	523	535.5	560.5	573
L4	150	162.5	187.5	200	225	237.5	262.5	275	300	312.5	337.5	350	375	387.5	412.5	425	450	475	487.5	512.5	525	550	562.5
L5	22.5	19.5	22.5	19	22	19	22	18.5	21.5	18.5	21.5	18	21	18	21	17.5	20.5	23.5	20.5	23.5	20	23	20

Dimensions: Series **SY5000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
D-sub Connector (IP67)

SS5Y5-10FW₂ - Stations $\begin{matrix} U & C4, N3 \\ D & C6, N7 (D) \\ B & C8, N9 \end{matrix}$



*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y5-10FW2-05D-C8".
*: Refer to page 211 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	122.5	138.5	154.5	170.5	186.5	202.5	218.5	234.5	250.5	266.5	282.5	298.5	314.5	330.5	346.5	362.5	378.5	394.5	410.5	426.5	442.5	458.5	474.5
L2	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304	320	336	352	368	384	400	416	432
L3	160.5	173	185.5	210.5	223	235.5	248	273	285.5	298	310.5	335.5	348	360.5	385.5	398	410.5	423	448	460.5	473	498	510.5
L4	150	162.5	175	200	212.5	225	237.5	262.5	275	287.5	300	325	337.5	350	375	387.5	400	412.5	437.5	450	462.5	487.5	500
L5	21.5	19.5	18	22.5	20.5	19	17	21.5	20	18	16.5	21	19	17.5	22	20	18.5	16.5	21	19.5	17.5	22	20.5

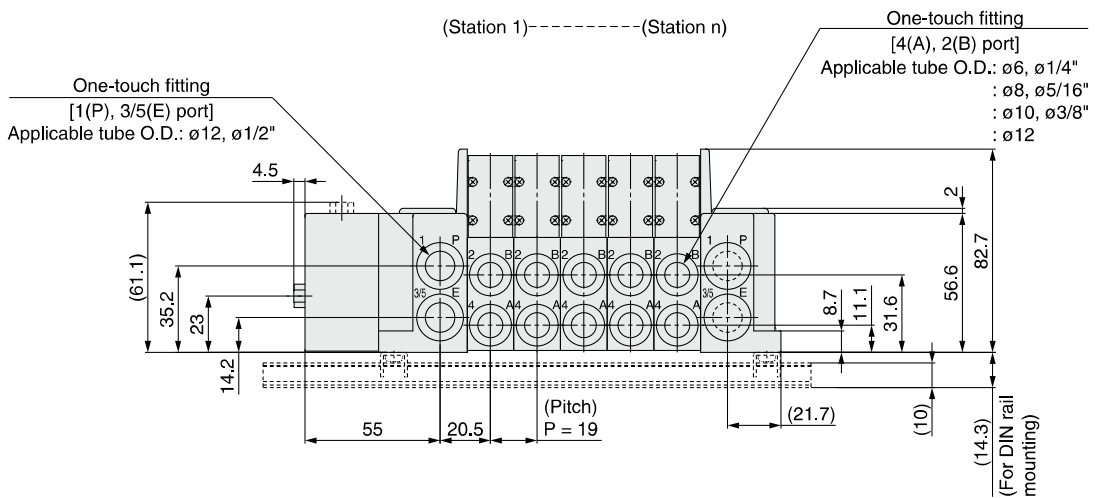
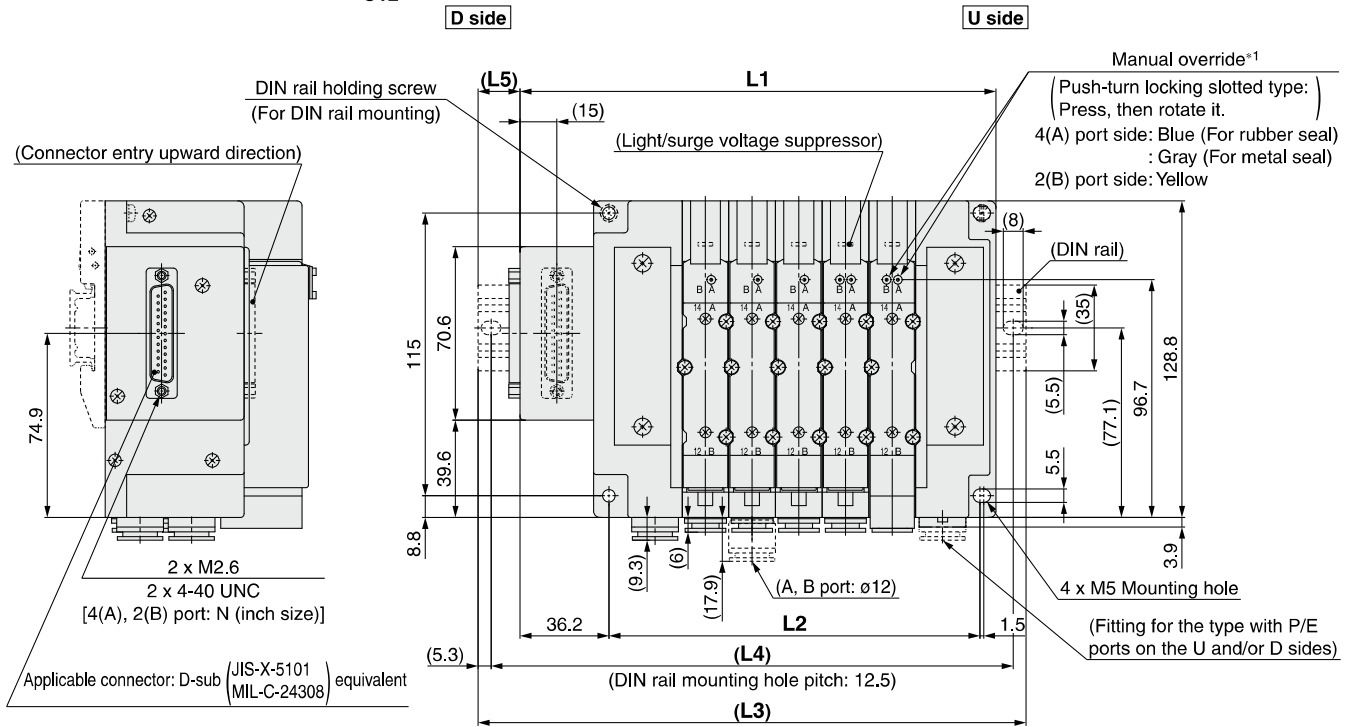
Series SY3000/5000/7000

Plug-in Connector Connecting Base

Type 10/Side Ported
D-sub Connector (IP67)

Dimensions: Series SY7000

SS5Y7-10FW₂ - Stations $\begin{matrix} \text{U} \\ \text{D} \\ \text{B} \end{matrix}$ $\begin{matrix} \text{C6, N7} \\ \text{C8, N9} \\ \text{C10, N11} \end{matrix}$ (D)
C12



*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y7-10FW2-05D-C10".
*: Refer to page 212 for dimensions of A or B port top-ported type.

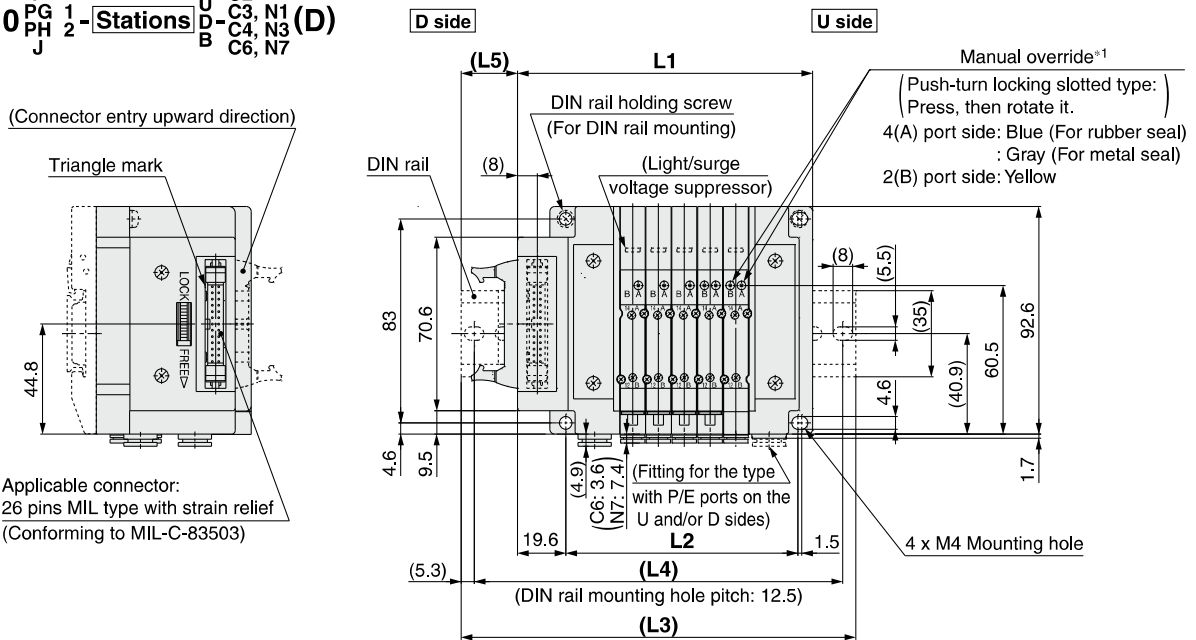
n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	136.7	155.7	174.7	193.7	212.7	231.7	250.7	269.7	288.7	307.7	326.7	345.7	364.7	383.7	402.7	421.7	440.7	459.7	478.7	497.7	516.7	535.7	554.7
L2	94	113	132	151	170	189	208	227	246	265	284	303	322	341	360	379	398	417	436	455	474	493	512
L3	173	185.5	210.5	223	248	260.5	285.5	298	323	335.5	360.5	385.5	398	423	435.5	460.5	473	498	510.5	535.5	548	573	585.5
L4	162.5	175	200	212.5	237.5	250	275	287.5	312.5	325	350	375	387.5	412.5	425	450	462.5	487.5	500	525	537.5	562.5	575
L5	20.5	17	20	17	20	16.5	19.5	16.5	19.5	16	19	22	19	22	18.5	21.5	18.5	21.5	18	21	18	21	17.5

Dimensions: Series **SY3000**

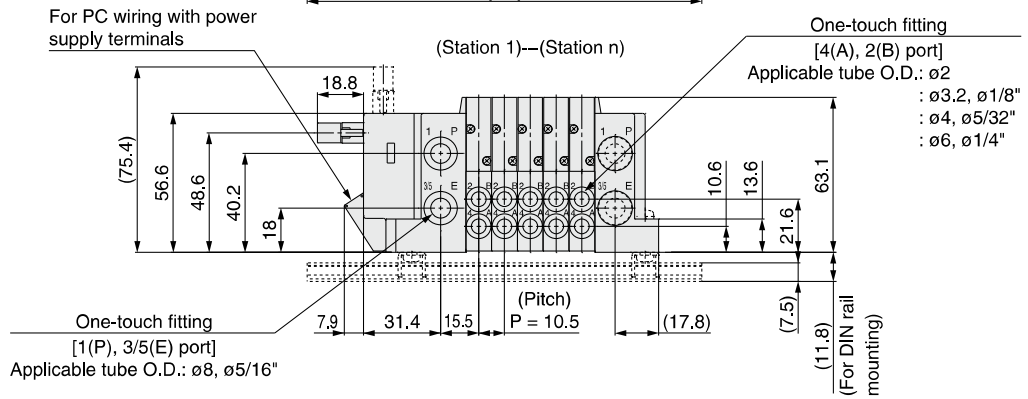
Plug-in
Connector Connecting Base

Type 10/Side Ported
Flat Ribbon Cable

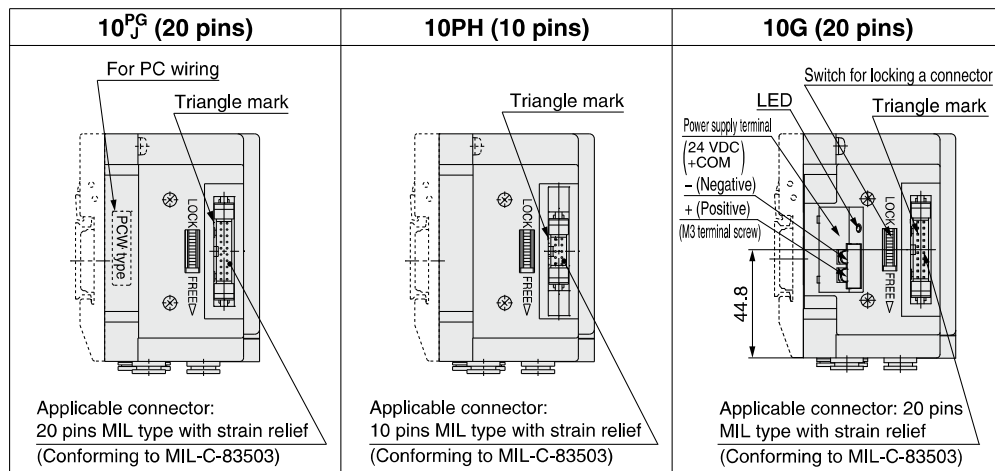
SS5Y3-10 ^PPG 1 ^JPH 2 - Stations ^UD ^BD - C2, C3, N1 (D) C4, N3 C6, N7



Applicable connector:
26 pins MIL type with strain relief
(Conforming to MIL-C-83503)



- *1: Refer to page 205 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
- *: These figures show the "SS5Y3-10P2-05D-C6".
- *: Refer to page 210 for dimensions of A or B port top-ported type.
- *: Only connectors are different for 10PG, 10PH, 10J and 10G. L1 to L5 dimensions are the same as 10P type.



n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	88.6	99.1	109.6	120.1	130.6	141.1	151.6	162.1	172.6	183.1	193.6	204.1	214.6	225.1	235.6	246.1	256.6	267.1	277.6	288.1	298.6	309.1	319.6
L2	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.5	189	199.5	210	220.5	231	241.5	252	262.5	273	283.5	294
L3	123	135.5	148	160.5	160.5	173	185.5	198	210.5	223	223	235.5	248	260.5	273	285.5	298	298	310.5	323	335.5	348	360.5
L4	112.5	125	137.5	150	150	162.5	175	187.5	200	212.5	212.5	225	237.5	250	262.5	275	287.5	287.5	300	312.5	325	337.5	350
L5	20.5	21.5	22.5	23.5	18	19	20	21	22	23	18	19	20	21	22	23	23.5	18.5	19.5	20.5	21.5	22.5	23.5

Series SY3000/5000/7000

Electrical Wiring Specifications

D-sub connector

If alignment is not specified, the internal wiring is double wiring (connected to SOL. a and SOL. b) regardless of number of stations, valve and option types.

Connector terminal no.

Station	SOL. a	SOL. b	Terminal no.	Polarity	Common
Station 1	SOL.a		1	(-)	(+)
	SOL.b		14	(-)	(+)
Station 2	SOL.a		2	(-)	(+)
	SOL.b		15	(-)	(+)
Station 3	SOL.a		3	(-)	(+)
	SOL.b		16	(-)	(+)
Station 4	SOL.a		4	(-)	(+)
	SOL.b		17	(-)	(+)
Station 5	SOL.a		5	(-)	(+)
	SOL.b		18	(-)	(+)
Station 6	SOL.a		6	(-)	(+)
	SOL.b		19	(-)	(+)
Station 7	SOL.a		7	(-)	(+)
	SOL.b		20	(-)	(+)
Station 8	SOL.a		8	(-)	(+)
	SOL.b		21	(-)	(+)
Station 9	SOL.a		9	(-)	(+)
	SOL.b		22	(-)	(+)
Station 10	SOL.a		10	(-)	(+)
	SOL.b		23	(-)	(+)
Station 11	SOL.a		11	(-)	(+)
	SOL.b		24	(-)	(+)
Station 12	SOL.a		12	(-)	(+)
	SOL.b		25	(-)	(+)
COM.			13	(+)	(-)

Positive common Negative common

*: When using a valve with no polarity, either positive common or negative common can be used.

Specified Layout

(25 pins)

Mixed wiring of single and double wiring can be specified on the manifold specification sheet. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 24 or less. 1 solenoid is required for 2-position single, and 2 solenoids for 2-position double, 3-position and 4-position.

COM.

Cable Assembly

AXT100-DS25-030 (N) [IP40]

015
050

Nil: Metric
N: Inch

SY30M-DS25-030 (N) [IP67]

015
050

Nil: Metric
N: Inch

D-sub connector cable assembly [IP40]

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 0.3 mm ² x 25 cores
3 m	AXT100-DS25-030	
5 m	AXT100-DS25-050	

- *: When using a standard commercial connector, use a 25-pin type female connector conforming to MIL-C-24308.
- *: Cannot be used for movable wiring.
- *: Lengths other than the above are also available. Please contact SMC for details.

D-sub connector cable assembly [IP67]

Cable length (L)	Assembly part no.	Note
1.5 m	SY30M-DS25-015	Cable 0.3 mm ² x 25 cores
3 m	SY30M-DS25-030	
5 m	SY30M-DS25-050	

- *: Be sure to use the connector cable assembly in the table, to satisfy enclosure IP67.
- *: Cannot be used for movable wiring.

Electrical characteristics

Item	Property
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit V, 1 minute, AC	1000
Insulation resistance MΩ/km, 20°C	5 or more

- *: The minimum bending radius of the D-sub connector cable is 20 mm.

Connector Manufacturers' Example

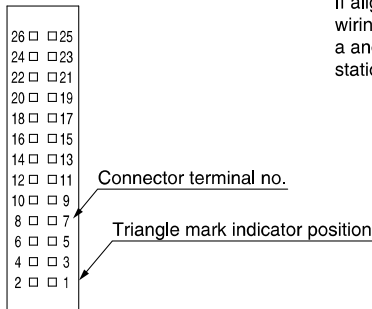
- Fujitsu Limited
- Japan Aviation Electronics Industry, Limited
- J.S.T. Mfg. Co., Ltd.
- HIROSE ELECTRIC CO., LTD.

D-sub connector cable assembly terminal numbers

Terminal no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Lead wire color	Black	Brown	Red	Orange	Yellow	Pink	Blue	Purple	Gray	White	White	Yellow	Orange	Black	Pink	Blue	Purple	Gray	Orange	White	Red	Brown	Pink	Gray	Black	White
Dot marking	None	None	None	None	None	None	None	White	Black	Black	Red	Red	Red	Black	White	None	None	Black	White	White	White	Red	Red	White	White	None

Electrical Wiring Specifications

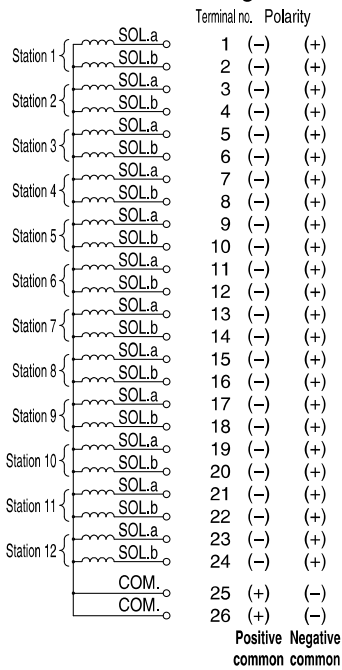
Flat ribbon cable connector



If alignment is not specified, the internal wiring is double wiring (connected to SOL.a and SOL.b) regardless of number of stations, valve and option types.

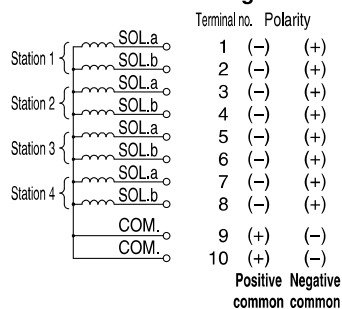
P: Flat ribbon cable (26 pins)

<Double wiring>



PH: Flat ribbon cable (10 pins)

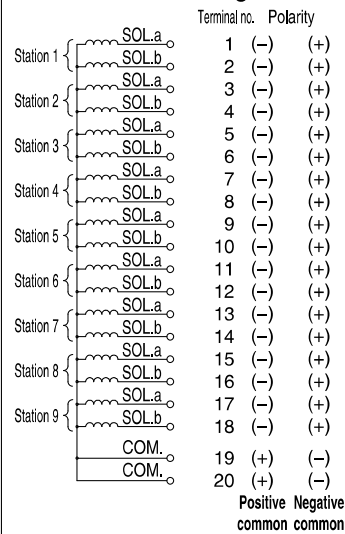
<Double wiring>



*: When using a valve with no polarity, either positive common or negative common can be used.

PG: Flat ribbon cable (20 pins)

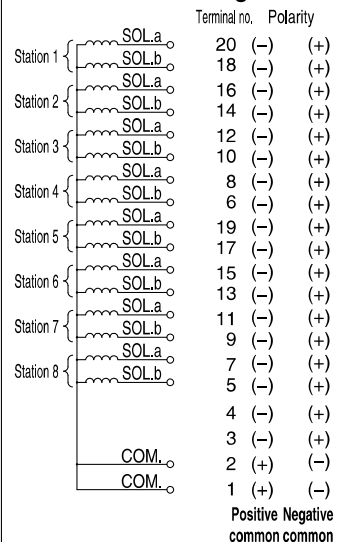
<Double wiring>



J: Flat ribbon cable (20 pins)

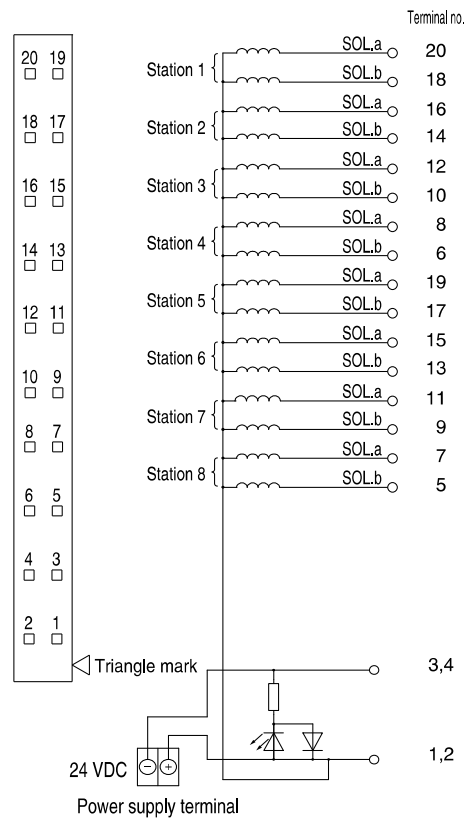
PC wiring

<Double wiring>



*: This circuits are for the specifications with up to 8 stations of 2-position double, 3-position and 4-position dual 3 port valve. There should be wired in order 20→18→16→14 without skipping or leaving any connectors remaining.
*: For details on PC wiring system, refer to the **WEB catalog** or the Best Pneumatics No. 1.

G: Flat ribbon cable (20 pins)
PC wiring (with power supply terminal)

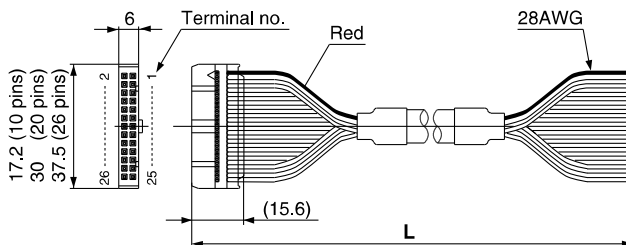


*: This circuits are for the specifications with up to 8 stations of 2-position double, 3-position and 4-position dual 3 port valve. There should be wired in order 20→18→16→14 without skipping or leaving any connectors remaining.
*: For details on PC wiring system, refer to the **WEB catalog** or the Best Pneumatics No. 1.

Series SY3000/5000/7000

Flat Ribbon Cable Assembly

10 1
 AXT100-FC20-2
 26 3



Flat ribbon cable connector assembly

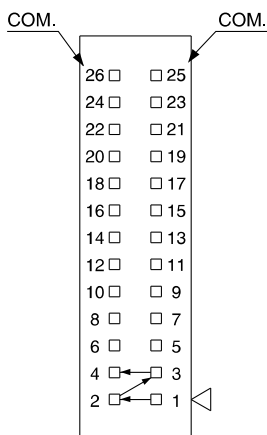
Cable length (L)	Assembly part no.		
	26 pins	20 pins	10 pins
1.5 m	AXT100-FC26-1	AXT100-FC20-1	AXT100-FC10-1
3 m	AXT100-FC26-2	AXT100-FC20-2	AXT100-FC10-2
5 m	AXT100-FC26-3	AXT100-FC20-3	AXT100-FC10-3

Connector Manufacturers' Example

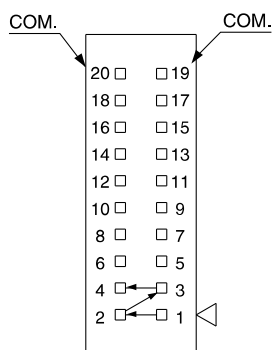
- HIROSE ELECTRIC CO., LTD.
- 3M Japan Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Limited
- J.S.T. Mfg. Co., Ltd.
- Oki Electric Cable Co., Ltd.

*: When using a standard commercial connector, use a 26-pin, 20-pin or 10-pin type connector conforming to MIL-C-83503 with strain relief.
 *: Cannot be used for movable wiring.
 *: Lengths other than the above are also available. Please contact SMC for details.

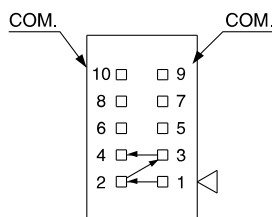
Specified Layout



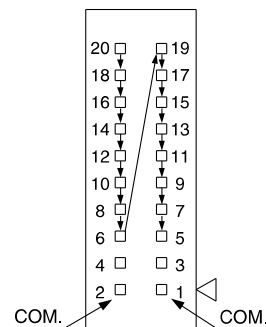
(P: 26 pins)



(PG: 20 pins)



(PH: 10 pins)



(J,G: 20 pins PC wiring)

Mixed wiring of single and double wiring can be specified on the manifold specification. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 24 or less for P, 18 or less for PG, 8 or less for PH, and 16 or less for J/G. 1 solenoid is required for 2-position single, and 2 solenoids for 2-position double, 3-position and 4-position.

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

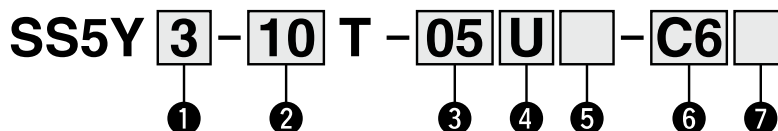
Terminal Block Box

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type

10	Side ported
11	Bottom ported*1

*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Mounting Type Manifold" (from page 213).

3 Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring*1
⋮	⋮	
10	10 stations	Specified layout*2 (Available up to 20 solenoids)
02	2 stations	
⋮	⋮	
20	20 stations	

*1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

*2: Specified layout: Indicate the wiring specifications with the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.)

*: This also includes the number of blanking plate assembly.

4 P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 20 stations)

5 SUP/EXH block assembly

Nil	Internal pilot
S	Internal pilot, Built-in silencer
R	External pilot

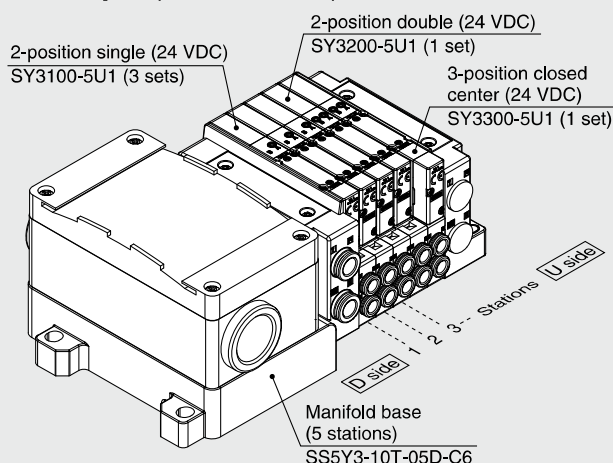
*: 3/5(E) port is plugged for the built-in silencer type.

*: When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

Refer to the page on the right for 6.

How to Order Manifold Assembly

Example (SS5Y3-10T-□)



SS5Y3-10T-05D-C6 ...1 set (Type 10 5-station manifold base part no.)

*SY3100-5U1 3 sets (2-position single part no.)

*SY3200-5U1 1 set (2-position double part no.)

*SY3300-5U1 1 set (3-position closed center part no.)

→ The asterisk denotes the symbol for assembly. Prefix it to the part numbers of the valve etc.

- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

*: When mixing top ported configurations, select from page 122. In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.

7 Mounting and Option

Symbol	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D□	DIN rail mounting	—	—
A□		●	●
B□		●	—

*: Enter the number of stations inside □ when it is larger than the number of valve stations. (Refer to "DIN Rail Option" below.)

*: Only direct mounting is available for Type 11 (Bottom ported).

*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

DIN Rail Option

Nil	Direct mounting	
0	Without DIN rail (with bracket)	
3	For 3 stations	Specify a longer rail than the total length of specified stations.
⋮	⋮	
20	For 20 stations	

6 A, B port size (Metric/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported		
		SY3000	SY5000	SY7000	SY5000	SY7000	
C2 C3 C4 C6 C8 C10 C12 CM*1	Straight	ø2	●	—	—	—	—
		ø3.2	●	—	—	—	—
		ø4	●	●	—	●	—
		ø6	●	●	●	●	●
		ø8	—	●	●	●	●
		ø10	—	—	●	—	●
		ø12	—	—	●	—	●
L4 L6 L8 L10 L12 B4 B6 B8 B10 B12 LM*1	Upward	ø4	●	●	—	—	—
		ø6	●	●	●	—	—
		ø8	—	●	●	—	—
	Downward	ø10	—	—	●	—	—
		ø12	—	—	●	—	—
		ø4	●	●	—	—	—
		ø6	●	●	●	—	—
Elbow*2	Downward	ø8	—	●	●	—	—
		ø10	—	—	●	—	—
Elbow*2	Downward	ø12	—	—	●	—	—
		ø12	—	—	●	—	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	ø8	●	●	●	—	—
		ø10	●	●	●	—	—
P, E port size (One-touch fittings)		ø8	ø10	ø12	ø10	ø12	

A, B port size (Inch/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported		
		SY3000	SY5000	SY7000	SY5000	SY7000	
N1 N3 N7 N9 N11 CM*1	Straight	ø1/8"	●	—	—	—	—
		ø5/32"	●	●	—	●	—
		ø1/4"	●	●	●	●	●
		ø5/16"	—	●	●	●	●
		ø3/8"	—	—	●	—	●
		Straight port, mixed sizes	●	●	●	●	●
LN3 LN7 LN9 LN11 BN3 BN7 BN9 BN11 LM*1	Upward	ø5/32"	●	—	—	—	—
		ø1/4"	●	●	—	—	—
		ø5/16"	—	●	—	—	—
	Downward	ø3/8"	—	—	●	—	—
		ø5/32"	●	—	—	—	—
		ø1/4"	●	●	—	—	—
Elbow*2	Downward	ø5/16"	—	●	—	—	
		ø3/8"	—	—	●	—	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	ø5/16"	●	●	●	—	—
		ø3/8"	●	●	●	—	—
P, E port size (One-touch fittings)		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"	

*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).

Valve

Plug-in Sub-plate

Plug-in Metal Base

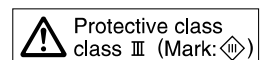
Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

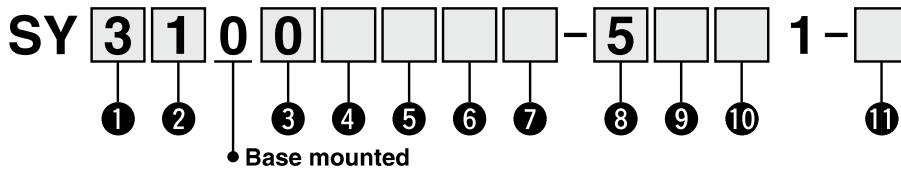
One-touch Fittings/
Plug Assembly Part No.

Manifold Options



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1	2-position	Single
2		Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

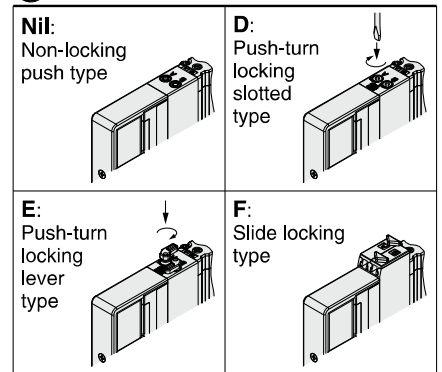
5	24 VDC
6	12 VDC

9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
Nil	—	—	Non-polar
R	—	●	
U	●		
S	—		Positive common
Z	●		
NS	—	Negative common	
NZ	●		

*: Only "Z" and "NZ" types are available for with the power saving circuit.

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service. Refer to page 244 for part numbers of the base gasket and mounting screw.

*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

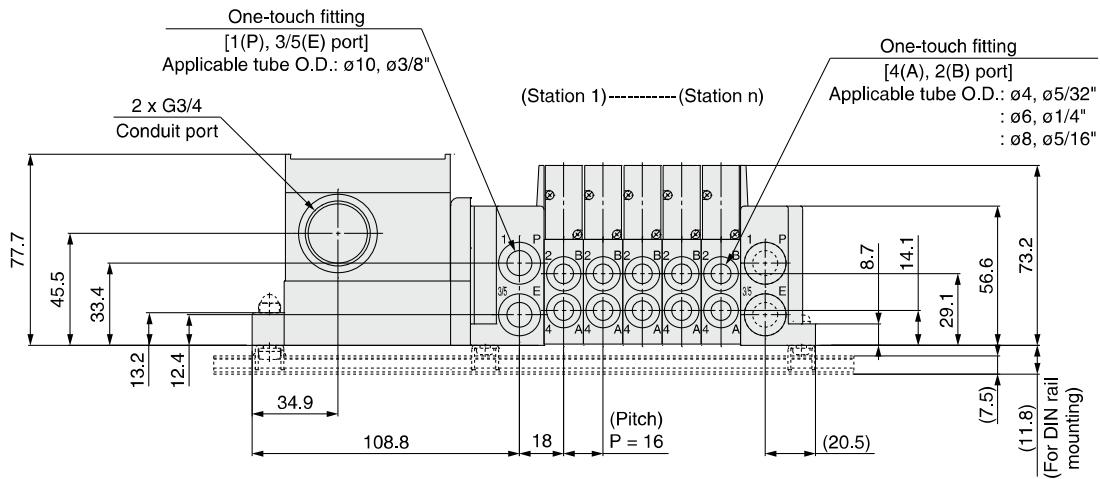
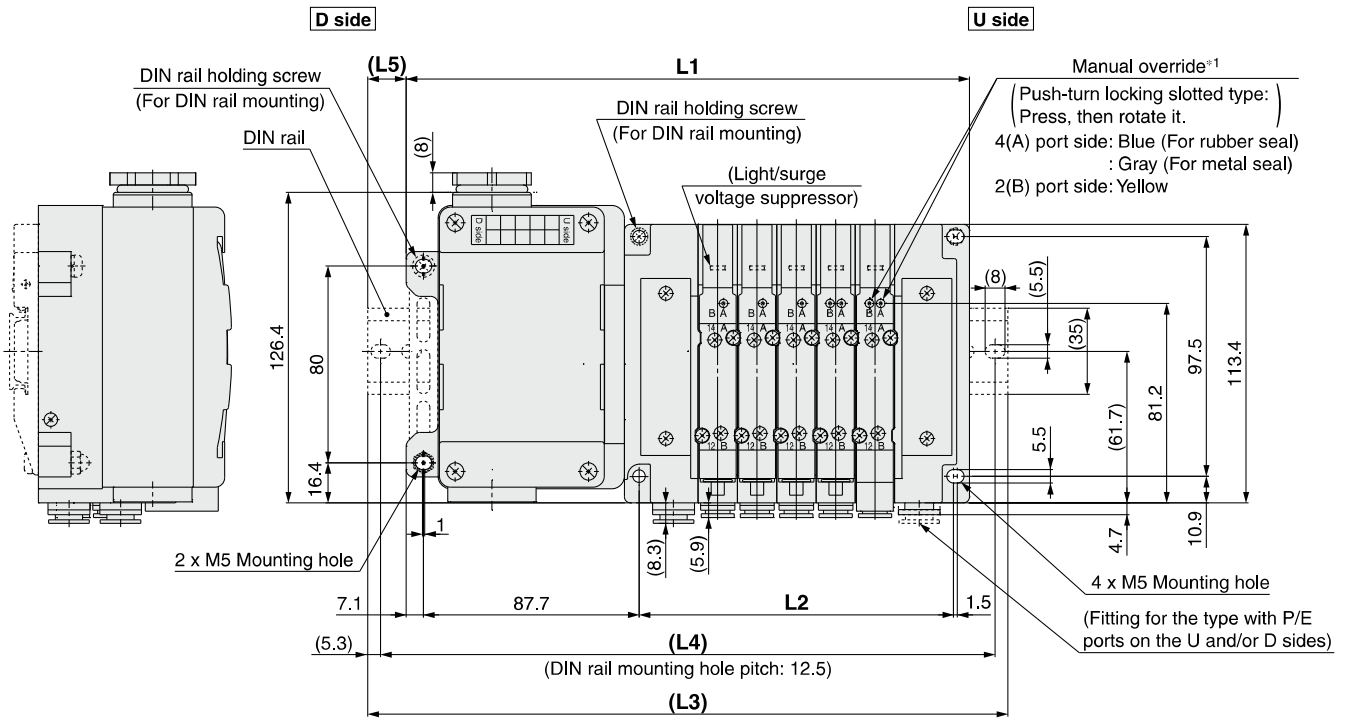
Series SY3000/5000/7000

Plug-in Connector Connecting Base

Type 10/Side Ported
Terminal Block Box

Dimensions: Series SY5000

SS5Y5-10T- Stations $\begin{matrix} \text{U} & \text{C4, N3} \\ \text{D} & \text{C6, N7 (D)} \\ \text{B} & \text{C8, N9} \end{matrix}$



*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.

*: These figures show the "SS5Y5-10T-05D-C8".

*: Refer to page 211 for dimensions of A or B port top-ported type.

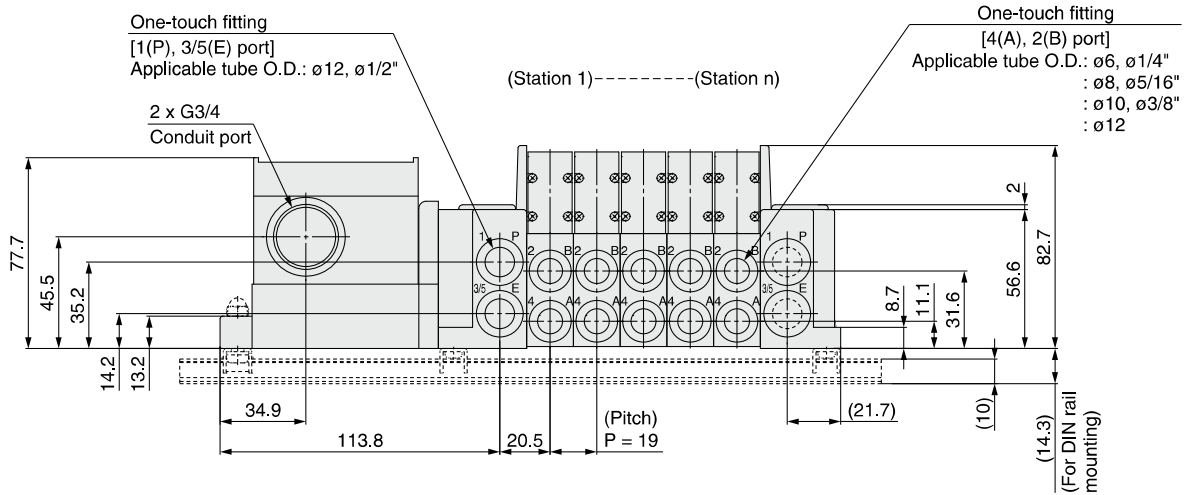
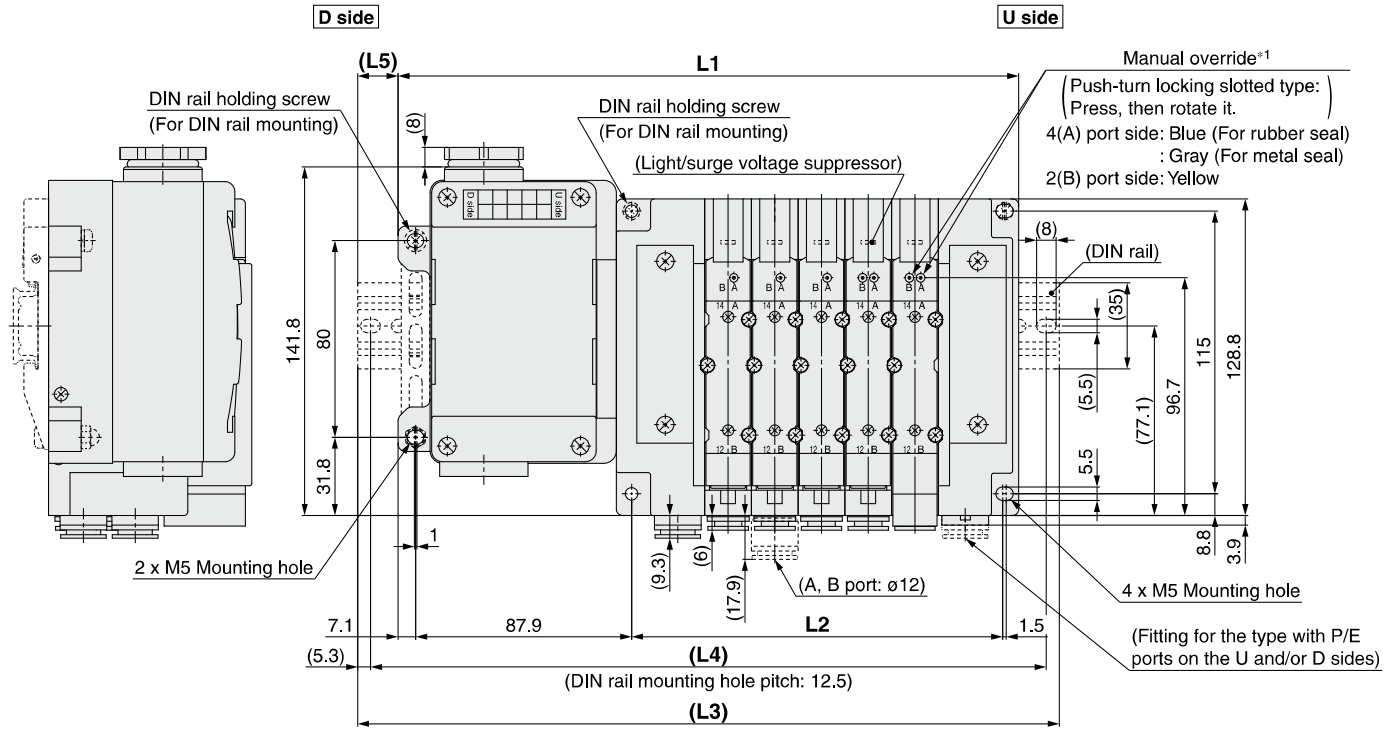
n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	181.3	197.3	213.3	229.3	245.3	261.3	277.3	293.3	309.3	325.3	341.3	357.3	373.3	389.3	405.3	421.3	437.3	453.3	469.3
L2	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304	320	336	352	368
L3	210.5	223	248	260.5	273	285.5	310.5	323	335.5	360.5	373	385.5	398	423	435.5	448	460.5	485.5	498
L4	200	212.5	237.5	250	262.5	275	300	312.5	325	350	362.5	375	387.5	412.5	425	437.5	450	475	487.5
L5	14.5	13	17.5	15.5	14	12	16.5	15	13	17.5	16	14	12.5	17	15	13.5	11.5	16	14.5

Dimensions: Series **SY7000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
Terminal Block Box

SS5Y7-10T-**Stations** $\begin{matrix} U \\ D \\ B \end{matrix}$ $\begin{matrix} C6, N7 \\ C8, N9 \\ C10, N11 \\ C12 \end{matrix}$ (D)



*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y7-10T-05D-C10".
*: Refer to page 212 for dimensions of A or B port top-ported type.

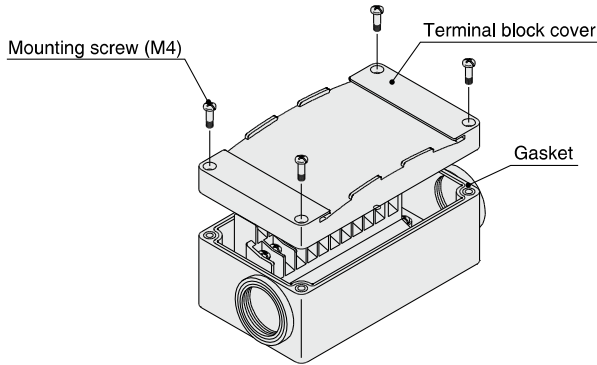
n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	195.5	214.5	233.5	252.5	271.5	290.5	309.5	328.5	347.5	366.5	385.5	404.5	423.5	442.5	461.5	480.5	499.5	518.5	537.5
L2	94	113	132	151	170	189	208	227	246	265	284	303	322	341	360	379	398	417	436
L3	223	248	260.5	285.5	298	323	335.5	360.5	373	398	410.5	435.5	448	473	485.5	510.5	523	548	573
L4	212.5	237.5	250	275	287.5	312.5	325	350	362.5	387.5	400	425	437.5	462.5	475	500	512.5	537.5	562.5
L5	14	17	13.5	16.5	13.5	16.5	13	16	13	16	12.5	15.5	12.5	15.5	12	15	12	15	18

Series SY3000/5000/7000

Terminal Block Connection

Step 1. Removing the terminal block cover

Loosen the 4 mounting screws (M4) to remove the terminal block cover.



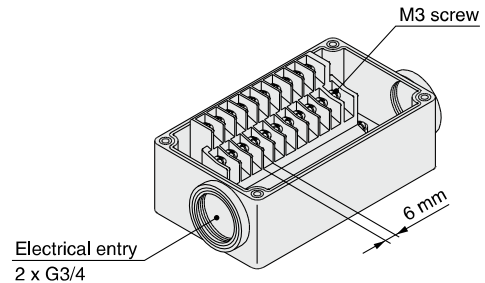
Step 3. Mounting the terminal block cover

Securely tighten the screws to the torque shown in the below table only after confirming that the gasket is installed correctly.

Proper tightening torque [N·m]
0.7 to 1.2

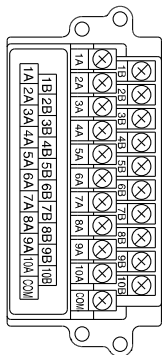
Step 2. The below diagram shows the terminal block wiring. All stations are provided with double wiring regardless of the mounted valves.

Connect each wire to the power supply side, according to the markings provided inside the terminal block.



- Applicable crimped terminal: 1.25-3S, 1.25Y-3, 1.25Y-3N, 1.25Y-3.5
- Name plate: VVQ5000-N-T
- Drip-proof plug assembly (for G3/4): AXT100-B06A

Electrical Wiring Specifications (IP67 compatible)



If alignment is not specified, the internal wiring is double wiring (connected to SOL. a and SOL. b) regardless of number of stations, valve and option types.

※: When using a valve with no polarity, either positive common or negative common can be used.

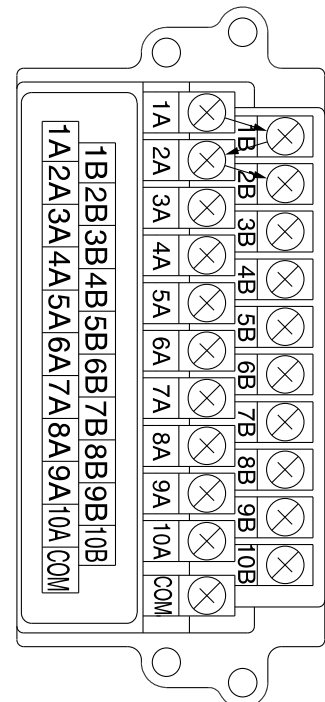
Standard wiring

	Terminal no.	Polarity	
Station 1	SOL.a	1A (-)	(+)
	SOL.b	1B (-)	(+)
Station 2	SOL.a	2A (-)	(+)
	SOL.b	2B (-)	(+)
Station 3	SOL.a	3A (-)	(+)
	SOL.b	3B (-)	(+)
Station 4	SOL.a	4A (-)	(+)
	SOL.b	4B (-)	(+)
Station 5	SOL.a	5A (-)	(+)
	SOL.b	5B (-)	(+)
Station 6	SOL.a	6A (-)	(+)
	SOL.b	6B (-)	(+)
Station 7	SOL.a	7A (-)	(+)
	SOL.b	7B (-)	(+)
Station 8	SOL.a	8A (-)	(+)
	SOL.b	8B (-)	(+)
Station 9	SOL.a	9A (-)	(+)
	SOL.b	9B (-)	(+)
Station 10	SOL.a	10A (-)	(+)
	SOL.b	10B (-)	(+)
	COM.	(+)	(-)

Positive Negative
common common

Specified Layout

Mixed wiring of single and double wiring can be specified on the manifold specification sheet. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 20 or less. 1 solenoid is required for 2-position single, and 2 solenoids for 2-position double, 3-position and 4-position.



Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

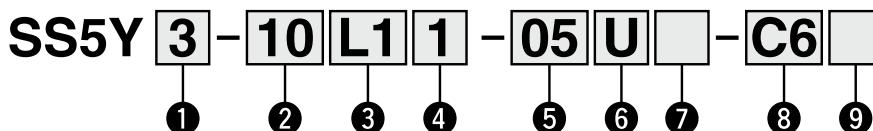
Lead Wire

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type

10	Side ported
11	Bottom ported*1

*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Mounting Type Manifold" (from page 213).

3 Number of cores (Lead wire)

L1	34 cores
L2	17 cores
L3	9 cores

4 Lead wire length

1	0.6 m
2	1.5 m
3	3 m

5 Valve stations

(L1□)

Symbol	Stations	Note
02	2 stations	Double wiring*1
⋮	⋮	
16	16 stations	Specified layout*2 (Available up to 32 solenoids)
02	2 stations	
⋮	⋮	
24	24 stations	

(L3□)

Symbol	Stations	Note
02	2 stations	Double wiring*1
⋮	⋮	
04	4 stations	Specified layout*2 (Available up to 8 solenoids)
02	2 stations	
⋮	⋮	
08	8 stations	

(L2□)

Symbol	Stations	Note
02	2 stations	Double wiring*1
⋮	⋮	
08	8 stations	Specified layout*2 (Available up to 16 solenoids)
02	2 stations	
⋮	⋮	
16	16 stations	

*1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations.

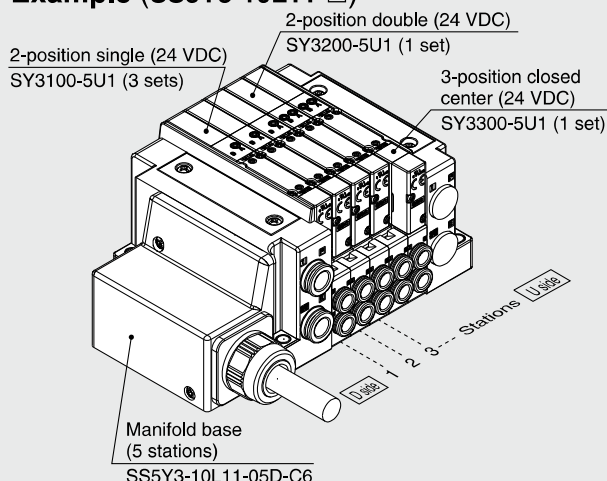
Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

*2: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.)

*: This also includes the number of blanking plate assembly.

How to Order Manifold Assembly

Example (SS5Y3-10L11-□)



SS5Y3-10L11-05D-C6 ... 1 set (Type 10 5-station manifold base part no.)
 *SY3100-5U1 3 sets (2-position single part no.)
 *SY3200-5U1 1 set (2-position double part no.)
 *SY3300-5U1 1 set (3-position closed center part no.)

→ The asterisk denotes the symbol for assembly.
 Prefix it to the part numbers of the valve etc.

- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

*: When mixing top ported configurations, select from page 132.
 In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.

6 P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 24 stations)

7 SUP/EXH block assembly

Nil	Internal pilot
S	Internal pilot, Built-in silencer
R	External pilot

*: 3/5(E) port is plugged for the built-in silencer type.

*: When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

8 A, B port size (Metric/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
C2	ø2	●	—	—	—	—
C3	ø3.2	●	—	—	—	—
C4	ø4	●	●	—	●	—
C6	ø6	●	●	●	●	●
C8	ø8	—	●	●	●	●
C10	ø10	—	—	●	—	●
C12	ø12	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
L4	Upward	ø4	●	●	—	—
L6		ø6	●	●	●	—
L8		ø8	—	●	●	—
L10		ø10	—	—	●	—
L12		ø12	—	—	●	—
B4	Downward	ø4	●	●	—	—
B6		ø6	●	●	●	—
B8		ø8	—	●	●	—
B10		ø10	—	—	●	—
B12		ø12	—	—	●	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø8	ø10	ø12	ø10	ø12

A, B port size (Inch/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
N1	ø1/8"	●	—	—	—	—
N3	ø5/32"	●	●	—	●	—
N7	ø1/4"	●	●	●	●	●
N9	ø5/16"	—	●	●	●	●
N11	ø3/8"	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
LN3	Upward	ø5/32"	●	—	—	—
LN7		ø1/4"	●	●	—	—
LN9		ø5/16"	—	●	—	—
LN11	ø3/8"	—	—	●	—	—
BN3	Downward	ø5/32"	●	—	—	—
BN7		ø1/4"	●	●	—	—
BN9		ø5/16"	—	●	—	—
BN11	ø3/8"	—	—	●	—	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"

*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).

9 Mounting and Option

Symbol	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D□	DIN rail mounting	—	—
A□		●	●
B□		●	—

DIN Rail Option

DIN Rail Option		Direct mounting
Nil		Without DIN rail (with bracket)
0		
3	For 3 stations	Specify a longer rail than the total length of specified stations.
⋮	⋮	
24	For 24 stations	

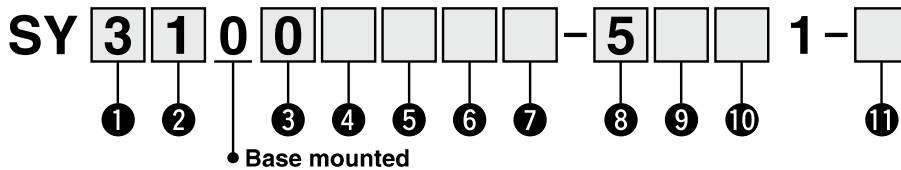
*: Enter the number of stations inside □ when it is larger than the number of valve stations. (Refer to "DIN Rail Option" above.)

*: Only direct mounting is available for Type 11 (Bottom ported).

*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1	2-position	Single
2		Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

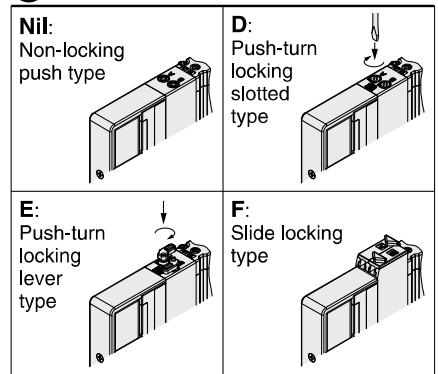
5	24 VDC
6	12 VDC

9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
Nil	—	—	Non-polar
R	—	●	
U	●		
S	—		Positive common
Z	●		
NS	—	Negative common	
NZ	●		

*: Only "Z" and "NZ" types are available for with the power saving circuit.

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service.

Refer to page 244 for part numbers of the base gasket and mounting screw.

*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

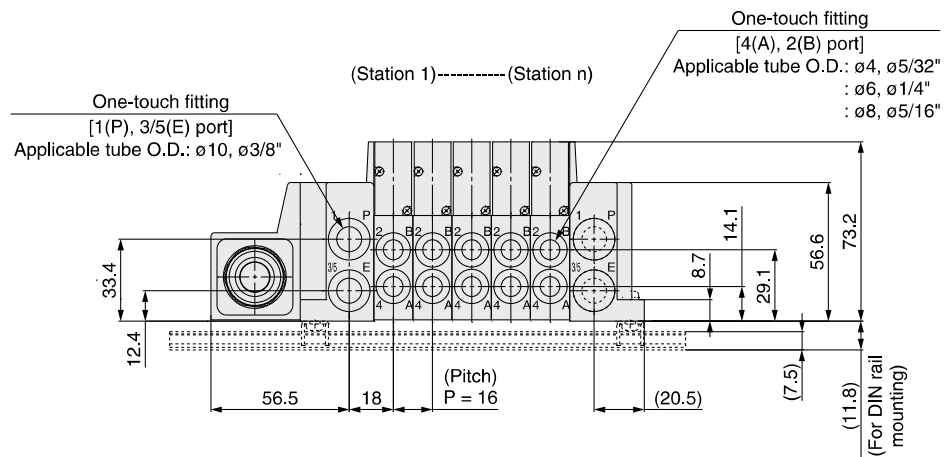
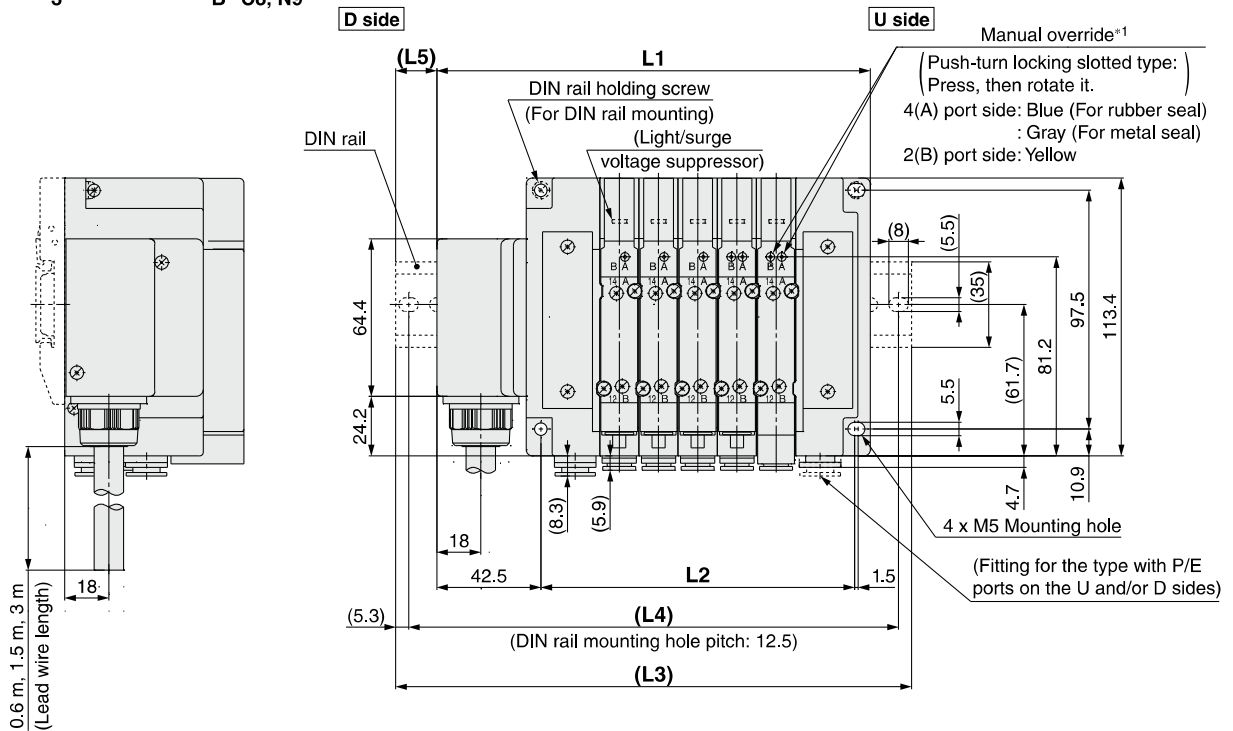
Series SY3000/5000/7000

Plug-in Connector Connecting Base

Type 10/Side Ported
Lead Wire

Dimensions: Series SY5000

SS5Y5-10L₂¹□-Stations₃ U C4, N3
D-C6, N7 (D)
B C8, N9



*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.

*: These figures show the "SS5Y5-10L1□-05D-C8".

*: Refer to page 211 for dimensions of A or B port top-ported type.

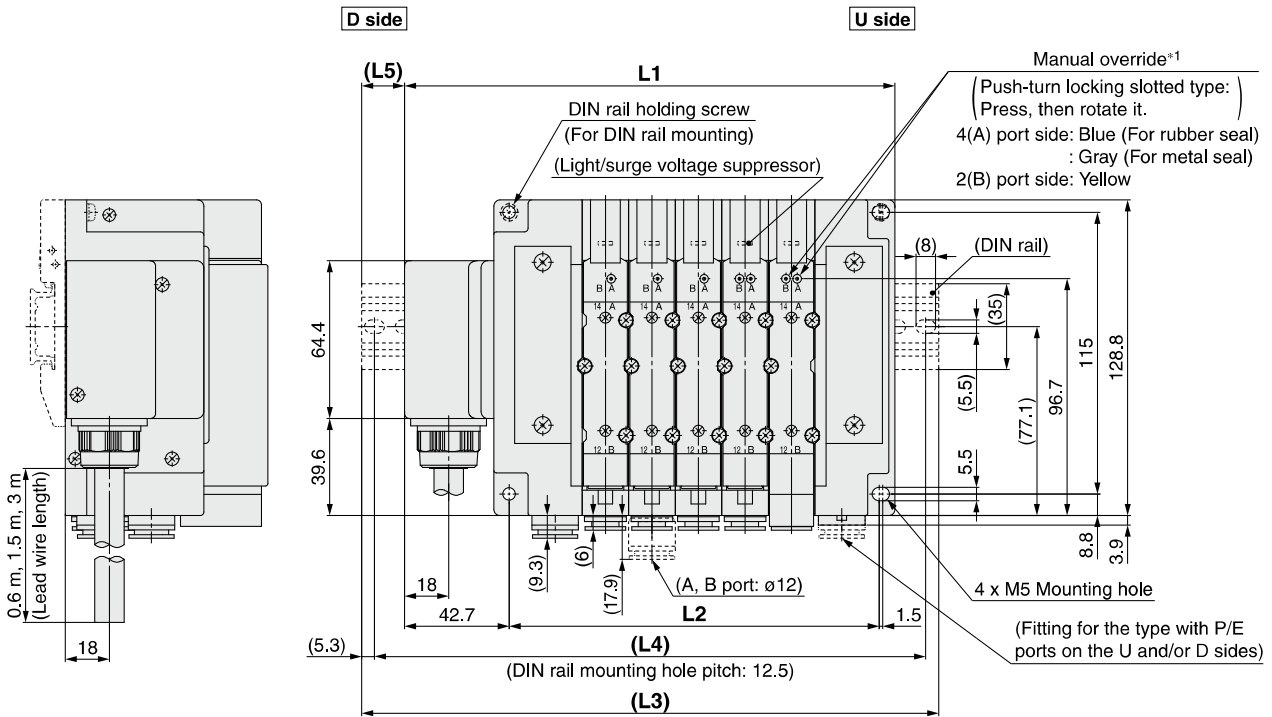
n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	129	145	161	177	193	209	225	241	257	273	289	305	321	337	353	369	385	401	417	433	449	465	481
L2	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304	320	336	352	368	384	400	416	432
L3	160.5	173	185.5	210.5	223	235.5	260.5	273	285.5	298	323	335.5	348	360.5	385.5	398	410.5	435.5	448	460.5	473	498	510.5
L4	150	162.5	175	200	212.5	225	250	262.5	275	287.5	312.5	325	337.5	350	375	387.5	400	425	437.5	450	462.5	487.5	500
L5	16	14	12.5	17	15	13.5	18	16	14.5	12.5	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12	16.5	15

Dimensions: Series **SY7000**

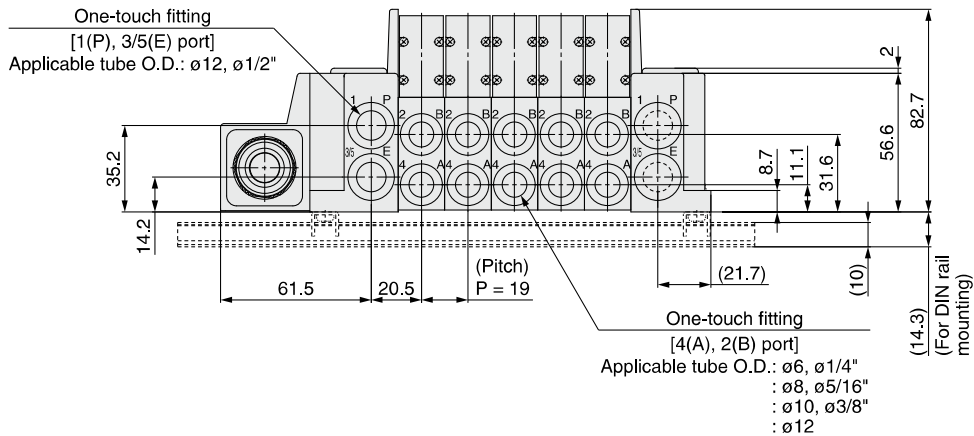
Plug-in
Connector Connecting Base

Type 10/Side Ported
Lead Wire

SS5Y7-10L₂¹□-Stations₃ U_D-C_B C₆, N₇ C₈, N₉ C₁₀, N₁₁ (D) C₁₂



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



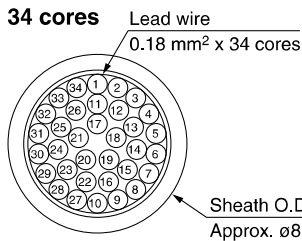
*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y7-10L1□-05D-C10".
*: Refer to page 212 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	143.2	162.2	181.2	200.2	219.2	238.2	257.2	276.2	295.2	314.2	333.2	352.2	371.2	390.2	409.2	428.2	447.2	466.2	485.2	504.2	523.2	542.2	561.2
L2	94	113	132	151	170	189	208	227	246	265	284	303	322	341	360	379	398	417	436	455	474	493	512
L3	173	185.5	210.5	235.5	248	273	285.5	310.5	323	348	360.5	385.5	398	423	435.5	460.5	473	498	510.5	535.5	548	573	585.5
L4	162.5	175	200	225	237.5	262.5	275	300	312.5	337.5	350	375	387.5	412.5	425	450	462.5	487.5	500	525	537.5	562.5	575
L5	15	11.5	14.5	17.5	14.5	17.5	14	17	14	17	13.5	16.5	13.5	16.5	13	16	13	16	12.5	15.5	12.5	15.5	12

Series SY3000/5000/7000

Electrical Wiring Specifications

Lead wire



If alignment is not specified, the internal wiring is double wiring (connected to SOL. a and SOL. b) regardless of number of stations, valve and option types.

Electrical characteristics

Item	Property
Conductor resistance Ω/km, 20°C	143 or less
Voltage limit V, 1 minute, AC	2000
Insulation resistance MΩ/km, 20°C	10 or more

*: Cannot be used for movable wiring.
The minimum bending radius of the cable is 55 mm.

Station	Lead wire no.	Polarity	Lead wire color	Printed mark (Both sides)	
				Type	Color
Station 1	SOL.a 1	(-) (+)	Orange	---	Red
	SOL.b 2	(-) (+)			Black
Station 2	SOL.a 3	(-) (+)	Light gray	---	Red
	SOL.b 4	(-) (+)			Black
Station 3	SOL.a 5	(-) (+)	White	---	Red
	SOL.b 6	(-) (+)			Black
Station 4	SOL.a 7	(-) (+)	Yellow	---	Red
	SOL.b 8	(-) (+)			Black
Station 5	SOL.a 9	(-) (+)	Pink	---	Red
	SOL.b 10	(-) (+)			Black
Station 6	SOL.a 11	(-) (+)	Orange	---	Red
	SOL.b 12	(-) (+)			Black
Station 7	SOL.a 13	(-) (+)	Light gray	---	Red
	SOL.b 14	(-) (+)			Black
Station 8	SOL.a 15	(-) (+)	White	---	Red
	SOL.b 16	(-) (+)			Black
Station 9	SOL.a 17	(-) (+)	Yellow	---	Red
	SOL.b 18	(-) (+)			Black
Station 10	SOL.a 19	(-) (+)	Pink	---	Red
	SOL.b 20	(-) (+)			Black
Station 11	SOL.a 21	(-) (+)	Orange	---	Red
	SOL.b 22	(-) (+)			Black
Station 12	SOL.a 23	(-) (+)	Light gray	---	Red
	SOL.b 24	(-) (+)			Black
Station 13	SOL.a 25	(-) (+)	White	---	Red
	SOL.b 26	(-) (+)			Black
Station 14	SOL.a 27	(-) (+)	Yellow	---	Red
	SOL.b 28	(-) (+)			Black
Station 15	SOL.a 29	(-) (+)	Pink	---	Red
	SOL.b 30	(-) (+)			Black
Station 16	SOL.a 31	(-) (+)	Orange	---	Red
	SOL.b 32	(-) (+)			Black
	COM. 33	(+) (-)	Light gray	---	Red
	COM. 34	(+) (-)			Black

Positive common Negative common

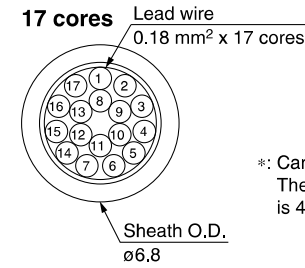
*: For negative common specification, a valve for negative common or a valve without polarity should be used.

Specified Layout

Mixed wiring of single and double wiring can be specified on the manifold specification. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 32 or less. 1 solenoid is required for 2-position single, and 2 solenoids for 2-position double, 3-position and 4-position.

Electrical Wiring Specifications

Lead wire



*: Cannot be used for movable wiring.
The minimum bending radius of the cable is 45 mm.

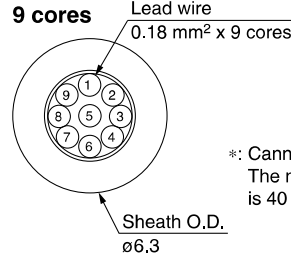
Station	Lead wire no.	Polarity	Lead wire color	Printed mark (Both sides)	
				Type	Color
Station 1	SOL.a 1	(-) (+)	Orange	-	Red
	SOL.b 2	(-) (+)		-	Black
Station 2	SOL.a 3	(-) (+)	Light gray	-	Red
	SOL.b 4	(-) (+)		-	Black
Station 3	SOL.a 5	(-) (+)	White	-	Red
	SOL.b 6	(-) (+)		-	Black
Station 4	SOL.a 7	(-) (+)	Yellow	-	Red
	SOL.b 8	(-) (+)		-	Black
Station 5	SOL.a 9	(-) (+)	Pink	-	Red
	SOL.b 10	(-) (+)		-	Black
Station 6	SOL.a 11	(-) (+)	Orange	-	Red
	SOL.b 12	(-) (+)		-	Black
Station 7	SOL.a 13	(-) (+)	Light gray	-	Red
	SOL.b 14	(-) (+)		-	Black
Station 8	SOL.a 15	(-) (+)	White	-	Red
	SOL.b 16	(-) (+)		-	Black
	COM. 17	(+) (-)	Yellow	-	Red

Positive common **Negative common**

*: For negative common specification, a valve for negative common or a valve without polarity should be used.

Electrical characteristics

Item	Property
Conductor resistance Ω/km, 20°C	143 or less
Voltage limit V, 1 minute, AC	2000
Insulation resistance MΩ/km, 20°C	10 or more



*: Cannot be used for movable wiring.
The minimum bending radius of the cable is 40 mm.

Station	Lead wire no.	Polarity	Lead wire color	Printed mark (Both sides)	
				Type	Color
Station 1	SOL.a 1	(-) (+)	Orange	-	Red
	SOL.b 2	(-) (+)		-	Black
Station 2	SOL.a 3	(-) (+)	Light gray	-	Red
	SOL.b 4	(-) (+)		-	Black
Station 3	SOL.a 5	(-) (+)	White	-	Red
	SOL.b 6	(-) (+)		-	Black
Station 4	SOL.a 7	(-) (+)	Yellow	-	Red
	SOL.b 8	(-) (+)		-	Black
	COM. 9	(+) (-)	Pink	-	Red

Positive common **Negative common**

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

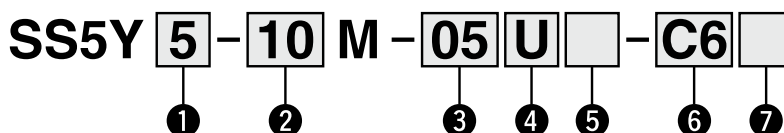
Circular Connector

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type

10	Side ported
11	Bottom ported*1

*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Mounting Type Manifold" (from page 213).

3 Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring*1
⋮	⋮	
12	12 stations	Specified layout*2 (Available up to 24 solenoids)
02	2 stations	
⋮	⋮	
24	24 stations	

*1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

*2: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.)

*: This also includes the number of blanking plate assembly.

4 P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 24 stations)

5 SUP/EXH block assembly

Nil	Internal pilot
S	Internal pilot, Built-in silencer
R	External pilot

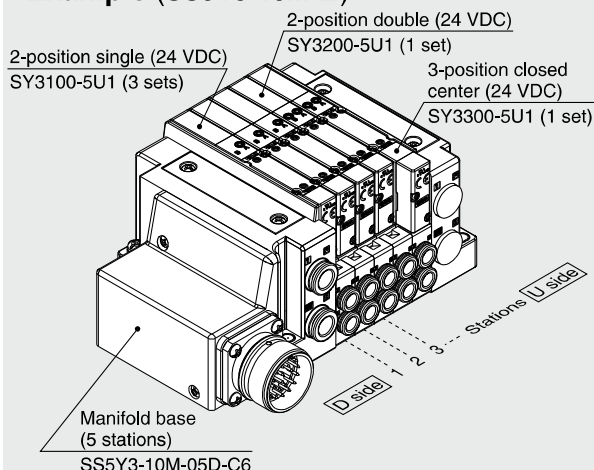
*: 3/5(E) port is plugged for the built-in silencer type.

*: When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

Refer to the page on the right for 6.

How to Order Manifold Assembly

Example (SS5Y3-10M-□)



SS5Y3-10M-05D-C6 ... 1 set (Type 10 5-station manifold base part no.)
 *SY3100-5U1 3 sets (2-position single part no.)
 *SY3200-5U1 1 set (2-position double part no.)
 *SY3300-5U1 1 set (3-position closed center part no.)

→ The asterisk denotes the symbol for assembly. Prefix it to the part numbers of the valve etc.

- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

*: When mixing top ported configurations, select from page 142. In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.

7 Mounting and Option

Symbol	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D□	DIN rail mounting	—	—
A□		●	●
B□		●	—

*: Enter the number of stations inside □ when it is larger than the number of valve stations. (Refer to "DIN Rail Option" below.)

*: Only direct mounting is available for Type 11 (Bottom ported).

*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

DIN Rail Option

Nil	Direct mounting	
0	Without DIN rail (with bracket)	
3	For 3 stations	Specify a longer rail than the total length of specified stations.
⋮	⋮	
24	For 24 stations	

6 A, B port size (Metric/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
C2	ø2	●	—	—	—	—
C3	ø3.2	●	—	—	—	—
C4	ø4	●	●	—	●	—
C6	ø6	●	●	●	●	●
C8	ø8	—	●	●	●	●
C10	ø10	—	—	●	—	●
C12	ø12	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
L4	Upward	ø4	●	●	—	—
L6		ø6	●	●	—	—
L8		ø8	—	●	●	—
L10		ø10	—	—	●	—
L12	ø12	—	—	●	—	
B4	Downward	ø4	●	●	—	—
B6		ø6	●	●	●	—
B8		ø8	—	●	●	—
B10		ø10	—	—	●	—
B12		ø12	—	—	●	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø8	ø10	ø12	ø10	ø12

A, B port size (Inch/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
N1	ø1/8"	●	—	—	—	—
N3	ø5/32"	●	●	—	●	—
N7	ø1/4"	●	●	●	●	●
N9	ø5/16"	—	●	●	●	●
N11	ø3/8"	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
LN3	Upward	ø5/32"	●	—	—	—
LN7		ø1/4"	●	●	—	—
LN9		ø5/16"	—	●	—	—
LN11		ø3/8"	—	—	●	—
BN3	Downward	ø5/32"	●	—	—	—
BN7		ø1/4"	●	●	—	—
BN9		ø5/16"	—	●	—	—
BN11		ø3/8"	—	—	●	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"

*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).

Valve

Plug-in Sub-plate

Plug-in Metal Base

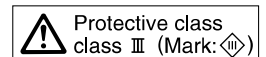
Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

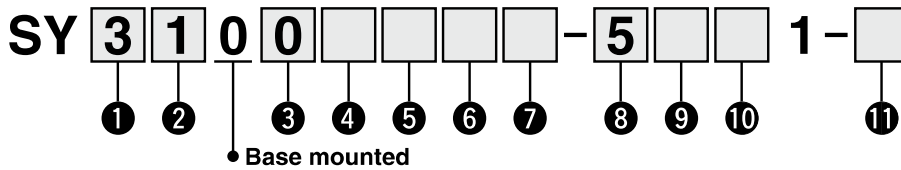
Manifold Options



Series SY3000/5000/7000

How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1	2-position	Single
2		Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

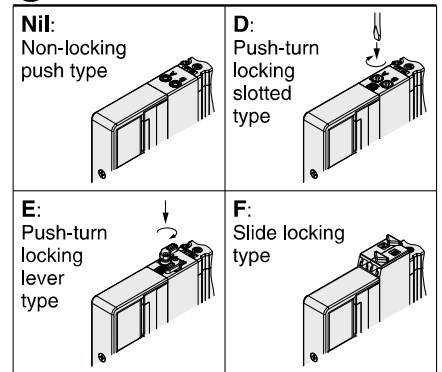
5	24 VDC
6	12 VDC

9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
Nil	—	—	Non-polar
R	—	●	
U	●		
S	—		Positive common
Z	●		
NS	—	Negative common	
NZ	●		

*: Only "Z" and "NZ" types are available for with the power saving circuit.

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.** Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service. Refer to page 244 for part numbers of the base gasket and mounting screw.

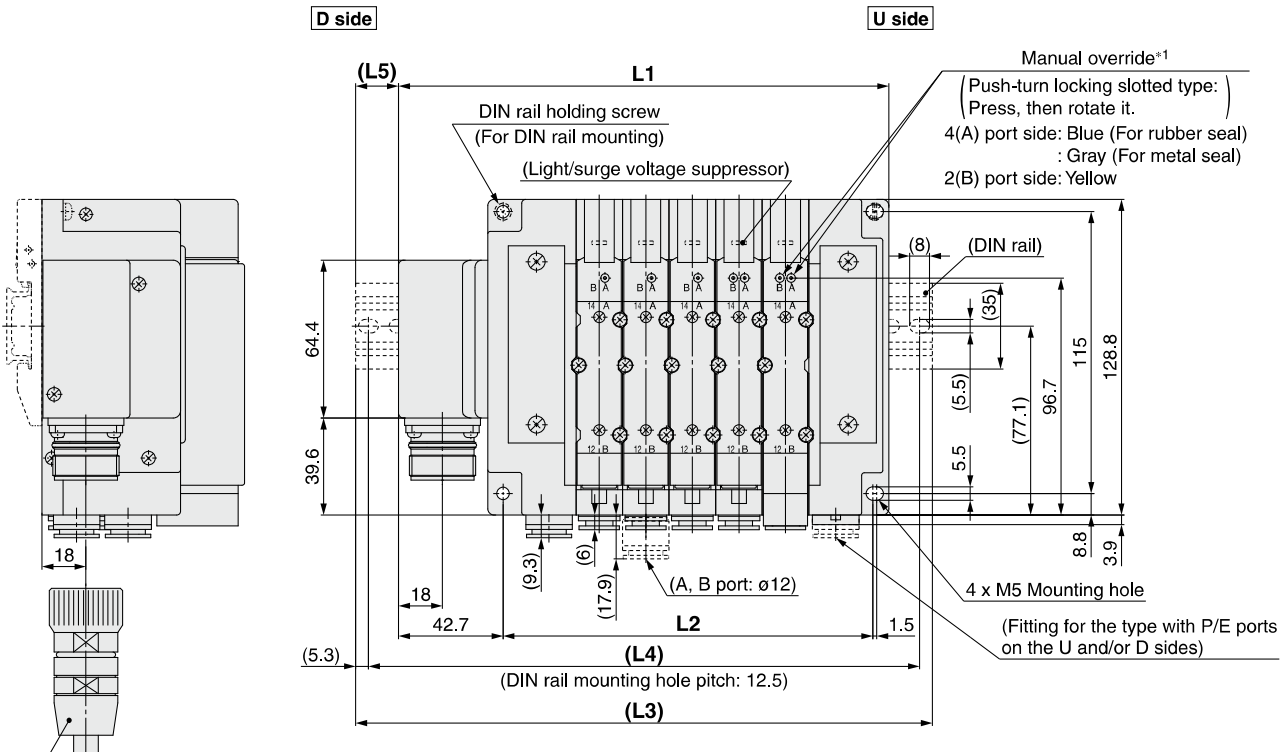
*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

Dimensions: Series **SY7000**

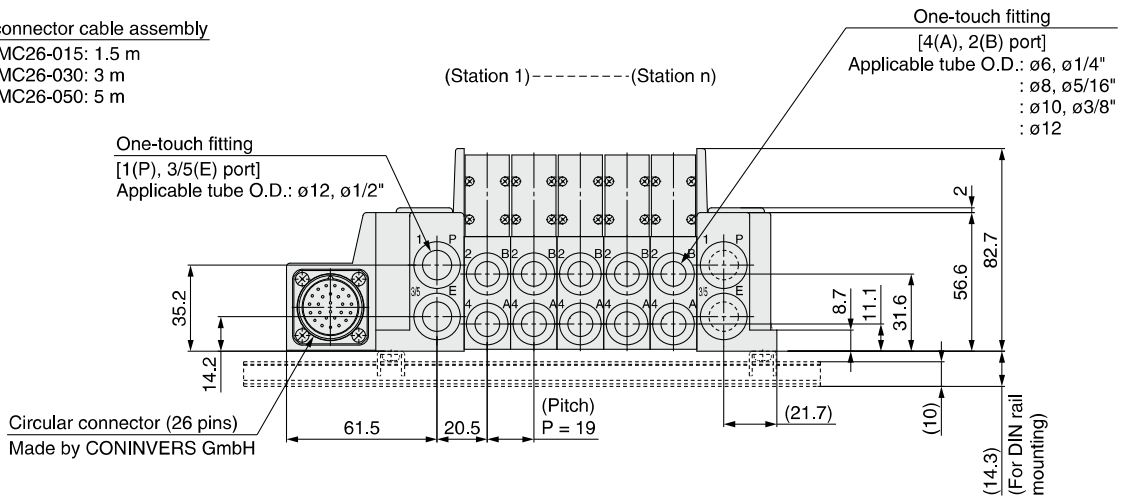
Plug-in
Connector Connecting Base

Type 10/Side Ported
Circular Connector

SS5Y7-10M-**Stations** $\begin{matrix} U \\ D \\ B \end{matrix}$ $\begin{matrix} C6, N7 \\ C8, N9 \\ C10, N11 \\ C12 \end{matrix}$ (D)



Circular connector cable assembly
AXT100-MC26-015: 1.5 m
AXT100-MC26-030: 3 m
AXT100-MC26-050: 5 m



Circular connector (26 pins)
Made by CONINVERS GmbH

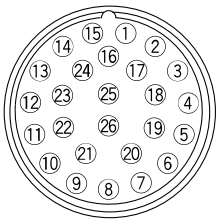
*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y7-10M-05D-C10".
*: Refer to page 212 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	143.2	162.2	181.2	200.2	219.2	238.2	257.2	276.2	295.2	314.2	333.2	352.2	371.2	390.2	409.2	428.2	447.2	466.2	485.2	504.2	523.2	542.2	561.2
L2	94	113	132	151	170	189	208	227	246	265	284	303	322	341	360	379	398	417	436	455	474	493	512
L3	173	185.5	210.5	235.5	248	273	285.5	310.5	323	348	360.5	385.5	398	423	435.5	460.5	473	498	510.5	535.5	548	573	585.5
L4	162.5	175	200	225	237.5	262.5	275	300	312.5	337.5	350	375	387.5	412.5	425	450	462.5	487.5	500	525	537.5	562.5	575
L5	15	11.5	14.5	17.5	14.5	17.5	14	17	14	17	13.5	16.5	13.5	16.5	13	16	13	16	12.5	15.5	12.5	15.5	12

Series SY3000/5000/7000

Electrical Wiring Specifications

Circular connector



If alignment is not specified, the internal wiring is double wiring (connected to SOL. a and SOL. b) regardless of number of stations, valve and option types.

	Terminal no.	Polarity	
Station 1	SOL.a	1 (-)	(+)
	SOL.b	2 (-)	(+)
Station 2	SOL.a	3 (-)	(+)
	SOL.b	4 (-)	(+)
Station 3	SOL.a	5 (-)	(+)
	SOL.b	6 (-)	(+)
Station 4	SOL.a	7 (-)	(+)
	SOL.b	8 (-)	(+)
Station 5	SOL.a	9 (-)	(+)
	SOL.b	10 (-)	(+)
Station 6	SOL.a	11 (-)	(+)
	SOL.b	12 (-)	(+)
Station 7	SOL.a	13 (-)	(+)
	SOL.b	14 (-)	(+)
Station 8	SOL.a	15 (-)	(+)
	SOL.b	16 (-)	(+)
Station 9	SOL.a	17 (-)	(+)
	SOL.b	18 (-)	(+)
Station 10	SOL.a	19 (-)	(+)
	SOL.b	20 (-)	(+)
Station 11	SOL.a	21 (-)	(+)
	SOL.b	22 (-)	(+)
Station 12	SOL.a	23 (-)	(+)
	SOL.b	24 (-)	(+)
	COM.	25 (+)	(-)
	COM.	26 (+)	(-)

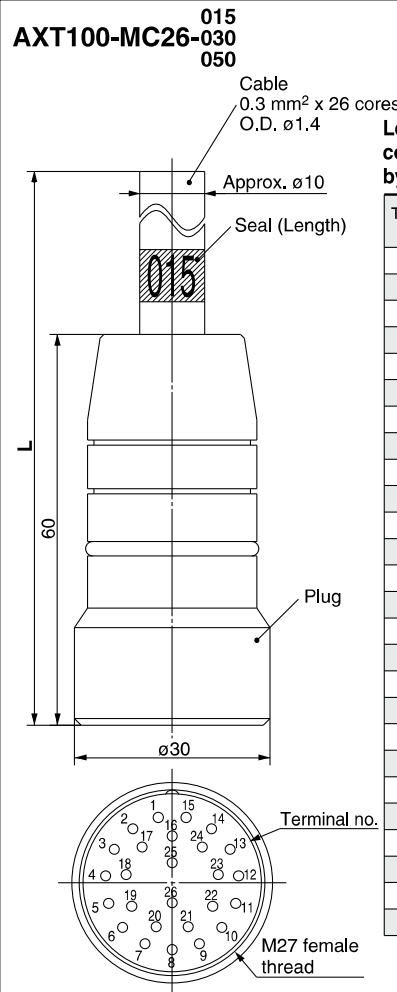
Positive Negative
common common

*: When using a valve with no polarity, either positive common or negative common can be used.

Specified Layout

Mixed wiring of single and double wiring can be specified on the manifold specification sheet. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 24 or less. 1 solenoid is required for 2-position single, and 2 solenoids for 2-position double, 3-position and 4-position.

Cable Assembly



Lead wire color for circular connector cable assembly by terminal number

Terminal no.	Lead wire color	Dot marking
1	Black	None
2	Brown	None
3	Red	None
4	Orange	None
5	Yellow	None
6	Pink	None
7	Blue	None
8	Purple	White
9	Gray	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Purple	None
18	Gray	None
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	None
26	White	None

Electrical characteristics

Item	Property
Conductor resistance Ω/km , 20°C	65 or less
Voltage limit V, 1 minute, AC	1000
Insulation resistance $M\Omega/\text{km}$, 20°C	5 or more

*: The minimum bending radius of the circular connector cable is 20 mm.

Circular connector cable assembly

Cable length (L)	Assembly part no.
	26 pins
1.5 m	AXT100-MC26-015
3 m	AXT100-MC26-030
5 m	AXT100-MC26-050

*: Cannot be used for movable wiring.

*: Lengths other than the above is also available. Please contact SMC for details.

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

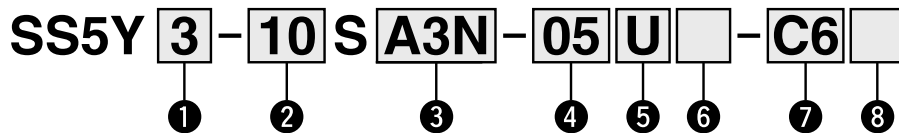
EX500 Gateway Decentralized System 2 (128 Points)

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

3	SY3000
5	SY5000
7	SY7000

*: For mixed mounting, refer to page 213 and later.

2 Type

10	Side ported
11	Bottom ported* ¹

*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Mounting Type Manifold" (from page 213).

*: When mixing top ported configurations, select from page 158. In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.

3 SI Unit (Number of outputs, Output polarity, Max. number of valve stations)

0	Without SI Unit
A3N	32 outputs* ¹ * ⁴ , 1 to 16 stations (24 stations* ³), Negative common* ²

- *1: 16 outputs can be set by switching the built-in setting switch.
- *2: Ensure a match with the common specification of the valve.
- *3: (): Maximum number of stations for mixed single and double wiring.
- *4: When using the SI Unit with 32 outputs, use the GW Unit compatible with the EX500 Gateway Decentralized System 2 (128 points).

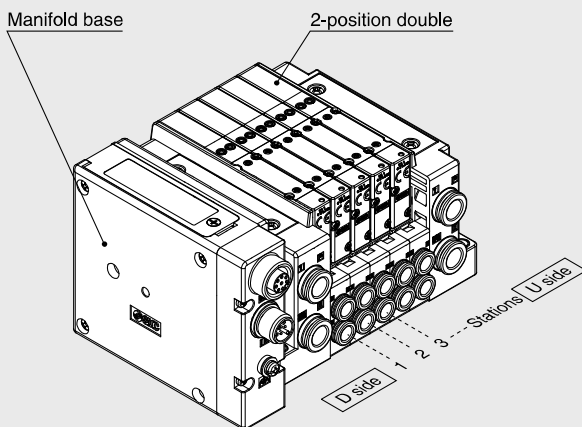
4 Valve stations

Stations	Note
02	2 stations Double wiring* ¹
:	
16	16 stations 2 stations Mixed wiring, Specified layout* ² (Available up to 32 solenoids)
02	
:	
24	24 stations

- *1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.
- *2: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.)
- *: When the product without the SI Unit (S0) is selected, note the maximum number of solenoids of the SI Unit that will be mounted. If the layout is specified, indicate it on the manifold specification sheet.
- *: This also includes the number of blanking plate assembly.

How to Order Manifold Assembly

Example



SS5Y3-10SA3N-05D-C6...1 set (Manifold base part number)
 * SY3200-5U15 sets (2-position double part number)
 ↳ The asterisk denotes the symbol for assembly.
 Prefix it to the part numbers of the valve etc.

- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold base part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on the manifold specification sheet.

5 P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 24 stations)

6 SUP/EXH block assembly

Nil	Internal pilot
S	Internal pilot, Built-in silencer* ¹ * ²
R	External pilot

- *1: 3/5(E) port is plugged for the built-in silencer type.
- *2: When built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

*: A separate GW Unit and communication cable are required.

For details about the EX500 Gateway-type Serial Transmission System, refer to the **WEB catalog** or the Best Pneumatics No. 1 and the Operation Manual. For details about part numbers of SI Units to be mounted, refer to page 235 in this catalog. Please download the Operation Manual via SMC website, <http://www.smcworld.com>

7 A, B port size (Metric/One-touch fitting)

	A, B port	Type 10/Side Ported			Type 11/Bottom Ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
C2	ø2	●	—	—	—	—
C3	ø3.2	●	—	—	—	—
C4	ø4	●	●	—	●	—
C6	ø6	●	●	●	●	●
C8	ø8	—	●	●	●	●
C10	ø10	—	—	●	—	●
C12	ø12	—	—	●	—	●
CM^{*1}	Mixed sizes	●	●	●	●	●
L4 L6 L8 L10 L12	Upward	ø4	●	●	—	—
		ø6	●	●	●	—
		ø8	—	●	●	—
		ø10	—	—	●	—
B4 B6 B8 B10 B12	Downward	ø4	●	●	—	—
		ø6	●	●	●	—
		ø8	—	●	●	—
		ø10	—	—	●	—
LM^{*1}	Mixed sizes	●	●	●	—	—
		●	●	●	—	—
P, E port ^{*3}		ø8	ø10	ø12	ø10	ø12

A, B port size (Inch/One-touch fitting)

	A, B port	Type 10/Side Ported			Type 11/Bottom Ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
N1	ø1/8"	●	—	—	—	—
N3	ø5/32"	●	●	—	●	—
N7	ø1/4"	●	●	●	●	●
N9	ø5/16"	—	●	●	●	●
N11	ø3/8"	—	—	●	—	●
CM^{*1}	Mixed sizes	●	●	●	●	●
LN3 LN7 LN9 LN11	Upward	ø5/32"	●	—	—	—
		ø1/4"	●	●	—	—
		ø5/16"	—	●	—	—
BN3 BN7 BN9 BN11	Downward	ø5/32"	●	—	—	—
		ø1/4"	●	●	—	—
		ø5/16"	—	●	—	—
LM^{*1}	Mixed sizes	●	●	●	—	—
		●	●	●	—	—
P, E port ^{*3}		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"

*1: Indicate the sizes on the manifold specification sheet.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).

*3: The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

8 Mounting and Option

	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D^{*1}	DIN rail mounting	—	—
A^{*1}		●	●
B^{*1}		●	—

*1: Refer to "DIN Rail Option" below.

*: Select the direct mounting type for Type 11 (Bottom ported).

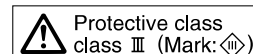
DIN Rail Option

Nil	With DIN bracket, DIN rail with standard length
0	With DIN bracket, without DIN rail
3^{*1}	With DIN bracket, DIN rail for 3 stations
⋮	⋮
24^{*1}	With DIN bracket, DIN rail for 24 stations

*1: Specify a longer rail than the length of valve stations.

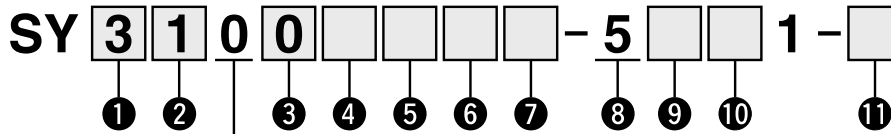
*: If the DIN rail must be mounted without an SI Unit, select "D0" and order the DIN rail separately. Refer to L3 of the dimensions for the DIN rail length. Refer to page 249 for the DIN rail part number.

*: Refer to page 271 for the fixation of DIN rail mounting type manifold.



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1	2-position	Single
2		Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port valve	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Select the rubber seal type for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve

Nil	None
H*1	Built-in

*1: Select the rubber seal type when the back pressure check valve is built-in. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. For ordering example, refer to page 256. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: Select "Nil" for 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Select the metal seal type for high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)*1*2

*1: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*2: Be careful of the energizing time when the power saving circuit is selected. For details, refer to page 268.

8 Rated voltage

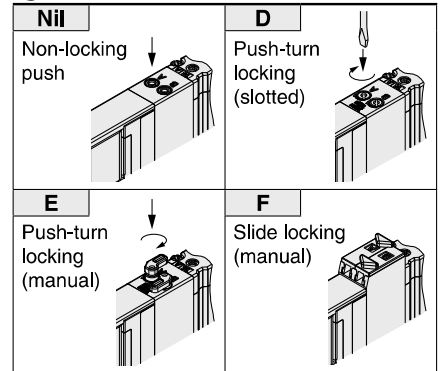
5	24 VDC
---	--------

9 Light/surge voltage suppressor and common specification

	With light	Surge voltage suppressor	Common specification
R	—	●	Non-polar
U	●		
NS	—		Negative common
NZ	●		

*: Select "NZ" for with the power saving circuit.

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)*1
H	Hexagon socket head cap screw (Falling-out-prevention type)*1

*1: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service.

Refer to page 244 for part numbers of the base gasket and mounting screw.

*: Select "Nil" or "K" for the optional individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

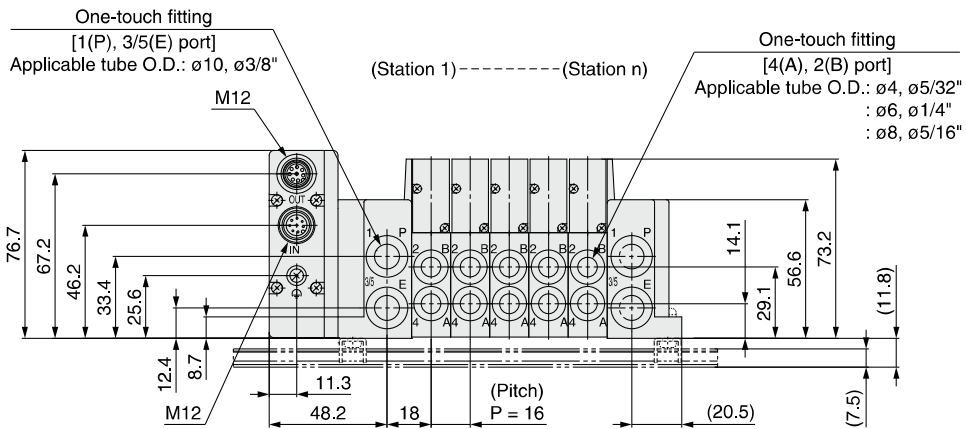
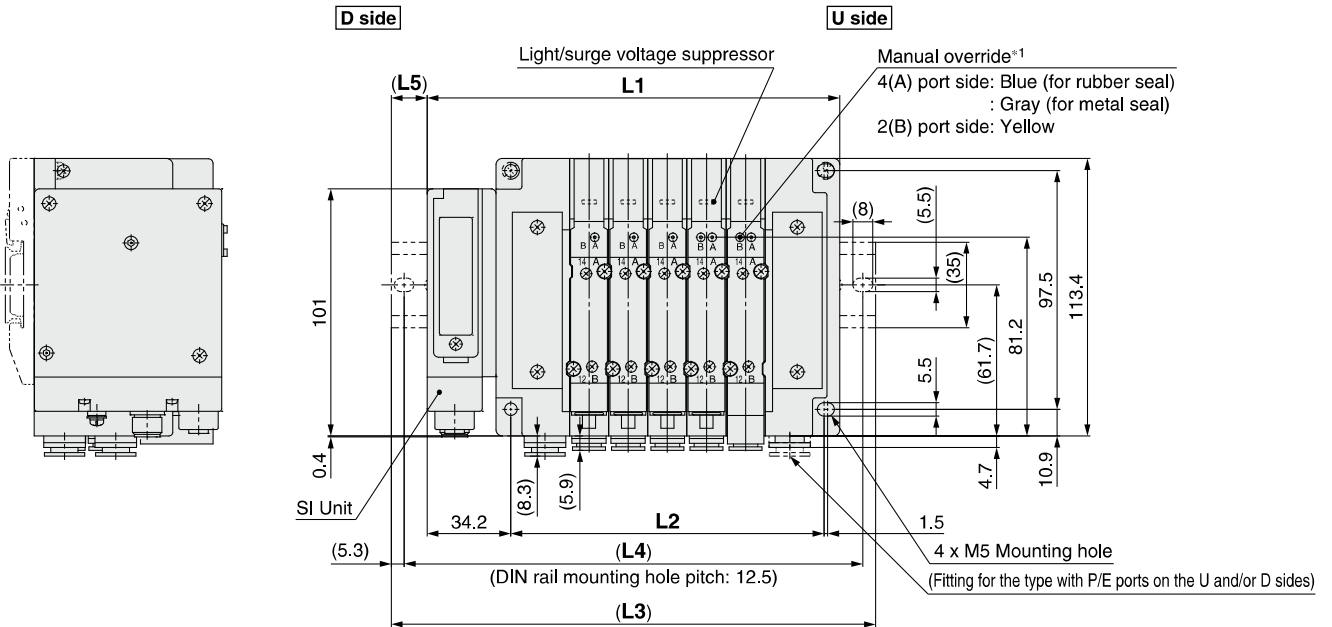
Series SY3000/5000/7000

Dimensions: Series SY5000

Plug-in Connector Connecting Base

Type 10/Side Ported
EX500 (128 Points)

SS5Y5-10SA3N- Stations $\begin{matrix} \text{U} & \text{C4, N3} \\ \text{D} & \text{-C6, N7 (D)} \\ \text{B} & \text{C8, N9} \end{matrix}$



*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
 *: These figures show the "SS5Y5-10SA3N-05D-C8".
 *: Refer to page 211 for dimensions of A or B port top-ported type.

L: Dimensions

n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	120.7	136.7	152.7	168.7	184.7	200.7	216.7	232.7	248.7	264.7	280.7	296.7	312.7	328.7	344.7
L2	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304
L3	148	160.5	185.5	198	210.5	235.5	248	260.5	273	298	310.5	323	348	360.5	373
L4	137.5	150	175	187.5	200	225	237.5	250	262.5	287.5	300	312.5	337.5	350	362.5
L5	13.5	12	16.5	14.5	13	17.5	15.5	14	12	16.5	15	13	17.5	16	14

L \ n	17	18	19	20	21	22	23	24
L1	360.7	376.7	392.7	408.7	424.7	440.7	456.7	472.7
L2	320	336	352	368	384	400	416	432
L3	385.5	410.5	423	435.5	448	473	485.5	498
L4	375	400	412.5	425	437.5	462.5	475	487.5
L5	12.5	17	15	13.5	11.5	16	14.5	12.5

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

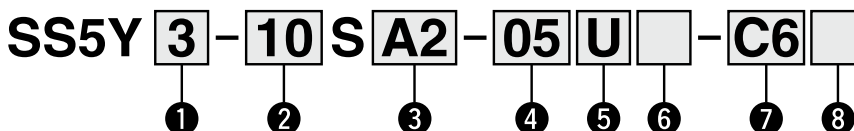
EX500 Gateway Decentralized System (64 Points)

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

3	SY3000
5	SY5000
7	SY7000

*: For mixed mounting, refer to page 213 and later.

2 Type

10	Side ported
11	Bottom ported*1

*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Mounting Type Manifold" (from page 213).

*: When mixing top ported configurations, select from page 160. In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.

3 SI Unit (Number of outputs, Output polarity, Max. number of valve stations)

0	Without SI Unit
A2	16 outputs, Positive common*1, 1 to 18 stations (16 stations)*2
A2N	16 outputs, Negative common*1, 1 to 18 stations (16 stations)*2

*1: Ensure a match with the common specification of the valve to be used.

*2: (): Maximum number of stations for mixed single and double wiring.

4 Valve stations

Stations	Note
02	2 stations
⋮	⋮
08	8 stations
02	2 stations
⋮	⋮
16	16 stations

*1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations.

Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

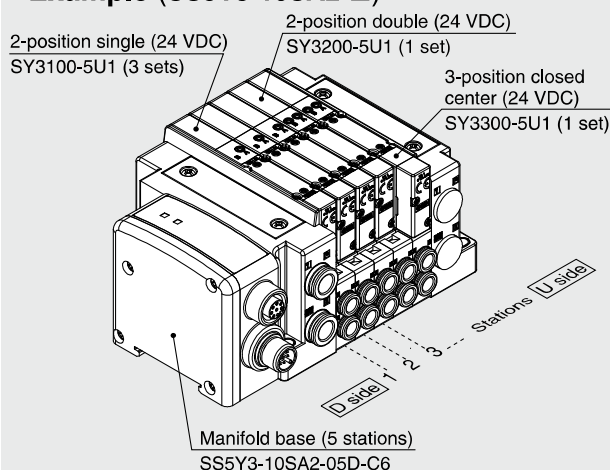
*2: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.)

*: When the product without the SI Unit (S0) is selected, note the maximum number of solenoids of the SI Unit that will be mounted. If the layout is specified, indicate it on the manifold specification sheet.

*: This also includes the number of blanking plate assembly.

How to Order Manifold Assembly

Example (SS5Y3-10SA2-□)



SS5Y3-10SA2-05D-C6 ... 1 set (Type 10 5-station manifold base part no.)
 *SY3100-5U1 3 sets (2-position single part no.)
 *SY3200-5U1 1 set (2-position double part no.)
 *SY3300-5U1 1 set (3-position closed center part no.)

The asterisk denotes the symbol for assembly.
Prefix it to the part numbers of the valve etc.

• The valve arrangement is numbered as the 1st station from the D side.
 • Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

5 P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 16 stations)

6 SUP/EXH block assembly

Nil	Internal pilot
S	Internal pilot, Built-in silencer
R	External pilot

*: 3/5(E) port is plugged for the built-in silencer type.

*: When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

*: A separate GW Unit and communication cable are required.

For details about the EX500 Gateway-type Serial Transmission System, refer to the **WEB catalog** or the Best Pneumatics No. 1 and the Operation Manual. For details about part numbers of SI Units to be mounted, refer to page 236 in this catalog. Please download the Operation Manual via SMC website, <http://www.smcworld.com>

7 A, B port size (Metric/One-touch fitting)

	A, B port	Type 10/Side Ported			Type 11/Bottom Ported		
		SY3000	SY5000	SY7000	SY5000	SY7000	
Straight	C2	ø2	●	—	—	—	
	C3	ø3.2	●	—	—	—	
	C4	ø4	●	●	—	●	
	C6	ø6	●	●	●	●	
	C8	ø8	—	●	●	●	
	C10	ø10	—	—	●	—	
	C12	ø12	—	—	●	—	
	CM ^{*1}	Mixed sizes	●	●	●	●	
	Upward	L4	ø4	●	●	—	—
		L6	ø6	●	●	●	—
		L8	ø8	—	●	●	—
		L10	ø10	—	—	●	—
L12		ø12	—	—	●	—	
Downward		B4	ø4	●	●	—	—
	B6	ø6	●	●	●	—	
	B8	ø8	—	●	●	—	
	B10	ø10	—	—	●	—	
	B12	ø12	—	—	●	—	
	LM ^{*1}	Mixed sizes	●	●	●	—	
P, E port ^{*3} (One-touch fittings)		ø8	ø10	ø12	ø10	ø12	

A, B port size (Inch/One-touch fitting)

	A, B port	Type 10/Side Ported			Type 11/Bottom Ported		
		SY3000	SY5000	SY7000	SY5000	SY7000	
Straight	N1	ø1/8"	●	—	—	—	
	N3	ø5/32"	●	●	—	●	
	N7	ø1/4"	●	●	●	●	
	N9	ø5/16"	—	●	●	●	
	N11	ø3/8"	—	—	●	—	
	CM ^{*1}	Mixed sizes	●	●	●	●	
Upward	LN3	ø5/32"	●	—	—	—	
	LN7	ø1/4"	●	●	—	—	
	LN9	ø5/16"	—	●	—	—	
	LN11	ø3/8"	—	—	●	—	
	Downward	BN3	ø5/32"	●	—	—	—
		BN7	ø1/4"	●	●	—	—
BN9		ø5/16"	—	●	—	—	
BN11		ø3/8"	—	—	●	—	
LM ^{*1}	Mixed sizes	●	●	●	—		
P, E port ^{*3} (One-touch fittings)		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"	

*1: Indicate the sizes on the manifold specification sheet.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).

*3: The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

8 Mounting and Option

	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D□ ^{*1}	DIN rail mounting	—	—
A□ ^{*1}		●	●
B□ ^{*1}		●	—
□		—	—

*1: Refer to "DIN Rail Option" below.

*: Select the direct mounting type for Type 11 (Bottom ported).

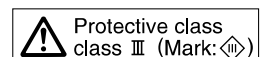
DIN Rail Option

Nil	With DIN bracket, DIN rail with standard length
0	With DIN bracket, without DIN rail
3 ^{*1}	With DIN bracket, DIN rail for 3 stations
⋮	⋮
16 ^{*1}	With DIN bracket, DIN rail for 16 stations

*1: Specify a longer rail than the length of valve stations.

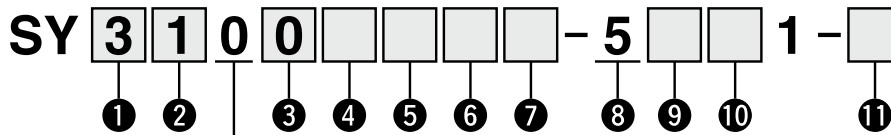
*: If the DIN rail must be mounted without an SI Unit, select "D0" and order the DIN rail separately. Refer to L3 of the dimensions for the DIN rail length. Refer to page 249 for the DIN rail part number.

*: Refer to page 271 for the fixation of DIN rail mounting type manifold.



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1		Single
2	2-position	Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

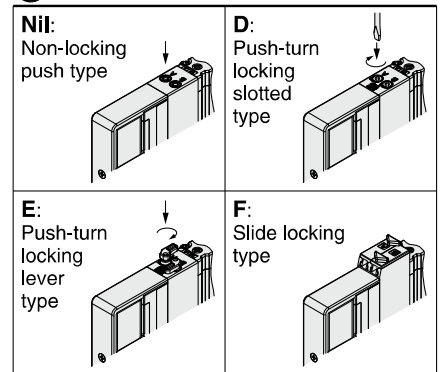
5	24 VDC
---	--------

9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
R	—	●	Non-polar
U	●		
S	—		Positive common
Z	●		
NS	—		
NZ	●		

*: Only "Z" and "NZ" are available for with the power saving circuit. Select a valve from R, U, S or Z when the SI Unit specification is A2 (positive common). Select a valve from R, U, NS or NZ when the SI Unit specification is A2N (negative common).

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service.

Refer to page 244 for part numbers of the base gasket and mounting screw.

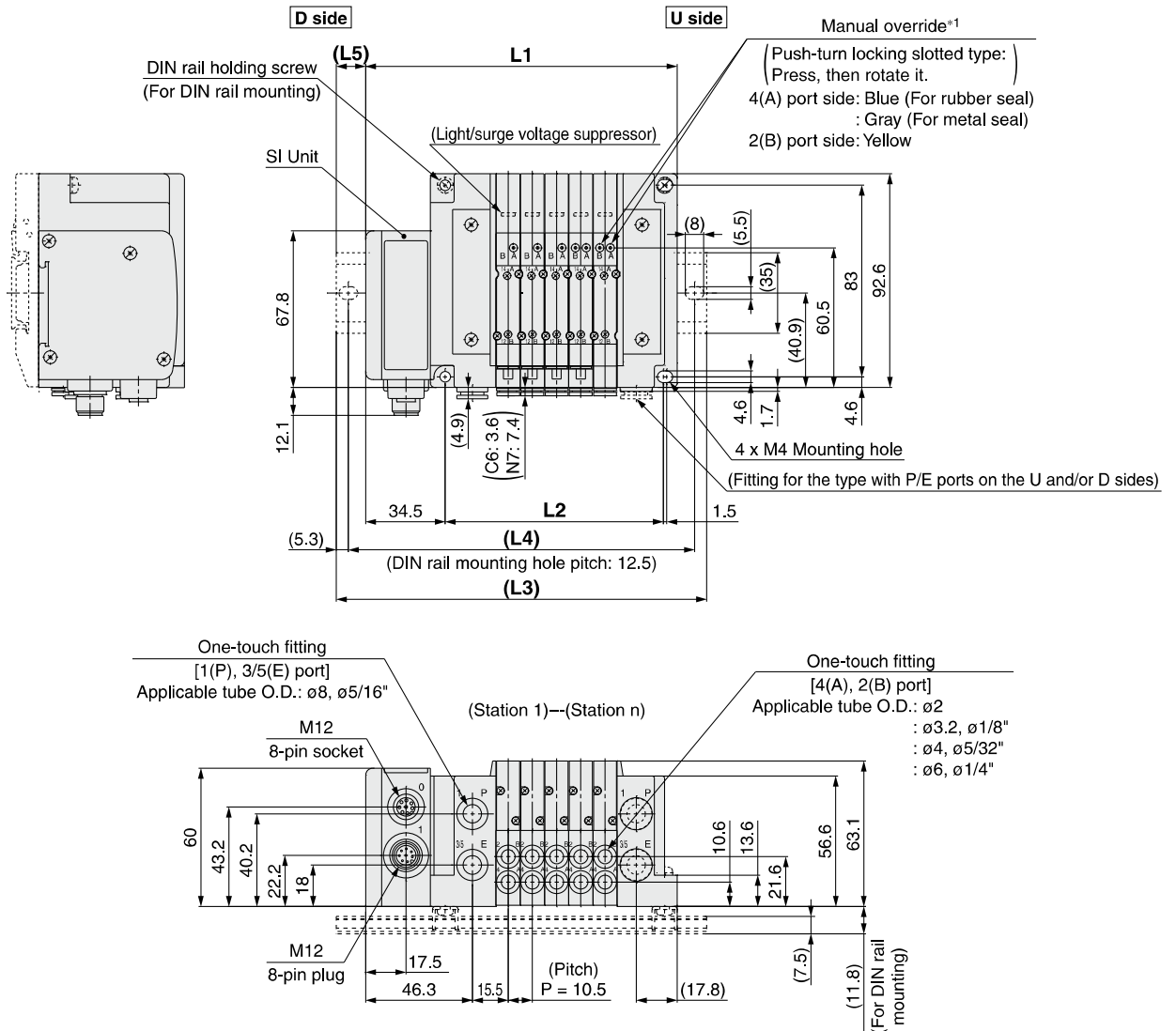
*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

Dimensions: Series **SY3000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
EX500 (64 Points)

SS5Y3-10SA2-Stations $\begin{matrix} U \\ D \\ B \end{matrix}$ $\begin{matrix} C2 \\ C3, N1 \\ C4, N3 \\ C6, N7 \end{matrix}$ (D)



*1: Refer to page 205 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y3-10SA2-05D-C6".
*: Refer to page 210 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219	229.5	240	250.5
L2	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.5	189	199.5	210
L3	135.5	148	148	160.5	173	185.5	198	210.5	223	223	235.5	248	260.5	273	285.5
L4	125	137.5	137.5	150	162.5	175	187.5	200	212.5	212.5	225	237.5	250	262.5	275
L5	16	17	12	13	14	15	16	17	18	12.5	13.5	14.5	15.5	16.5	17.5

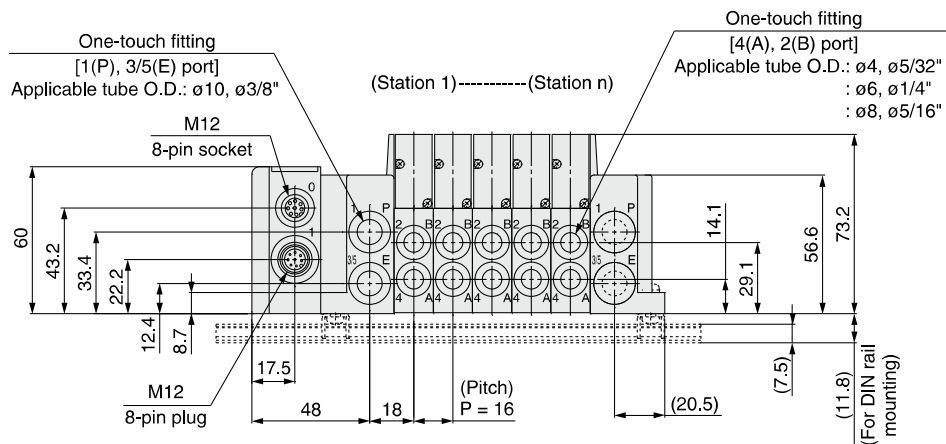
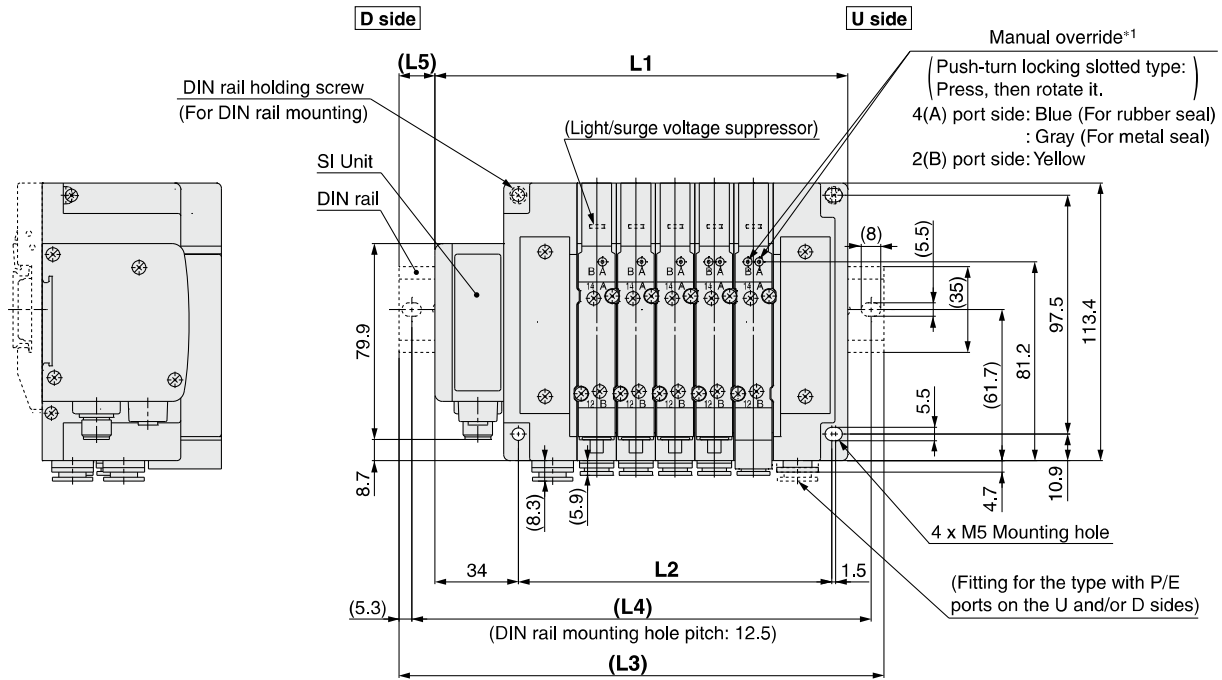
Series SY3000/5000/7000

Dimensions: Series SY5000

Plug-in Connector Connecting Base

Type 10/Side Ported
EX500 (64 Points)

SS5Y5-10SA2-Stations $\begin{matrix} \text{U} & \text{C4, N3} \\ \text{D} & \text{C6, N7 (D)} \\ \text{B} & \text{C8, N9} \end{matrix}$



*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y5-10SA2-05D-C8".
*: Refer to page 211 for dimensions of A or B port top-ported type.

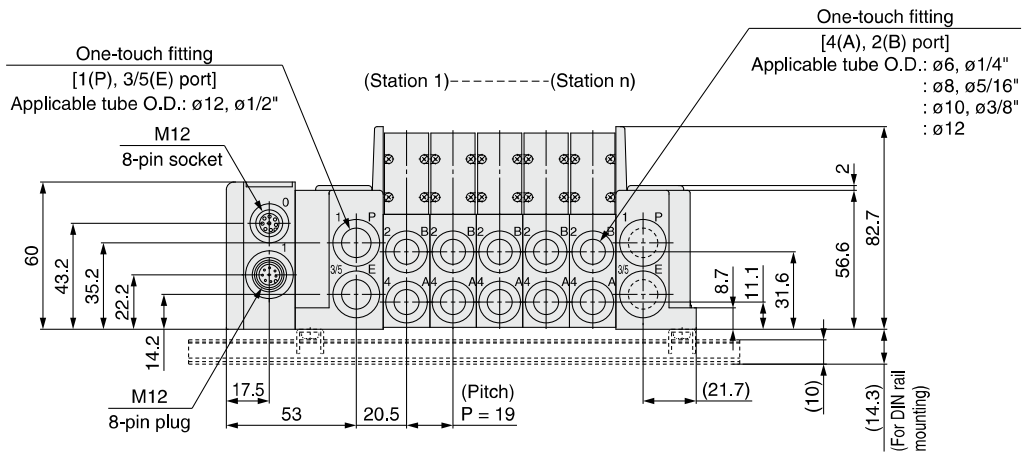
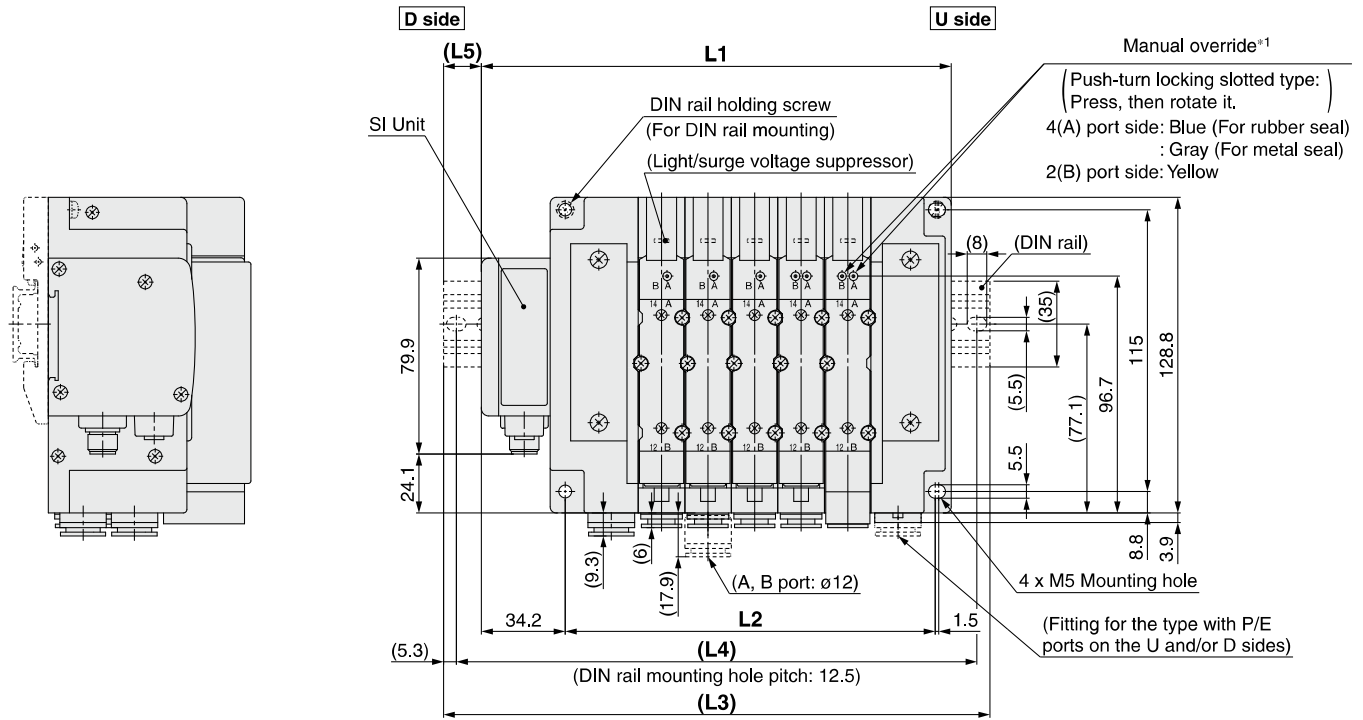
n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	120.5	136.5	152.5	168.5	184.5	200.5	216.5	232.5	248.5	264.5	280.5	296.5	312.5	328.5	344.5
L2	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304
L3	148	160.5	185.5	198	210.5	235.5	248	260.5	273	298	310.5	323	348	360.5	373
L4	137.5	150	175	187.5	200	225	237.5	250	262.5	287.5	300	312.5	337.5	350	362.5
L5	14	12	16.5	15	13	17.5	16	14	12.5	17	15	13.5	18	16	14.5

Dimensions: Series SY7000

Plug-in Connector Connecting Base

Type 10/Side Ported
EX500 (64 Points)

SS5Y7-10SA2-**Stations** $\begin{matrix} U \\ D \\ B \end{matrix}$ $\begin{matrix} C6, N7 \\ C8, N9 \\ C10, N11 (D) \\ C12 \end{matrix}$



*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y7-10SA2-05D-C10".
*: Refer to page 212 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	134.7	153.7	172.7	191.7	210.7	229.7	248.7	267.7	286.7	305.7	324.7	343.7	362.7	381.7	400.7
L2	94	113	132	151	170	189	208	227	246	265	284	303	322	341	360
L3	160.5	185.5	198	223	235.5	260.5	273	298	310.5	335.5	348	373	398	410.5	435.5
L4	150	175	187.5	212.5	225	250	262.5	287.5	300	325	337.5	362.5	387.5	400	425
L5	13	16	12.5	15.5	12.5	15.5	12	15	12	15	11.5	14.5	17.5	14.5	17.5

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

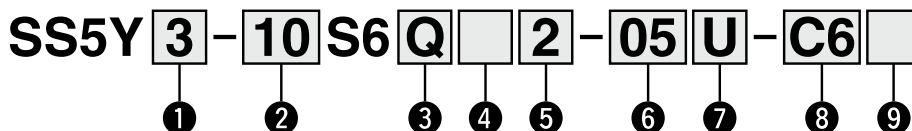
EX600

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type

10	Side ported
11	Bottom ported*1

*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Mounting Type Manifold" (from page 213).

3 SI Unit

0	Without SI Unit
Q	DeviceNet™
N	PROFIBUS DP
V	CC-Link
ZE	EtherNet/IP™ (1 port)
EA	EtherNet/IP™ (2 ports)
D	EtherCAT®
F	PROFINET

*: I/O Unit cannot be mounted without SI Unit.
*: Valve plate which connects manifold and SI Unit is not mounted to a valve without SI Unit. Refer to the EX600 catalog (CAT.E02-24) for mounting.

4 SI Unit output polarity, end plate type

SI Unit output polarity	Power supply with M12 connector	Power supply with 7/8 inch connector
Without SI Unit	Nil	
SI Unit positive common	2	3
SI Unit negative common	4	5

*: Ensure a match with the common specification of the valve to be used.
*: Without SI Unit, the symbol is nil.

5 I/O Unit stations

Nil	None
1	1 station
:	:
9	9 stations

*: Without SI Unit, the symbol is nil.
*: SI Unit is not included in I/O Unit stations.
*: When I/O Unit is selected, it is shipped separately, and assembled by users. Refer to the attached operation manual for mounting.

6 Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring*1
:	:	
16	16 stations	Specified layout*2 (Available up to 32 solenoids)
02	2 stations	
:	:	
24	24 stations	

*1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.
*2: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.)
*: This also includes the number of blanking plate assembly.

7 P, E port entry, SUP/EXH block assembly

P, E port entry	Internal pilot	Internal pilot, Built-in silencer	External pilot
U side (2 to 10 stations)	U	C	G
D side (2 to 10 stations)	D	E	H
Both sides (2 to 24 stations)	B	F	J

*: 3/5(E) port is plugged for the built-in silencer type.
*: When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

9 Mounting and Option

Symbol	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D□	DIN rail mounting	—	—
A□		●	●
B□		●	—

*: Enter the number of stations inside □ when it is larger than the number of valve stations. (Refer to "DIN Rail Option" below.)
*: Only direct mounting is available for Type 11 (Bottom ported).
*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

DIN Rail Option

Nil	Direct mounting	
0	Without DIN rail (with bracket)	
3	For 3 stations	Specify a longer rail than the total length of specified stations.
:	:	
24	For 24 stations	

*: If the DIN rail must be mounted without an SI Unit, select D0. Then, refer to L3 of the dimensions for the DIN rail length and order separately. (Refer to page 249 for the DIN rail part number.)

Refer to the page on the right for 8.

For details about the EX600 Integrated-type (For Input/Output) Serial Transmission System, refer to the **WEB catalog** or the Best Pneumatics No. 1 and the Operation Manual. For details about part numbers of SI Units to be mounted, refer to pages 237 and 238 in this catalog. (IP40 specifications may be required according to the I/O Unit to be selected.) Please download the Operation Manual via SMC website, <http://www.smcworld.com>

Valve

Plug-in Sub-plate

Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

8 A, B port size (Metric/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
C2	ø2	●	—	—	—	—
C3	ø3.2	●	—	—	—	—
C4	ø4	●	●	—	●	—
C6	ø6	●	●	●	●	●
C8	ø8	—	●	●	●	●
C10	ø10	—	—	●	—	●
C12	ø12	—	—	—	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
L4	Upward	ø4	●	●	—	—
L6		ø6	●	●	●	—
L8		ø8	—	●	●	—
L10		ø10	—	—	●	—
L12		ø12	—	—	●	—
B4	Downward	ø4	●	●	—	—
B6		ø6	●	●	●	—
B8		ø8	—	●	●	—
B10		ø10	—	—	●	—
B12		ø12	—	—	●	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø8	ø10	ø12	ø10	ø12

A, B port size (Inch/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
N1	ø1/8"	●	—	—	—	—
N3	ø5/32"	●	●	—	●	—
N7	ø1/4"	●	●	●	●	●
N9	ø5/16"	—	●	●	●	●
N11	ø3/8"	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
LN3	Upward	ø5/32"	●	—	—	—
LN7		ø1/4"	●	●	—	—
LN9		ø5/16"	—	●	—	—
LN11	ø3/8"	—	—	●	—	—
BN3	Downward	ø5/32"	●	—	—	—
BN7		ø1/4"	●	●	—	—
BN9		ø5/16"	—	●	—	—
BN11	ø3/8"	—	—	●	—	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"

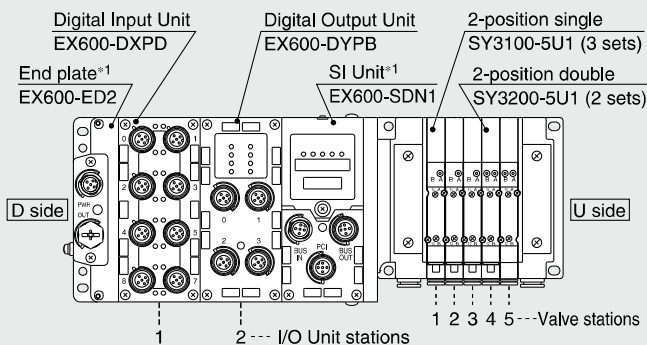
*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).

How to Order Manifold Assembly

Example (SS5Y3-10S6□-□)



SS5Y3-10S6Q42-05B-C6... 1 set (Type 10 5-station manifold base part no.)

*SY3100-5U1 3 sets (2-position single part no.)

*SY3200-5U1 2 sets (2-position double part no.)

*EX600-DXPD 1 set I/O Unit part number (Station 1)

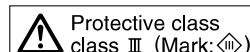
*EX600-DYPB 1 set I/O Unit part number (Station 2)

The asterisk denotes the symbol for assembly. Prefix it to the part numbers of the valve etc.

- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold part number, state the valves to be mounted, then the I/O Units in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

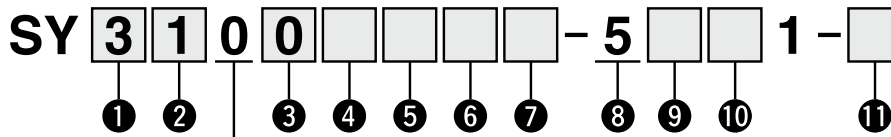
*1: Do not enter the SI Unit part number and the end plate part number together.

*2: When mixing top ported configurations, select from page 172. In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1	2-position	Single
2		Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

5	24 VDC
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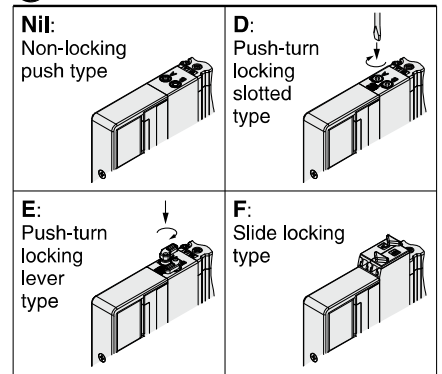
9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
R	—	●	Non-polar
U	●		
S	—		Positive common
Z	●		
NS	—	Negative common	
NZ	●		

*: Select a valve from R, U, S or Z when the SI Unit polarity is positive common. Select a valve from R, U, NS or NZ when the SI Unit output polarity is negative common.

*: Only "Z" and "NZ" types are available for with the power saving circuit.

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service.

Refer to page 244 for part numbers of the base gasket and mounting screw.

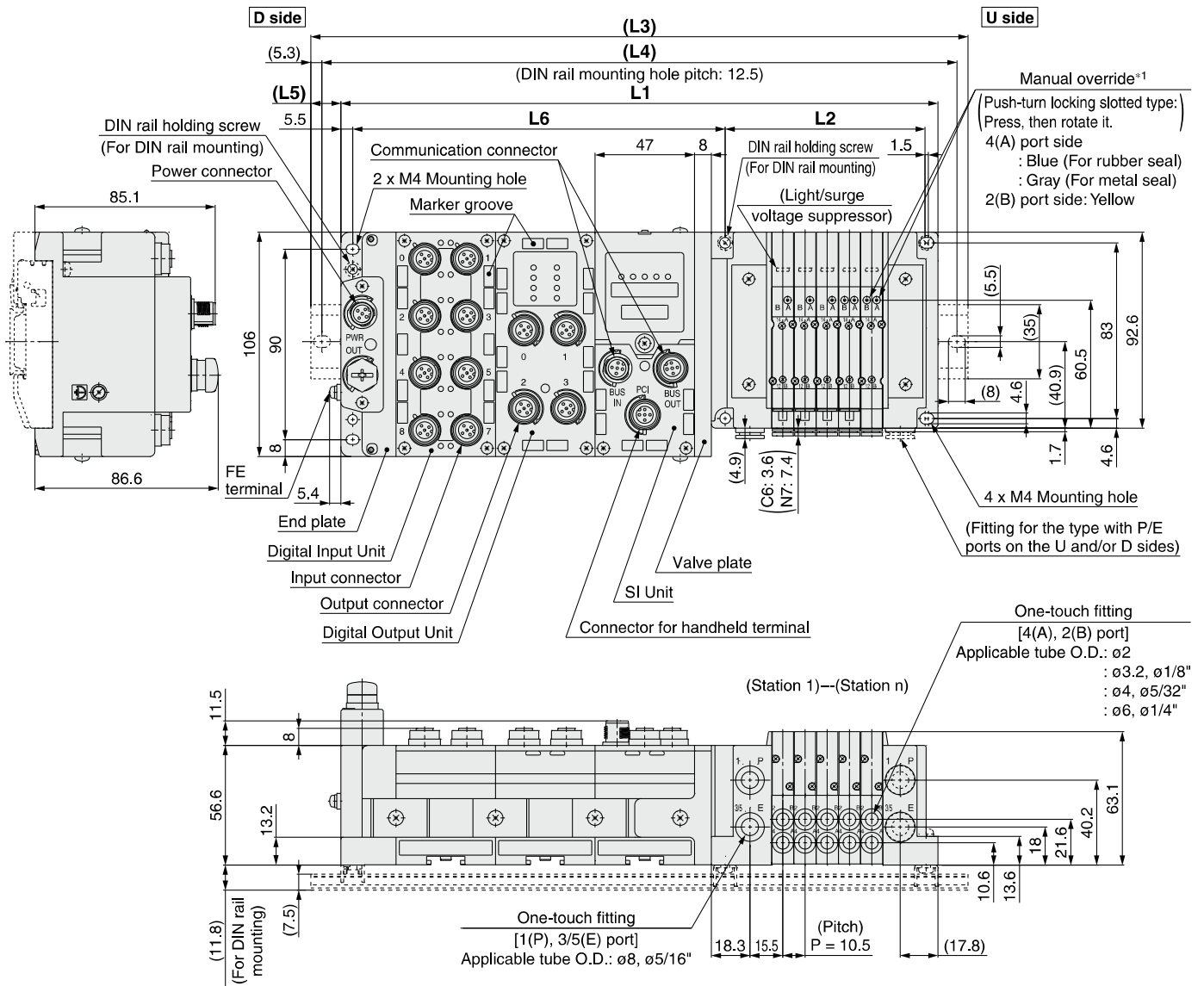
*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

Dimensions: Series **SY3000**

Plug-in Connector Connecting Base

Type 10/Side Ported
EX600 (M12 Connector)

SS5Y3-10S6□ $\frac{2}{4}$ □-Stations $\begin{matrix} U \\ D \\ B \end{matrix} \begin{matrix} C2 \\ C3, N1 (D) \\ C4, N3 \\ C6, N7 \end{matrix}$



$L1 = 10.5 \times n1 + 135.5 + 47 \times n2$
 $L2 = 10.5 \times n1 + 42$
 $L4 = L3 - 10.5$
 $L5 = (L3 - L1)/2$
 $L6 = 47 \times n2 + 82$

n1: Valve stations
n2: I/O Unit stations

*1: Refer to page 205 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
* These figures show the "SS5Y3-10S6Q22-05D-C6".
*: Refer to page 210 for dimensions of A or B port top-ported type.

L3: DIN Rail Overall Length

I/O Unit stations (n2) \ Valve stations (n1)	Valve stations (n1)																							
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0	185.5	198	210.5	223	223	235.5	248	260.5	273	285.5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	423	
1	235.5	248	248	260.5	273	285.5	298	310.5	323	323	335.5	348	360.5	373	385.5	385.5	398	410.5	423	435.5	448	448	460.5	
2	285.5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	410.5	423	435.5	448	460.5	473	485.5	485.5	498	510.5	
3	323	335.5	348	360.5	373	385.5	385.5	398	410.5	423	435.5	448	448	460.5	473	485.5	498	510.5	510.5	523	535.5	548	560.5	
4	373	385.5	398	410.5	410.5	423	435.5	448	460.5	473	473	485.5	498	510.5	523	535.5	548	560.5	573	585.5	598	610.5	623	
5	423	435.5	448	448	460.5	473	485.5	498	510.5	510.5	523	535.5	548	560.5	573	585.5	598	610.5	623	635.5	648	660.5	673	
6	473	473	485.5	498	510.5	523	535.5	548	560.5	573	585.5	598	610.5	623	635.5	648	660.5	673	685.5	698	710.5	723	735.5	
7	510.5	523	535.5	548	560.5	573	573	585.5	598	610.5	623	635.5	648	660.5	673	685.5	698	710.5	723	735.5	748	760.5	773	
8	560.5	573	585.5	598	598	610.5	623	635.5	648	660.5	673	673	685.5	698	710.5	723	735.5	748	760.5	773	785.5	798	810.5	
9	610.5	623	635.5	635.5	648	660.5	673	685.5	698	698	710.5	723	735.5	748	760.5	773	785.5	798	810.5	823	835.5	848	860.5	

Valve
Plug-in Sub-plate
Plug-in Metal Base
Type 50, 51, 52
Manifold Exploded View
Plug-in Connector Connecting Base
Type 10, 11, 12
Manifold Exploded View
One-touch Fittings/
Plug Assembly Part No.
Manifold Options

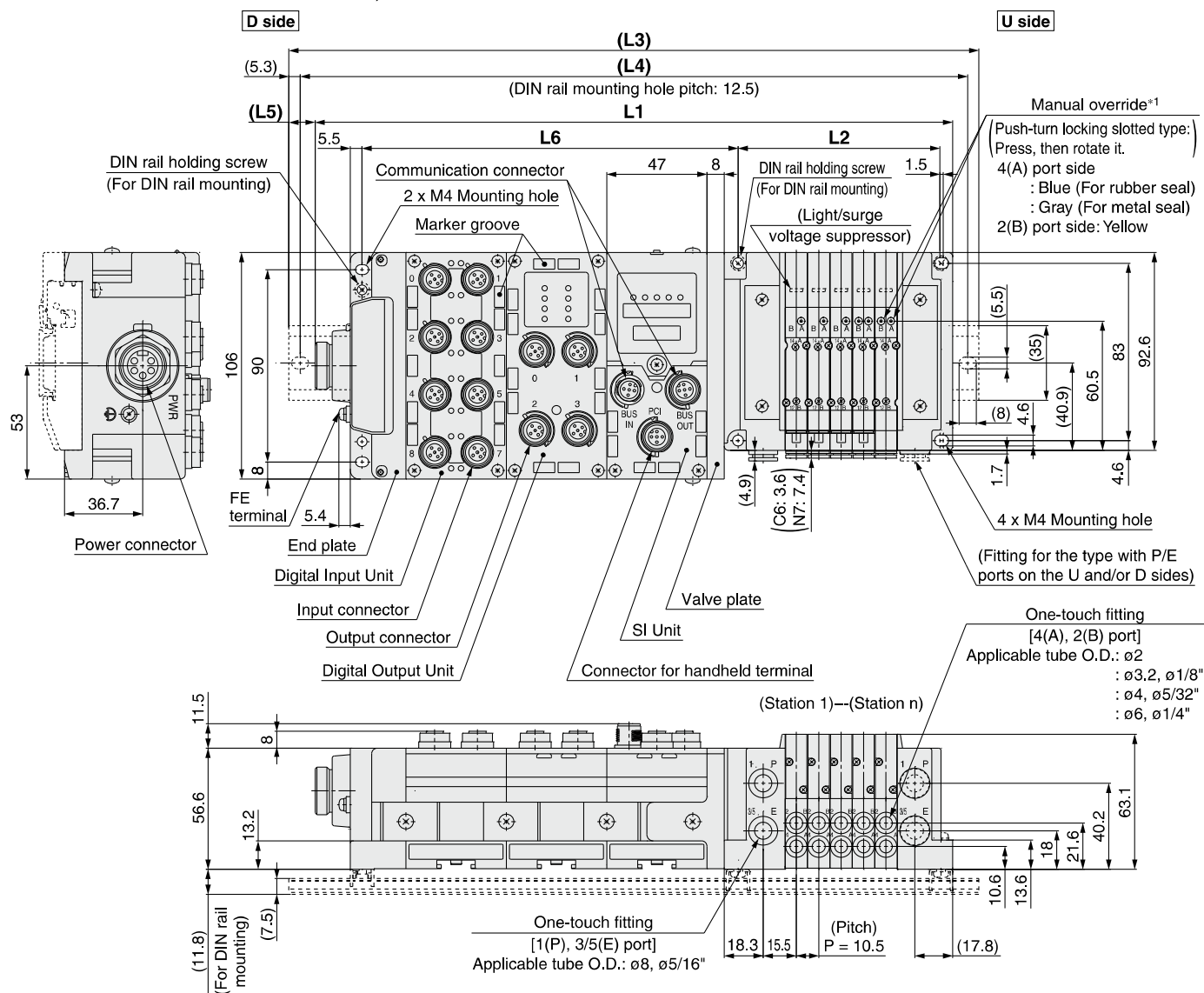
Series SY3000/5000/7000

Plug-in Connector Connecting Base

Type 10/Side Ported
EX600 (7/8 Inch Connector)

Dimensions: Series SY3000

SS5Y3-10S6□₅□₃□₃-Stations $\begin{matrix} U \\ D \\ B \end{matrix}$ $\begin{matrix} C2 \\ C3, N1 (D) \\ C4, N3 \\ C6, N7 \end{matrix}$



$$L1 = 10.5 \times n1 + 152 + 47 \times n2$$

$$L2 = 10.5 \times n1 + 42$$

$$L4 = L3 - 10.5$$

$$L5 = (L3 - L1)/2$$

$$L6 = 47 \times n2 + 82$$

n1: Valve stations
n2: I/O Unit stations

L3: DIN Rail Overall Length

I/O Unit stations (n2) \ Valve stations (n1)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	198	210.5	223	235.5	248	260.5	260.5	273	285.5	298	310.5	323	323	335.5	348	360.5	373	385.5	385.5	398	410.5	423	435.5
1	248	260.5	273	285.5	285.5	298	310.5	323	335.5	348	360.5	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	473	485.5
2	298	310.5	323	323	335.5	348	360.5	373	385.5	385.5	398	410.5	423	435.5	448	448	460.5	473	485.5	498	510.5	523	523
3	348	348	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	473	485.5	485.5	498	510.5	523	535.5	548	548	560.5	573
4	385.5	398	410.5	423	435.5	448	448	460.5	473	485.5	498	510.5	510.5	523	535.5	548	560.5	573	585.5	585.5	598	610.5	623
5	435.5	448	460.5	473	485.5	485.5	498	510.5	523	535.5	548	548	560.5	573	585.5	598	610.5	610.5	623	635.5	648	660.5	673
6	485.5	498	510.5	510.5	523	535.5	548	560.5	573	573	585.5	598	610.5	623	635.5	648	648	660.5	673	685.5	698	710.5	710.5
7	535.5	548	548	560.5	573	585.5	598	610.5	610.5	623	635.5	648	660.5	673	673	685.5	698	710.5	723	735.5	735.5	748	760.5
8	573	585.5	598	610.5	623	635.5	635.5	648	660.5	673	685.5	698	710.5	710.5	723	735.5	748	760.5	773	773	785.5	798	810.5
9	623	635.5	648	660.5	673	673	685.5	698	710.5	723	735.5	735.5	748	760.5	773	785.5	798	798	810.5	823	835.5	848	860.5

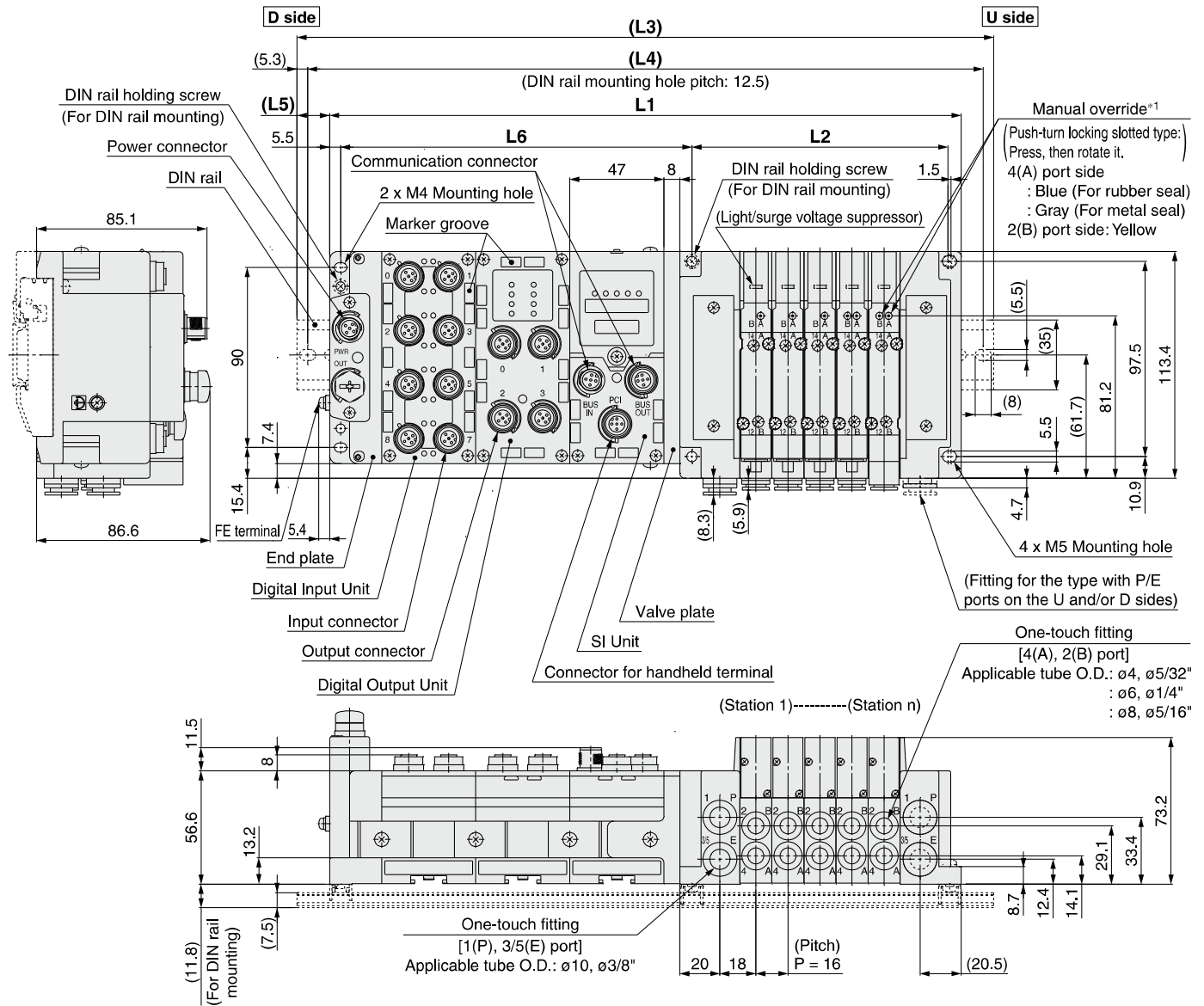
*1: Refer to page 205 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y3-10S6Q32-05D-C6".
*: Refer to page 210 for dimensions of A or B port top-ported type.

Dimensions: Series **SY5000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
EX600 (M12 Connector)

SS5Y5-10S6□□□-Stations $\begin{matrix} U & C4, N3 \\ D & C6, N7 (D) \\ B & C8, N9 \end{matrix}$



$L1 = 16 \times n1 + 141.5 + 47 \times n2$
 $L2 = 16 \times n1 + 48$
 $L4 = L3 - 10.5$
 $L5 = (L3 - L1)/2$
 $L6 = 47 \times n2 + 81.5$

n1: Valve stations
n2: I/O Unit stations

*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
* These figures show the "SS5Y5-10S6Q22-05D-C8".
* Refer to page 211 for dimensions of A or B port top-ported type.

L3: DIN Rail Overall Length

I/O Unit stations (n2) \ Valve stations (n1)	Valve stations (n1)																							
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0	198	223	235.5	248	273	285.5	298	310.5	335.5	348	360.5	373	398	410.5	423	448	460.5	473	485.5	510.5	523	535.5	560.5	
1	248	260.5	285.5	298	310.5	335.5	348	360.5	373	398	410.5	423	448	460.5	473	485.5	510.5	523	535.5	548	573	585.5	598	
2	298	310.5	323	348	360.5	373	398	410.5	423	435.5	460.5	473	485.5	510.5	523	535.5	548	573	585.5	598	610.5	635.5	648	
3	348	360.5	373	398	410.5	423	435.5	460.5	473	485.5	498	523	535.5	548	573	585.5	598	610.5	635.5	648	660.5	685.5	698	
4	385.5	410.5	423	435.5	460.5	473	485.5	498	523	535.5	548	573	585.5	598	610.5	635.5	648	660.5	673	698	710.5	723	748	
5	435.5	448	473	485.5	498	523	535.5	548	560.5	585.5	598	610.5	623	648	660.5	673	698	710.5	723	748	760.5	773	785.5	
6	485.5	498	523	535.5	548	560.5	585.5	598	610.5	623	648	660.5	673	698	710.5	723	735.5	760.5	773	785.5	810.5	823	835.5	
7	535.5	548	560.5	585.5	598	610.5	623	648	660.5	673	698	710.5	723	735.5	760.5	773	785.5	798	823	835.5	848	873	885.5	
8	573	598	610.5	623	648	660.5	673	685.5	710.5	723	735.5	760.5	773	785.5	798	823	835.5	848	873	885.5	898	910.5	935.5	
9	623	648	660.5	673	685.5	710.5	723	735.5	748	773	785.5	798	823	835.5	848	860.5	885.5	898	910.5	935.5	948	960.5	973	

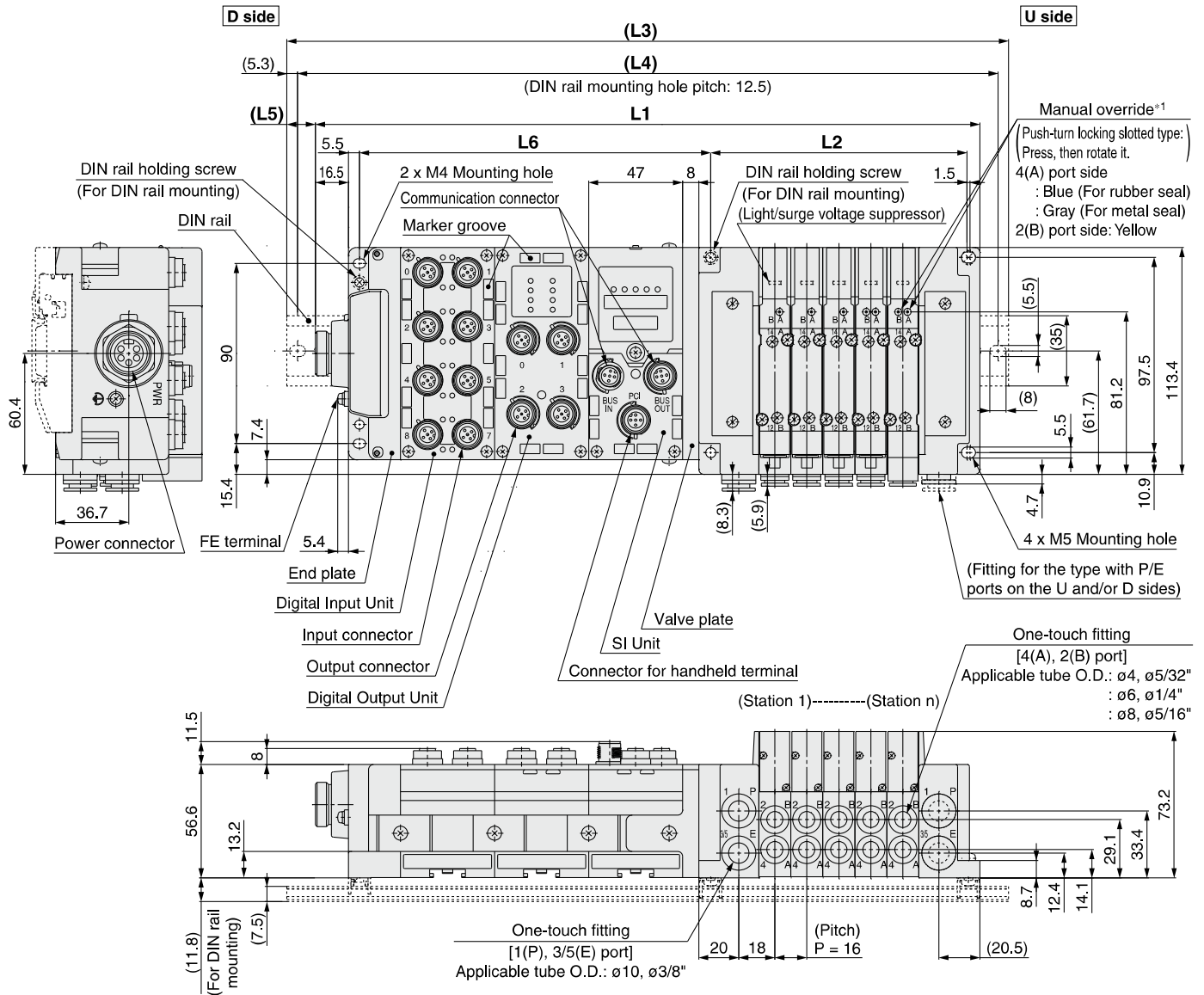
Series SY3000/5000/7000

Plug-in Connector Connecting Base

Type 10/Side Ported
EX600 (7/8 Inch Connector)

Dimensions: Series SY5000

SS5Y5-10S6 □ $\frac{3}{8}$ □ - Stations $\begin{matrix} U \\ D \\ B \end{matrix} \begin{matrix} C4, N3 \\ C6, N7 \\ C8, N9 \end{matrix} (D)$



$$L1 = 16 \times n1 + 158 + 47 \times n2$$

$$L2 = 16 \times n1 + 48$$

$$L4 = L3 - 10.5$$

$$L5 = (L3 - L1)/2$$

$$L6 = 47 \times n2 + 81.5$$

n1: Valve stations
n2: I/O Unit stations

L3: DIN Rail Overall Length

I/O Unit stations (n2) \ Valve stations (n1)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	223	235.5	248	273	285.5	298	310.5	335.5	348	360.5	385.5	398	410.5	423	448	460.5	473	485.5	510.5	523	535.5	560.5	573
1	260.5	285.5	298	310.5	335.5	348	360.5	373	398	410.5	423	448	460.5	473	485.5	510.5	523	535.5	560.5	573	585.5	598	623
2	310.5	335.5	348	360.5	373	398	410.5	423	435.5	460.5	473	485.5	510.5	523	535.5	548	573	585.5	598	623	635.5	648	660.5
3	360.5	373	398	410.5	423	435.5	460.5	473	485.5	510.5	523	535.5	548	573	585.5	598	610.5	635.5	648	660.5	685.5	698	710.5
4	410.5	423	435.5	460.5	473	485.5	498	523	535.5	548	573	585.5	598	610.5	635.5	648	660.5	685.5	698	710.5	723	748	760.5
5	460.5	473	485.5	498	523	535.5	548	560.5	585.5	598	610.5	635.5	648	660.5	673	698	710.5	723	748	760.5	773	785.5	810.5
6	498	523	535.5	548	560.5	585.5	598	610.5	635.5	648	660.5	673	698	710.5	723	735.5	760.5	773	785.5	810.5	823	835.5	848
7	548	560.5	585.5	598	610.5	623	648	660.5	673	698	710.5	723	735.5	760.5	773	785.5	810.5	823	835.5	848	873	885.5	898
8	598	610.5	623	648	660.5	673	685.5	710.5	723	735.5	760.5	773	785.5	798	823	835.5	848	873	885.5	898	910.5	935.5	948
9	648	660.5	673	685.5	710.5	723	735.5	760.5	773	785.5	798	823	835.5	848	860.5	885.5	898	910.5	935.5	948	960.5	973	—

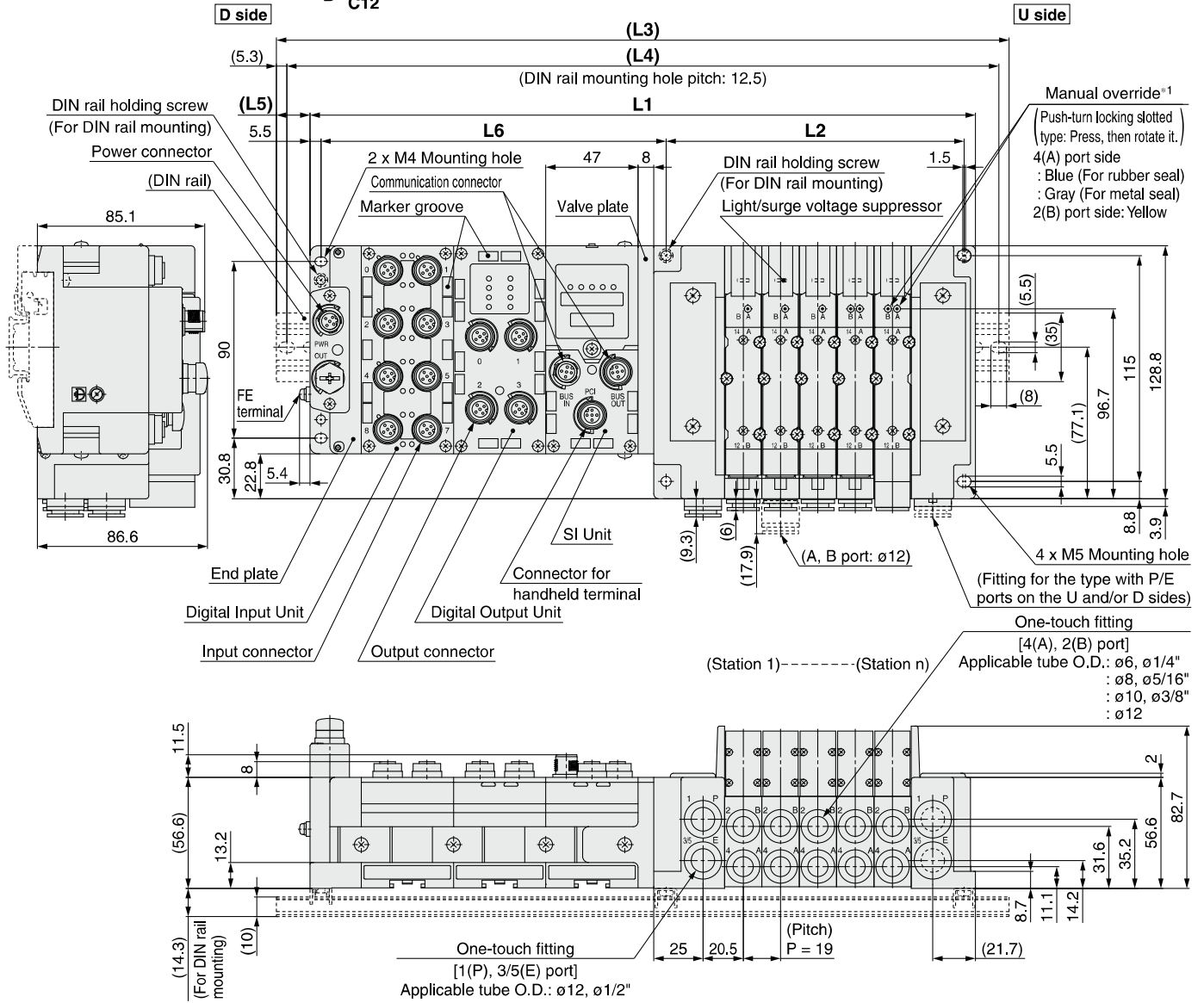
*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y5-10S6Q32-05D-C8".
*: Refer to page 211 for dimensions of A or B port top-ported type.

Dimensions: Series **SY7000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
EX600 (M12 Connector)

SS5Y7-10S6 □ $\frac{2}{4}$ □ - Stations $\begin{matrix} U \\ D \\ B \end{matrix}$ C6, N7
C8, N9
C10, N11 (D)
C12



L1 = 19 x n1 + 149.7 + 47 x n2
L2 = 19 x n1 + 56
L3 = DIN rail dimension
L4 = L3 - 10.5
L5 = (L3 - L1)/2
L6 = 47 x n2 + 81.7

n1: Valve stations
n2: I/O Unit stations

*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y7-10S6Q22-05D-C10".
*: Refer to page 212 for dimensions of A or B port top-ported type.

L3: DIN Rail Overall Length

Valve stations (n1) / I/O Unit stations (n2)	Valve stations (n1)																							
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0	223	235.5	260.5	273	298	310.5	335.5	348	373	385.5	410.5	423	448	460.5	485.5	498	523	535.5	560.5	573	598	610.5	635.5	
1	260.5	285.5	298	323	335.5	360.5	373	398	410.5	435.5	448	473	498	510.5	535.5	548	573	585.5	610.5	623	648	660.5	685.5	
2	310.5	335.5	348	373	385.5	410.5	423	448	460.5	485.5	498	523	535.5	560.5	573	598	610.5	635.5	648	673	685.5	710.5	723	
3	360.5	373	398	410.5	435.5	448	473	485.5	510.5	523	548	573	585.5	610.5	623	648	660.5	685.5	698	723	735.5	760.5	773	
4	410.5	423	448	460.5	485.5	498	523	535.5	560.5	573	598	610.5	635.5	648	673	685.5	710.5	723	748	760.5	785.5	798	823	
5	448	473	485.5	510.5	523	548	560.5	585.5	598	623	648	660.5	685.5	698	723	735.5	760.5	773	798	810.5	835.5	848	873	
6	498	523	535.5	560.5	573	598	610.5	635.5	648	673	685.5	710.5	723	748	760.5	785.5	798	823	835.5	860.5	873	898	923	
7	548	560.5	585.5	598	623	635.5	660.5	673	698	723	735.5	760.5	773	798	810.5	835.5	848	873	885.5	910.5	923	948	960.5	
8	598	610.5	635.5	648	673	685.5	710.5	723	748	760.5	785.5	798	823	835.5	860.5	873	898	910.5	935.5	948	973	-	-	
9	635.5	660.5	673	698	710.5	735.5	748	773	798	810.5	835.5	848	873	885.5	910.5	923	948	960.5	985.5	-	-	-	-	

Valve
Plug-in Sub-plate
Plug-in Metal Base
Type 50, 51, 52
Manifold Exploded View
Plug-in Connector Connecting Base
Type 10, 11, 12
Manifold Exploded View
One-touch Fittings/
Plug Assembly Part No.
Manifold Options

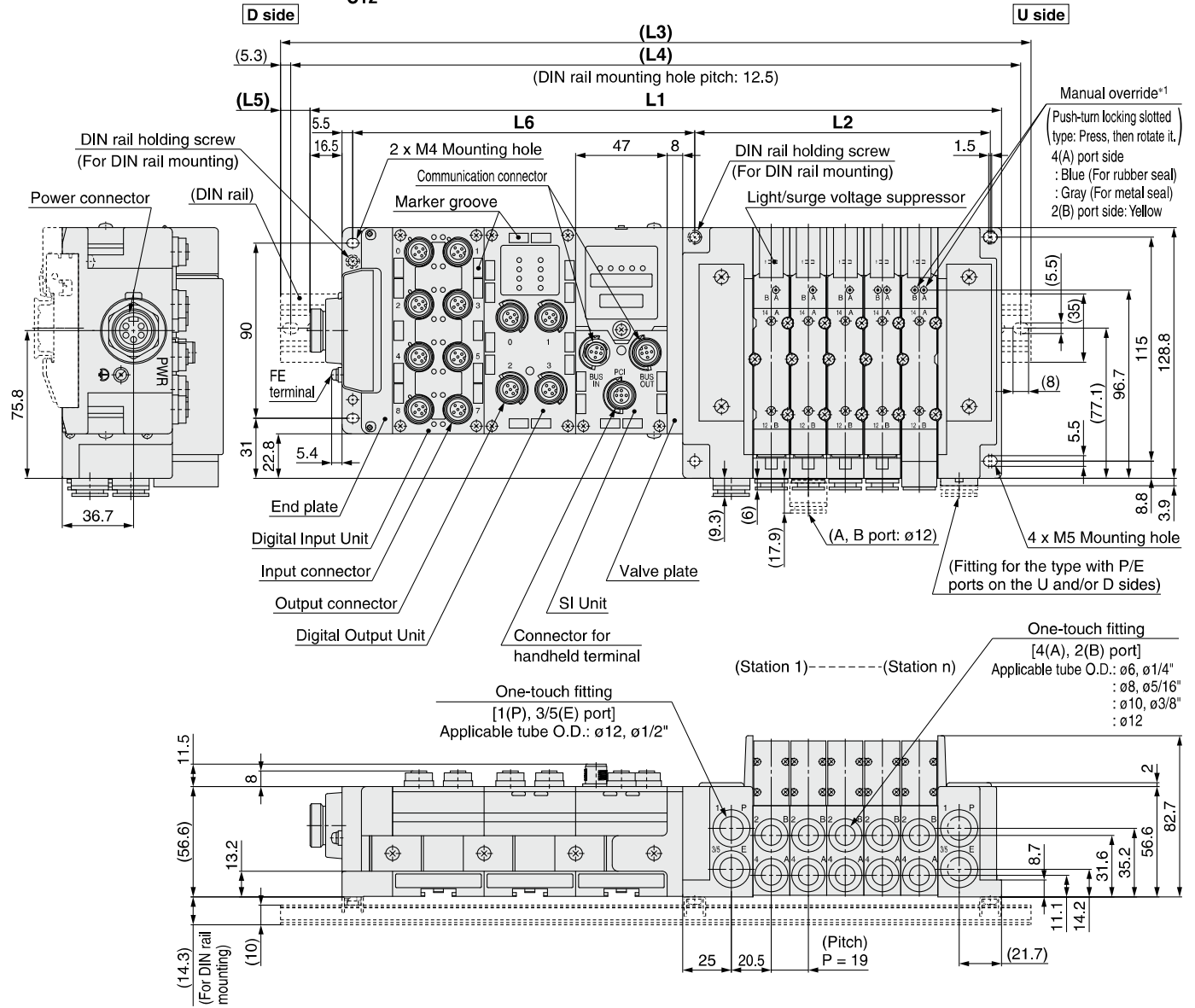
Series SY3000/5000/7000

Dimensions: Series SY7000

Plug-in Connector Connecting Base

Type 10/Side Ported EX600 (7/8 Inch Connector)

SS5Y7-10S6□₃□₅□₅-Stations $\begin{matrix} \text{U} \\ \text{D} \\ \text{B} \end{matrix}$ $\begin{matrix} \text{C6, N7} \\ \text{C8, N9} \\ \text{C10, N11} \\ \text{C12} \end{matrix}$ (D)



$$L1 = 19 \times n1 + 166.2 + 47 \times n2$$

$$L2 = 19 \times n1 + 56$$

$$L4 = L3 - 10.5$$

$$L5 = (L3 - L1)/2$$

$$L6 = 47 \times n2 + 81.7$$

n1: Valve stations
n2: I/O Unit stations

*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
* : These figures show the "SS5Y7-10S6Q32-05D-C10".
* : Refer to page 212 for dimensions of A or B port top-ported type.

L3: DIN Rail Overall Length

Valve stations (n1) / I/O Unit stations (n2)	Valve stations (n1)																							
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0	235.5	248	273	285.5	310.5	323	348	360.5	385.5	410.5	423	448	460.5	485.5	498	523	535.5	560.5	573	598	610.5	635.5	648	
1	285.5	298	323	335.5	360.5	373	398	410.5	435.5	448	473	485.5	510.5	523	548	560.5	585.5	598	623	635.5	660.5	685.5	698	
2	323	348	360.5	385.5	398	423	435.5	460.5	485.5	498	523	535.5	560.5	573	598	610.5	635.5	648	673	685.5	710.5	723	748	
3	373	398	410.5	435.5	448	473	485.5	510.5	523	548	560.5	585.5	598	623	635.5	660.5	673	698	710.5	735.5	760.5	773	798	
4	423	435.5	460.5	473	498	510.5	535.5	560.5	573	598	610.5	635.5	648	673	685.5	710.5	723	748	760.5	785.5	798	823	835.5	
5	473	485.5	510.5	523	548	560.5	585.5	598	623	635.5	660.5	673	698	710.5	735.5	748	773	785.5	810.5	835.5	848	873	885.5	
6	510.5	535.5	548	573	585.5	610.5	635.5	648	673	685.5	710.5	723	748	760.5	785.5	798	823	835.5	860.5	873	898	910.5	935.5	
7	560.5	585.5	598	623	635.5	660.5	673	698	710.5	735.5	748	773	785.5	810.5	823	848	860.5	885.5	910.5	923	948	960.5	985.5	
8	610.5	623	648	660.5	685.5	710.5	723	748	760.5	785.5	798	823	835.5	860.5	873	898	910.5	935.5	948	973	985.5	—	—	
9	660.5	673	698	710.5	735.5	748	773	785.5	810.5	823	848	860.5	885.5	898	923	935.5	960.5	985.5	—	—	—	—	—	

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

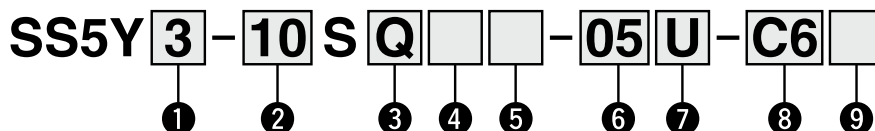
EX250

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type

10	Side ported
11	Bottom ported*1

*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Mounting Type Manifold" (from page 213).

4 Input block stations

Nil	None
1	1 station
⋮	⋮
8	8 stations

*: Without SI Unit, the symbol is nil. The maximum number of stations is limited for the AS-Interface applicable SI Unit.

3 SI Unit

0	Without SI Unit	
Q	DeviceNet™ (Negative common)	
N	PROFIBUS DP (Negative common)	
V	CC-Link (Positive common)	
TA	AS-Interface (Negative common)	2 power supply systems 8 in/8 out, 31 slave modes
TB		4 in/4 out, 31 slave modes
TC		1 power supply systems 8 in/8 out, 31 slave modes
TD		4 in/4 out, 31 slave modes
Y	CANopen (Negative common)	
ZE	EtherNet/IP™ (Negative common)	

- *: Ensure a match with the common specification of the valve to be used.
- *: Input block cannot be mounted without SI Unit.
- *: The supply current from the SI Unit of AS-Interface applicable 1 power supply system specification to the input block and valve is limited.

5 Input block type

	PNP input (Positive common)	NPN input (Negative common)
Without input block	Nil	
M12, 2 inputs	A	D
M12, 4 inputs	B	E
M8, 4 inputs	C	F

*: Without SI Unit, the symbol is nil.

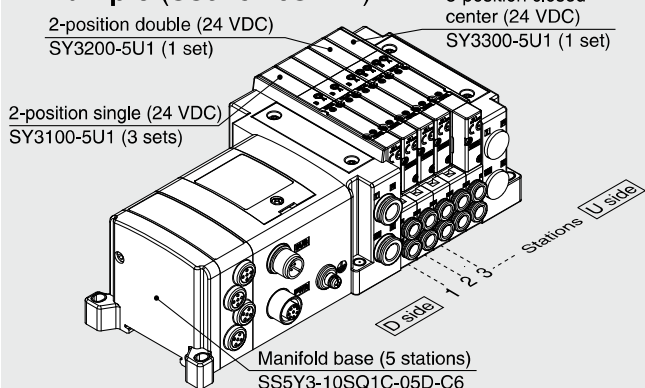
6 Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring*1
⋮	⋮	
16	16 stations	Specified layout*2 (Available up to 32 solenoids)
02	2 stations	
⋮	⋮	
24	24 stations	

- *1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.
- *2: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.) When determining the number of valve stations, note that the maximum number of solenoids for the AS-Interface applicable SI Unit specification is as follows.
 - 8 in/8 out specification: Max. 8 solenoids
 - 4 in/4 out specification: Max. 4 solenoids
- *: This also includes the number of blanking plate assembly.
- *: For the product without the SI Unit (S0), note the maximum number of solenoids of the SI Unit that will be mounted. If the layout is specified, indicate it on the manifold specification sheet.

How to Order Manifold Assembly

Example (SS5Y3-10S□-□)



SS5Y3-10SQ1C-05D-C6 ... 1 set (Type 10 5-station manifold base part no.)
 *SY3100-5U1 3 sets (2-position single part no.)
 *SY3200-5U1 1 set (2-position double part no.)
 *SY3300-5U1 1 set (3-position closed center part no.)

The asterisk denotes the symbol for assembly. Prefix it to the part numbers of the valve etc.

- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

*: When mixing top ported configurations, select from page 180. In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.

7 P, E port entry, SUP/EXH block assembly

P, E port entry	Internal pilot	Internal pilot, Built-in silencer	External pilot
U side (2 to 10 stations)	U	C	G
D side (2 to 10 stations)	D	E	H
Both sides (2 to 24 stations)	B	F	J

- *: 3/5(E) port is plugged for the built-in silencer type.
- *: When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

For details about the EX250 Integrated-type (For Input/Output) Serial Transmission System, refer to the **WEB catalog** or the Best Pneumatics No. 1 and the Operation Manual. For details about part numbers of SI Units to be mounted, refer to page 239 in this catalog. Please download the Operation Manual via SMC website, <http://www.smcworld.com>

Valve

Plug-in Sub-plate

Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

8 A, B port size (Metric/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
C2	ø2	●	—	—	—	—
C3	ø3.2	●	—	—	—	—
C4	ø4	●	●	—	●	—
C6	ø6	●	●	●	●	●
C8	ø8	—	●	●	●	●
C10	ø10	—	—	●	—	●
C12	ø12	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
L4	Upward	ø4	●	●	—	—
L6		ø6	●	●	●	—
L8		ø8	—	●	●	—
L10		ø10	—	—	●	—
L12		ø12	—	—	●	—
B4	Downward	ø4	●	●	—	—
B6		ø6	●	●	●	—
B8		ø8	—	●	●	—
B10		ø10	—	—	●	—
B12		ø12	—	—	●	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø8	ø10	ø12	ø10	ø12

A, B port size (Inch/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
N1	ø1/8"	●	—	—	—	—
N3	ø5/32"	●	●	—	●	—
N7	ø1/4"	●	●	●	●	●
N9	ø5/16"	—	●	●	●	●
N11	ø3/8"	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
LN3	Upward	ø5/32"	●	—	—	—
LN7		ø1/4"	●	●	—	—
LN9		ø5/16"	—	●	—	—
LN11	ø3/8"	—	—	●	—	—
BN3	Downward	ø5/32"	●	—	—	—
BN7		ø1/4"	●	●	—	—
BN9		ø5/16"	—	●	—	—
BN11	ø3/8"	—	—	●	—	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"

*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).

9 Mounting and Option

Symbol	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D□	DIN rail mounting	—	—
A□		●	●
B□		●	—

DIN Rail Option

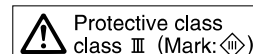
Nil	Direct mounting
0	Without DIN rail (with bracket)
3	For 3 stations Specify a longer rail than the total length of specified stations.
⋮	⋮
24	For 24 stations

*: Enter the number of stations inside □ when it is larger than the number of valve stations. (Refer to "DIN Rail Option" above.)

*: Only direct mounting is available for Type 11 (Bottom ported).

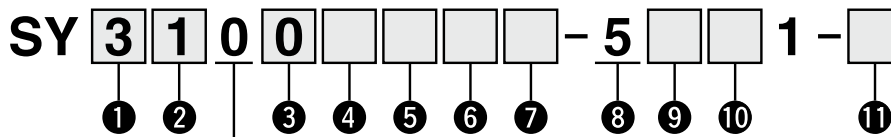
*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

*: When it is necessary to mount a DIN rail without an SI Unit, select D0 and order DIN rail length separately, referring to L3 in the dimensions. (Refer to page 249 for part numbers of DIN rail.)



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



● Base mounted

1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1		Single
2	2-position	Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

5	24 VDC
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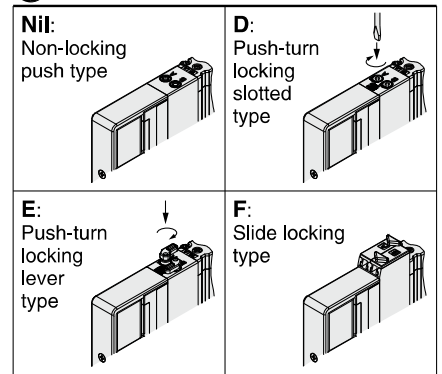
9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
R	—	●	Non-polar
U	●		
S	—		Positive common
Z	●		
NS	—		
NZ	●		

*: "R" and "U" are applicable for every SI Unit. However, "S" and "Z" can be used only for CC-Link applicable Unit and "NS" and "NZ" are for Units which are not CC-Link applicable.

*: Only "Z" and "NZ" types are available for with the power saving circuit.

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service.

Refer to page 244 for part numbers of the base gasket and mounting screw.

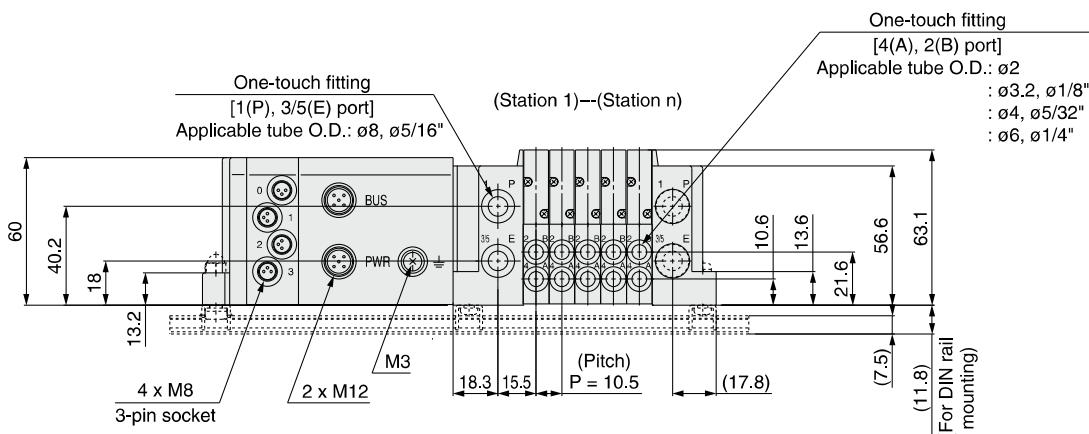
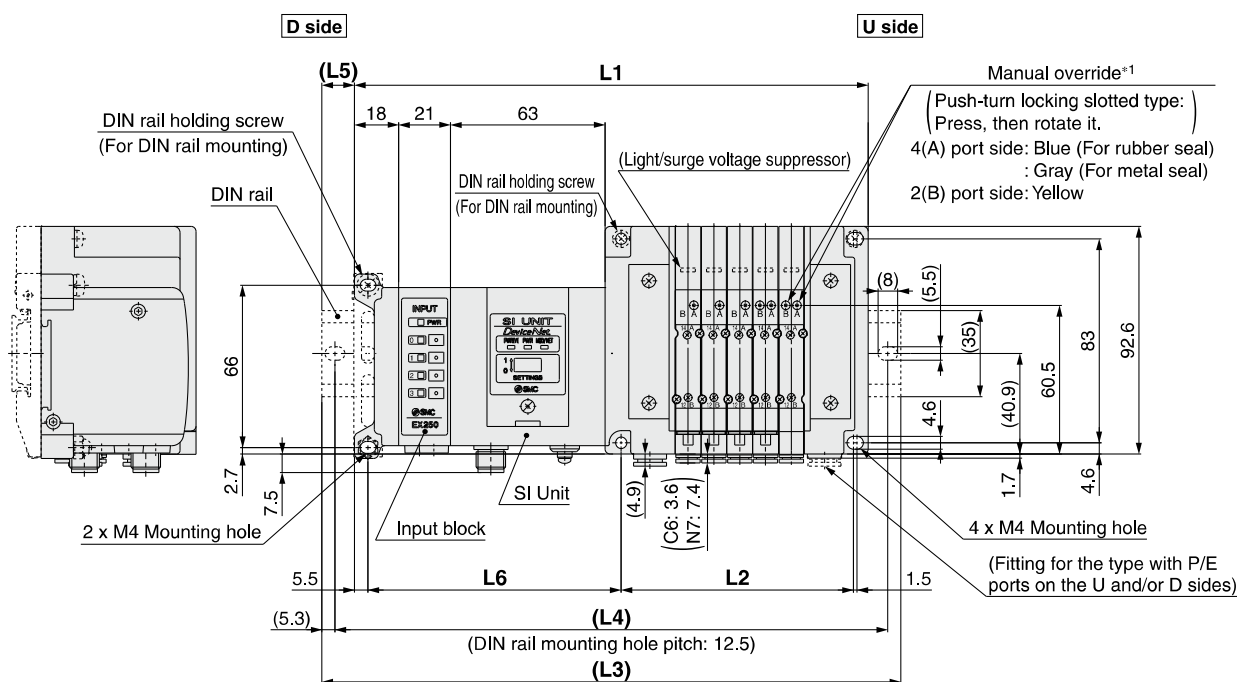
*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

Dimensions: Series **SY3000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
EX250

SS5Y3-10S□□□-Stations $\begin{matrix} U \\ D \\ B \end{matrix}$ $\begin{matrix} C2 \\ C3, N1 \\ C4, N3 \\ C6, N7 \end{matrix}$ (D)



$L1 = 10.5 \times n1 + 135.5 + 21 \times n2$
 $L2 = 10.5 \times n1 + 42$
 $L4 = L3 - 10.5$
 $L5 = (L3 - L1)/2$
 $L6 = 21 \times n2 + 82$

n1: Valve stations
n2: Input block stations

L3: DIN Rail Overall Length

Valve stations (n1) Input block stations (n2)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0	185.5	198	210.5	223	223	235.5	248	260.5	273	285.5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	423	
1	210.5	223	223	235.5	248	260.5	273	285.5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	423	423	435.5	435.5
2	223	235.5	248	260.5	273	285.5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	460.5
3	248	260.5	273	285.5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	473	485.5	485.5
4	273	285.5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	473	485.5	485.5	498	498
5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	473	485.5	485.5	498	510.5	523	523
6	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	473	485.5	485.5	498	510.5	523	535.5	548	548
7	335.5	348	348	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	473	485.5	485.5	498	510.5	523	535.5	548	548	560.5	560.5
8	348	360.5	373	385.5	398	410.5	423	423	435.5	448	460.5	473	485.5	485.5	498	510.5	523	535.5	548	548	560.5	573	585.5	585.5

*1: Refer to page 205 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y3-10SQ1A-05D-C6".
*: Refer to page 210 for dimensions of A or B port top-ported type.

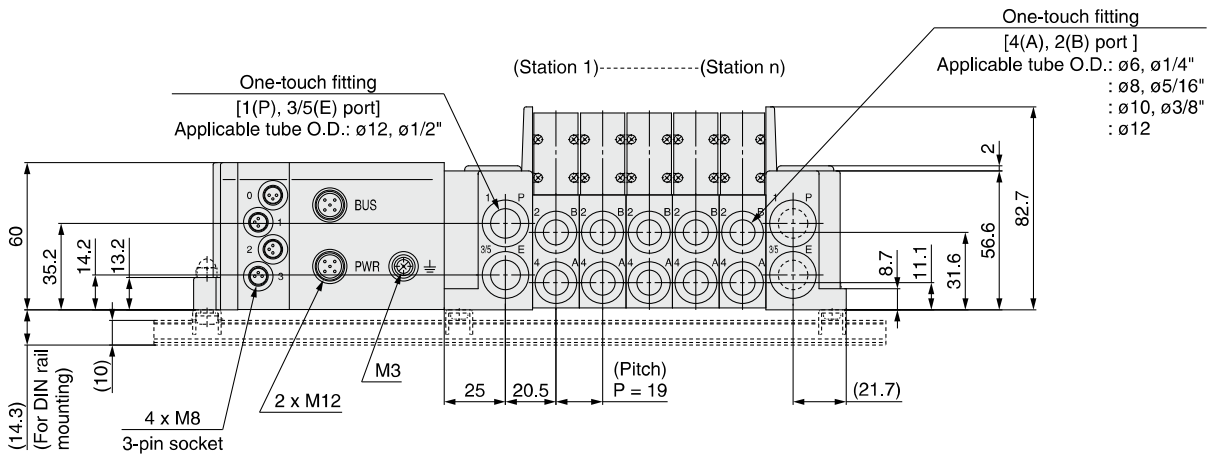
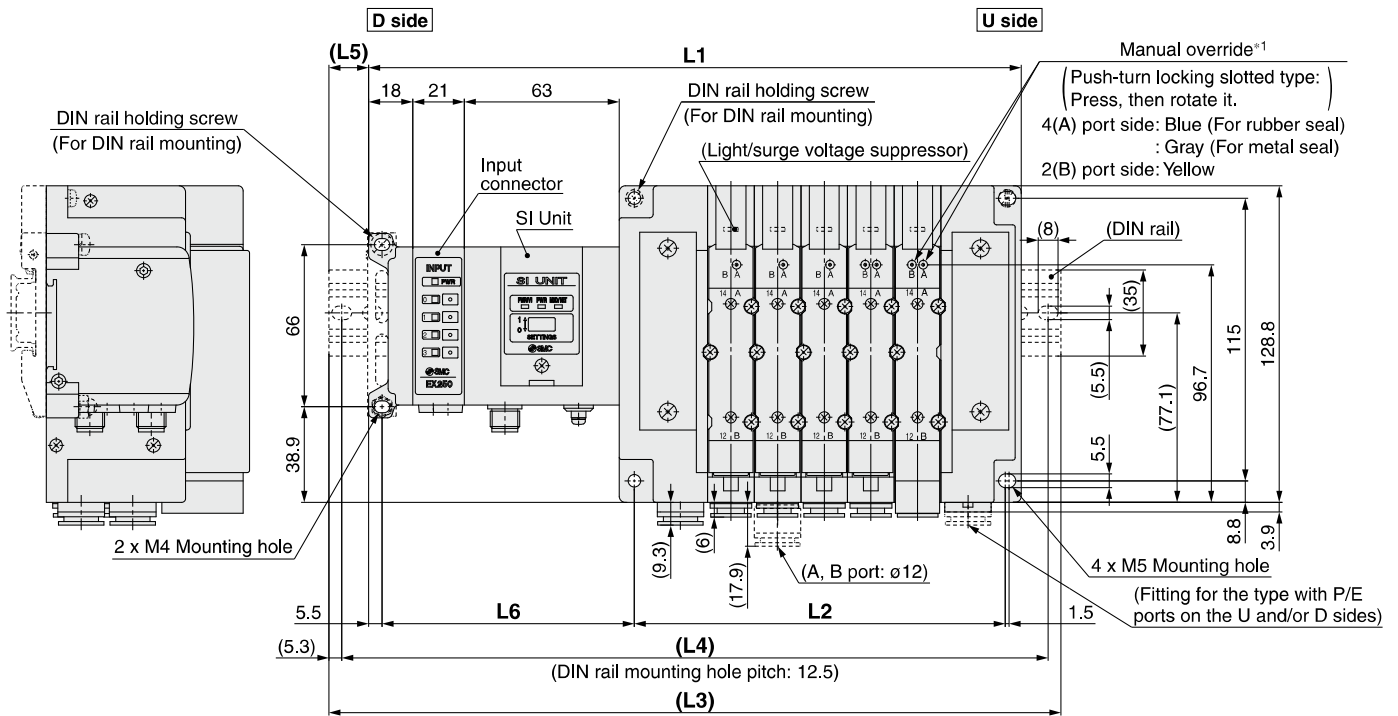
Valve
Plug-in Sub-plate
Plug-in Metal Base
Type 50, 51, 52
Manifold Exploded View
Plug-in Connector Connecting Base
Type 10, 11, 12
Manifold Exploded View
One-touch Fittings/
Plug Assembly Part No.
Manifold Options

Dimensions: Series **SY7000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
EX250

SS5Y7-10S□□□-Stations $\begin{matrix} \text{U} \\ \text{D} \\ \text{B} \end{matrix}$ C6, N7
C8, N9
C10, N11 (D)
C12



$L1 = 19 \times n1 + 149.7 + 21 \times n2$
 $L2 = 19 \times n1 + 56$
 $L4 = L3 - 10.5$
 $L5 = (L3 - L1)/2$
 $L6 = 21 \times n2 + 81.7$

n1: Valve stations
n2: Input block stations

*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*2: These figures show the "SS5Y7-10SQ1A-05D-C10".
*3: Refer to page 212 for dimensions of A or B port top-ported type.

L3: DIN Rail Overall Length

I/O Unit stations (n2) \ Valve stations (n1)	Valve stations (n1)																							
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0	223	235.5	260.5	273	298	310.5	335.5	348	373	385.5	410.5	423	448	460.5	485.5	498	523	535.5	560.5	573	598	610.5	635.5	
1	235.5	260.5	273	298	310.5	335.5	348	373	385.5	410.5	423	448	460.5	485.5	498	523	548	560.5	585.5	598	623	635.5	660.5	
2	260.5	273	298	310.5	335.5	348	373	398	410.5	435.5	448	473	485.5	510.5	523	548	560.5	585.5	598	623	635.5	660.5	673	
3	285.5	298	323	335.5	360.5	373	398	410.5	435.5	448	473	485.5	510.5	523	548	560.5	585.5	598	623	635.5	660.5	673	698	
4	298	323	335.5	360.5	373	398	410.5	435.5	448	473	485.5	510.5	523	548	573	585.5	610.5	623	648	660.5	685.5	698	723	
5	323	335.5	360.5	373	398	423	435.5	460.5	473	498	510.5	535.5	548	573	585.5	610.5	623	648	660.5	685.5	698	723	735.5	
6	348	360.5	385.5	398	423	435.5	460.5	473	498	510.5	535.5	548	573	585.5	610.5	623	648	660.5	685.5	698	723	748	760.5	
7	360.5	385.5	398	423	435.5	460.5	473	498	510.5	535.5	548	573	598	610.5	635.5	648	673	685.5	710.5	723	748	760.5	785.5	
8	385.5	398	423	448	460.5	485.5	498	523	535.5	560.5	573	598	610.5	635.5	648	673	685.5	710.5	723	748	760.5	785.5	798	

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

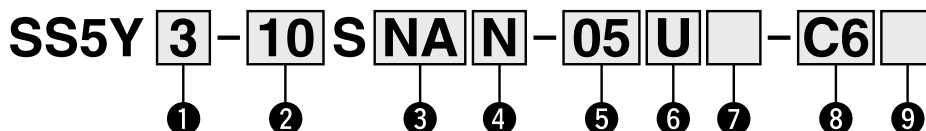
EX260

Series SY3000/5000/7000



How to Order Manifold

Refer to pages 208 (SY5000) and 209 (SY7000) for dimensions of Type 11/Bottom ported type.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type

10	Side ported
11	Bottom ported*1

*1: The SY5000 manifold base is used for the bottom ported of the SY3000. When ordering, refer to "Plug-in Mixed Type Manifold" (from page 213).

3 SI Unit specifications

Symbol	Protocol	Number of outputs	Communication connector
0	Without SI Unit		
QA	DeviceNet™	32	M12
QB		16	
NA	PROFIBUS DP	32	M12
NB		16	
NC		32	
ND		16	
VA	CC-Link	32	M12
VB		16	
DA	EtherCAT®	32	M12
DB		16	
FA	PROFINET	32	M12
FB		16	
EA	EtherNet/IP™	32	M12
EB		16	

*1: IP40 for the D-sub applicable communication connector specification. DIN rail cannot be mounted without SI Unit.

4 SI Unit output polarity

Nil	Positive common (NPN)
N	Negative common (PNP)

*: Ensure a match with the common specification of the valve to be used.
*: Without SI Unit, the symbol is nil.

5 Valve stations

In the case of the 32-output SI Unit

Symbol	Stations	Note
02	2 stations	Double wiring*1
⋮	⋮	
16	16 stations	Specified layout*2 (Available up to 32 solenoids)
02	2 stations	
⋮	⋮	
24	24 stations	

In the case of the 16-output SI Unit

Symbol	Stations	Note
02	2 stations	Double wiring*1
⋮	⋮	
08	8 stations	Specified layout*2 (Available up to 16 solenoids)
02	2 stations	
⋮	⋮	
16	16 stations	

*1: Double wiring: 2-position single, double, 3-position and 4-position valves can be used on all manifold stations.

Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout

*2: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.)

*: This also includes the number of blanking plate assembly.

*: For the model without the SI Unit (S0), note the maximum number of solenoids of the SI Unit that will be mounted. If the layout is specified, indicate it on the manifold specification sheet.

6 P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 24 stations)

7 SUP/EXH block assembly

Nil	Internal pilot
S	Internal pilot, Built-in silencer
R	External pilot

*: 3/5(E) port is plugged for the built-in silencer type.

*: When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

Refer to the page on the right for 8.

9 Mounting and Option

Symbol	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D□	DIN rail mounting	—	—
A□		●	●
B□		●	—

*: Enter the number of stations inside □ when it is larger than the number of valve stations. (Refer to "DIN Rail Option" below.)

*: Only direct mounting is available for Type 11 (Bottom ported).

*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

DIN Rail Option

Nil	Standard length	
0	Without DIN rail (with bracket)	
3	For 3 stations	Specify a longer rail than the total length of specified stations.
⋮	⋮	
24	For 24 stations	

*: When it is necessary to mount a DIN rail without an SI Unit, select D0 and order DIN rail length separately, referring to L3 in the dimensions. (Refer to page 249 for part numbers of DIN rail.)

For details about the EX260 Integrated-type (For Output) Serial Transmission System, refer to the **WEB catalog** or the Best Pneumatics No. 1 and the Operation Manual. For details about part numbers of SI Units to be mounted, refer to page 240 in this catalog. Please download the Operation Manual via SMC website, <http://www.smcworld.com>

Valve

Plug-in Sub-plate

Metal Base

Plug-in

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

8 A, B port size (Metric/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
C2	ø2	●	—	—	—	—
C3	ø3.2	●	—	—	—	—
C4	ø4	●	●	—	●	—
C6	ø6	●	●	●	●	●
C8	ø8	—	●	●	●	●
C10	ø10	—	—	●	—	●
C12	ø12	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
L4	Upward	ø4	●	●	—	—
L6		ø6	●	●	●	—
L8		ø8	—	●	—	—
L10		ø10	—	—	●	—
L12		ø12	—	—	●	—
B4	Downward	ø4	●	●	—	—
B6		ø6	●	●	●	—
B8		ø8	—	●	●	—
B10		ø10	—	—	●	—
B12		ø12	—	—	●	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø8	ø10	ø12	ø10	ø12

A, B port size (Inch/One-touch fitting)

Symbol	A, B port	Type 10/Side ported			Type 11/Bottom ported	
		SY3000	SY5000	SY7000	SY5000	SY7000
N1	ø1/8"	●	—	—	—	—
N3	ø5/32"	●	●	—	●	—
N7	ø1/4"	●	●	●	●	●
N9	ø5/16"	—	●	●	●	●
N11	ø3/8"	—	—	●	—	●
CM*1	Straight port, mixed sizes	●	●	●	●	●
LN3	Upward	ø5/32"	●	—	—	—
LN7		ø1/4"	●	●	—	—
LN9		ø5/16"	—	●	—	—
LN11	ø3/8"	—	—	●	—	
BN3	Downward	ø5/32"	●	—	—	—
BN7		ø1/4"	●	●	—	—
BN9		ø5/16"	—	●	—	—
BN11		ø3/8"	—	—	●	—
LM*1	Elbow port, mixed sizes (Including upward and downward piping)	●	●	●	—	—
P, E port size (One-touch fittings)		ø5/16"	ø3/8"	ø1/2"	ø3/8"	ø1/2"

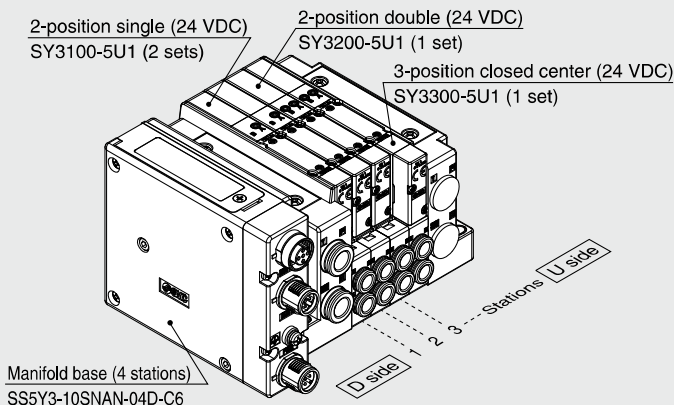
*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252).

How to Order Manifold Assembly

Example (SS5Y3-10SNAN-□)

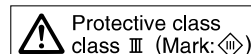


SS5Y3-10SNAN-04D-C6...1 set (Type 10 4-station manifold base part no.)
 *SY3100-5U1.....2 sets (2-position single part no.)
 *SY3200-5U1.....1 set (2-position double part no.)
 *SY3300-5U1.....1 set (3-position closed center part no.)

The asterisk denotes the symbol for assembly. Prefix it to the part numbers of the valve etc.

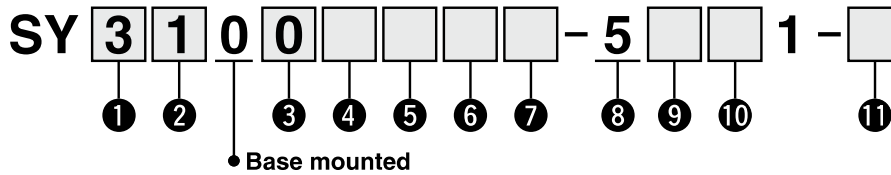
- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

*: When mixing top ported configurations, select from page 188. Specify on a manifold specification sheet if plugs are required on the A and B port on the manifold.



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



1 Series

3	SY3000
5	SY5000
7	SY7000

2 Type of actuation

1	2-position	Single
2		Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if the back pressure check valve is required for a valve with metal seal. Refer to page 256 for details. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when a valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

5	24 VDC
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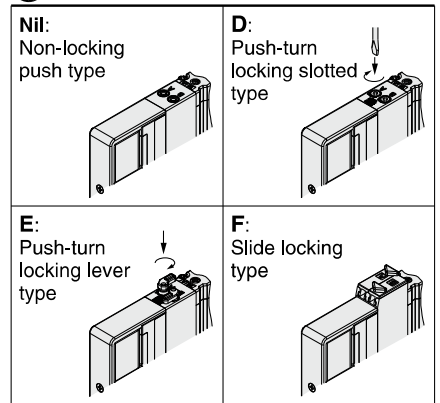
9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification	
R	—	●	Non-polar	
U	●			
S	—		Positive common	
Z	●			
NS	—			Negative common
NZ	●			

*: Select a valve from R, U, S or Z when the SI Unit output polarity is Nil (positive common). Select a valve from R, U, NS or NZ when the SI Unit output polarity is N (negative common).

*: Only "Z" and "NZ" types are available for with the power saving circuit.

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.** Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service.

Refer to page 244 for part numbers of the base gasket and mounting screw.

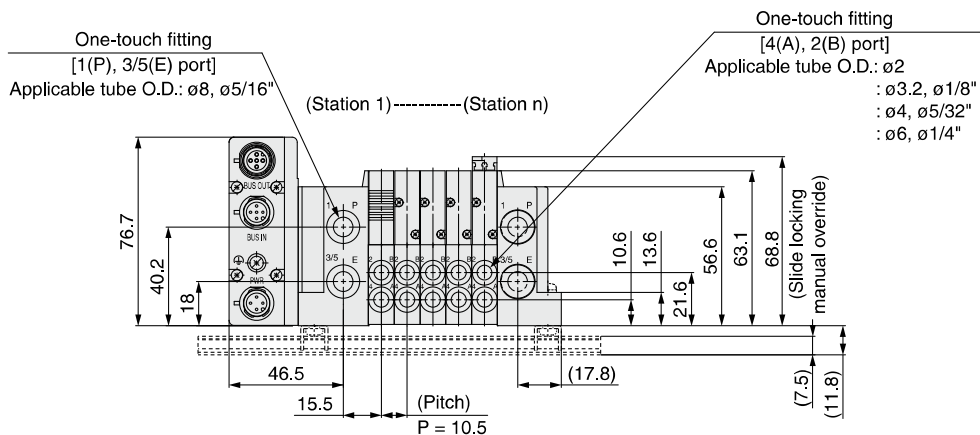
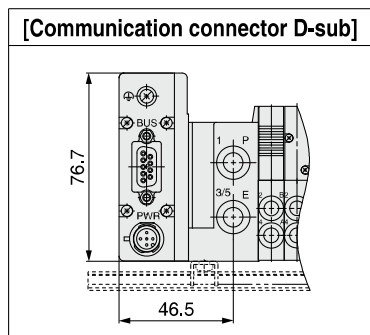
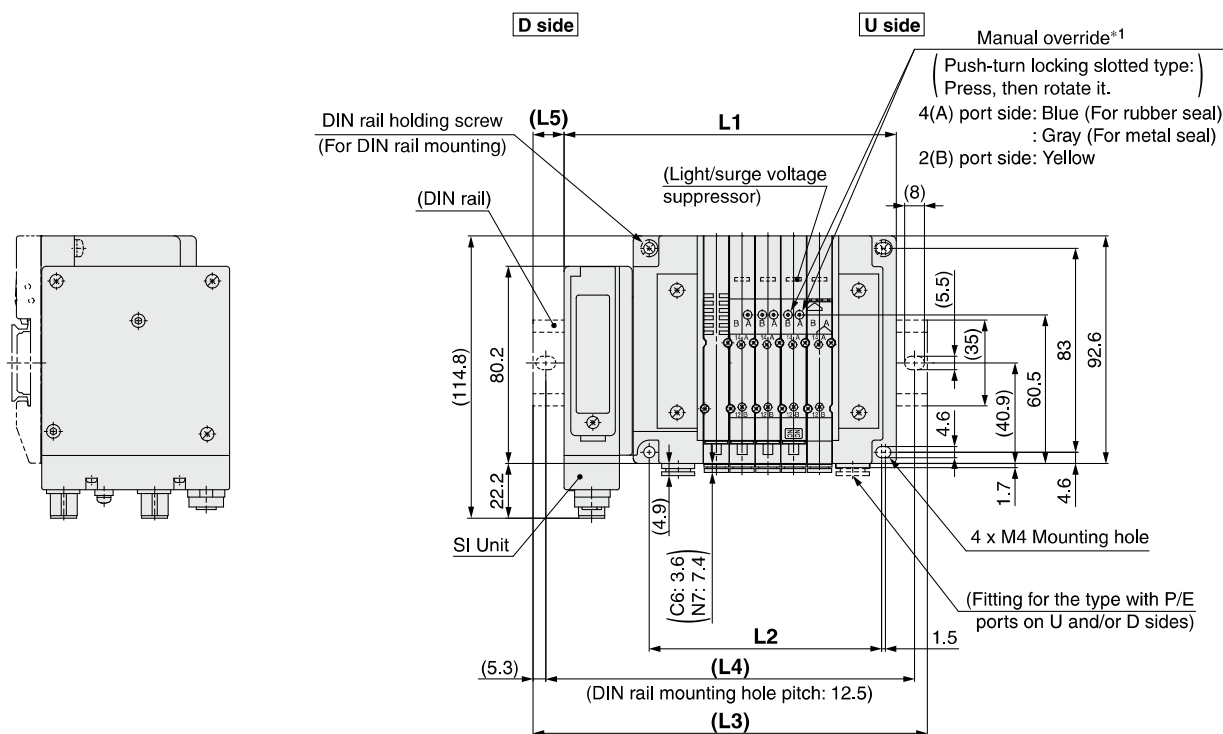
*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

Dimensions: Series **SY3000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
EX260

SS5Y3-10S□□-Stations $\begin{matrix} U \\ D \end{matrix}$ - $\begin{matrix} C6, C2 \\ C3, N1 \\ C4, N3 \\ C6, N7 \end{matrix}$ (D)



*1: Refer to page 205 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
 *: These figures show the "SS5Y3-10SQA-05D-C6".
 *: Refer to page 210 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
L1	103.7	114.2	124.7	135.2	145.7	156.2	166.7	177.2	187.7	198.2	208.7	219.2	229.7	240.2	250.7	261.2
L2	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.5	189	199.5	210	220.5
L3	135.5	148	148	160.5	173	185.5	198	210.5	223	223	235.5	248	260.5	273	285.5	285.5
L4	125	137.5	137.5	150	162.5	175	187.5	200	212.5	212.5	225	237.5	250	262.5	275	275
L5	16	17	11.5	12.5	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5	12

n: Stations	18	19	20	21	22	23	24
L1	271.7	282.2	292.7	303.2	313.7	324.2	334.7
L2	231	241.5	252	262.5	273	283.5	294
L3	298	310.5	323	335.5	348	348	360.5
L4	287.5	300	312.5	325	337.5	337.5	350
L5	13	14	15	16	17	12	13

Valve
Plug-in Sub-plate
Plug-in Metal Base
Type 50, 51, 52 Manifold Exploded View
Plug-in Connector Connecting Base
Type 10, 11, 12 Manifold Exploded View
One-touch Fittings/ Plug Assembly Part No.
Manifold Options

Series SY3000/5000/7000

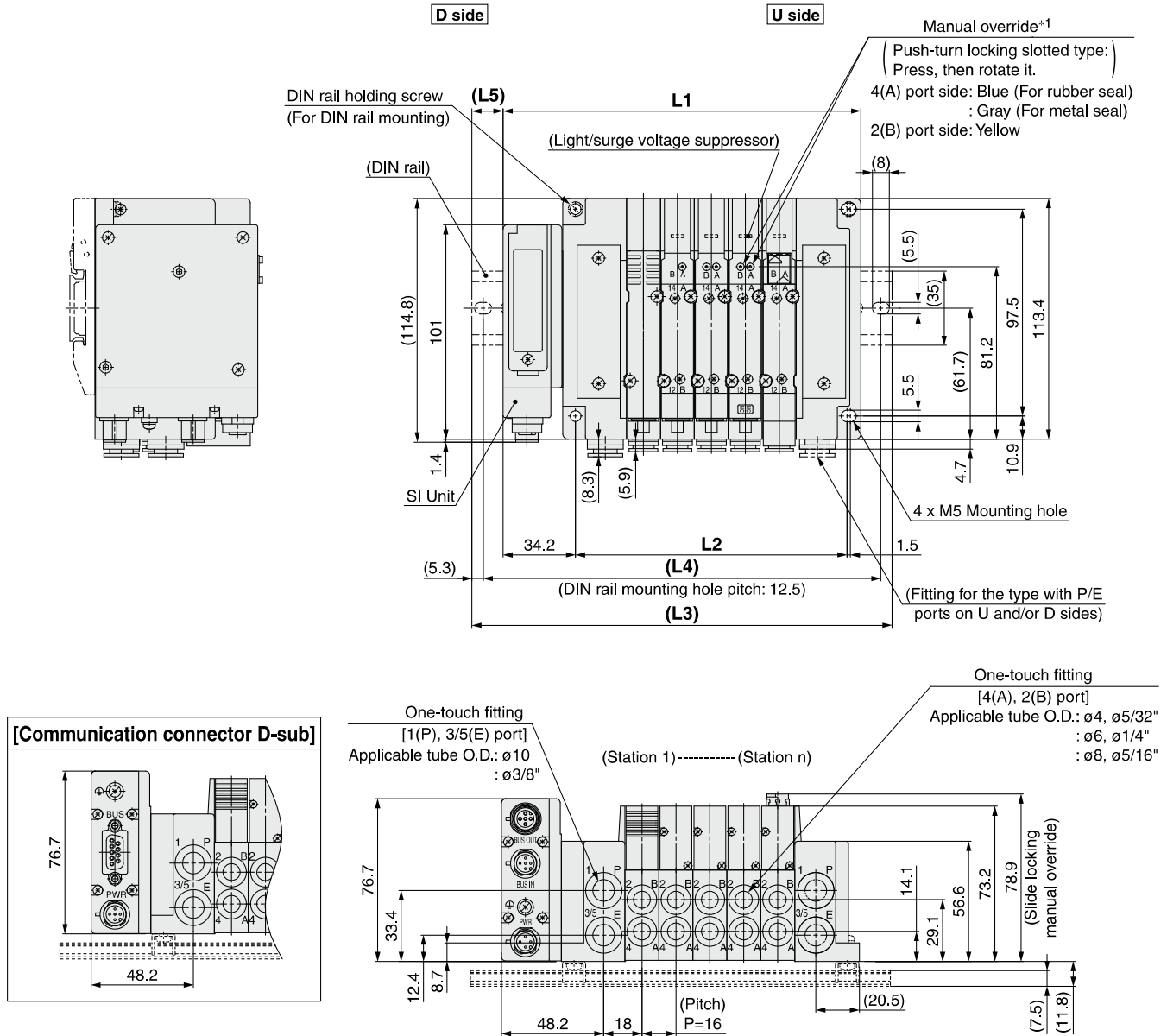
Dimensions: Series SY5000

Plug-in Connector Connecting Base

Type 10/Side Ported

EX260

SS5Y5-10S□□-Stations $\begin{matrix} \text{U} \\ \text{D} \\ \text{B} \end{matrix}$ - $\begin{matrix} \text{C4, N3} \\ \text{C6, N7} \\ \text{C8, N9} \end{matrix}$ (D)



*1: Refer to page 206 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.

*: These figures show the "SS5Y5-10SQA-05D-C8".

*: Refer to page 211 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
L1	120.7	136.7	152.7	168.7	184.7	200.7	216.7	232.7	248.7	264.7	280.7	296.7	312.7	328.7	344.7	360.7
L2	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304	320
L3	148	160.5	185.5	198	210.5	235.5	248	260.5	273	298	310.5	323	348	360.5	373	385.5
L4	137.5	150	175	187.5	200	225	237.5	250	262.5	287.5	300	312.5	337.5	350	362.5	375
L5	13.5	12	16.5	14.5	13	17.5	15.5	14	12	16.5	15	13	17.5	16	14	12.5

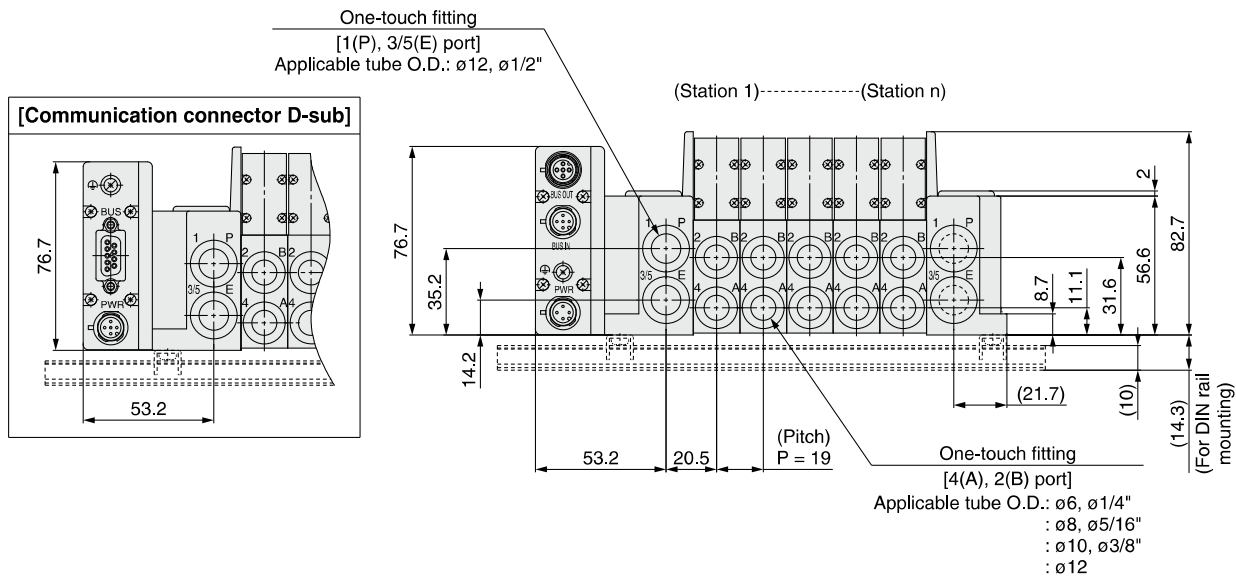
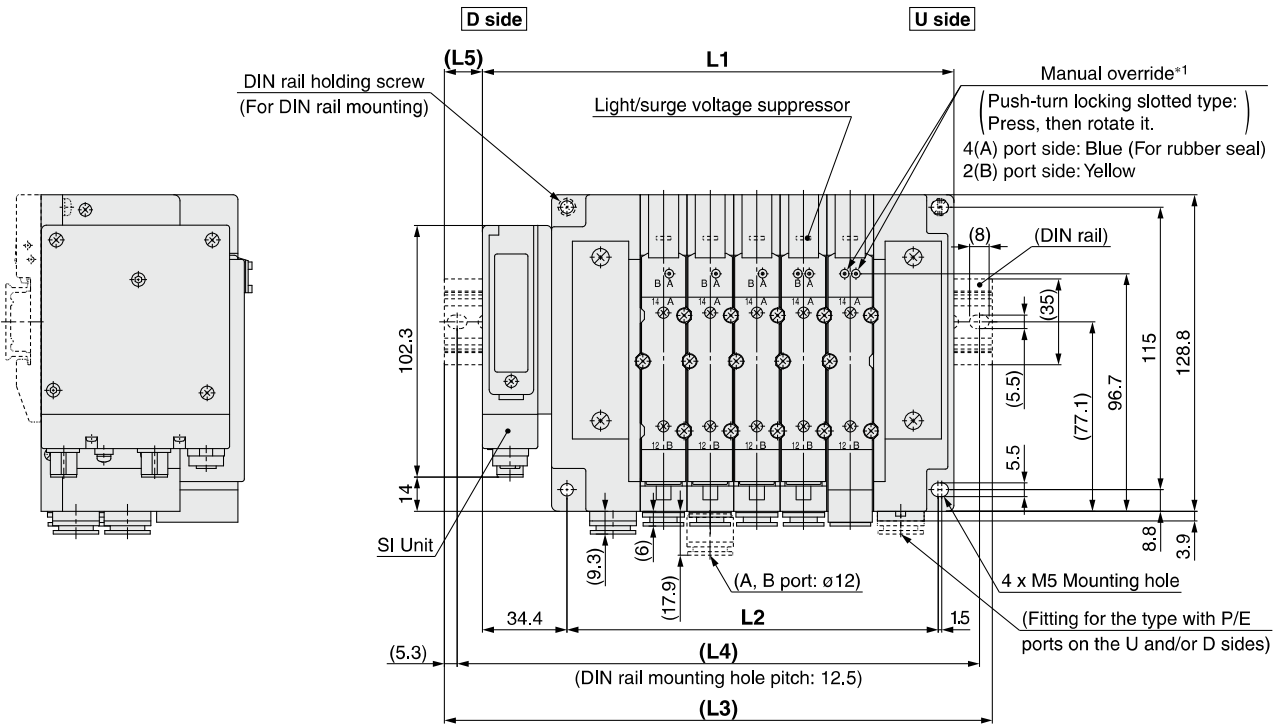
n: Stations	18	19	20	21	22	23	24
L1	376.7	392.7	408.7	424.7	440.7	456.7	472.7
L2	336	352	368	384	400	416	432
L3	410.5	423	435.5	448	473	485.5	498
L4	400	412.5	425	437.5	462.5	475	487.5
L5	17	15	13.5	11.5	16	14.5	12.5

Dimensions: Series **SY7000**

Plug-in
Connector Connecting Base

Type 10/Side Ported
EX260

SS5Y7-10S□□-Stations $\begin{matrix} \text{U} & \text{C6, N7} \\ \text{D} & \text{C8, N9} \\ \text{B} & \text{C10, N11 (D)} \\ & \text{C12} \end{matrix}$



*1: Refer to page 207 for dimensions of external pilot, silencer, elbow fittings and slide locking manual override.
*: These figures show the "SS5Y7-10SQA-05D-C10".
*: Refer to page 212 for dimensions of A or B port top-ported type.

n: Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	134.9	153.9	172.9	191.9	210.9	229.9	248.9	267.9	286.9	305.9	324.9	343.9	362.9	381.9	400.9	419.9	438.9	457.9	476.9	495.9	514.9	533.9	552.9
L2	94	113	132	151	170	189	208	227	246	265	284	303	322	341	360	379	398	417	436	455	474	493	512
L3	160.5	185.5	198	223	235.5	260.5	273	298	310.5	335.5	348	373	398	410.5	435.5	448	473	485.5	510.5	523	548	560.5	585.5
L4	150	175	187.5	212.5	225	250	262.5	287.5	300	325	337.5	362.5	387.5	400	425	437.5	462.5	475	500	512.5	537.5	550	575
L5	13	16	12.5	15.5	12.5	15.5	12	15	12	15	11.5	14.5	17.5	14.5	17.5	14	17	14	17	13.5	16.5	13.5	16.5

Series SY5000

SS5Y5-11 □ - Stations ^U_D

Plug-in Connector Connecting Base

Type 11/Bottom Ported
All Wirings

Valve

Plug-in Sub-plate

Plug-in Metal Base

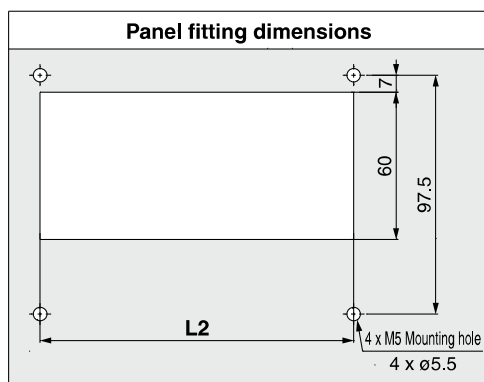
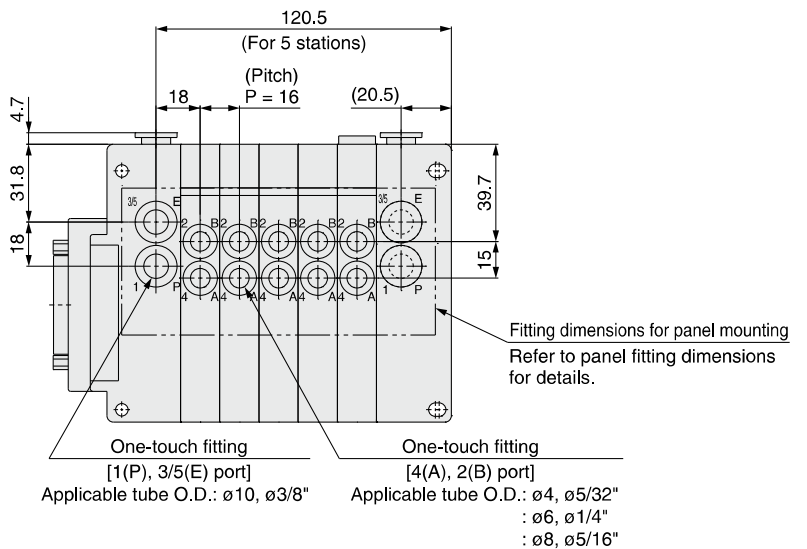
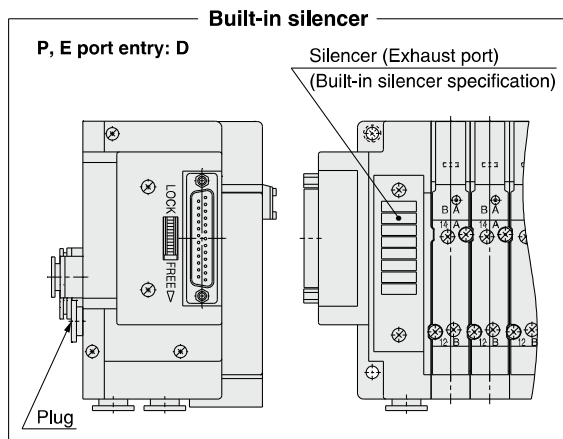
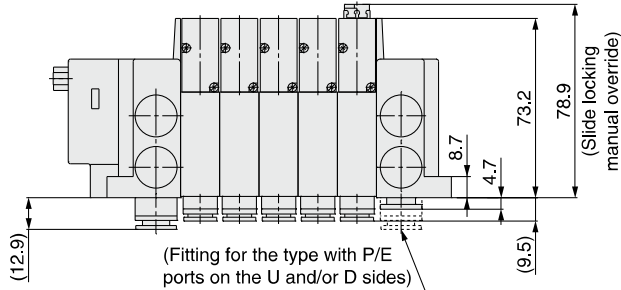
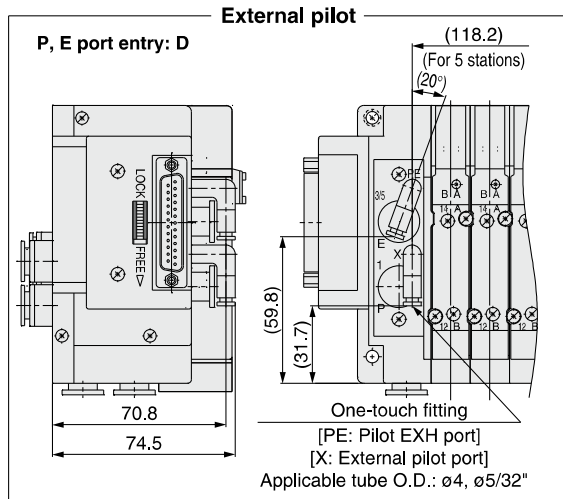
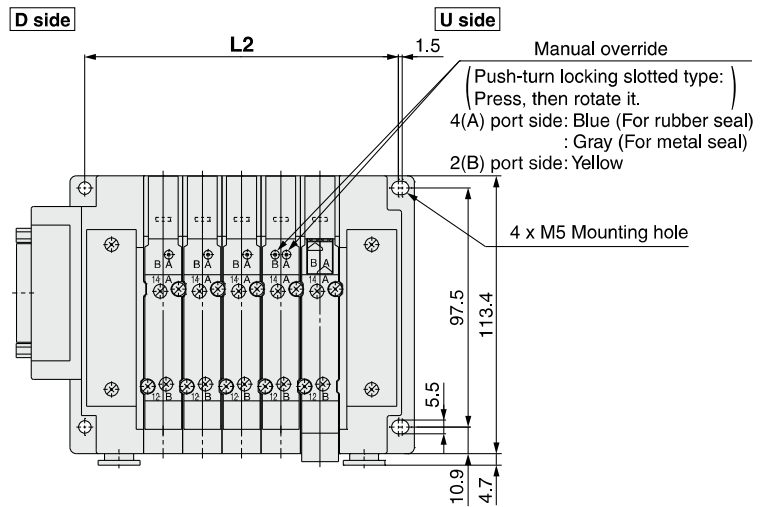
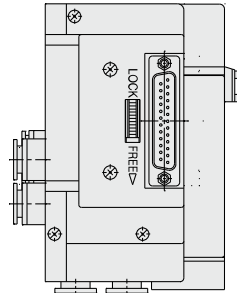
Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options



- *: These figures show the "SS5Y5-11F2-05D-C8".
- *: Refer to the below pages for L2 dimensions and other dimensions that are not specified in each wiring specification.
- D-sub connector <IP40>: P. 101
- D-sub connector <IP67>: P. 104
- Flat ribbon cable : P. 107
- Terminal block box : P. 119
- Lead wire : P. 129
- Circular connector : P. 139
- EX500 (128 points) : P. 149
- EX500 (64 points) : P. 155
- EX600 : P. 166, 167
- EX250 : P. 177
- EX260 : P. 185
- EX126 : P. 193
- EX120 : P. 201

Series SY3000/5000/7000

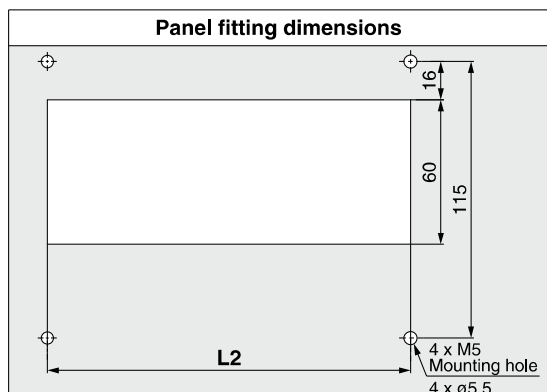
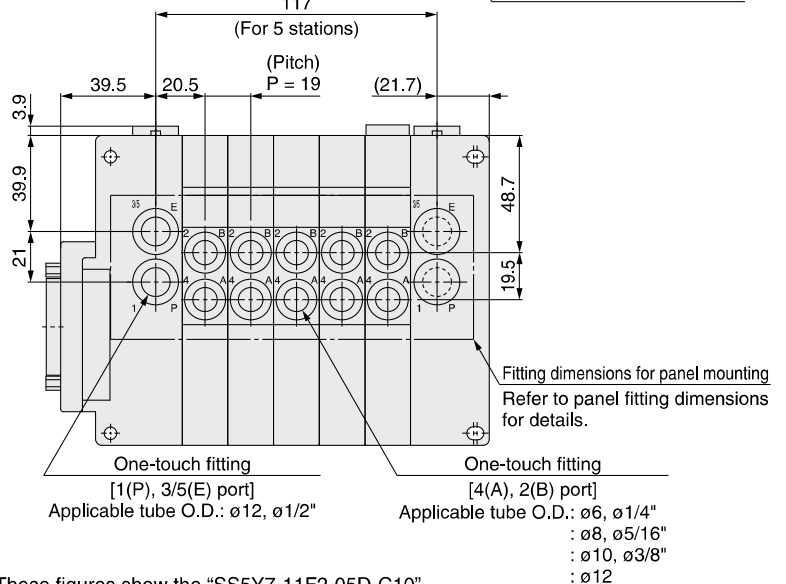
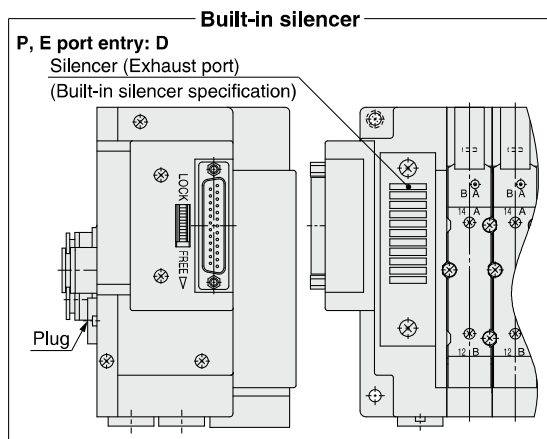
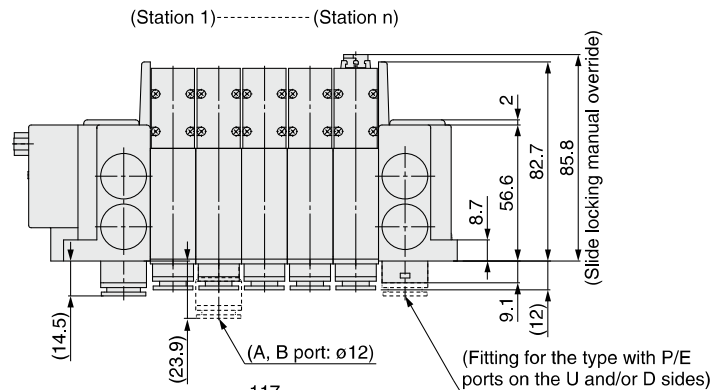
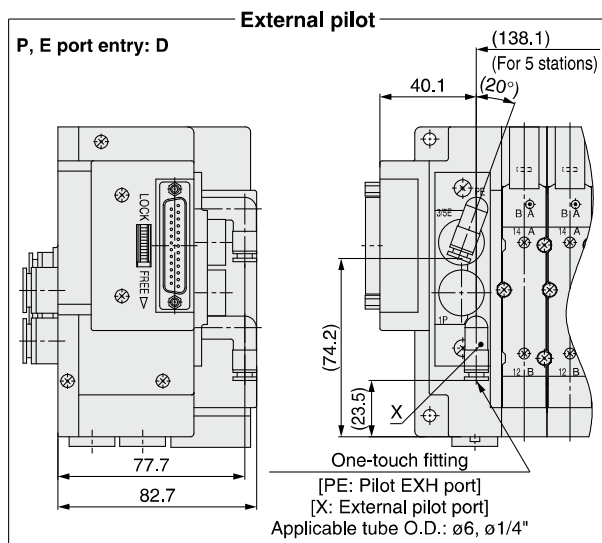
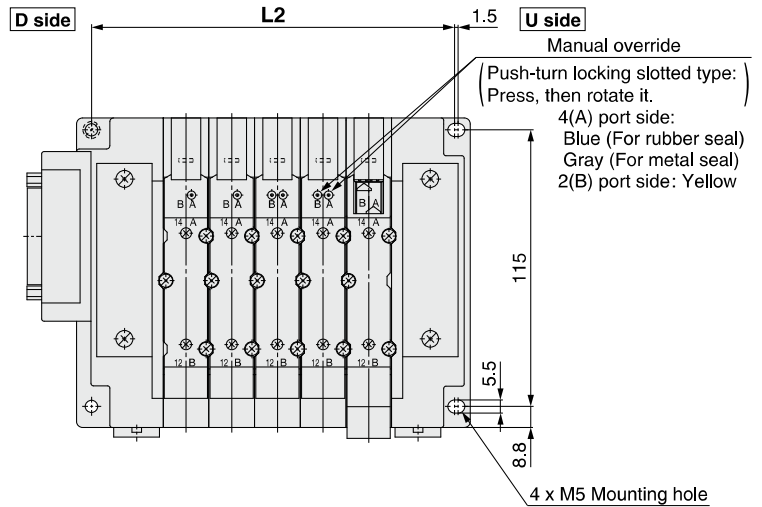
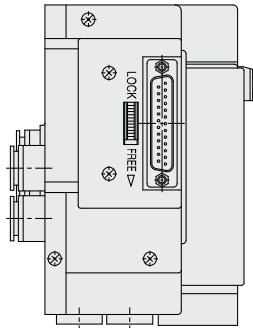
Series SY7000

SS5Y7-11 □ - Stations $\begin{matrix} U \\ D \\ B \end{matrix}$

Plug-in Connector Connecting Base

Type 11/Bottom Ported

All Wirings



*: These figures show the "SS5Y7-11F2-05D-C10".
*: Refer to the below pages for L2 dimensions and other dimensions that are not specified in each wiring specification.

D-sub connector <IP40>	: P. 102
D-sub connector <IP67>	: P. 105
Flat ribbon cable	: P. 108
Terminal block box	: P. 120
Lead wire	: P. 130
Circular connector	: P. 140
EX500 (128 points)	: P. 150
EX500 (64 points)	: P. 156
EX600	: P. 168, 169
EX250	: P. 178
EX260	: P. 186
EX126	: P. 194
EX120	: P. 202

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base: Plug-in Mixed Mounting Type Manifold

D-sub Connector (IP40/67) Flat Ribbon Cable PC Wiring Terminal Block Box (IP67)

Lead Wire (IP67) Circular Connector (IP67) EX500 (IP67) EX600 (IP67)

EX250 (IP67) EX260 (IP67) EX126 (IP67) EX120

Series SY3000/5000



The SY3000 can be mounted onto the SY5000 size manifold.

How to Order Manifold

Refer to page 222 for dimensions of Type 11/Bottom ported type.

SS5Y5 - M 10 F 1 - 05 U - C 8 6

Mixed Mounting Type

It is possible to mount the SY3000 size valves on all stations. In this case, there is no need to fill in part ③ in the order code. However, the manifold block width should be 12.5 mm.

① Type

10	Side ported
11	Bottom ported

② Connector type

Symbol	Type	Page	
F	D-sub connector	97	
FW	(25 pins)		
P	Flat ribbon cable	26 pins	
PG		20 pins	
PH		10 pins	
J	PC wiring (20 pins)	—	
G		With power supply terminal	
T	Terminal block box	115	
L1	Lead wire	34 cores	
L2		17 cores	
L3		9 cores	
M	Circular connector	135	
S□	Serial transmission	EX500 Gateway Decentralized System 2 (128 Points)	145
S□		EX500 Gateway Decentralized System (64 Points)	151
S6□		EX600	161
S□		EX250	173
S□		EX260	181
S4□		EX126	189
S3□		EX120	197

*: Refer to the pages shown in the table above for details.

③

• With Lead wire

Lead wire length

1	0.6 m
2	1.5 m
3	3 m

• With D-sub connector (IP40/67), Flat ribbon cable and PC wiring

Connector entry direction

1	Upward
2	Lateral

*: It is not necessary to select the items above for the valve with terminal block box or with circular connector or the serial transmission type.

④ Valve stations

Symbol	Stations	Note
02	2 stations	Some connectors have a limitation on the number of stations. Refer to the pages shown in the table "Connector type" for details.
:	:	
24	24 stations	

⑤ P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 24 stations)

*: Refer to page 161 for the EX600 and ⑦ on page 173 for the EX250.

⑦ Fitting type: One-touch fitting

Symbol	A, B port	
C	Straight	
L	Metric size	Upward* ²
B		Downward* ²
N	Inch size	Straight
LN		Upward* ²
BN		Downward* ²
CM* ¹	Mixed sizes	Straight
LM* ¹		Elbow (Including upward and downward piping)* ²

*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252). Elbow fittings are not available for Type 11 (Bottom ported).

*: Elbow fittings: $\phi 2$, $\phi 3.2$ and $\phi 1.8$ " are not available for the SY3000 series. $\phi 2$, $\phi 3.2$, $\phi 1.8$ " and $\phi 5/32$ " are not available for the SY5000 series.

8 SY5000: A, B port size

(Metric/One-touch fitting)

Symbol	Port size
4	ø4
6	ø6
8	ø8
Nil	For all stations of SY3000

(Inch/One-touch fitting)

Symbol	Port size
3	ø5/32"
7	ø1/4"
9	ø5/16"
Nil	For all stations of SY3000

*: No symbol needs to be specified when fitting type "CM", "LM" is selected.

9 SY3000: A, B port size

(Metric/One-touch fitting)

Symbol	Port size
2	ø2
3	ø3.2
4	ø4
6	ø6
8	ø8*1

(Inch/One-touch fitting)

Symbol	Port size
1	ø1/8"
3	ø5/32"
7	ø1/4"
9	ø5/16"*1

*1: The valve pitch is the same as the SY5000.

*: No symbol needs to be specified when fitting type "CM", "LM" is selected.

10 Mounting

Symbol	Mounting
Nil	Direct mounting
D	DIN rail mounting (With DIN rail)
D0	DIN rail mounting (Without DIN rail)
D3	For 3 stations
:	:
D24	For 24 stations

Specify a longer rail than the standard length. [The SY5000 valve is now at a mountable length (manifold block length of 16 mm).]

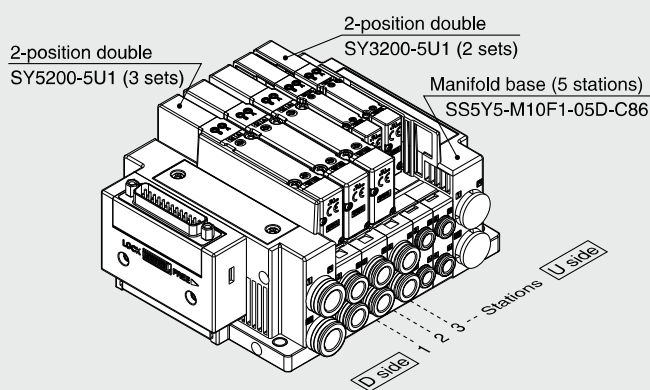
*: Only direct mounting is available for Type 11 (Bottom ported).

*: Refer to page 220 to determine the L3 using "Calculation formula" for the DIN rail length.

*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

How to Order Manifold Assembly

Example (SS5Y5-M10F1-□)

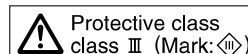


SS5Y5-M10F1-05D-C86 ... 1 set (Type M10 5-station manifold base part no.)
 *SY5200-5U1 3 sets (2-position double part no.)
 *SY3200-5U1 2 sets (2-position double part no.)

→ The asterisk denotes the symbol for assembly.
 Prefix it to the part numbers of the valve etc.

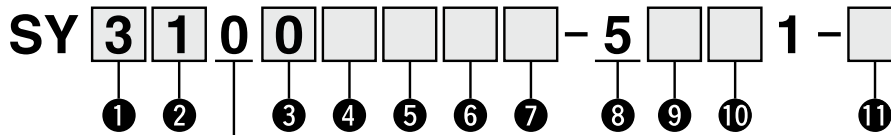
- The valve arrangement is numbered as the 1st station from the D side.
- Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

*: When mixing top ported configurations, select from page 226. In this case, use caution as there is also output on the A and B port on base side. Specify on a manifold specification sheet if plugs are required on the A and B port on base side.



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



• Base mounted

1 Series

3	SY3000
5	SY5000

2 Type of actuation

1		Single
2	2-position	Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if back pressure check valve is required for the valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

5	24 VDC
6	12 VDC

*: Only 24 VDC is available for the serial transmission type.

9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
Nil	—	—	Non-polar
R	—	●	
U	●		
S	—		
Z	●		Positive common
NS	—		
NZ	●	Negative common	

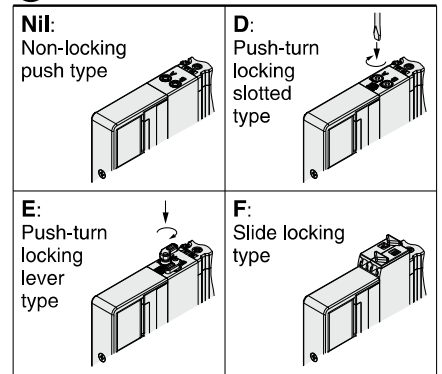
*: "Nil" is not available for the SI Unit manifold.

*: Only "Z" and "NZ" types are available for with the power saving circuit. Select a valve which is suited to the SI Unit output polarity or SI Unit specification when the SI Unit is selected.

Refer to the pages below for details.

EX500: P.147, 153 EX600: P.163
EX250: P.175 EX260: P.183
EX126: P.191 EX120: P.199

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service. Refer to page 244 for part numbers of the base gasket and mounting screw.

*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base: Plug-in Mixed Mounting Type Manifold

D-sub Connector (IP40/67) Flat Ribbon Cable PC Wiring Terminal Block Box (IP67)

Lead Wire (IP67) Circular Connector (IP67) EX500 (IP67) EX600 (IP67)

EX250 (IP67) EX260 (IP67) EX126 (IP67) EX120

Series SY5000/7000



The SY5000 can be mounted onto the SY7000 size manifold.

How to Order Manifold

Refer to page 223 for dimensions of Type 11/Bottom ported type.

SS5Y7 - M 10 F 1 - 05 U - C 10 8

Mixed Mounting Type

It is possible to mount the SY5000 size valves on all stations. In this case, there is no need to fill in part ③ in the order code. However, the manifold block width should be 19 mm.

① Type

10	Side ported
11	Bottom ported

② Connector type

Symbol	Type	Page	
F	D-sub connector	97	
FW	(25 pins)		
P	Flat ribbon cable	26 pins	
PG		20 pins	
PH		10 pins	
J	PC wiring (20 pins)	—	
G		With power supply terminal	
T	Terminal block box	115	
L1	Lead wire	34 cores	
L2		17 cores	
L3		9 cores	
M	Circular connector	135	
S□	Serial transmission	EX500 Gateway Decentralized System 2 (128 Points)	145
S□		EX500 Gateway Decentralized System (64 Points)	151
S6□		EX600	161
S□		EX250	173
S□		EX260	181
S4□		EX126	189
S3□		EX120	197

*: Refer to the pages shown in the table above for details.

③

• With Lead wire

Lead wire length

1	0.6 m
2	1.5 m
3	3 m

• With D-sub connector (IP40/67), Flat ribbon cable and PC wiring

Connector entry direction

1	Upward
2	Lateral

*: It is not necessary to select the items above for the valve with terminal block box or with circular connector or the serial transmission type.

④ Valve stations

Symbol	Stations	Note
02	2 stations	Some connectors have a limitation on the number of stations. Refer to the pages shown in the table "Connector type" for details.
:	:	
24	24 stations	

⑤ P, E port entry

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 24 stations)

*: Refer to page 161 for the EX600 and ⑦ on page 173 for the EX250.

⑦ Fitting type: One-touch fitting

Symbol	A, B port	
C	Straight	
L	Metric size	Upward* ²
B		Downward* ²
N	Inch size	Straight
LN		Upward* ²
BN		Downward* ²
CM* ¹	Mixed sizes	Straight
LM* ¹		Elbow (Including upward and downward piping)* ²

*1: Indicate the sizes on the manifold specification sheet in the case of "CM", "LM".

The direction of P, E port fittings is the same as for A, B port. If selecting "LM", indicate it on the manifold specification sheet for the P, E port fitting direction.

*2: To avoid interference with the body or piping, select downward elbow port when mounting the optional spacer assembly (pages 250 to 252). Elbow fittings are not available for Type 11 (Bottom ported).

*: Elbow fittings: $\phi 1/4"$ and $\phi 5/16"$ are not available.

8 SY7000: A, B port size

(Metric/One-touch fitting)

Symbol	Port size
6	ø6
8	ø8
10	ø10
12	ø12
Nil	For all stations of SY5000

(Inch/One-touch fitting)

Symbol	Port size
7	ø1/4"
9	ø5/16"
11	ø3/8"
Nil	For all stations of SY5000

*: No symbol needs to be specified when fitting type "CM", "LM" is selected.

9 SY5000: A, B port size

(Metric/One-touch fitting)

Symbol	Port size
6	ø6
8	ø8
10	ø10
12	ø12

(Inch/One-touch fitting)

Symbol	Port size
7	ø1/4"
9	ø5/16"
11	ø3/8"

*: The valve pitch is 19 mm, the same as the SY7000.
*: No symbol needs to be specified when fitting type "CM", "LM" is selected.

10 Mounting and Option

Symbol	Mounting	Option	
		Name plate	Station number
Nil	Direct mounting	—	—
AA		●	●
BA		●	—
D□	DIN rail mounting	—	—
A□		●	●
B□		●	—

DIN Rail Option

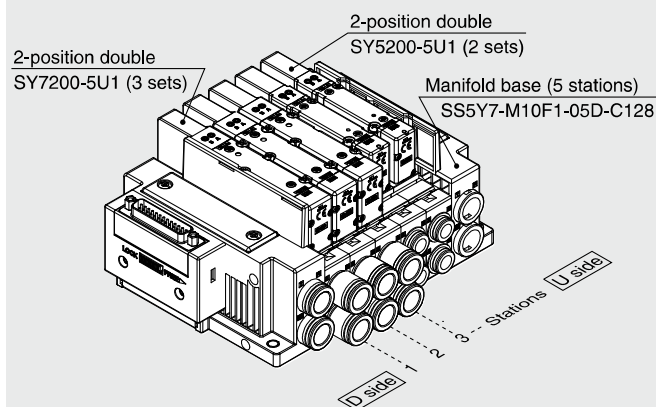
Nil	Direct mounting
0	Without DIN rail (with bracket)
3	For 3 stations
:	:
24	For 24 stations

Specify a longer rail than the total length of specified stations.

*: Enter the number of stations inside □ when it is larger than the number of valve stations. (Refer to "DIN Rail Option" above.)
*: Only direct mounting is available for Type 11 (Bottom ported).
*: Refer to page 220 to determine the L3 using "Calculation formula" for the DIN rail length. (For the SY3000 and SY5000 mixed mounting type)
*: The manifold block width is 19 mm for both the SY5000 and SY7000 sizes.
*: Refer to page 271 for the fixation of DIN rail mounting type manifold.

How to Order Manifold Assembly

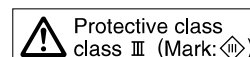
Example (SS5Y7-M10F1-□)



SS5Y7-M10F1-05D-C128.. 1 set (Type M10 5-station manifold base part no.)
 *SY7200-5U1 3 sets (2-position double part no.)
 *SY5200-5U1 2 sets (2-position double part no.)
 → The asterisk denotes the symbol for assembly.
 Prefix it to the part numbers of the valve etc.

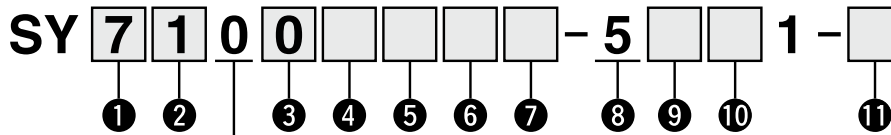
• The valve arrangement is numbered as the 1st station from the D side.
 • Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.

*: When mixing top ported configurations, select from page 226.
 In this case, use caution as there is also output on the A and B port on base side.
 Specify on a manifold specification sheet if plugs are required on the A and B port on base side.



How to Order Valves (With mounting screw)

Refer to page 13 for valve specifications.



• Base mounted

1 Series

5	SY5000
7	SY7000

2 Type of actuation

1		Single
2	2-position	Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A*1	4-position dual 3-port	N.C./N.C.
B*1		N.O./N.O.
C*1		N.C./N.O.

*1: Only rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nil	Internal pilot
R	External pilot

5 Back pressure check valve (Built-in valve type)

Nil	None
H	Built-in

*: Only rubber seal type. Manifold installed type is available if back pressure check valve is required for the valve with metal seal. Refer to page 256 for Ordering Example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*: The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1: Only metal seal type is available for the high pressure type.

7 Coil type

Nil	Standard
T	With power saving circuit (Continuous duty type)

*: Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*: Be careful of the energizing time when the power saving circuit is selected. Refer to page 268 for details.

8 Rated voltage

5	24 VDC
6	12 VDC

*: Only 24 VDC is available for the serial transmission type.

9 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
Nil	—	—	Non-polar
R	—	●	
U	●		
S	—		
Z	●		Positive common
NS	—		
NZ	●	Negative common	

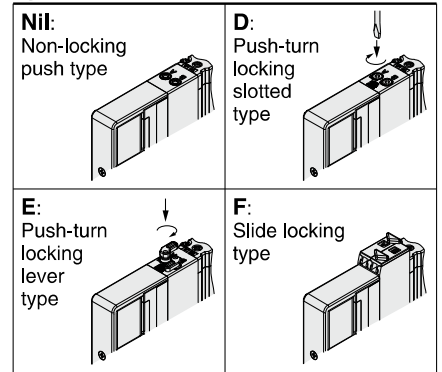
*: "Nil" is not available for the SI Unit manifold.

*: Only "Z" and "NZ" types are available for with the power saving circuit. Select a valve which is suited to the SI Unit output polarity or SI Unit specification when the SI Unit is selected.

Refer to the pages below for details.

EX500: P.147, 153 EX600: P.163
EX250: P.175 EX260: P.183
EX126: P.191 EX120: P.199

10 Manual override



*: Refer to page 31 for with the safety slide locking manual override.

11 Type of mounting screw

Nil	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Falling-out-prevention type)
H	Hexagon socket head cap screw (Falling-out-prevention type)

*: For "K" and "H", the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*: **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service. Refer to page 244 for part numbers of the base gasket and mounting screw.

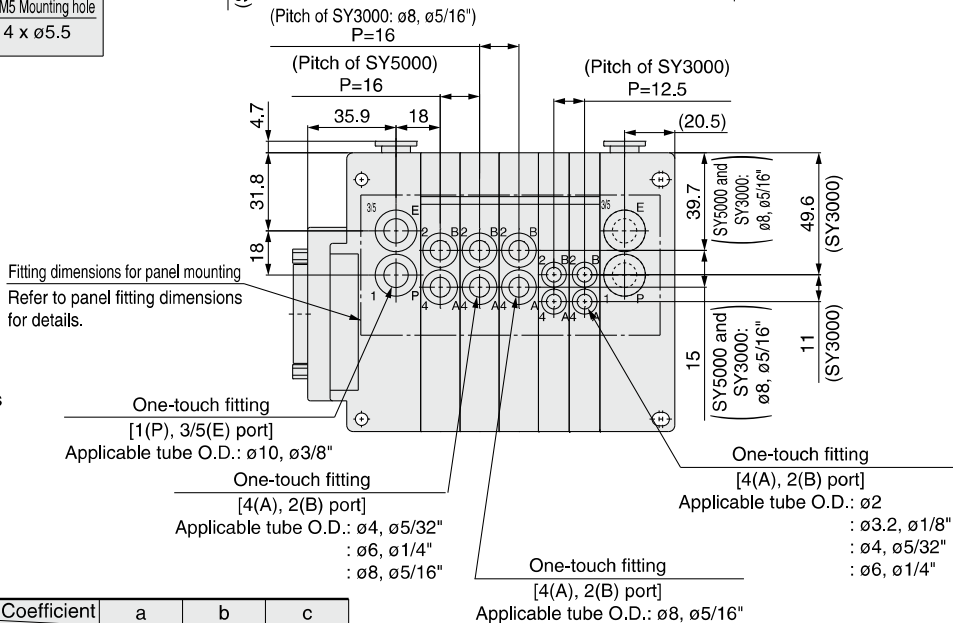
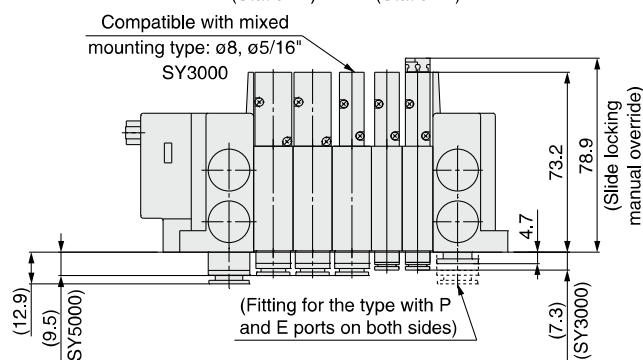
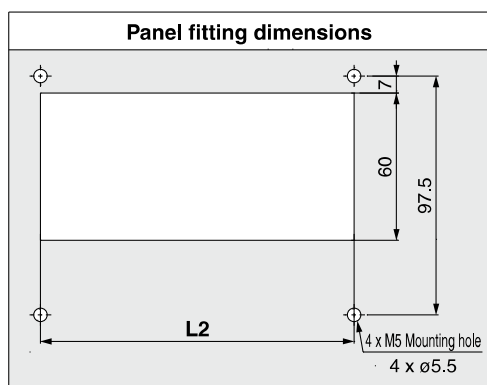
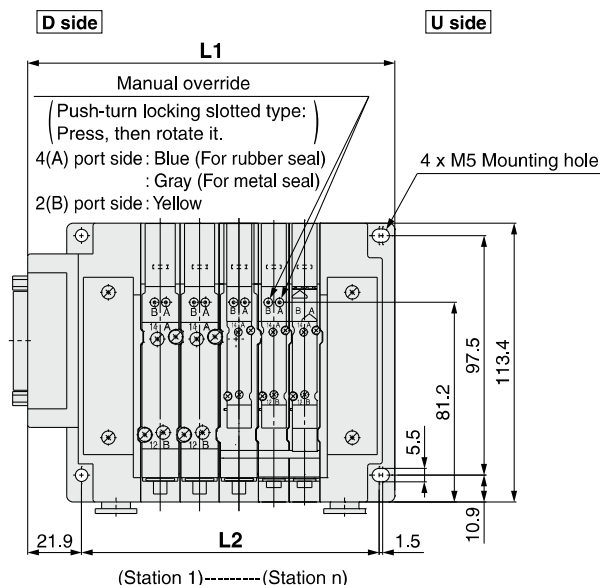
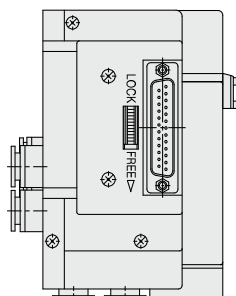
*: "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly, interface regulator or double check spacer assembly with residual pressure release valve.

Dimensions: Series **SY3000/5000**

Plug-in
Connector Connecting Base

Type 11/Bottom Ported
Mixed Mounting Type

SS5Y5-M11 □ - Stations $\frac{U}{D}$
 $\frac{B}{B}$



Calculation formula for dimensions

$$L1 = 12.5 \times n1 + 16 \times n2 + a + b \times n3$$

$$L2 = 12.5 \times n1 + 16 \times n2 + 48$$

$$L6 = b \times n3 + c$$

- n1: Number of valve stations of the SY3000
- n2: Number of valve stations of the SY5000 (Including the stations of the SY3000: ø8, ø5/16")
- n3: Number of I/O Units or input block stations

*: Refer to pages 166 and 167 for dimensions of the EX600 serial transmission with I/O Unit and page 177 for the EX250 serial transmission with input block when L6, b and c are used for the calculation formula.

Coefficient	a	b	c
D-sub connector <IP40>, Flat ribbon cable or PC wiring	76.4	—	—
D-sub connector <IP67>	90.5	—	—
Terminal block box or Serial transmission: EX126	149.3	—	—
Lead wire or Circular connector	97	—	—
EX500 Gateway Decentralized System 2 (128 Points)	88.7	—	—
EX500 Gateway Decentralized System (64 Points)	88.5	—	—
Serial transmission: EX600 (M12 connector)	141.5	47	81.5
Serial transmission: EX600 (7/8 inch connector)	158	47	81.5
Serial transmission: EX250	141.5	21	81.5
Serial transmission: EX260	88.7	—	—
Serial transmission: EX120	84.7	—	—

*: Refer to page 208 for dimensions of external pilots and built-in silencers.

Valve
Plug-in Sub-plate
Plug-in Metal Base
Type 50, 51, 52 Manifold Exploded View
Plug-in Connector Connecting Base
Type 10, 11, 12 Manifold Exploded View
One-touch Fittings/ Plug Assembly Part No.
Manifold Options

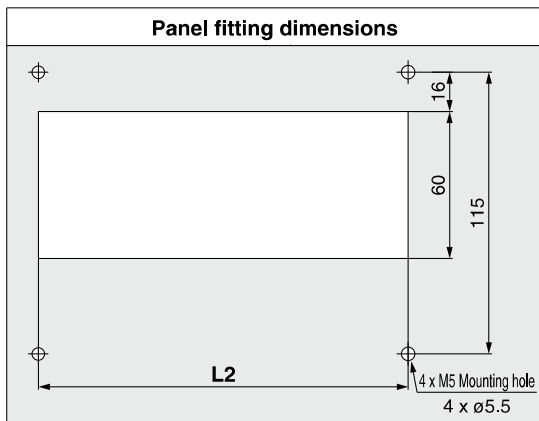
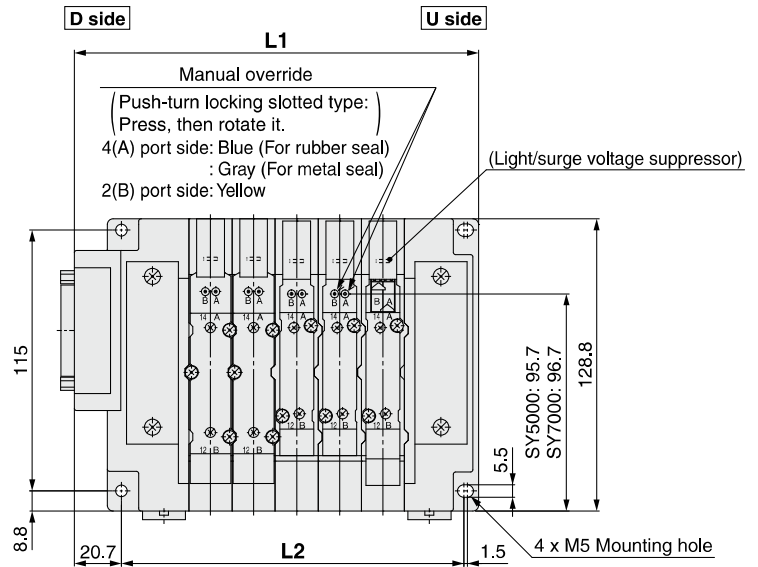
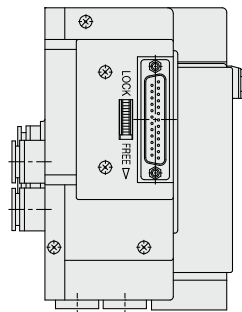
Series SY3000/5000/7000

Dimensions: Series SY5000/7000

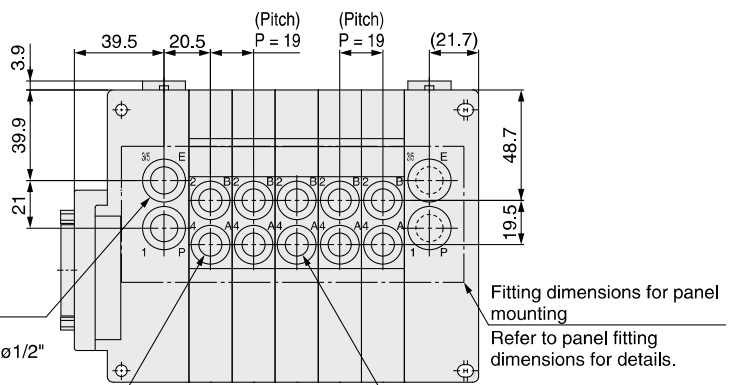
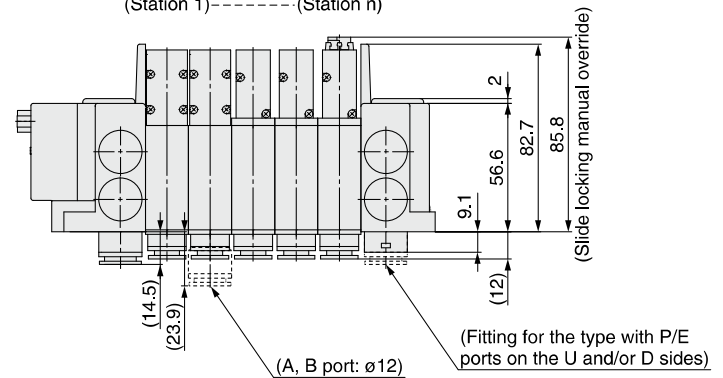
Plug-in Connector Connecting Base

Type 11/Bottom Ported Mixed Mounting Type

SS5Y7-M11 □ - Stations $\frac{U}{D}$ _B



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



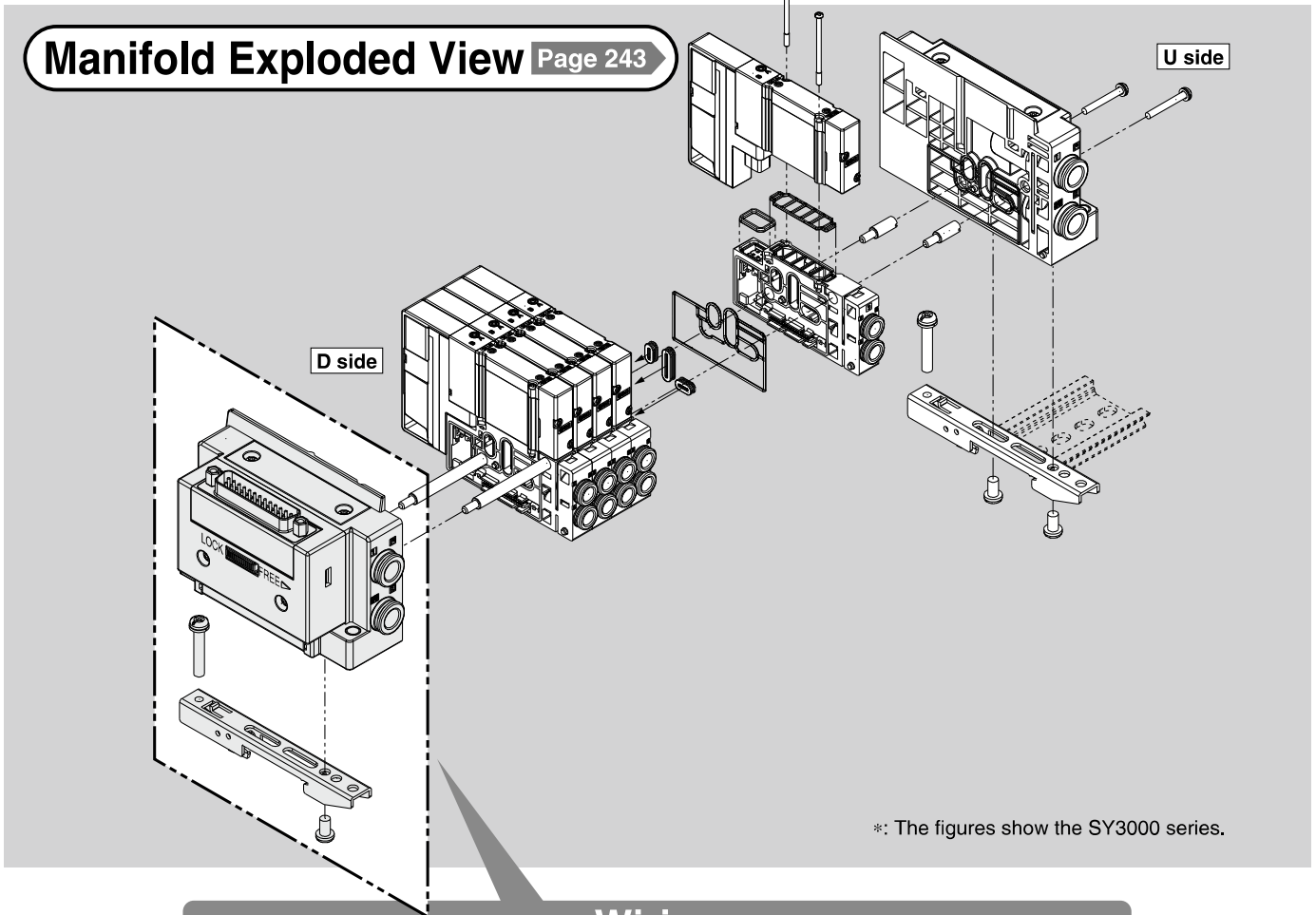
*: Refer to page 209 for dimensions of external pilots and built-in silencers.

*: Refer to the below pages for L1, L2 dimensions and other dimensions that are not specified in each wiring specification.

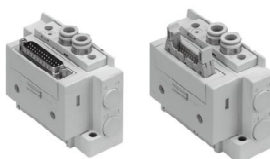











Dimensions of Type 11/Bottom ported: P. 209

D-sub connector <IP40>	: P. 102
D-sub connector <IP67>	: P. 105
Flat ribbon cable	: P. 108
Terminal block box	: P. 120
Lead wire	: P. 130
Circular connector	: P. 140
EX500 (128 points)	: P. 150
EX500 (64 points)	: P. 156
EX600	: P. 168, 169
EX250	: P. 178
EX260	: P. 186
EX126	: P. 194
EX120	: P. 202

Series SY3000/5000/7000 Type 10, 11, 12 Connector Connecting Base Manifold Exploded View

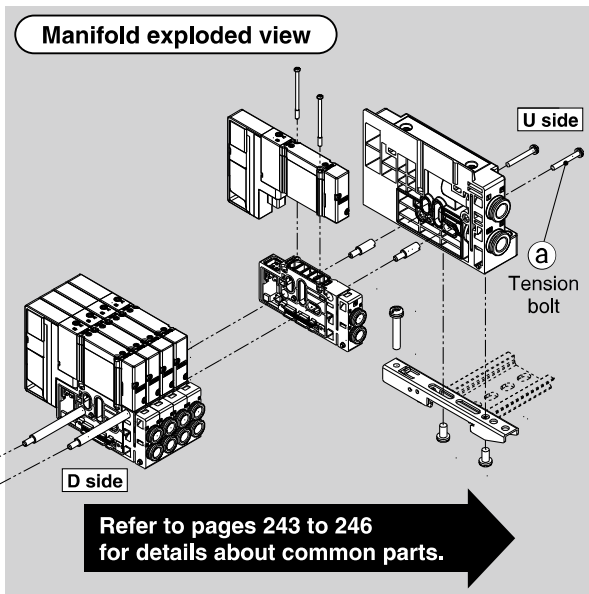
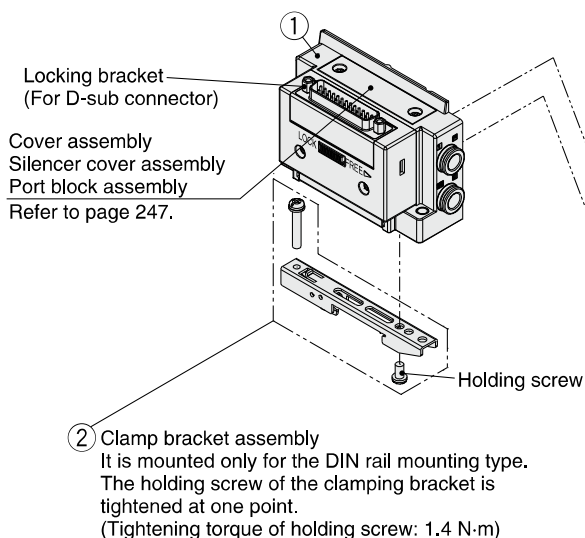


Wiring

<p>D-sub Connector <IP40>/Flat Ribbon Cable Page 230</p> 	<p>D-sub Connector <IP67> Page 231</p> 	<p>Terminal Block Box Page 232</p> 	<p>Lead Wire Page 233</p> 
<p>Circular Connector Page 234</p> 	<p>EX500 Gateway Decentralized System 2 (128 Points) Page 235</p> 	<p>EX500 Gateway Decentralized System (64 Points) Page 236</p> 	<p>EX600 Page 237</p> 
<p>EX250 Page 239</p> 	<p>EX260 Page 240</p> 	<p>EX126 Page 241</p> 	<p>EX120 Page 242</p> 

Wiring

D-sub Connector <IP40>/Flat Ribbon Cable



Manifold Parts No.

① SUP/EXH block assembly

SY 3 0M-1-11 A 1-C8 -

• Series

3	SY3000
5	SY5000
7	SY7000

• SUP/EXH block assembly

11	D-sub connector <IP40>
12	Flat ribbon cable (26 pins)
13	Flat ribbon cable (20 pins)
14	Flat ribbon cable (10 pins)
15	PC wiring (20 pins)
35	PC wiring (20 pins) with power supply terminal

• Connector entry direction

1	Upward
2	Lateral

• Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	Top
RV	—	●	—	
VP	●	—	●*1	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side), E port is plugged.

*2: "B" for bottom ported can be selected for the SY5000/7000 series.

• Mounting

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

• P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note	
C8	ø8	●	—	—	Side/Bottom/Top ported	
C10	ø10	—	●	—	Metric size	
C12	ø12	—	—	●	Metric size	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported	
N11	ø3/8"	—	●	—	Inch size	
N13	ø1/2"	—	—	●	Inch size	
L8	ø8	●	—	—	Side ported	
L10	ø10	—	●	—		Metric size
L12	ø12	—	—	●		Metric size
LN9	ø5/16"	●	—	—	Side ported	
LN11	ø3/8"	—	●	—		Inch size
LN13	ø1/2"	—	—	●		Inch size
B8	ø8	●	—	—	Side ported	
B10	ø10	—	●	—		Metric size
B12	ø12	—	—	●		Metric size
BN9	ø5/16"	●	—	—	Side ported	
BN11	ø3/8"	—	●	—		Inch size
BN13	ø1/2"	—	—	●		Inch size
00*1	Plug	●	●	●	P/E port entry on one side or Top ported	
00U*2	Plug	●	●	●		

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

*2: "00U" is available only for the D-sub connector type and it has an inch size locking bracket.

SUP/EXH block assembly (D side)

accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
a Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

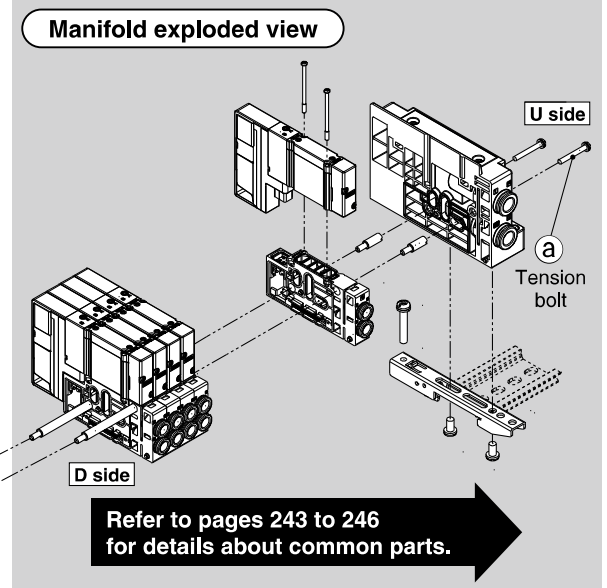
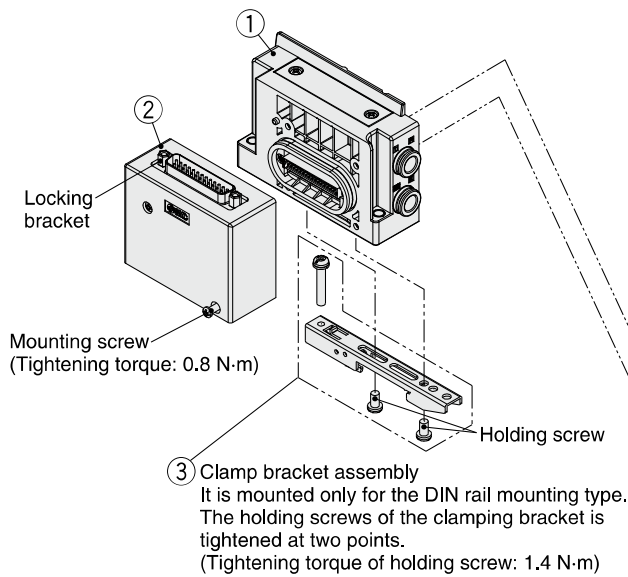
One-touch Fittings/
Plug Assembly Part No.

Manifold Options

Series SY3000/5000/7000

Wiring

D-sub Connector <IP67>



Manifold Parts No.

① SUP/EXH block assembly

SY 3 0M-1-1A [] - C8 - [] • Mounting

• Series

3	SY3000
5	SY5000
7	SY7000

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

• P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size
C10	ø10	—	●	—	Side/Bottom/Top ported Metric size
C12	ø12	—	—	●	Side/Bottom/Top ported Metric size
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size
N11	ø3/8"	—	●	—	Side/Bottom/Top ported Inch size
N13	ø1/2"	—	—	●	Side/Bottom/Top ported Inch size
L8	ø8	●	—	—	Side ported Metric size
L10	ø10	—	●	—	Side ported Metric size
L12	ø12	—	—	●	Side ported Metric size
LN9	ø5/16"	●	—	—	Side ported Inch size
LN11	ø3/8"	—	●	—	Side ported Inch size
LN13	ø1/2"	—	—	●	Side ported Inch size
B8	ø8	●	—	—	Side ported Metric size
B10	ø10	—	●	—	Side ported Metric size
B12	ø12	—	—	●	Side ported Metric size
BN9	ø5/16"	●	—	—	Side ported Inch size
BN11	ø3/8"	—	●	—	Side ported Inch size
BN13	ø1/2"	—	—	●	Side ported Inch size
00*1	Plug	●	●	●	P/E port entry on one side or Top ported
00U*2	Plug	●	●	●	P/E port entry on one side or Top ported

• Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	
RV	—	●	—	Top
VP	●	—	●*1	
B	●	—	—	
BS	●	—	●	
BR	—	●	—	Bottom

*1: For silencer (supply side), E port is plugged.

*: "B" for bottom ported can be selected for the SY5000/7000 series.

SUP/EXH block assembly (D side)

accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
a Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② D-sub connector block assembly <IP67>

Part no.	Connector direction	Locking bracket
SY30M-14-9A1	Top	Metric size
SY30M-14-9A2	Side	
SY30M-14-9A1U	Top	Inch size
SY30M-14-9A2U	Side	

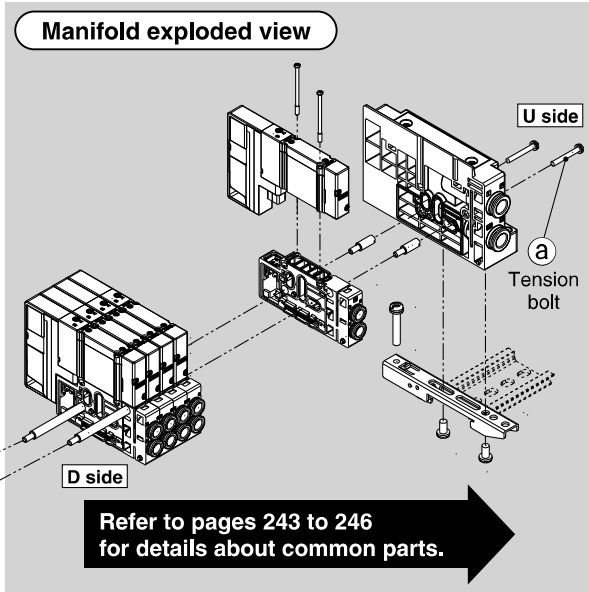
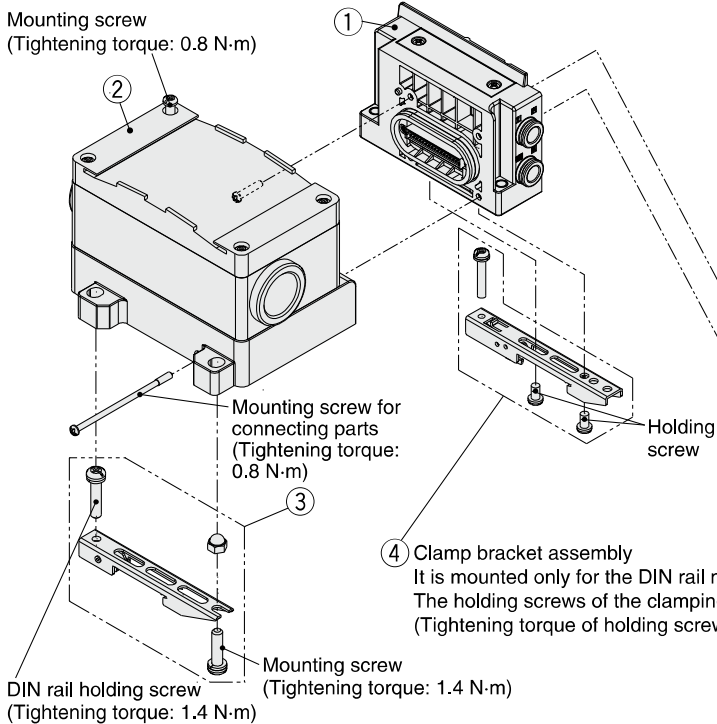
③ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

Wiring

Terminal Block Box



Manifold Parts No.

① SUP/EXH block assembly

SY **3** 0M-1-1A - C8 -

Series

3	SY3000
5	SY5000
7	SY7000

Mounting

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

● Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	—	
R	—	●	—	
V	●	—	—	Top
RV	—	●	—	
VP	—	—	●*1	
B	●	—	—	Bottom
BS	●	—	—	
BR	—	●	—	

*1: For silencer (supply side), E port is plugged.

*: "B" for bottom ported can be selected for the SY5000/7000 series.

● P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note	
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size	
C10	ø10	—	●	—		
C12	ø12	—	—	●		
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size	
N11	ø3/8"	—	●	—		
N13	ø1/2"	—	—	●		
L8	Upward elbow	ø8	●	—	Side ported Metric size	
L10		ø10	—	●		
L12		ø12	—	—		●
LN9	Downward elbow	ø5/16"	●	—	Side ported Inch size	
LN11		ø3/8"	—	●		
LN13		ø1/2"	—	—		●
B8	Upward elbow	ø8	●	—	Side ported Metric size	
B10		ø10	—	●		
B12		ø12	—	—		●
BN9	Downward elbow	ø5/16"	●	—	Side ported Inch size	
BN11		ø3/8"	—	●		
BN13		ø1/2"	—	—		●
00*1	Plug	●	●	●	P/E port entry on one side or Top ported	

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
① Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② Terminal block box housing assembly

VVQC1000-T0-1

③ Clamp bracket assembly for terminal block box

SY30M-15-4A

*: Part number is for one assembly.

④ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

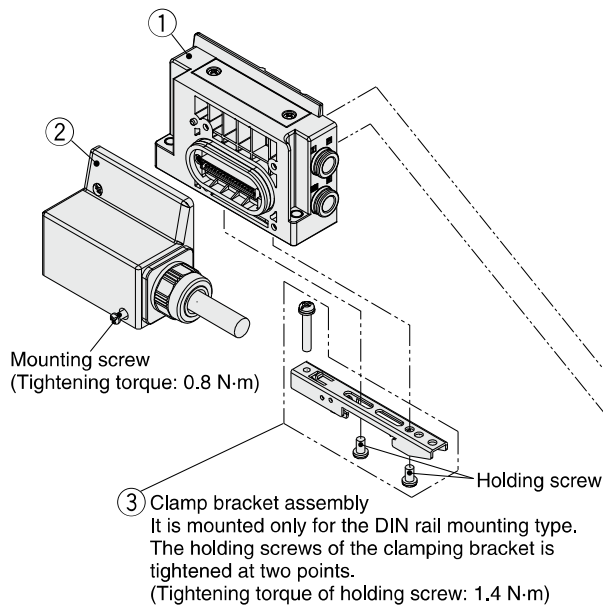
One-touch Fittings/
Plug Assembly Part No.

Manifold Options

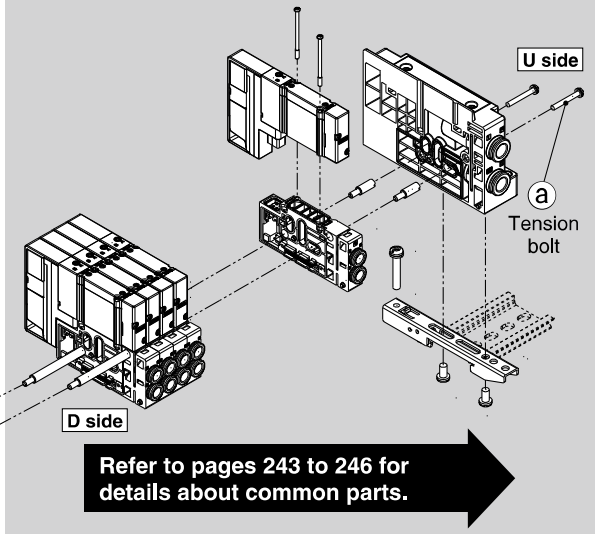
Series SY3000/5000/7000

Wiring

Lead Wire



Manifold exploded view



Manifold Parts No.

① SUP/EXH block assembly

SY 3 0M-1-1A - C8 - Mounting

Series

3	SY3000
5	SY5000
7	SY7000

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	
RV	—	●	—	Top
VP	●	—	● ^{*1}	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side). E port is plugged.

*: "B" for bottom ported can be selected for the SY5000/7000 series.

P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size
C10	ø10	—	●	—	
C12	ø12	—	—	●	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size
N11	ø3/8"	—	●	—	
N13	ø1/2"	—	—	●	
L8	ø8	●	—	—	Side ported Metric size
L10	ø10	—	●	—	
L12	ø12	—	—	●	
LN9	ø5/16"	●	—	—	Side ported Inch size
LN11	ø3/8"	—	●	—	
LN13	ø1/2"	—	—	●	
B8	ø8	●	—	—	Side ported Metric size
B10	ø10	—	●	—	
B12	ø12	—	—	●	
BN9	ø5/16"	●	—	—	Side ported Inch size
BN11	ø3/8"	—	●	—	
BN13	ø1/2"	—	—	●	
00 ^{*1}	Plug	●	●	●	P/E port entry on one side or Top ported

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
a Tension bolt	None ^{*1}	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② Lead wire connector block assembly

SY30M-14-4A - -

Number of cores

1	34
2	17
3	9

Lead wire length [m]

1	0.6
2	1.5
3	3

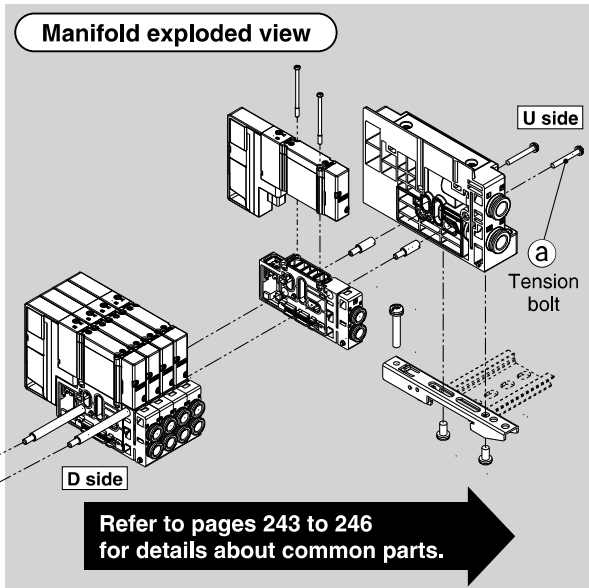
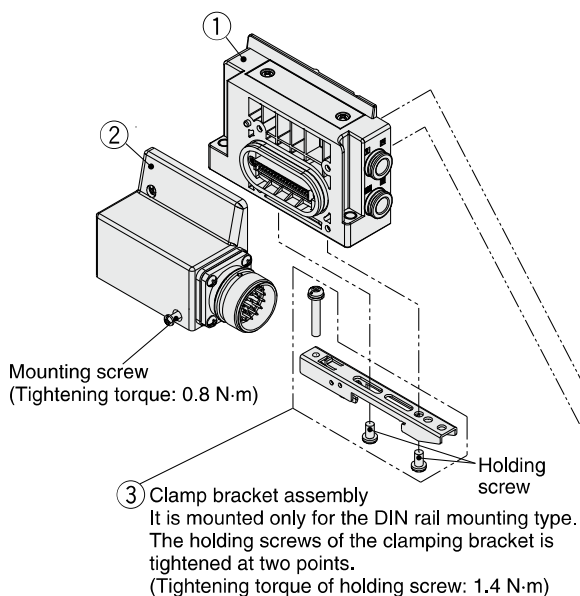
③ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

Wiring

Circular Connector



Manifold Parts No.

① SUP/EXH block assembly

SY 3 0M-1-1A - **C8** - **Mounting**

● Series

3	SY3000
5	SY5000
7	SY7000

● Mounting

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

● Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	
RV	—	●	—	Top
VP	●	—	●*1	
B	●	—	—	
BS	●	—	●	Bottom
BR	—	●	—	

*1: For silencer (supply side). E port is plugged.
 *: "B" for bottom ported can be selected for the SY5000/7000 series.

● P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size
C10	ø10	—	●	—	
C12	ø12	—	—	●	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size
N11	ø3/8"	—	●	—	
N13	ø1/2"	—	—	●	
L8	Upward elbow ø8	●	—	—	Side ported Metric size
L10		ø10	—	●	
L12		ø12	—	—	
LN9	Upward elbow ø5/16"	●	—	—	Side ported Inch size
LN11		ø3/8"	—	●	
LN13		ø1/2"	—	—	
B8	Downward elbow ø8	●	—	—	Side ported Metric size
B10		ø10	—	●	
B12		ø12	—	—	
BN9	Downward elbow ø5/16"	●	—	—	Side ported Inch size
BN11		ø3/8"	—	●	
BN13		ø1/2"	—	—	
00*1	Plug	●	●	●	P/E port entry on one side or Top ported

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
① Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② Circular connector block assembly

SY30M-14-5A

*: 26 pins

③ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

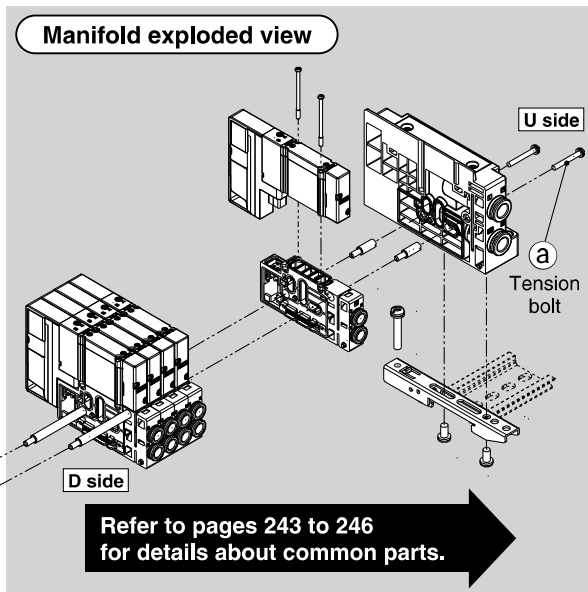
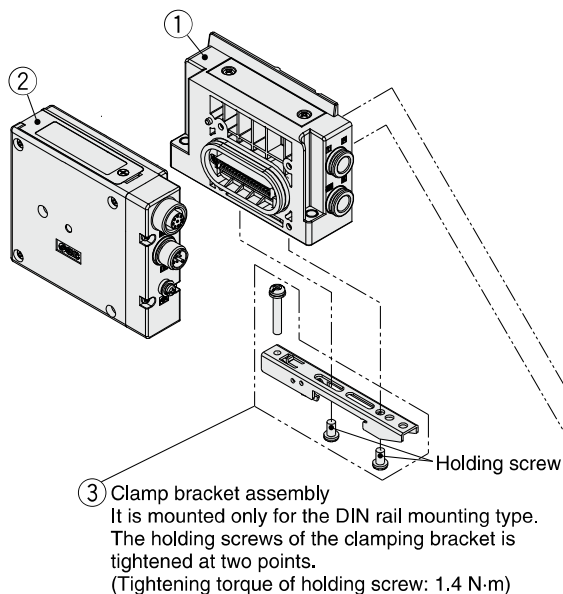
*: Part number is for one assembly.

Valve
 Plug-in Sub-plate
 Plug-in Metal Base
 Type 50, 51, 52 Manifold Exploded View
 Plug-in Connector Connecting Base
 Type 10, 11, 12 Manifold Exploded View
 One-touch Fittings/ Plug Assembly, Part No.
 Manifold Options

Series SY3000/5000/7000

Wiring

EX500: Gateway Decentralized System 2 (128 Points)



Manifold Parts No.

① SUP/EXH block assembly

SY **3** 0M-1-1A **C8** - **Mounting**

Series

3	SY3000
5	SY5000
7	SY7000

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	
RV	—	●	—	Top
VP	●	—	● ^{*1}	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side). E port is plugged.

*: "B" for bottom ported can be selected for the SY5000/7000 series.

P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size
C10	ø10	—	●	—	
C12	ø12	—	—	●	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size
N11	ø3/8"	—	●	—	
N13	ø1/2"	—	—	●	
L8	ø8	●	—	—	Side ported Metric size
L10	ø10	—	●	—	
L12	ø12	—	—	●	
LN9	ø5/16"	●	—	—	Side ported Inch size
LN11	ø3/8"	—	●	—	
LN13	ø1/2"	—	—	●	
B8	ø8	●	—	—	Side ported Metric size
B10	ø10	—	●	—	
B12	ø12	—	—	●	
BN9	ø5/16"	●	—	—	Side ported Inch size
BN11	ø3/8"	—	●	—	
BN13	ø1/2"	—	—	●	
00 ^{*1}	Plug	●	●	●	P/E port entry on one side or Top ported

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side)

accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
a Tension bolt	None ^{*1}	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② EX500 SI Unit

EX500-S103

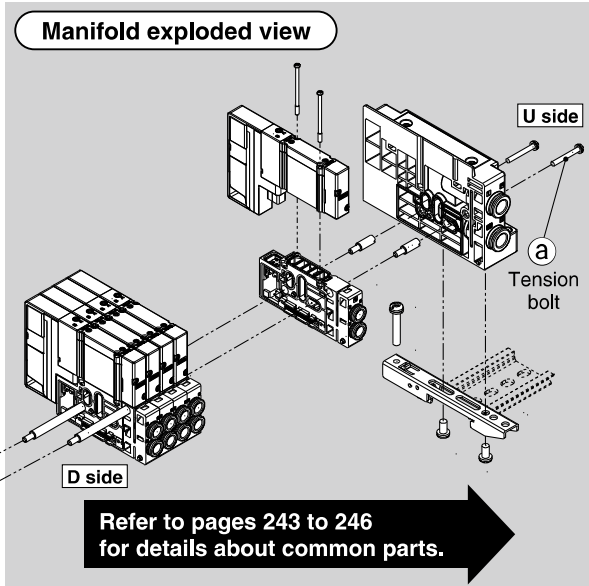
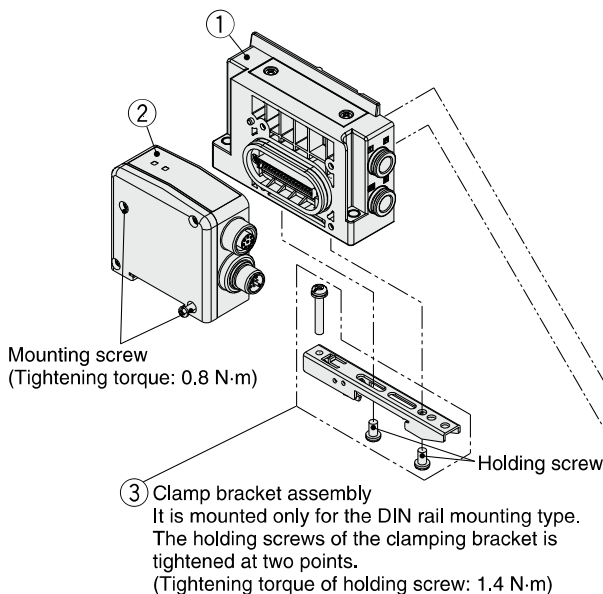
③ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

Wiring

EX500: Gateway Decentralized System (64 Points)



Manifold Parts No.

① SUP/EXH block assembly

SY 3 0M-1-1A — **C8** — **Mounting**

• Series

3	SY3000
5	SY5000
7	SY7000

• Mounting

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

• Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	
RV	—	●	—	Top
VP	●	—	●*1	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side). E port is plugged.
 *: "B" for bottom ported can be selected for the SY5000/7000 series.

• P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size
C10	ø10	—	●	—	
C12	ø12	—	—	●	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size
N11	ø3/8"	—	●	—	
N13	ø1/2"	—	—	●	
L8	ø8	●	—	—	Side ported Metric size
L10	ø10	—	●	—	
L12	ø12	—	—	●	
LN9	ø5/16"	●	—	—	Side ported Inch size
LN11	ø3/8"	—	●	—	
LN13	ø1/2"	—	—	●	
B8	ø8	●	—	—	Side ported Metric size
B10	ø10	—	●	—	
B12	ø12	—	—	●	
BN9	ø5/16"	●	—	—	Side ported Inch size
BN11	ø3/8"	—	●	—	
BN13	ø1/2"	—	—	●	
00*1	Plug	●	●	●	P/E port entry on one side or Top ported

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
a Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② EX500 SI Unit

EX500-Q 0 01

• Output specifications

0	NPN (Positive common)
1	PNP (Negative common)

③ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

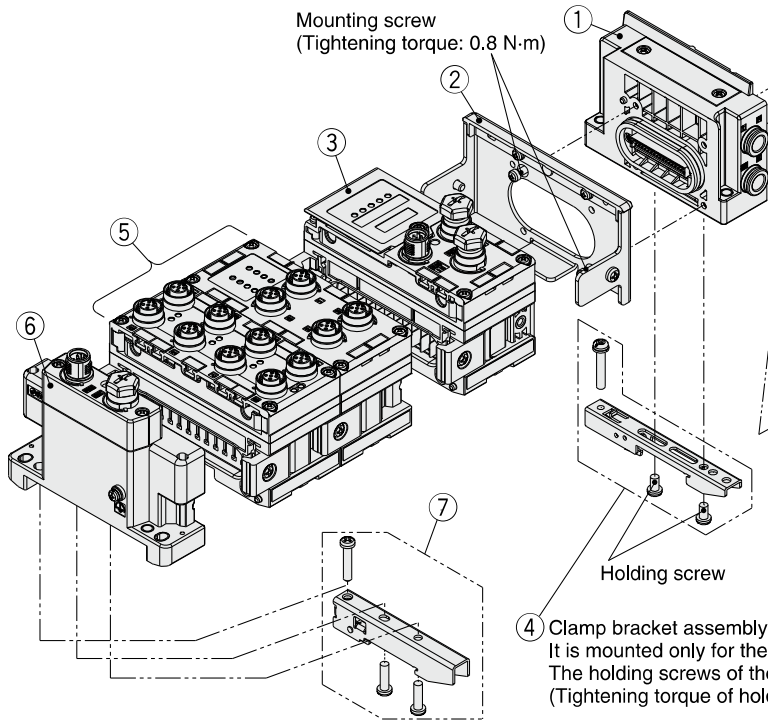
One-touch Fittings/
Plug Assembly Part No.

Manifold Options

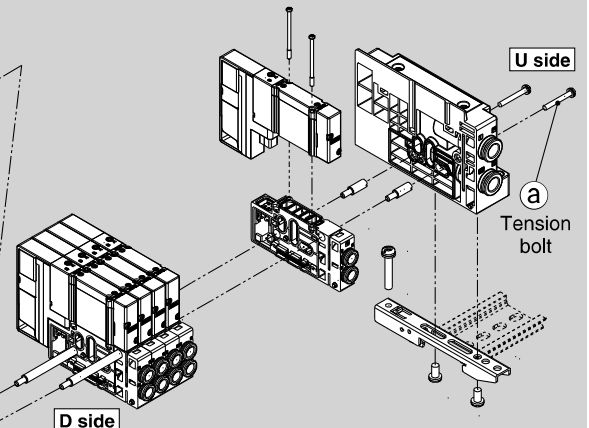
Series SY3000/5000/7000

Wiring

EX600



Manifold exploded view



Refer to pages 243 to 246 for details about common parts.

Manifold Parts No.

① SUP/EXH block assembly

SY 3 0M-1-1A - **C8** - **Mounting**

Series	
3	SY3000
5	SY5000
7	SY7000

Mounting	
Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

● Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	—	
R	—	●	—	
V	●	—	—	Top
RV	—	●	—	
VP	●	—	●*1	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side), E port is plugged.

*: "B" for bottom ported can be selected for the SY5000/7000 series.

● P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note	
C8	ø8	●	—	—	Side/Bottom/Top ported	
C10	ø10	—	●	—	Top ported	
C12	ø12	—	—	●	Metric size	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported	
N11	ø3/8"	—	●	—	Top ported	
N13	ø1/2"	—	—	●	Inch size	
L8	Upward elbow	●	—	—	Side ported	
L10		ø8	—	●		Metric size
L12		ø10	—	●		
LN9	Downward elbow	●	—	—	Side ported	
LN11		ø5/16"	—	●		Inch size
LN13		ø3/8"	—	●		
B8	Downward elbow	●	—	—	Side ported	
B10		ø8	—	●		Metric size
B12		ø10	—	●		
BN9	Downward elbow	●	—	—	Side ported	
BN11		ø5/16"	—	●		Inch size
BN13		ø3/8"	—	●		
00*1	Plug	●	●	●	P/E port entry on one side or Top ported	

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
① Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② Valve plate

EX600-ZMV2

*: With mounting screws (2 pcs. of M4 x 6 and 2 pcs. of M3 x 8)

④ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

③ EX600 SI Unit

EX600-S PR 1

● Protocol

Symbol	Description
PR	PROFIBUS DP
DN	DeviceNet™
MJ	CC-Link
EN	EtherNet/IP™*1
EC	EtherCAT®*1
PN	PROFINET*1

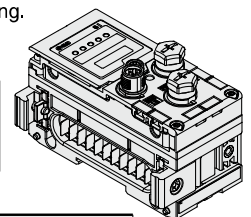
*1: Cannot be communicated with the EX600-HT1-□.

● Version

Symbol	Description
Nil	When MJ, EN, EC or PN is selected
A	When PR or DN is selected

● Output type

Symbol	Description	Condition
1	PNP (Negative common)	Can be selected by all protocols.
2	NPN (Positive common)	Can be selected by all protocols.
3	PNP (Negative common) EtherNet/IP (2 ports)	Can be selected in the case of EN.
4	NPN (Positive common) EtherNet/IP (2 ports)	Can be selected in the case of EN.



Manifold Parts No.

⑤ EX600 Digital Input Unit

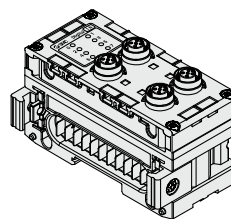
EX600-DX **P** **B**

Input type

Symbol	Description
P	PNP
N	NPN

Number of inputs, open circuit detection, and connector

Symbol	Number of inputs	Open circuit detection	Connector
B	8	No	M12 connector (5 pins) 4 pcs.
C	8	No	M8 connector (3 pins) 8 pcs.
C1	8	Yes	M8 connector (3 pins) 8 pcs.
D	16	No	M12 connector (5 pins) 8 pcs.
E	16	No	D-sub connector (25 pins) ^{*1*2}
F	16	No	Spring type terminal block (32 pins) ^{*1*2}



⑤ EX600 Digital Output Unit

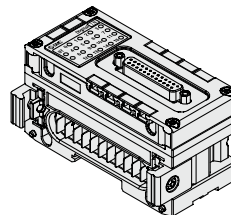
EX600-DY **P** **B**

Output type

Symbol	Description
P	PNP
N	NPN

Number of outputs and connector

Symbol	Number of outputs	Connector
B	8	M12 connector (5 pins) 4 pcs.
E	16	D-sub connector (25 pins) ^{*1*2}
F	16	Spring type terminal block (32 pins) ^{*1*2}



⑤ EX600 Digital Input/Output Unit

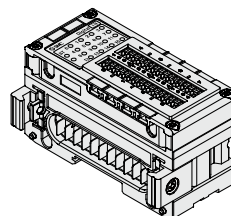
EX600-DM **P** **E**

Input/Output type

Symbol	Description
P	PNP
N	NPN

Number of inputs/outputs and connector

Symbol	Number of inputs	Number of outputs	Connector
E	8	8	D-sub connector (25 pins) ^{*1*2}
F	8	8	Spring type terminal block (32 pins) ^{*1*2}



⑤ EX600 Analog Input/Output Unit

EX600-AX **A**

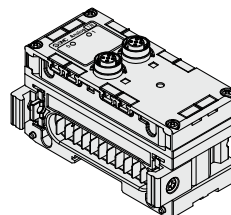
Analog input/output

Symbol	Description
AX	Analog input
AY	Analog output

Number of input channels and connector

Symbol	Number of input channels	Connector
A	2 channels	M12 connector (5 pins) 2 pcs. ^{*3}

*3: Refer to *1 and *2 below for AY.



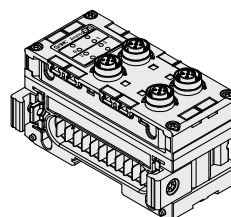
⑤ EX600 Analog Input/Output Unit

EX600-AM **B**

Analog input/output

Number of input/output channels and connector

Symbol	Number of input channels	Number of output channels	Connector
B	2 channels	2 channels	M12 connector (5 pins) 4 pcs. ^{*1*2}



⑥ EX600 end plate

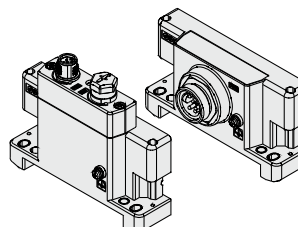
EX600-ED **2** - **□**

Power connector

Symbol	Connector
2	M12 (5 pins)
3	7/8 inch (5 pins)

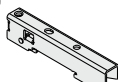
Mounting

Symbol	Description
Nil	Without DIN rail mounting bracket
3	With DIN rail mounting bracket



⑦ Clamp bracket for EX600

EX600-ZMA3



Enclosed parts

Round head screw with washer (M4 x 20) 1 pc.
P-tight screw (4 x 14) 2 pcs.

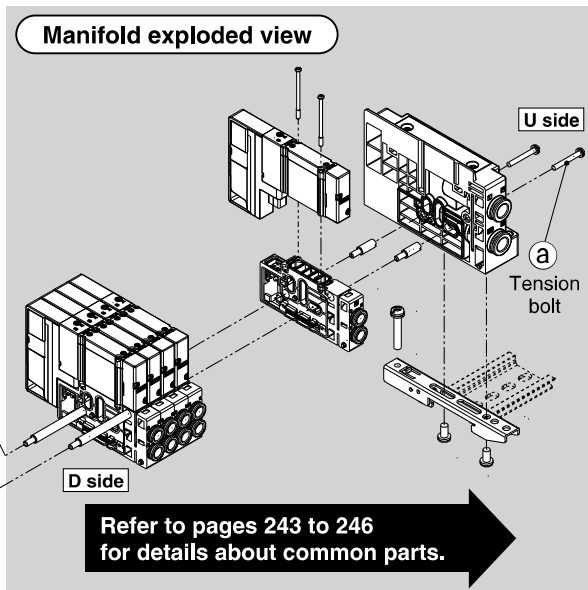
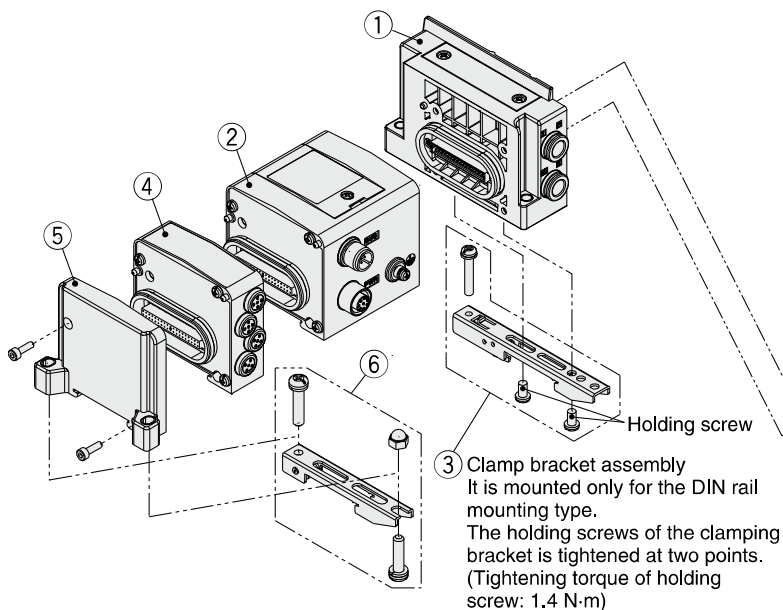
*1: Cannot be communicated with the EX600-HT1-□ (Old version of the Handheld Terminal).
*2: Cannot be connected with the EX600-SPR1, EX600-SPR2, EX600-SDN1, or EX600-SDN2.

Valve
Plug-in Sub-plate
Plug-in Metal Base
Type 50, 51, 52 Manifold Exploded View
Plug-in Connector Connecting Base
Type 10, 11, 12 Manifold Exploded View
One-touch Fittings/ Plug Assembly Part No.
Manifold Options

Series SY3000/5000/7000

Wiring

EX250



Manifold Parts No.

① SUP/EXH block assembly

SY **3** 0M-1-1A **C8** - **Mounting**

• Series

3	SY3000
5	SY5000
7	SY7000

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

• Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	Top
RV	—	●	—	
VP	●	—	●*1	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side). E port is plugged.

*: "B" for bottom ported can be selected for the SY5000/7000 series.

• P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size
C10	ø10	—	●	—	
C12	ø12	—	—	●	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size
N11	ø3/8"	—	●	—	
N13	ø1/2"	—	—	●	
L8	Upward elbow ø8	●	—	—	Side ported Metric size
L10		—	●	—	
L12		—	—	●	
LN9	Upward elbow ø5/16"	●	—	—	Side ported Inch size
LN11		—	●	—	
LN13		—	—	●	
B8	Downward elbow ø8	●	—	—	Side ported Metric size
B10		—	●	—	
B12		—	—	●	
BN9	Downward elbow ø5/16"	●	—	—	Side ported Inch size
BN11		—	●	—	
BN13		—	—	●	
00*1	Plug	●	●	●	P/E port entry on one side or Top ported

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
① Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② EX250 SI Unit

EX250-S **DN1**

• Communication protocol

DN1	DeviceNet™ (Negative common)
PR1	PROFIBUS DP (Negative common)
MJ2	CC-Link (Positive common)
AS3	AS-Interface (8 in/8 out, 31 slave modes, 2 isolated common type) (Negative common)
AS5	AS-Interface (4 in/4 out, 31 slave modes, 2 isolated common type) (Negative common)
AS7	AS-Interface (8 in/8 out, 31 slave modes, 1 common type) (Negative common)
AS9	AS-Interface (4 in/4 out, 31 slave modes, 1 common type) (Negative common)
CA1A	CANopen (Negative common)
EN1	EtherNet/IP™ (Negative common)

③ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

④ Input block

EX250-IE **1**

• Block type

1	M12 connector, 2 inputs
2	M12 connector, 4 inputs
3	M8 connector, 4 inputs

⑤ EX250 end plate assembly

EX250-EA1

*: With mounting screws (2 pcs. of M3 x 10)

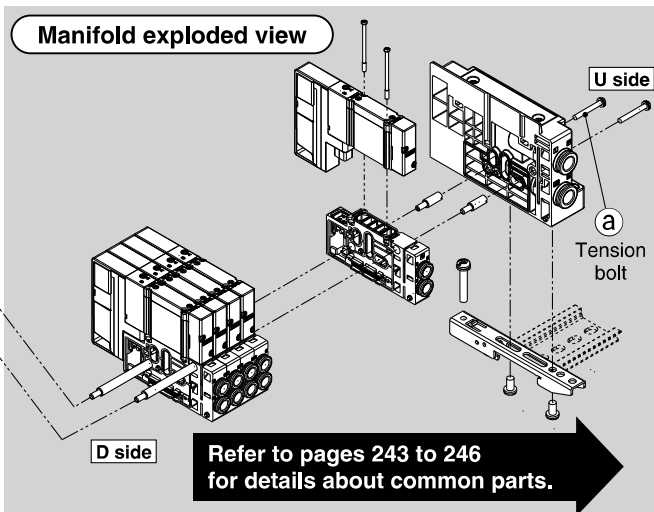
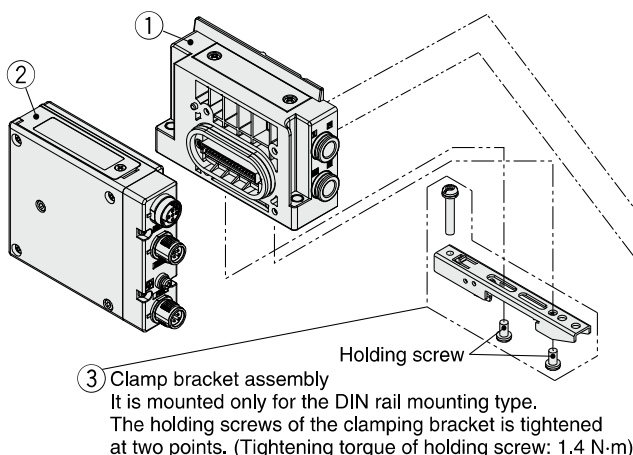
⑥ Clamp bracket assembly for EX250 SI Unit

SY30M-15-3A

*: Part number is for one assembly.

Wiring

EX260



Manifold Parts No.

① SUP/EXH block assembly

SY 3 0M-1-1A - C8 -

Series	Part No.
3	SY3000
5	SY5000
7	SY7000

Mounting	Symbol	Description
Nil		Direct mounting
D0		DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	
RV	—	●	—	Top
VP	●	—	●*1	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side). E port is plugged.
 *: "B" for bottom ported can be selected for the SY5000/7000 series.

● P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size
C10	ø10	—	●	—	
C12	ø12	—	—	●	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size
N11	ø3/8"	—	●	—	
N13	ø1/2"	—	—	●	
L8	ø8	●	—	—	Side ported Metric size
L10		—	●	—	
L12		—	—	●	
LN9	ø5/16"	●	—	—	Side ported Inch size
LN11	ø3/8"	—	●	—	
LN13	ø1/2"	—	—	●	
B8	ø8	●	—	—	Side ported Metric size
B10	ø10	—	●	—	
B12	ø12	—	—	●	
BN9	ø5/16"	●	—	—	Side ported Inch size
BN11	ø3/8"	—	●	—	
BN13	ø1/2"	—	—	●	
00*1	Plug	●	●	●	P/E port entry on one side or Top ported

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000/7000
@ Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② EX260 SI Unit

EX260-S PR1

● Communication protocol

Symbol	Protocol	Number of outputs	SI Unit output polarity	Communication connector	Manifold symbol	Symbol	Protocol	Number of outputs	SI Unit output polarity	Communication connector	Manifold symbol
DN1	DeviceNet™	32	Source/PNP (Negative common)	M12	QAN	EC1	EtherCAT®	32	Source/PNP (Negative common)	M12	DAN
DN2			Sink/NPN (Positive common)		QA	EC2			Sink/NPN (Positive common)		DA
DN3			Source/PNP (Negative common)		QBN	EC3			Source/PNP (Negative common)		DBN
DN4			Sink/NPN (Positive common)		QB	EC4			Sink/NPN (Positive common)		DB
PR1	PROFIBUS DP	32	Source/PNP (Negative common)	M12	NAN	PN1	PROFINET	32	Source/PNP (Negative common)	M12	FAN
PR2			Sink/NPN (Positive common)		NA	PN2			Sink/NPN (Positive common)		FA
PR3			Source/PNP (Negative common)		NBN	PN3			Source/PNP (Negative common)		FBN
PR4			Sink/NPN (Positive common)		NB	PN4			Sink/NPN (Positive common)		FB
PR5		Source/PNP (Negative common)	16	D-sub*1	NCN	EN1	EtherNet/IP™	32	Source/PNP (Negative common)	M12	EAN
PR6		Sink/NPN (Positive common)			NC	EN2			Sink/NPN (Positive common)		EA
PR7		Source/PNP (Negative common)			NDN	EN3			Source/PNP (Negative common)		EBN
PR8		Sink/NPN (Positive common)			ND	EN4			Sink/NPN (Positive common)		EB
MJ1	CC-Link	32	Source/PNP (Negative common)	M12	VAN						
MJ2			Sink/NPN (Positive common)		VA						
MJ3			Source/PNP (Negative common)		VBN						
MJ4			Sink/NPN (Positive common)		VB						

*1: Enclosure is IP40 when the communication connector is D-sub.

③ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

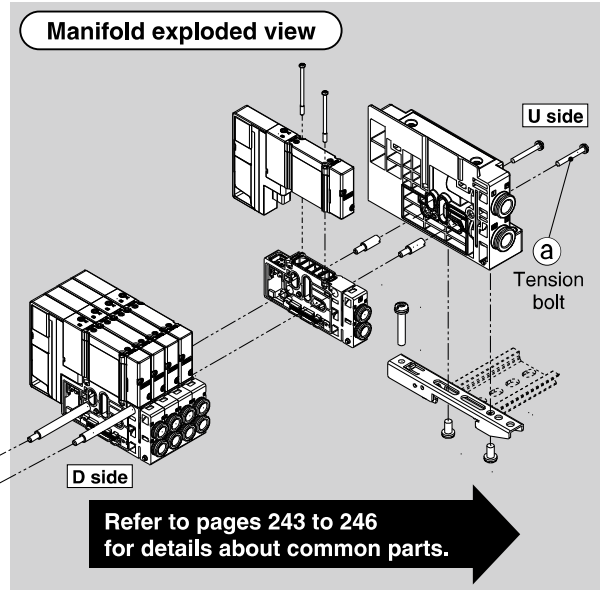
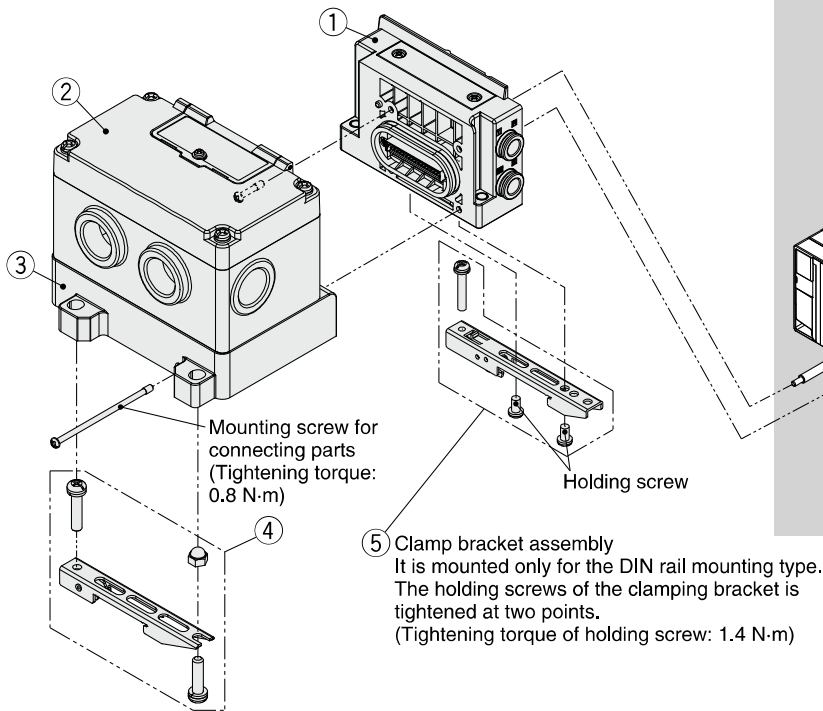
*: Part number is for one assembly.

Valve
 Plug-in Sub-plate
 Metal Base
 Plug-in
 Type 50, 51, 52 Manifold Exploded View
 Plug-in Connector Connecting Base
 Type 10, 11, 12 Manifold Exploded View
 One-touch Fittings/ Plug Assembly Part No.
 Manifold Options

Series SY3000/5000/7000

Wiring

EX126



Manifold Parts No.

① SUP/EXH block assembly

SY **3** 0M-1-1A - C8 -

Series	
3	SY3000
5	SY5000
7	SY7000

Mounting	
Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	—	
R	—	●	—	
V	●	—	—	Top
RV	—	●	—	
VP	●	—	●*1	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side), E port is plugged.
 *: "B" for bottom ported can be selected for the SY5000/7000 series.

• P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note	
C8	ø8	●	—	—	Side/Bottom/Top ported	
C10	ø10	—	●	—	Top ported	
C12	ø12	—	—	●	Metric size	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported	
N11	ø3/8"	—	●	—	Top ported	
N13	ø1/2"	—	—	●	Inch size	
L8	ø8	●	—	—	Side ported	
L10						Metric size
L12						
LN9	ø5/16"	●	—	—	Side ported	
LN11						Inch size
LN13						
B8	ø8	●	—	—	Side ported	
B10						Metric size
B12						
BN9	ø5/16"	●	—	—	Side ported	
BN11						Inch size
BN13						
00*1	Plug	●	●	●	P/E port entry on one side or Top ported	

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
(a) Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② EX126 SI Unit

EX126D-SMJ1

*: CC-Link (Positive common)

③ Terminal block plate assembly

VVQC1000-74A-2

④ Clamp bracket assembly for EX126 SI Unit

SY30M-15-4A

*: Part number is for one assembly.

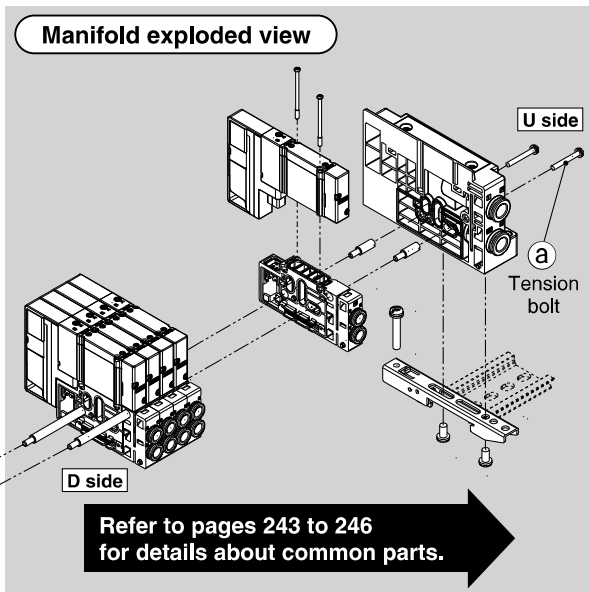
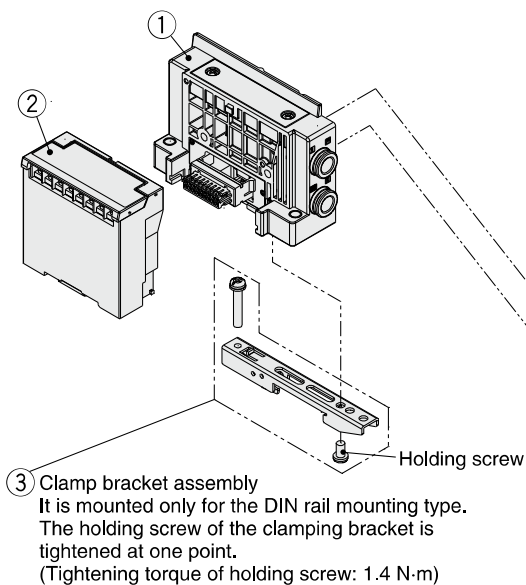
⑤ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

Wiring

EX120



Manifold Parts No.

① SUP/EXH block assembly

SY **3** 0M-1-16A **C8** - **Mounting**

• Series

3	SY3000
5	SY5000
7	SY7000

Nil	Direct mounting
DO	DIN rail mounting (Without DIN rail)

*: For bottom ported, the symbol is nil.

• Pilot, Silencer/Piping type

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	—	—	—	Top
RV	—	●	—	
VP	●	—	●*1	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

*1: For silencer (supply side). E port is plugged.
*: "B" for bottom ported can be selected for the SY5000/7000 series.

• P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported
C10	ø10	—	●	—	Top ported
C12	ø12	—	—	●	Metric size
N9	ø5/16"	●	—	—	Side/Bottom/Top ported
N11	ø3/8"	—	●	—	Top ported
N13	ø1/2"	—	—	●	Inch size
L8	ø8	●	—	—	Side ported
		—	●	—	
		—	—	●	
L10	ø10	—	—	—	Metric size
		—	—	●	
		—	—	—	
LN9	ø5/16"	●	—	—	Side ported
		—	●	—	
		—	—	—	
LN11	ø3/8"	—	—	—	Inch size
		—	●	—	
		—	—	—	
LN13	ø1/2"	—	—	—	Side ported
		—	—	●	
		—	—	—	
B8	ø8	●	—	—	Side ported
		—	●	—	
		—	—	—	
B10	ø10	—	—	—	Metric size
		—	—	●	
		—	—	—	
B12	ø12	—	—	—	Side ported
		—	—	●	
		—	—	—	
BN9	ø5/16"	●	—	—	Inch size
		—	●	—	
		—	—	—	
BN11	ø3/8"	—	—	—	Side ported
		—	●	—	
		—	—	—	
BN13	ø1/2"	—	—	—	Inch size
		—	—	●	
		—	—	—	
00*1	Plug	●	●	●	P/E port entry on one side or Top ported

*1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

SUP/EXH block assembly (D side) accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000
① Tension bolt	None*1	3 pcs.

*1: Since the nuts are embedded in the SUP/EXH block.

② EX120 SI Unit

EX120-S **DN1**

• Communication protocol

DN1	DeviceNet™ (Positive common)
CS1	OMRON Corp.: CompoBus/S (16 outputs) (Positive common)
CS2	OMRON Corp.: CompoBus/S (8 outputs) (Positive common)
MJ1	CC-Link (Positive common)
CM1	CompoNet™ NPN (Positive common)
CM3	CompoNet™ PNP (Negative common)

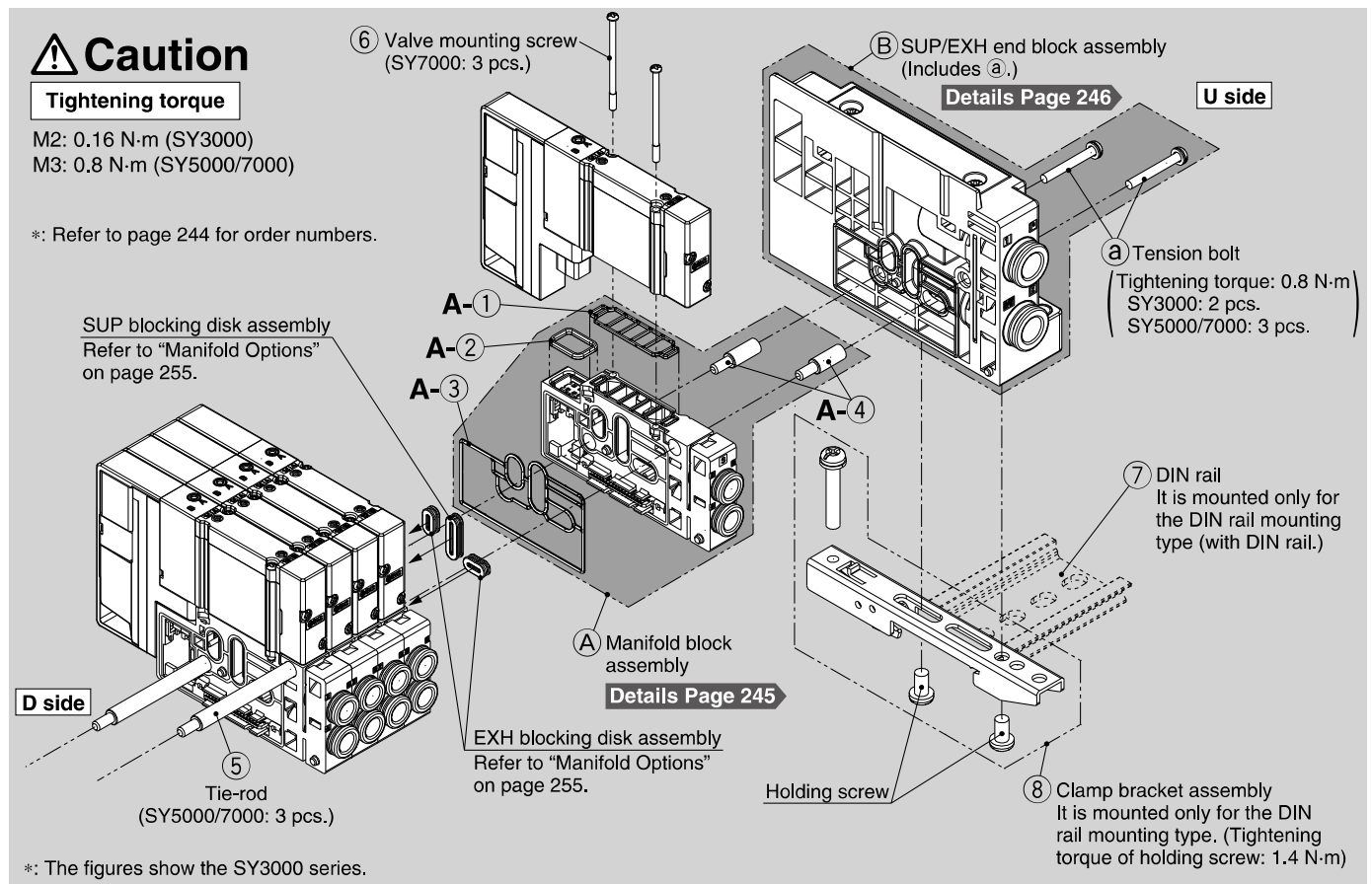
③ Clamp bracket assembly

Series	Part no.
SY3000	SY30M-15-1A
SY5000/7000	SY50M-15-1A

*: Part number is for one assembly.

Valve
Plug-in Sub-plate
Plug-in Metal Base
Type 50, 51, 52 Manifold Exploded View
Plug-in Connector Connecting Base
Type 10, 11, 12 Manifold Exploded View
One-touch Fittings/ Plug Assembly Part No.
Manifold Options

Manifold Exploded View (Common Parts)



Type 10, 11, 12: How to Increase Connector Type Manifold

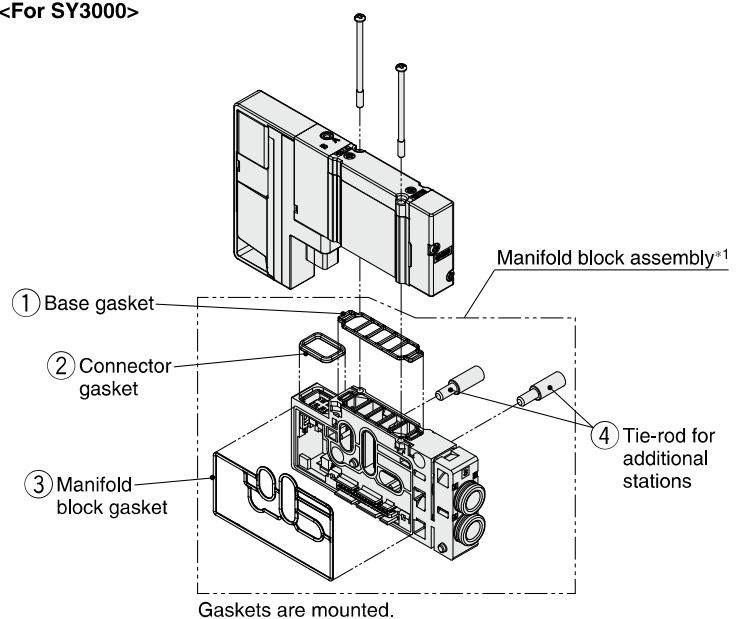
- Loosen the U-side tension bolt (a), and remove the B SUP/EXH end block assembly.
- Screw in (4) tie-rods for additional stations to the (5) tie-rod of the manifold.
(Screw them in until there is no gap between the tie-rods.)
- Connect the A manifold block assembly and B SUP/EXH end block assembly to be added, and tighten the tension bolt (a).

Tightening torque for tension bolt (a) (M3): 0.8 N·m

Caution

- Be sure to shut off the power and air supplies before disassembly. Furthermore, since air may remain inside the actuator, piping and manifold, confirm that the air is completely exhausted before performing any work.
- When disassembly and assembly are performed, air leakage may result if the tightening of the tension bolt is inadequate.

<For SY3000>



*1: Manifold block assembly

No.	Description	Quantity	Note
①②③	Gasket	3	For base, connector and manifold block
④	Tie-rod for additional stations	SY3000 2 pcs. SY5000 3 pcs. SY7000 3 pcs.	

Refer to page 244 for ordering single unit.

Connector Connecting Base Manifold Exploded View **Series SY3000/5000/7000**

For SS5Y3-10/11/12, SS5Y5-(M)10/11/12, SS5Y7-(M)10/11/12

No.	Description		SY3000	SY5000	SY7000	Note		
A-①	Manifold block assembly	Base gasket (for connector connecting base)	SY30M-9-1A	SY50M-9-1A	SY70M-9-1A	Part numbers shown on the left are for 10 valves. (10 pcs.)		
A-②		Connector gasket	SX3000-146-2			Supplied individually.		
A-③		Manifold block gasket	SY30M-9-2	SY50M-9-2	SY70M-9-2	Supplied individually.		
A-④	Manifold block assembly	Tie-rod for additional stations*1	SY3000/5000/7000	SY30M-49-2-A (10.5 mm pitch)	SV2000-55-2A-A (16 mm pitch)	SY70M-49-2-A*2 (19 mm pitch)	2 pcs. supplied (SY3000), 3 pcs. supplied (SY5000/7000)	
			For mixed mounting of SY3000/5000: SY3000 A, B port size $\phi 8, \phi 5/16"$	SV2000-55-2A-A (16 mm pitch)		—	3 pcs. supplied.	
			For mixed mounting of SY3000/5000: SY3000 except A, B port size $\phi 8, \phi 5/16"$ *4	SY50M-49-2-A (12.5 mm pitch)		—	3 pcs. supplied.	
⑤	Tie-rod	Mixed mounting type manifold	SS5Y5-M**	SY3000/5000/7000	VVQC1000-TR-□ (10.5 mm pitch)	SV2000-55-1-1-□-A (16 mm pitch)	SY70M-49-1-□-A*2 (19 mm pitch)	□: Manifold stations (2 stations to 24 stations) 2 pcs. supplied (SY3000), 3 pcs. supplied (SY5000/7000)
				SS5Y7-M**	SY50M-49-1-□-A*3*4 (12.5 mm pitch)		—	□: Manifold stations (2 stations to 24 stations) 3 pcs. supplied.
					SV2000-55-1-□-A*5 (16 mm pitch)		—	
⑥	Valve mounting screw	Round head combination screw	SY3000-23-24A (M2 x 32)	SY5000-221-1A (M3 x 32.5)	SY7000-221-1A (M3 x 36.5)	Part numbers shown on the left are as follows. SY3000/5000: for 10 valves (20 pcs. included) SY7000: for 10 valves (30 pcs. included)		
		Hexagon socket head cap screw	SY3000-222-1A (M2 x 32)	SY5000-222-1A (M3 x 32.5)	SY7000-222-1A (M3 x 36.5)			
⑦	DIN rail		VZ1000-11-1-□		VZ1000-11-4-□	Refer to page 249.		
⑧	Clamp bracket assembly (for connector connecting base)		SY30M-15-1A	SY50M-15-1A		Supplied individually.		

*1: The manifold of the SY3000 (SS5Y3-10/11/12) can be assembled by connecting the tie-rods for additional stations for the number of manifold stations. However, the manifold of the SY5000 or SY7000 (SS5Y5/7-10/11/12 including mixed mounting) cannot be assembled by connecting the tie-rods for additional stations for the number of manifold stations.

*2: When mounting with the SY5000.

*3: When mounting only the SY3000 (12.5 mm pitch except A, B port size $\phi 8, \phi 5/16"$).

*4: The port sizes except A, B port size $\phi 8, \phi 5/16"$ are the following: $\phi 2, \phi 3.2, \phi 4, \phi 6, \phi 1/8, \phi 5/32, \phi 1/4$.

*5: When mounting only the SY3000 (16 mm pitch A, B port size $\phi 8, \phi 5/16"$).

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded ViewOne-touch Fittings/
Plug Assembly Part No.

Manifold Options

Series SY3000/5000/7000

Manifold Parts No.

(A) Manifold block assembly

SY 3 0M-2-1 D A-C6

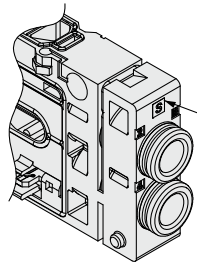
Series

3	SY3000
5	SY5000
7	SY7000

Piping direction

1	Side/Top ported
2	Bottom ported

*: "2" for bottom ported can be selected for the SY5000/7000 series.



Single wiring
Marked with

Wiring type

S	Single wiring
D	Double wiring

A, B port size (One-touch fittings)

Symbol	A, B port	SY3000	SY5000	SY7000	Note
C2	ø2	●	—	—	Side/Bottom ported Metric size
C3	ø3.2	●	—	—	
C4	ø4	●	●	—	
C6	ø6	●	●	●	
C8	ø8	—*1	●	●	
C10	ø10	—	—	●	
C12	ø12	—	—	●	Side/Bottom ported Inch size
N1	ø1/8"	●	—	—	
N3	ø5/32"	●	—	—	
N7	ø1/4"	●	●	●	
N9	ø5/16"	—*1	●	●	
N11	ø3/8"	—	—	●	

*1: Refer to mixed mounting type for ø8, ø5/16".

Symbol	A, B port	SY3000	SY5000	SY7000	Note	
L4	ø4	●	●	—	Side ported Metric size	
L6	ø6	●	●	—		
L8	ø8	—*1	●	●		
L10	ø10	—	—	●		
L12	ø12	—	—	●		
LN3	ø5/32"	●	—	—		Side ported Inch size
LN7	ø1/4"	●	●	—		
LN9	ø5/16"	—*1	●	—		
LN11	ø3/8"	—	—	●		
B4	ø4	●	●	—	Side ported Metric size	
B6	ø6	●	●	●		
B8	ø8	—*1	●	●		
B10	ø10	—	—	●		
B12	ø12	—	—	●		
BN3	ø5/32"	●	—	—		Side ported Inch size
BN7	ø1/4"	●	●	—		
BN9	ø5/16"	—*1	●	—		
BN11	ø3/8"	—	—	●		
00	Plug	●	●	●	Top ported	

(A) Mixed mounting of the SY3000/5000 Manifold block assembly for mounting the SY3000

SY50M-2-3 D A-C6

Piping direction

3	Side/Top ported
4	Bottom ported

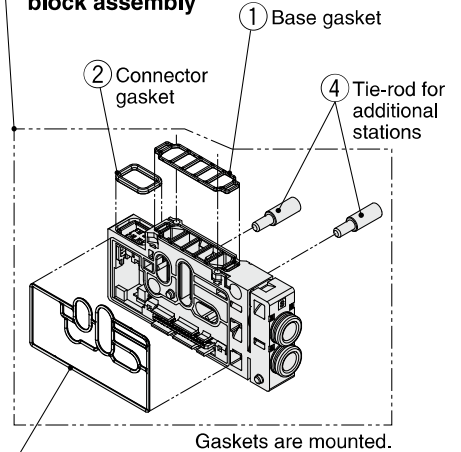
Wiring type

S	Single wiring
D	Double wiring

A, B port size (One-touch fittings)

Symbol	A, B port	Note	Symbol	A, B port	Note
C2	ø2	Side/Bottom ported Metric size	L4	ø4	Side ported Metric size
C3	ø3.2		L6	ø6	Side ported Metric size
C4	ø4		LN3	ø5/32"	Side ported
C6	ø6	Side/Bottom ported Inch size	LN7	ø1/4"	Inch size
N1	ø1/8"		B4	ø4	Side ported
N3	ø5/32"		B6	ø6	Metric size
N7	ø1/4"	BN3	ø5/32"	Side ported	
		BN7	ø1/4"	Inch size	
		00	Plug	Top ported	

(A) Manifold (All parts inside are included.) block assembly



(A) Mixed mounting of the SY3000/5000 Manifold block assembly for mounting the SY3000 for ø8, ø5/16" (A manifold block assembly for mounting the SY3000 valves on the SY5000 manifolds at A, B port size: ø8, ø5/16")

SY50M-2-5 D A-C8

Piping direction

5	Side ported
6	Bottom ported

Wiring type

S	Single wiring
D	Double wiring

A, B port size (One-touch fittings)

Symbol	A, B port	Note
C8	ø8	Side/Bottom ported Metric size
N9	ø5/16"	Side/Bottom ported Inch size
L8	Upward ø8	Side ported Metric size
LN9	ø5/16"	Side ported Inch size
B8	Downward ø8	Side ported Metric size
BN9	ø5/16"	Side ported Inch size

Manifold block assembly accessories and the number of accessories

Accessories	SY3000	SY5000 SY7000*1
① Base gasket	1 pc.	1 pc.
② Connector gasket	1 pc.	1 pc.
③ Manifold block gasket	1 pc.	1 pc.
④ Tie-rod assembly for additional stations	2 pcs.	3 pcs.

*1: Including mixed mounting type

(A) Mixed mounting of the SY5000/7000 Manifold block assembly for mounting the SY5000

SY70M-2-3 D A-C10

Piping direction

3	Side/Bottom ported
4	Bottom ported

Wiring type

S	Single wiring
D	Double wiring

A, B port size (One-touch fittings)

Symbol	A, B port	Note	Symbol	A, B port	Note	Symbol	A, B port	Note
C6	ø6	Side/Bottom ported Metric size	L6	ø6	Side ported Metric size	B6	ø6	Side ported Metric size
C8	ø8		L8	ø8		B8	ø8	
C10	ø10		L10	ø10		B10	ø10	
C12	ø12	Side/Bottom ported Inch size	L12	ø12	Side ported Inch size	B12	ø12	Side ported Inch size
N7	ø1/4"		LN11	ø3/8"		BN11	ø3/8"	
N9	ø5/16"					00	Plug	
N11	ø3/8"							

Manifold Parts No.

(B) SUP/EXH end block assembly

SY 3 0M-3-1A [] - C8 - []

● **Series**

3	SY3000
5	SY5000
7	SY7000

● **Mounting**

Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

∗: For bottom ported, the symbol is nil.

● **Pilot, Silencer/Piping type**

Symbol	Pilot type		Built-in silencer	Piping direction
	Internal	External		
Nil	●	—	—	Side
S	●	—	●	
R	—	●	—	
V	●	—	—	Top
RV	—	●	—	
VP	●	—	● ^{∗1}	
B	●	—	—	Bottom
BS	●	—	●	
BR	—	●	—	

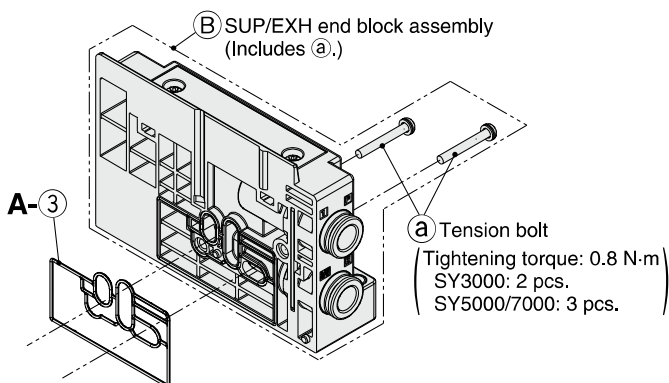
∗1: For silencer (supply side). E port is plugged.

∗: "B" for bottom ported can be selected for the SY5000/7000 series.

● **P, E port size (One-touch fittings)**

Symbol	P, E port	SY3000	SY5000	SY7000	Note
C8	ø8	●	—	—	Side/Bottom/Top ported Metric size
C10	ø10	—	●	—	
C12	ø12	—	—	●	
N9	ø5/16"	●	—	—	Side/Bottom/Top ported Inch size
N11	ø3/8"	—	●	—	
N13	ø1/2"	—	—	●	
L8	Upward elbow ø8	●	—	—	Side ported Metric size
L10		ø10	—	●	
L12		ø12	—	—	
LN9	Upward elbow ø5/16"	●	—	—	Side ported Inch size
LN11		ø3/8"	—	●	
LN13		ø1/2"	—	—	
B8	Downward elbow ø8	●	—	—	Side ported Metric size
B10		ø10	—	●	
B12		ø12	—	—	
BN9	Downward elbow ø5/16"	●	—	—	Side ported Inch size
BN11		ø3/8"	—	●	
BN13		ø1/2"	—	—	
00 ^{∗1}	Plug	●	●	●	P/E port entry on one side or Top ported

∗1: It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.



SUP/EXH end block assembly accessories and the number of accessories

Accessories	SY3000	SY5000/7000
a Tension bolt	2 pcs.	3 pcs.
A-3 Manifold block gasket	1 pc.	

Gasket is mounted.

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly, Part No.

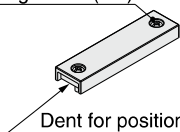
Manifold Options

Series SY3000/5000/7000

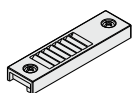
Manifold Parts No.

■ Cover assembly/Silencer cover assembly/Port block assembly for SUP/EXH (end) block assembly

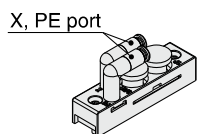
Mounting screw (M3)



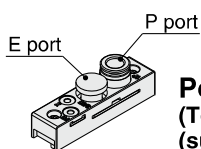
Cover assembly
(Internal pilot)



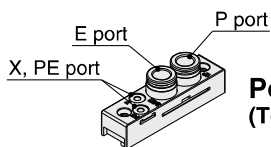
Silencer cover assembly
(Internal pilot, Built-in silencer)



Port block assembly
(Side/Bottom ported, External pilot)



Port block assembly
(Top ported, Internal pilot, for silencer supply side)



Port block assembly
(Top ported, Internal/External pilot)

*: Cover assembly, silencer cover assembly and port block assembly are included in the SUP/EXH (end) block assembly, but they need to be ordered for piping direction change.

Tightening torque for mounting screw
SY3000/5000 (M3): 0.8 N·m
SY7000 (M4): 1.4 N·m

⚠ Caution

1. Be sure to shut off the power and air supplies before disassembly.
Furthermore, since air may remain inside the actuator, piping and manifold, confirm that the air is completely exhausted before performing any work.
2. When disassembly and assembly are performed, air leakage may result if the tightening of the cover and port block assemblies are inadequate.

SY 3 0M-4- 1A

SY 3 0M-5- 1A

SY 3 0M-6- 1AR - 00

X, PE port One-touch fitting type

Symbol	X, PE port	SY3000	SY5000	SY7000
Nil	Metric size	ø4	●	●
		ø6	—	—
U	Inch size	ø5/32"	●	●
		ø1/4"	—	—

SY 3 0M-6- 3AV - C8

SY 3 0M-6- 1A V - C8

Series

3	SY3000
5	SY5000
7	SY7000

Pilot type

Nil	Internal pilot
R	External pilot

P, E port size (One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000
C8	ø8	●	—	—
C10	ø10	—	●	—
C12	ø12	—	—	●
N9	ø5/16"	●	—	—
N11	ø3/8"	—	●	—
N13	ø1/2"	—	—	●
00*1	Plug	●	●	●

*1: Cannot be selected for the SY□0M-6-3AV-□ and SY□0M-6-1ARV-□.

Series SY3000/5000/7000 One-touch Fittings and Plug Assembly/Part No.

Refer to "Changing One-touch Fittings" on page 272 for replacement method.

One-touch fittings

Port size			SY3000	SY5000	SY7000	
A, B port*	Metric size	ø2	VVQ1000-50A-C2	—	—	
		ø3.2	VVQ1000-50A-C3	—	—	
		ø4	VVQ1000-50A-C4	VVQ1000-51A-C4	—	
		ø6	VVQ1000-50A-C6	VVQ1000-51A-C6	VVQ2000-51A-C6	
		ø8	—	VVQ1000-51A-C8	VVQ2000-51A-C8	
		ø10	—	—	VVQ2000-51A-C10	
		ø12	—	—	KQ2H12-17-X224	
		ø4	SZ3000-73-1A-L4	SZ3000-74-1A-L4	—	
		ø6	SZ3000-73-1A-L6	SZ3000-74-1A-L6	SZ3000-83-1A-L6	
		ø8	—	SZ3000-74-1A-L8	SZ3000-83-1A-L8	
		ø10	—	—	SZ3000-83-1A-L10	
		ø12	—	—	KQ2L12-17N-X224	
	ø4	SZ3000-73-2A-L4	SZ3000-74-2A-L4	—		
	ø6	SZ3000-73-2A-L6	SZ3000-74-2A-L6	SZ3000-83-2A-L6		
	ø8	—	SZ3000-74-2A-L8	SZ3000-83-2A-L8		
	ø10	—	—	SZ3000-83-2A-L10		
	ø12	—	—	KQ2W12-17N-X224		
	Inch size	Straight type	ø1/8"	VVQ1000-50A-N1	—	—
			ø5/32"	VVQ1000-50A-N3	VVQ1000-51A-N3	—
			ø1/4"	VVQ1000-50A-N7	VVQ1000-51A-N7	VVQ2000-51A-N7
			ø5/16"	—	VVQ1000-51A-N9	VVQ2000-51A-N9
			ø3/8"	—	—	VVQ2000-51A-N11
		Elbow type	ø5/32"	KJL03-95-X224	—	—
			ø1/4"	KJL07-95-X224	KQ2L07-14-X224	—
ø5/16"			—	KQ2L09-14-X224	—	
ø3/8"			—	—	KQ2L11-14-X224	
Long elbow type		ø5/32"	KJL03-95-X225	—	—	
		ø1/4"	KJL07-95-X225	KQ2L07-14-X225	—	
		ø5/16"	—	KQ2L09-14-X225	—	
ø3/8"	—	—	KQ2L11-14-X225			
Metric size	Straight type	ø8	VVQ1000-51A-C8	—	—	
		ø10	—	VVQ2000-51A-C10	—	
		ø12	—	—	VVQ4000-50B-C12	
	Elbow type	ø8	SZ3000-74-1A-L8	—	—	
		ø10	—	SZ3000-83-1A-L10	—	
		ø12	—	—	KQ2L12-19N-X224	
	Long elbow type	ø8	SZ3000-74-2A-L8	—	—	
		ø10	—	SZ3000-83-2A-L10	—	
		ø12	—	—	KQ2W12-19N-X224	
	Inch size	Straight type	ø5/16"	VVQ1000-51A-N9	—	—
			ø3/8"	—	VVQ2000-51A-N11	—
			ø1/2"	—	—	VVQ4000-50B-N13
Elbow type		ø5/16"	KQ2L09-14-X224	—	—	
		ø3/8"	—	KQ2L11-14-X224	—	
Long elbow type		ø1/2"	—	—	KQ2L13-19N-X224	
		ø5/16"	KQ2L09-14-X225	—	—	
ø3/8"	—	KQ2L11-14-X225	—			
ø1/2"	—	—	KQ2W13-19N-X224			

*1: A and B ports (ø8 and ø5/16") of the SY3000 and 5000 mixed mounting type are the same as those of the SY5000.

*: Purchasing order is available in units of 10 pieces. Additionally, when performing the piping in the same orientation using the elbow type, please order "elbow type" or "long elbow type" appropriately.

Plug assembly

	SY3000	SY5000	SY7000
A, B port	VVQ0000-58A	VVQ1000-58A	VVQ2000-58A
P, E port	VVQ1000-58A	VVQ2000-58A	SY9000-62-1A

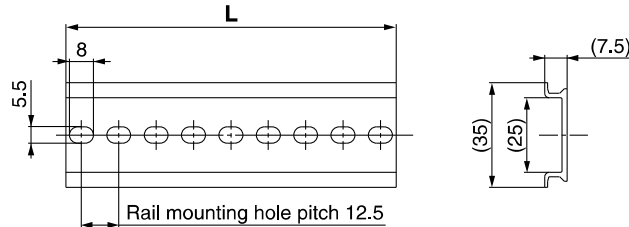
*: Purchasing order is available in units of 10 pieces.

Series SY3000/5000/7000 Manifold Options

■ DIN rail dimensions/weight for the SY3000 **Plug-in** metal base and the SY3000/5000 **Plug-in** connector connecting base

VZ1000-11-1-□

*: After confirming the L3 dimension in the dimensions table of each series, refer to the DIN rail dimensions table below and specify the number in the box □.

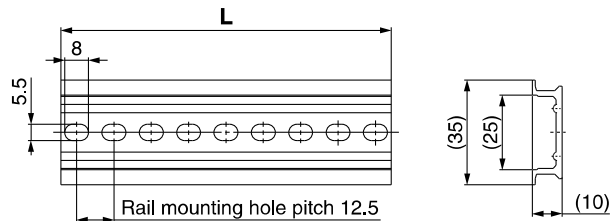


No.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
L dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	323
Weight [g]	17.6	19.9	22.1	24.4	26.6	28.9	31.1	33.4	35.6	37.9	40.1	42.4	44.6	46.9	49.1	51.4	53.6	55.9	58.1
No.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
L dimension	335.5	348	360.5	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5	523	535.5	548	560.5
Weight [g]	60.4	62.5	64.9	67.1	69.4	71.6	73.9	76.1	78.4	80.6	82.9	85.1	87.4	89.6	91.9	94.1	96.4	98.6	100.9
No.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
L dimension	573	585.5	598	610.5	623	635.5	648	660.5	673	685.5	698	710.5	723	735.5	748	760.5	773	785.5	798
Weight [g]	103.1	105.4	107.6	109.9	112.1	114.4	116.6	118.9	121.1	123.4	125.6	127.9	130.1	132.4	134.6	136.9	139.1	141.4	143.6
No.	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71				
L dimension	810.5	823	835.5	848	860.5	873	885.5	898	910.5	923	935.5	948	960.5	973	985.5				
Weight [g]	145.9	148.1	150.4	152.6	154.9	157.1	159.4	161.6	163.9	166.1	168.4	170.6	172.9	175.1	177.4				

■ DIN rail dimensions/weight for the SY5000/7000 **Plug-in** metal base and the SY7000 **Plug-in** connector connecting base

VZ1000-11-4-□

*: After confirming the L3 dimension in the dimensions table of each series, refer to the DIN rail dimensions table below and specify the number in the box □.



No.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
L dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	323
Weight [g]	24.8	28	31.1	34.3	37.4	40.6	43.8	46.9	50.1	53.3	56.4	59.6	62.7	65.9	69.1	72.2	75.4	78.6	81.7
No.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
L dimension	335.5	348	360.5	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5	523	535.5	548	560.5
Weight [g]	84.9	88	91.2	94.4	97.5	100.7	103.9	107	110.2	113.3	116.5	119.7	122.8	126	129.2	132.3	135.5	138.6	141.8
No.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
L dimension	573	585.5	598	610.5	623	635.5	648	660.5	673	685.5	698	710.5	723	735.5	748	760.5	773	785.5	798
Weight [g]	145	148.1	151.3	154.5	157.6	160.8	163.9	167.1	170.3	173.4	176.6	179.8	182.9	186.1	189.2	192.4	195.6	198.7	201.9
No.	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71				
L dimension	810.5	823	835.5	848	860.5	873	885.5	898	910.5	923	935.5	948	960.5	973	985.5				
Weight [g]	205.1	208.2	211.4	214.5	217.7	220.9	224	227.2	230.4	233.5	236.7	239.8	243	246.2	249.3				

⚠ Caution

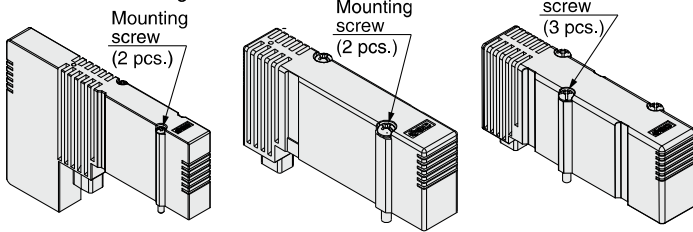
Tightening torque for mounting screw	
M2:	0.16 N·m (SY3000)
M3:	0.8 N·m (SY5000/7000)

Manifold Options

*: Refer to pages 260, 262, 264 for dimensions.

■ Blanking plate assembly

[With two mounting screws (3 pcs. for the SY7000)]
Used when valve additions are expected or for maintenance. A structure is in place on the blanking plate to prevent the mounting screws from sliding.



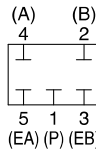
SY30M-26-□A (-B) SY50M-26-□A (-B) SY70M-26-□A (-B)

How to Order Blanking Plate Assembly

SY 3 0M-26-1 A-□

Series

3	SY3000
5	SY5000
7	SY7000



Circuit diagram

Option for mounting

Nil	With mounting screw (Round head combination screw)
B	With mounting screw (Hexagon socket head cap screw)

Base type

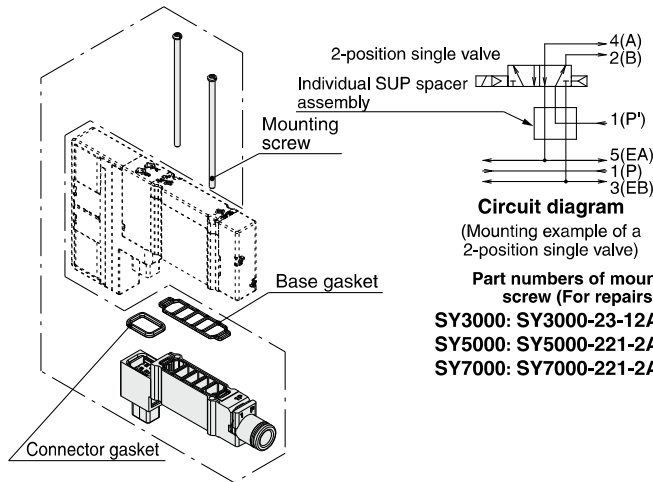
1	For plug-in connector connecting base
2	For plug-in metal base

■ Individual SUP spacer assembly

[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

When the same manifold is used for different pressures, an individual SUP spacer assembly is used as a supply port for different pressures.

*: When selecting a One-touch fitting elbow type for a spacer assembly, use it faced upward, since it interferes with A and B port piping in Type 50 and Type 10 manifolds.



Circuit diagram
(Mounting example of a 2-position single valve)

Part numbers of mounting screw (For repairs)

- SY3000: SY3000-23-12A (2 pcs.)
- SY5000: SY5000-221-2A (2 pcs.)
- SY7000: SY7000-221-2A (3 pcs.)

How to Order Individual SUP/EXH Spacer Assembly

One-touch fitting Straight type SY 3 0M-38-1 A-C6

One-touch fitting Elbow type SY 3 0M-38-2 A-L6

Series

3	SY3000
5	SY5000
7	SY7000

Spacer type

38	Individual SUP spacer
39	Individual EXH spacer

Individual SUP/EXH spacer assembly

2	Short elbow type
3	Long elbow type

*: Select the long elbow type for a 3-position valve when using Type 11 and Type 12 downward. However, Type 11 of the SY3000 series for the mixed mounting of connector connecting bases cannot be used downward.

Port size (Metric/One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000
L4	ø4	●	●	—
L6	ø6	●	●	●
L8	ø8	—	●	●
L10	ø10	—	—	●
L12	ø12	—	—	●

Port size (Inch/One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000
LN3	ø5/32"	●	—	—
LN7	ø1/4"	●	●	—
LN9	ø5/16"	—	●	—
LN11	ø3/8"	—	—	●

Port size (Metric/One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000
C2	ø2	●	—	—
C3	ø3	●	—	—
C4	ø4	●	●	—
C6	ø6	●	●	●
C8	ø8	—	●	●
C10	ø10	—	—	●
C12	ø12	—	—	●

Port size (Inch/One-touch fittings)

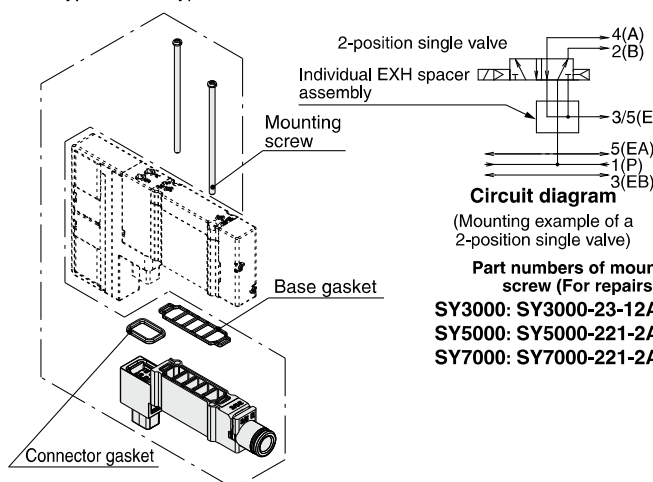
Symbol	P, E port	SY3000	SY5000	SY7000
N1	ø1/8"	●	—	—
N3	ø5/32"	●	●	—
N7	ø1/4"	●	●	●
N9	ø5/16"	—	●	●
N11	ø3/8"	—	—	●

■ Individual EXH spacer assembly

[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

When valve exhaust affects other stations due to the circuit configuration, this spacer assembly is used for individual valve exhaust.

*: When selecting a One-touch fitting elbow type for a spacer assembly, use it faced upward, since it interferes with A and B port piping in Type 50 and Type 10 manifolds.



Circuit diagram
(Mounting example of a 2-position single valve)

Part numbers of mounting screw (For repairs)

- SY3000: SY3000-23-12A (2 pcs.)
- SY5000: SY5000-221-2A (2 pcs.)
- SY7000: SY7000-221-2A (3 pcs.)

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

Caution

Tightening torque for mounting screw
M2: 0.16 N·m (SY3000)
M3: 0.8 N·m (SY5000/7000)

Manifold Options

*: Refer to pages 260 to 265 for dimensions.

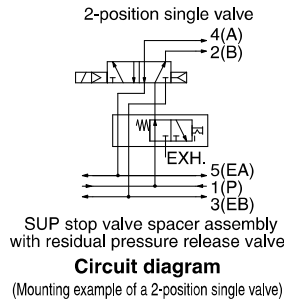
■ SUP stop valve spacer assembly with residual pressure release valve

[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

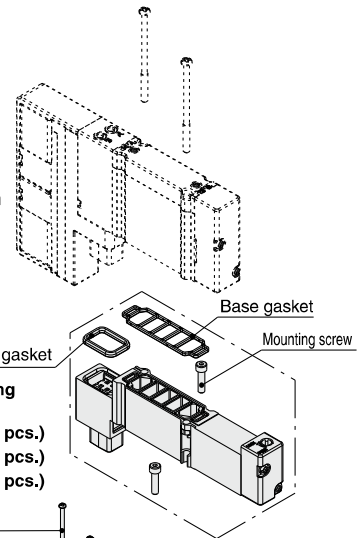
It is used to shut off the supply air to valves individually.

*: Cannot be selected when the elbows are facing upward in A and B ports in Type 10 manifolds, since they will interfere with the piping for the spacer assembly.

SY 3 0M - 50 - 1A E	
Series	Manual override
3 SY3000	Nil Push-turn locking slotted type
5 SY5000	E Push-turn locking lever type
7 SY7000	



*: For lever type
When locking the lever type manual override, push the lever down in the PUSH position with your fingers until it stops, then turn the lever 90° clockwise. (PUSH → LOCK)
Turning the lever without pushing it down until it stops can cause damage to the manual override and other problems such as air leakages.
To unlock the manual override, turn the lever counterclockwise. (LOCK → PUSH)



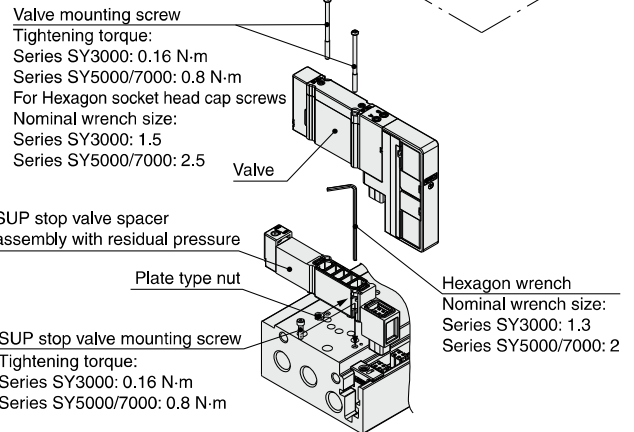
Part numbers of mounting screw (For repairs)
SY3000: SY30M-56-1A (2 pcs.)
SY5000: SY50M-56-1A (2 pcs.)
SY7000: SY70M-56-1A (3 pcs.)

[How to mount SUP stop valve spacer assembly with residual pressure release valve]

Insert the SUP stop valve mounting screw from the side of the spacer assembly, and mount it to the manifold.

Tighten the SUP stop valve mounting screw to the specified tightening torque. Mount the valve and tighten the valve mounting screws to the specified tightening torque after mounting the SUP stop valve spacer assembly with residual pressure exhaust valve.

- *: Install the plate type nut to the spacer assembly as shown in the figure if it comes off. The SUP stop valve mounting screws can be tightened with a hexagon wrench without removing the plate type nut.
- *: When the elbows are facing upward in A and B ports in Type 10 manifolds, they will interfere with the piping for the spacer assembly. Therefore, combine the A and B ports with straight types or elbows facing downward.
- *: This product is only for internal pilot specifications, as the external pilot air cannot be shut off.



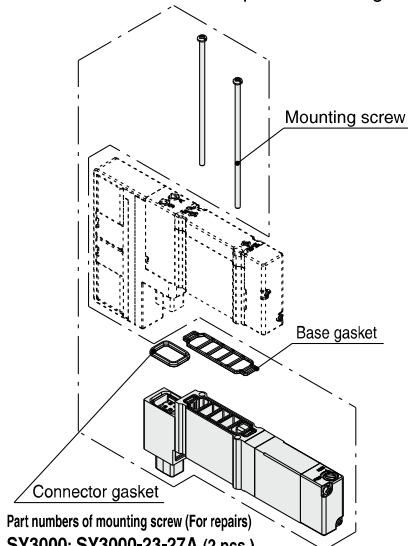
■ Double check spacer assembly with residual pressure release valve (Side/Bottom ported)

[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

It is used to hold the intermediate position of the cylinder for a long period of time. Use a 3-position exhaust center valve when the double check spacer assembly with residual exhaust valve is used.

It can also be used for drop prevention at the cylinder stroke end when supply residual pressure is released by using a 2-position single/double valve.
Operating pressure range: 0.1 to 1.0 MPa

*: When the elbows are facing upward in A and B ports in Type 10 manifolds, they will interfere with the piping for the spacer assembly. Therefore, combine the A and B ports with straight types or elbows facing downward.



Part numbers of mounting screw (For repairs)
SY3000: SY3000-23-27A (2 pcs.)
SY5000: SY5000-221-4A (2 pcs.)
SY7000: SY7000-221-4A (3 pcs.)

Series	Part no.
SY3000	SY30M-60-1A
SY5000	SY50M-60-1A
SY7000	SY70M-60-1A

	Intermediate stop	Drop prevention
Applicable valve	SY $\frac{3}{7}$ 40 $\frac{1}{1}$	SY $\frac{3}{7}$ 20 $\frac{0}{1}$

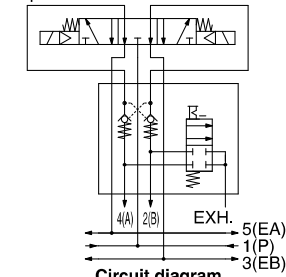
Caution

- Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from stopping for a long period of time. Check the leakage using neutral household detergent, such as dish washing soap. Also, check the cylinder's tube gasket, piston packing and rod packing for air leakage.
- Combining with 3-position closed center or pressure center valve will not work.
- If the exhaust of the double check spacer is restricted too much, the cylinder may not operate properly and may not stop intermediately.
- Set the cylinder load so that the cylinder pressure will be within two times that of the supply pressure.

<Example>

Double check spacer assembly with residual pressure release valve

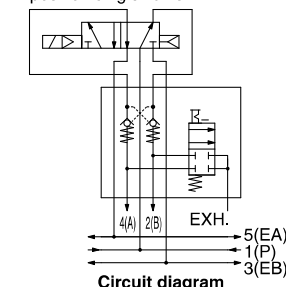
3-position exhaust center valve



(Intermediate stop: When 3-position exhaust center valve is mounted)

Double check spacer assembly with residual pressure release valve

2-position single valve



(Drop prevention: When 2-position single valve is mounted)

⚠ Caution

Tightening torque for mounting screw
M2: 0.16 N·m (SY3000)
M3: 0.8 N·m (SY5000/7000)

Manifold Options

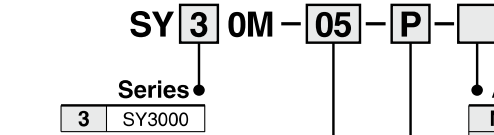
*: Refer to pages 261, 263, 265 for dimensions.

■ Interface regulator

[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

Used when the supply pressure for each valve on the same manifold must be individually set (reduced pressure).

How to Order



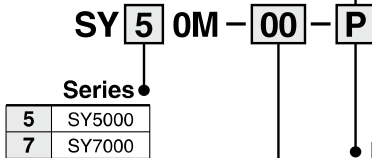
Pressure gauge option ^{*1}	
M1	No pressure gauge
05	Pressure gauge with MPa display (For odd number station)
06	Pressure gauge with MPa display (For even number station)
N5	Pressure gauge with psi display (For odd number station) ^{*2}
N6	Pressure gauge with psi display (For even number station) ^{*2}

Applicable valve ^{*3}	
Nil	For single, double, and 4-position
3	For 3-position

*1: In the case of the SY3000 series with a pressure gauge, when mounting on the manifold, use caution that the part numbers are different between the odd no. stations and the even no. stations to prevent the pressure gauges from interfering with each other.
If using a connector connecting base M10/11/12 (mixed mounting type) or laminating two or more types of spacer type manifold options for the neighboring stations, you can use only the model without a pressure gauge (M1).

*2: As per the new Measurement Law, gauges with a psi display will only be sold to overseas customers.

*3: In the case of the SY3000 series, use caution that the part numbers will differ depending on the one for single/double and 4- and 3-position due to the different length of solenoid valves. Also, if you have selected a model with a pressure gauge, and if at least the one for 3-position is included in the same manifold, use all the ones for 3-position to prevent the pressure gauges from interfering with each other.

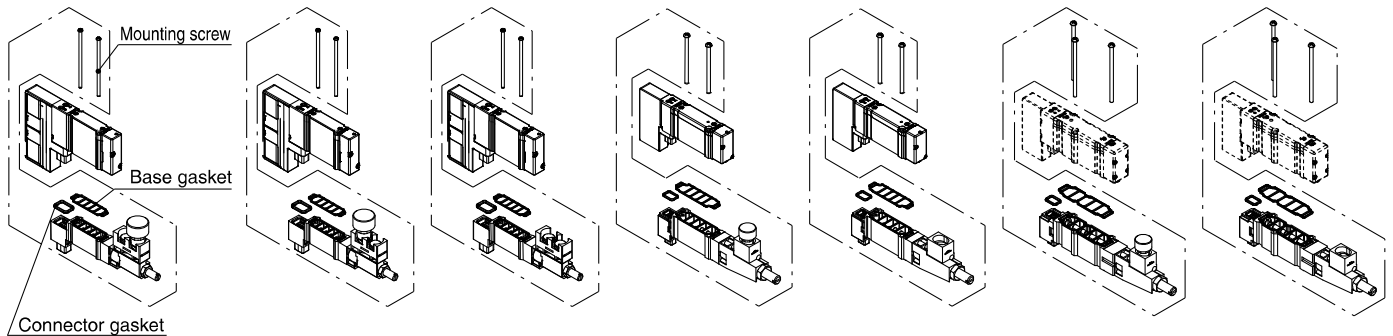


Pressure gauge option ^{*1}	
M1	No pressure gauge
00	Pressure gauge with MPa display
N0	Pressure gauge with psi display ^{*2}

Regulating port	
P	1(P) port
A1	4(A) port (P controlled type, A port regulation)
B1	2(B) port (P controlled type, B port regulation)

Part numbers of mounting screw (For repairs)

SY3000: SY3000-23-12A (2 pcs.)
SY5000: SY5000-221-6A (2 pcs.)
SY7000: SY7000-221-6A (3 pcs.)



SY30M-05/N5-□ (With pressure gauge/ For odd number station) SY30M-06/N6-□ (With pressure gauge/ For even number station) SY30M-M1-□ (Without pressure gauge) SY50M-00/N0-□ (With pressure gauge) SY50M-M1-□ (Without pressure gauge) SY70M-00/N0-□ (With pressure gauge) SY70M-M1-□ (Without pressure gauge)

Specifications

Interface regulator model	SY30M-□-□-□	SY50M-□-□	SY70M-□-□
Applicable valve model ^{*1}	SY3□ ₃ □(R)	SY5□ ₃ □(R)	SY7□ ₃ □(R)
Regulating port		1(P), 4(A), 2(B)	
Set pressure range		0.1 to 0.7 MPa	
Maximum operating pressure		1.0 MPa	
Fluid		Air	
Ambient and fluid temperature		-10 to 50°C (No freezing)	
Weight [g] ^{*2}	With pressure gauge	33(35) ^{*3}	75
	Without pressure gauge	27(29) ^{*3}	69

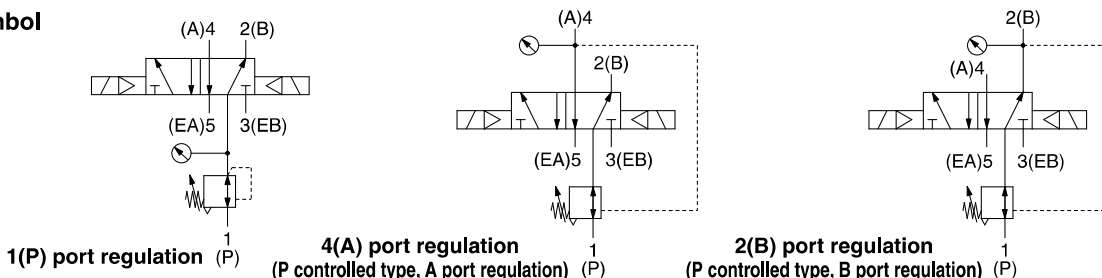
*1: 3-position closed center and pressure center, and 4-position dual 3-port valves are only available for 1(P) port pressure regulation.

*2: Gasket and mounting screws are included in the weight.

*3: (): Denotes the values of SY30M-□-□-3.

*: Always apply pressure from 1(P) port in the base for interface regulator.

Symbol

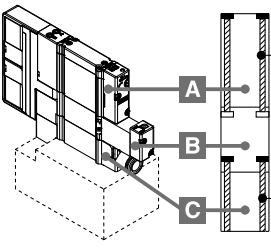
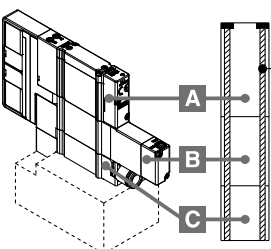
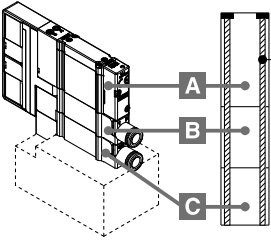
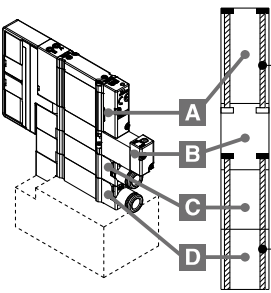


Series SY3000/5000/7000

⚠ Caution

Tightening torque for mounting screw
M2: 0.16 N·m (SY3000)
M3: 0.8 N·m (SY5000/7000)

Spacer Combinations and Screw List ①

Combination	① SY3000 (M2)		② SY5000 (M3)		③ SY7000 (M3)			
	Round head combination screw	Hexagon socket head cap screw	Round head combination screw	Hexagon socket head cap screw	Round head combination screw	Hexagon socket head cap screw		
 <p><Round head combination screw> ①: SY3000-23-24A ②: SY5000-221-1A ③: SY7000-221-1A</p> <p><Hexagon socket head cap screw> ①: SY3000-222-1A ②: SY5000-222-1A ③: SY7000-221-1A</p> <p>①: SY30M-56-2A ②: SY50M-56-2A ③: SY70M-56-2A</p>	A Valve	SY3000-23-24A [for 10 valves (20 pcs.)]	SY3000-222-1A [for 10 valves (20 pcs.)]	SY5000-221-1A [for 10 valves (20 pcs.)]	SY5000-222-1A [for 10 valves (20 pcs.)]	SY7000-221-1A [for 10 valves (30 pcs.)]	SY7000-222-1A [for 10 valves (30 pcs.)]	
	B SUP stop valve spacer assembly with residual pressure release valve	SY30M-56-2A (2 pcs.)		SY50M-56-2A (2 pcs.)		SY70M-56-2A (3 pcs.)		
	C Individual SUP (EXH) spacer assembly							
 <p><Round head combination screw> ①: SY3000-23-33A ②: SY5000-221-5A ③: SY7000-221-5A</p>	A Valve	SY3000-23-33A (2 pcs.)	—	SY5000-221-5A (2 pcs.)	—	SY7000-221-5A (3 pcs.)	—	
	B Double check spacer assembly with residual pressure release valve							
	C Individual SUP (EXH) spacer assembly							
 <p><Round head combination screw> ①: SY3000-23-32A ②: SY5000-221-3A ③: SY7000-221-3A</p>	A Valve	SY3000-23-32A (2 pcs.)	—	SY5000-221-3A (2 pcs.)	—	SY7000-221-3A (3 pcs.)	—	
	B Individual SUP (EXH) spacer assembly							
	C Individual EXH (SUP) spacer assembly							
 <p><Round head combination screw> ①: SY3000-23-24A ②: SY5000-221-1A ③: SY7000-221-1A</p> <p><Hexagon socket head cap screw> ①: SY3000-222-1A ②: SY5000-222-1A ③: SY7000-222-1A</p> <p>①: SY30M-56-4A ②: SY50M-56-4A ③: SY70M-56-4A</p>	A Valve	SY3000-23-24A [for 10 valves (20 pcs.)]	SY3000-222-1A [for 10 valves (20 pcs.)]	SY5000-221-1A [for 10 valves (20 pcs.)]	SY5000-222-1A [for 10 valves (20 pcs.)]	SY7000-221-1A [for 10 valves (30 pcs.)]	SY7000-222-1A [for 10 valves (30 pcs.)]	
	B SUP stop valve spacer assembly with residual pressure release valve	SY30M-56-4A (2 pcs.)		SY50M-56-4A (2 pcs.)		SY70M-56-4A (3 pcs.)		
	C Individual SUP (EXH) spacer assembly							
	D Individual EXH (SUP) spacer assembly							

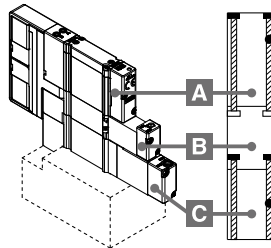
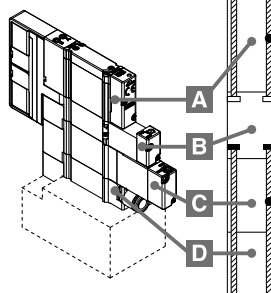
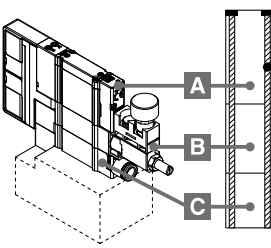
*: Mounting onto a manifold follows the order explained above.

*: The fitting for individual SUP/EXH spacers comes in a straight type only, since an elbow type would interfere with each spacer assembly when laminated.

⚠ Caution

Tightening torque for mounting screw
M2: 0.16 N·m (SY3000)
M3: 0.8 N·m (SY5000/7000)

Spacer Combinations and Screw List ②

Combination	① SY3000 (M2)		② SY5000 (M3)		③ SY7000 (M3)			
	Round head combination screw	Hexagon socket head cap screw	Round head combination screw	Hexagon socket head cap screw	Round head combination screw	Hexagon socket head cap screw		
 <p style="font-size: 8px;"> <Round head combination screw> ①: SY3000-23-24A ②: SY5000-221-1A ③: SY7000-221-1A </p> <p style="font-size: 8px;"> <Hexagon socket head cap screw> ①: SY3000-222-1A ②: SY5000-222-1A ③: SY7000-222-1A </p> <p style="font-size: 8px;"> ①: SY30M-56-3A ②: SY50M-56-3A ③: SY70M-56-3A </p>	A	Valve	SY3000-23-24A [for 10 valves (20 pcs.)]	SY3000-222-1A [for 10 valves (20 pcs.)]	SY5000-221-1A [for 10 valves (20 pcs.)]	SY5000-222-1A [for 10 valves (20 pcs.)]	SY7000-221-1A [for 10 valves (30 pcs.)]	SY7000-222-1A [for 10 valves (30 pcs.)]
	B	SUP stop valve spacer assembly with residual pressure release valve	SY30M-56-3A (2 pcs.)		SY50M-56-3A (2 pcs.)		SY70M-56-3A (3 pcs.)	
	C	Double check spacer assembly with residual pressure release valve						
 <p style="font-size: 8px;"> <Round head combination screw> ①: SY3000-23-24A ②: SY5000-221-1A ③: SY7000-221-1A </p> <p style="font-size: 8px;"> <Hexagon socket head cap screw> ①: SY3000-222-1A ②: SY5000-222-1A ③: SY7000-222-1A </p> <p style="font-size: 8px;"> ①: SY30M-56-5A ②: SY50M-56-5A ③: SY70M-56-5A </p>	A	Valve	SY3000-23-24A [for 10 valves (20 pcs.)]	SY3000-222-1A [for 10 valves (20 pcs.)]	SY5000-221-1A [for 10 valves (20 pcs.)]	SY5000-222-1A [for 10 valves (20 pcs.)]	SY7000-221-1A [for 10 valves (30 pcs.)]	SY7000-222-1A [for 10 valves (30 pcs.)]
	B	SUP stop valve spacer assembly with residual pressure release valve	SY30M-56-5A (2 pcs.)		SY50M-56-5A (2 pcs.)		SY70M-56-5A (3 pcs.)	
	C	Double check spacer assembly with residual pressure release valve						
	D	Individual EXH (SUP) spacer assembly						
 <p style="font-size: 8px;"> <Round head combination screw> ①: SY3000-23-32A ②: SY5000-221-7A ③: SY7000-221-7A </p>	A	Valve						
	B	Interface regulator	SY3000-23-32A (2 pcs.)	—	SY5000-221-7A (2 pcs.)	—	SY7000-221-7A (3 pcs.)	—
	C	Individual SUP (EXH) spacer assembly						

- *: Mounting onto a manifold follows the order explained above.
- *: The fitting for individual SUP/EXH spacers comes in a straight type only, since an elbow type would interfere with each spacer assembly when laminated.
- *: When laminating an interface regulator with other options, only the combinations in the table above are possible.

Valve
 Plug-in Sub-plate
 Metal Base
 Plug-in
 Type 50, 51, 52
 Manifold Exploded View
 Connector Connecting Base
 Plug-in
 Type 10, 11, 12
 Manifold Exploded View
 One-touch Fittings/
 Plug Assembly Part No.
 Manifold Options

Caution

Tightening torque for mounting screw
M2: 0.16 N·m (SY3000)
M3: 0.8 N·m (SY5000/7000)

Manifold Options

*: Refer to pages 261, 263, 265 for dimensions.

Individual SUP block assembly

On the circuit of the plug-in connector connection base, an individual SUP block assembly can be used to supply air to a series of valves if a separate air supply is required, or if additional air is required for additional air flow.

Individual SUP block assembly occupies 1 station.

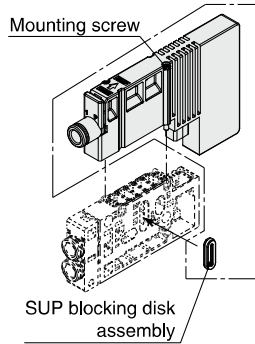
Blocking disks also supplied (2 pieces). Can be used to block both sides of the number of stations being isolated for individual air supply (as shown in example).

*: Specify the mounting position of the block as well as the position where the SUP passage is to be blocked on the manifold specification sheet. Blocking is required for 1 or 2 positions for 1 set. (2 SUP blocking disks is attached to individual SUP block.)

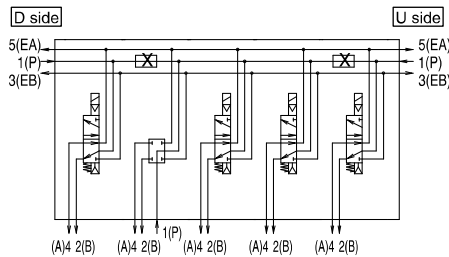
*: Electrical wiring is connected to a number of stations in the individual SUP block manifold.

*: When used in M10/11/12 (mixed mounting type), select the SY50M type for SS5Y5 and the SY70M type for SS5Y7.

*: A structure to prevent screws falling out is in place on the individual SUP block, making it much harder for the mounting screws to fall out.



<Example>



How to Order Individual SUP/EXH Block Assembly

One-touch fitting Straight type SY **3** OM - **78** - 1 A - **C6**

One-touch fitting Elbow type SY **3** OM - **78** - **2** A - **L6**

Series	3	SY3000
5	SY5000	
7	SY7000	

Block type

78	Individual SUP block
79	Individual EXH block

Individual SUP/EXH block assembly

2	Short elbow type (Type 12)
3	Long elbow type (Type 11)

*: Long elbow type is for the SY5000/7000 only.

Port size (Metric/One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000
L4	ø4	●	●	—
L6	ø6	●	●	●
L8	ø8	—	●	●
L10	ø10	—	—	●
L12	ø12	—	—	●

Port size (Inch/One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000
LN3	ø5/32"	●	—	—
LN7	ø1/4"	●	●	—
LN9	ø5/16"	—	●	—
LN11	ø3/8"	—	—	●

Port size (Metric/One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000
C2	ø2	●	—	—
C3	ø3	●	—	—
C4	ø4	●	●	—
C6	ø6	●	●	●
C8	ø8	—	●	●
C10	ø10	—	—	●
C12	ø12	—	—	●

Port size (Inch/One-touch fittings)

Symbol	P, E port	SY3000	SY5000	SY7000
N1	ø1/8"	●	—	—
N3	ø5/32"	●	●	—
N7	ø1/4"	●	●	●
N9	ø5/16"	—	●	●
N11	ø3/8"	—	—	●

Individual EXH block assembly

On the circuit of the plug-in connector connection base, individual EXH block assembly can be used to individually exhaust series of valves when the exhaust from the valves would affect a number of other stations.

Individual EXH block assembly occupies 1 station.

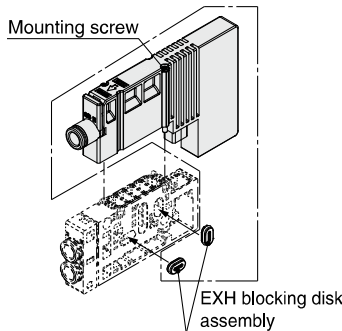
Blocking disks also supplied (4 pieces). Can be used to block both sides of the number of stations being isolated for individual exhaust. (as shown in example).

*: Specify the mounting position of the block as well as the position where the EXH passage is to be blocked on the manifold specification sheet. Blocking is required for 1 or 2 positions for 1 set. (2 sets of EXH blocking disks (4 pcs.) to block EXH is attached to individual EXH block.)

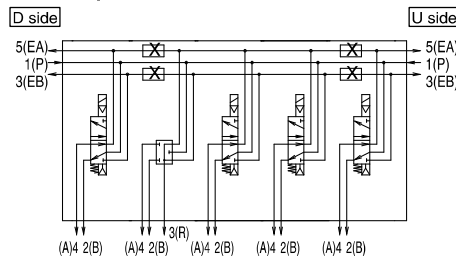
*: Electrical wiring is connected to a number of stations in the individual EXH block manifold.

*: When used in M10/11/12 (mixed mounting type), select the SY50M type for SS5Y5 and the SY70M type for SS5Y7.

*: A structure to prevent screws falling out is in place on the individual EXH block, making it much harder for the mounting screws to fall out.



<Example>



Manifold Options

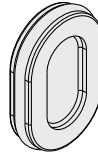
■ SUP/EXH blocking disk assembly (for connector type manifold, Type 10, 11, 12)

[SUP blocking disk]

By inserting the SUP blocking disk in the pressure supply passage of the manifold valve, can provide two different high and low pressure in one manifold.

[EXH blocking disk]

By inserting the EXH blocking disk in the exhaust passage of the manifold valve, can separate the exhaust from the valve so it does not affect the other valves. It can also be used for the manifold for the positive pressure and vacuum mixed manifold. (2 pcs. are required to block FA/EB both sides of the EXH.)

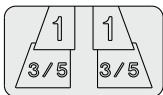


Series	SUP blocking disk assembly	EXH blocking disk assembly
SY3000	SY30M-40-1A	SY30M-40-2A
SY5000	SY50M-40-1A	SY50M-40-1A
SY7000	SY70M-40-1A	SY70M-40-1A

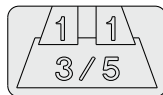
■ Label for blocking disk

Label to indicate and confirm on the manifold where the SUP/EXH blocking disk assemblies were inserted. (3 sheets each)

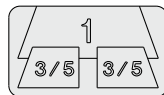
SUP/EXH blocking disk label



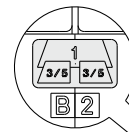
SUP blocking disk label



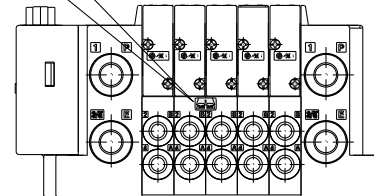
EXH blocking disk label



Series	Part no.
SY3000	SJ3000-155-1A
SY5000	
SY7000	



*: If the blocking disk assembly is ordered using the manifold specification sheet and ordered at the same time as the manifold, the position where the blocking disk assembly is inserted will be labeled and shipped out.



■ Back pressure check valve assembly (Retrofit or pre-installed type)

It prevents cylinder malfunction caused by other valve exhaust entry. Insert it into EA/EB port (valve mounting side) on the manifold side of a valve which is affected. It is effective when a single-acting cylinder is used.

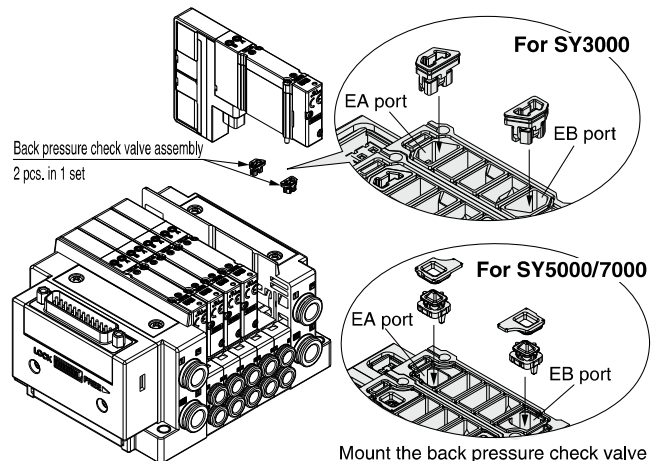
*: When ordering assemblies incorporated with a manifold, refer to the Ordering Example below (when installed in all stations.)

*: When a check valve for back pressure prevention is desired and is to be installed only in certain manifold stations, clearly indicate the part number and specify the mounting position on the manifold specification sheet.

<Precautions>

1. The manifold installed type back pressure check valve assembly is assembly parts with a check valve structure. However, since slight air leakage against the back pressure is allowed due to its structure, adverse effects of the back pressure due to increase in exhaust resistance cannot be prevented if the manifold exhaust port and other exhaust ports are put together for piping or if the piping diameter is narrowed. As a result, this may cause the actuator and air operated equipment to malfunction. So, be careful not to restrict the exhaust air. If the exhaust resistance becomes large, select a built-in valve type with rubber seal.

2. When the back pressure check valve assembly is mounted, please contact SMC for valve flow rate characteristics.



Mount the back pressure check valve assemblies on the EA and EB ports in the order shown in the figure above.

Series	Part no.
SY3000	SY30M-24-1A
SY5000	SY50M-24-1A
SY7000	SY70M-24-1A

Ordering Example

SS5Y3-10F1-05B-C6.....1 set (Type 10 5-station manifold base part no.)

***SY3201-5U1.....5 sets (2-position double part no.)**

***SY30M-24-1A.....5 sets (Back pressure check valve assembly part no.)**

The asterisk denotes the symbol for assembly.

Series SY3000/5000/7000

Manifold Options

■ Dual flow fitting (for connector connecting base, Type 10, side ported)

This is a fitting for cylinder ports which enables simultaneous actuation and increase in flow rate of valves for 2 stations.

*: When ordering assemblies incorporated into a manifold, refer to the Ordering Example below and specify on the manifold specification sheet.

How to Order Dual Flow Fitting

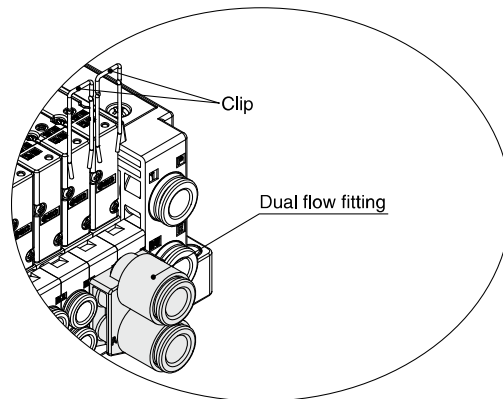
SY **3** 0M-120-1A-**C8**

Series

3	SY3000
5	SY5000

● A, B port size (One-touch fittings)

Symbol	A, B port	SY3000	SY5000
C8	Metric size	ø8	●
		ø10	—
N9	Inch size	ø5/16"	●
		ø3/8"	—
N11		—	●



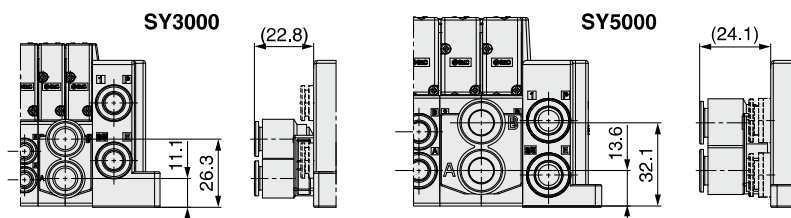
Ordering Example

SS5Y3-10F1-08B-CM

*SY3100-5U1

*SY30M-120-1A-C8

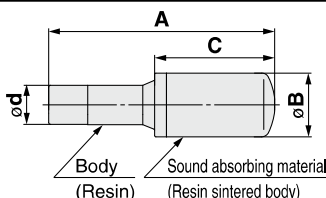
The asterisk denotes the symbol for assembly.



- *: Specifically for side porting for a connector connecting base. Cannot be attached to bottom or top ported, or mixed mounting types that are metal or connector connecting bases.
- *: When adding or changing clips, push them into the very end of the manifold for each station. Also, make sure to use the clip that was packed together, as the clip and the fitting for one station differ among products that can be used with the SY5000.
- *: Not available for the SY7000 series.

■ Silencer (One-touch fitting connection type)

This silencer can be mounted to the 3/5 (E: EXH) port of the manifold in one step.

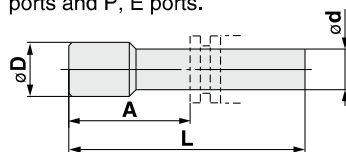


Series	Model	Effective area	A	B	C
For SY3000 (ø8)	AN15-C08	20 mm ²	45	13	20
For SY5000 (ø10)	AN20-C10	30 mm ²	57.5	16.5	30.5
For SY7000 (ø12)	AN30-C12	41 mm ²	71.5	20	43.5

*: Shipped together with the product.

■ Plug (White)

These are inserted in unused cylinder ports and P, E ports.



*: Shipped together with the product.

Dimensions

Applicable fitting size ød (Metric size)	Model	A	L	øD
2	KJP-02	8.2	17	3
3.2	KQ2P-23	16	31.5	5
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
12	KQ2P-12	24	45.5	14

Applicable fitting size ød (Inch size)	Model	A	L	øD
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10
3/8"	KQ2P-11	22	43	11.5
1/2"	KQ2P-13	24	46	15

Manifold Options

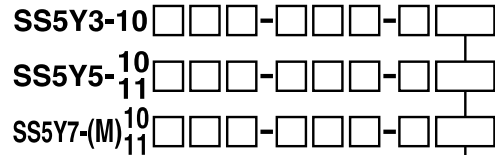
A transparent plastic plate to put a label with the name of the function of the solenoid valve.

■ Name plate (For connector connecting base)

SY3000: For SS5Y3-10 (Side ported)
SY5000: For SS5Y5-10/11 (Side/Bottom ported)
SY7000: For SS5Y7-(M)10/11 (Side/Bottom ported)

Name plate bracket assembly and name plate mounting instructions
 Insert it into the groove on the name plate bracket onto which a SUP/EXH (end) block is mounted, as shown in Figure 2.

*: When ordering assemblies incorporated with a manifold, refer to the Ordering Example below.



Mounting and Option

Symbol	Mounting option					
	Printing		DIN rail			Direct mounting
	Yes	No	With	Without	Specified length	
AA	●	—	—	—	—	●
A	●	—	●	—	—	—
A0	●	—	—	●	—	—
A3	●	—	—	—	For 3 stations	—
⋮	⋮	⋮	⋮	⋮	⋮	⋮
A24	●	—	—	—	For 24 stations	—
BA	—	●	—	—	—	●
B	—	●	●	—	—	—
B0	—	●	—	●	—	—
B3	—	●	—	—	For 3 stations	—
⋮	⋮	⋮	⋮	⋮	⋮	⋮
B24	—	●	—	—	For 24 stations	—

*: Name plates cannot be mounted onto Type 12 (Top ported) and Type 10 (Side ported) mixed mounting types with top ported valves, nor onto manifolds with optional laminated spacers.

*: No name plate settings are available for the SY3000/SY5000 mixed mounting types. However, they are available for the SY5000/SY7000 mixed mounting types.

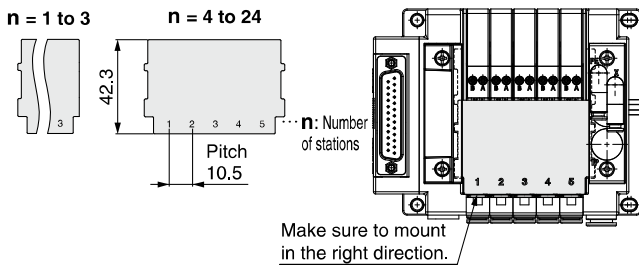
Ordering Example

SS5Y3-10F1-05UR-C6AA 1 set

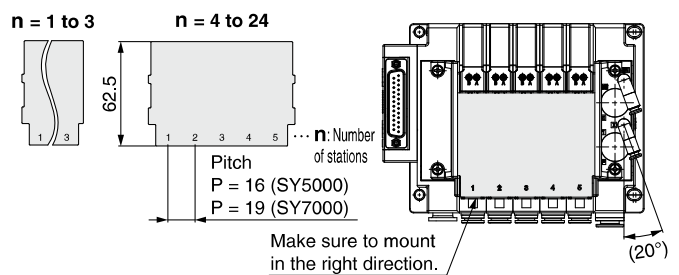
*SY3200R-5U1 5 sets

The asterisk denotes the symbol for assembly.

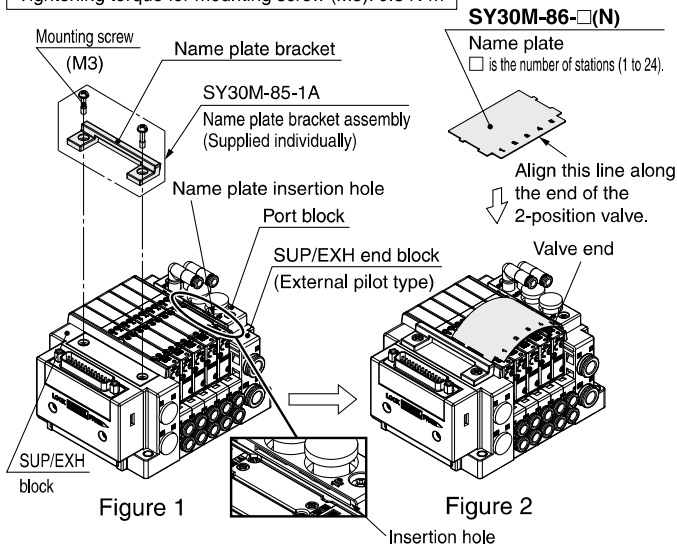
<SY3000>



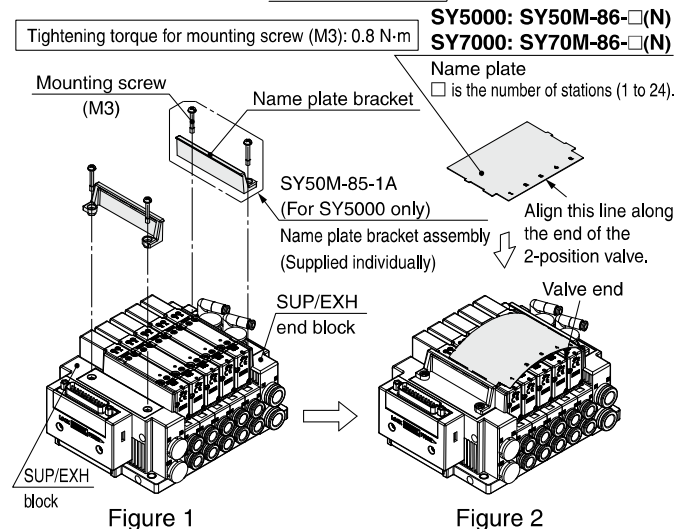
<SY5000/7000>



Tightening torque for mounting screw (M3): 0.8 N·m



Tightening torque for mounting screw (M3): 0.8 N·m



Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

One-touch Fittings/
Plug Assembly Part No.

Manifold Options

Series SY3000/5000/7000

Manifold Options

A transparent plastic plate to put a label with the name of the function of the solenoid valve.

■ If adding a name plate

If adding a name plate to a manifold in use, order a name plate bracket assembly, in addition to ordering a name plate. Refer to the table below for the part number and the amount.

Name plate part number

Model		SS5Y3-10	SS5Y5-10/11	SS5Y7-(M)10/11	Note
Name plate	Printed	SY30M-86-□N	SY50M-86-□N	SY70M-86-□N	□:Number of stations (1 to 24)
	No printing	SY30M-86-□	SY50M-86-□	SY70M-86-□	

Name plate bracket assembly part number and number of items ordered

Model		SS5Y3-10	SS5Y5-10/11
Name plate assembly part number		SY30M-85-1A	SY50M-85-1A
Manifold SUP/EXH block assembly Pilot type and P, E port entry	Internal pilot U/D piping	2 pcs.	2 pcs.
	Internal pilot double sided piping	2 pcs.	
	External pilot U/D piping	1 pc.*1	
	External pilot double sided piping	Not required*1	

*1: If the manifold is an external pilot, an insertion slot for name plates is on the port block of the SUP/EXH block assembly. Thus, a bracket assembly is no longer required on the port piping side.

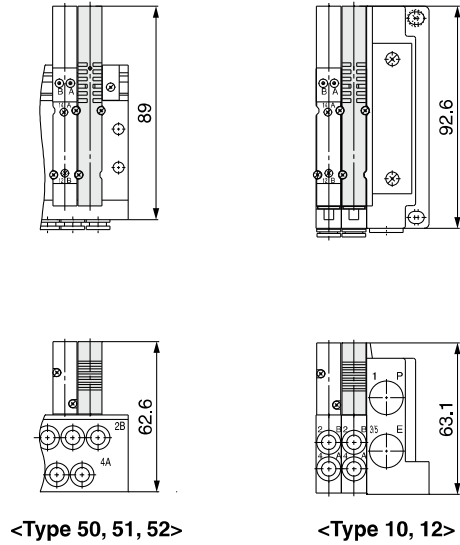
*: Name plate bracket assembly is not required for the SY7000.

Caution

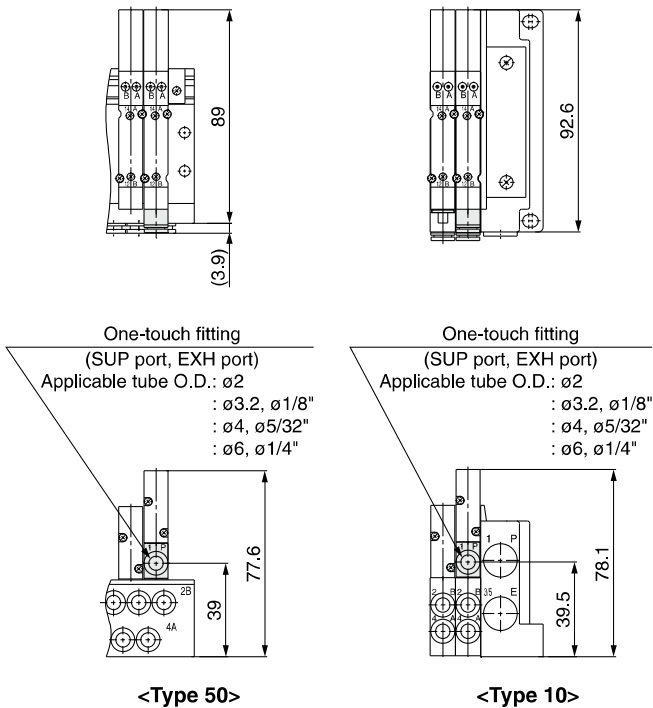
1. Be sure to shut off the power and air supplies before mounting the name plate bracket assembly. Furthermore, since air may remain inside the actuator, piping and manifold, confirm that the air is completely exhausted before performing any work.
2. When disassembly and assembly are performed, air leakage may result if the tightening of the bracket mounting screws is inadequate.

Dimensions: Manifold Options/Series SY3000

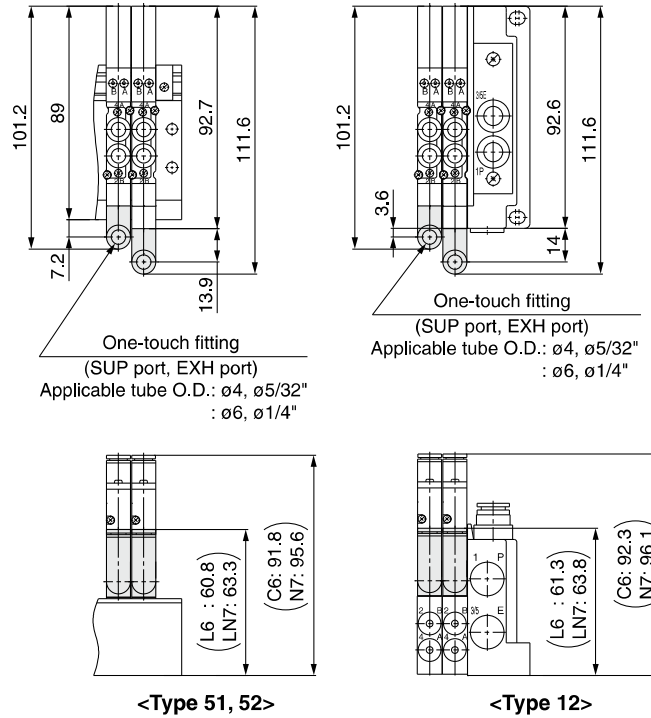
■ **Blanking plate assembly**



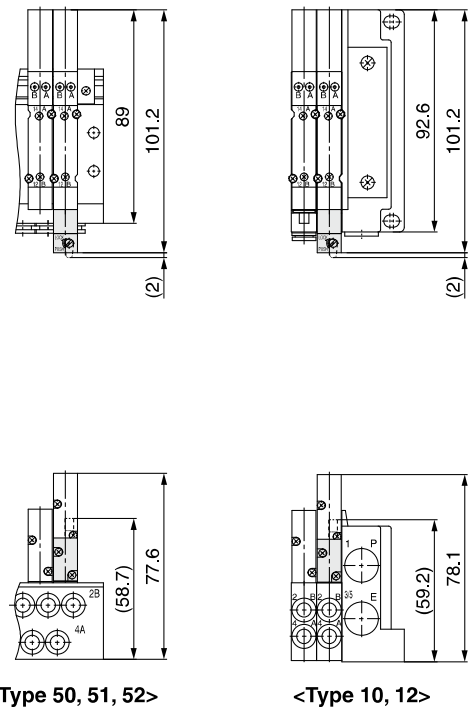
■ **Individual SUP/EXH spacer assembly (Side ported)**



■ **Individual SUP/EXH spacer assembly (Top/Bottom ported)**



■ **SUP stop valve spacer assembly with residual pressure release valve**



*: The dimensions within () applies to the SY30-50-1AE.

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

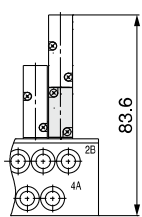
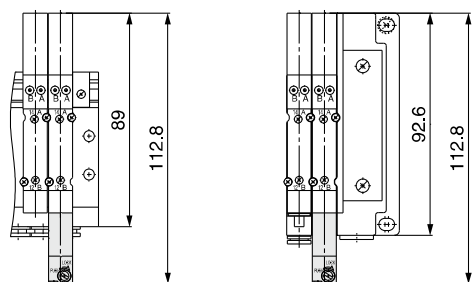
One-touch Fittings/
Plug Assembly Part No.

Manifold Options

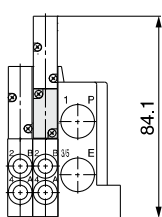
Series SY3000/5000/7000

Dimensions: Manifold Options/Series SY3000

■ Double check spacer assembly with residual pressure release valve

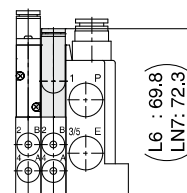
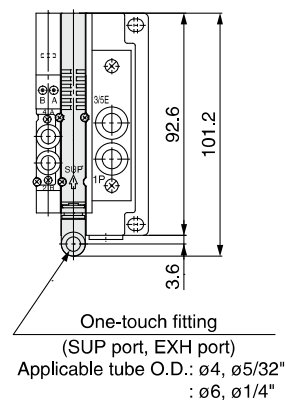


<Type 50, 51>



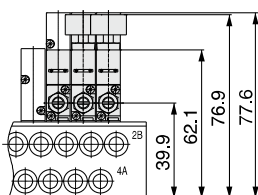
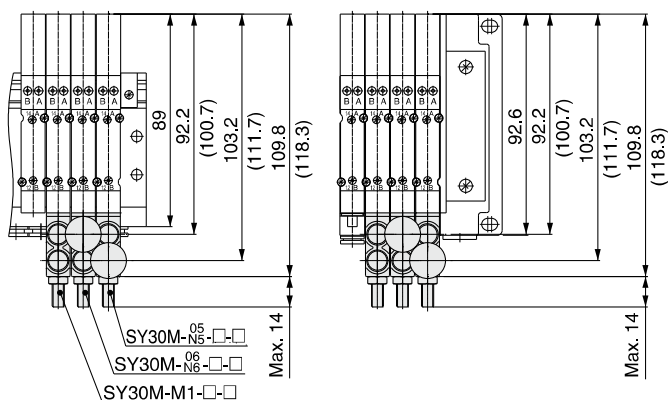
<Type 10>

■ Individual SUP/EXH block assembly (Top ported)

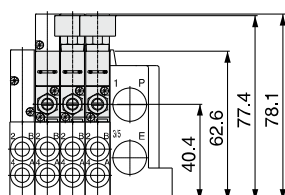


<Type 12>

■ Interface regulator

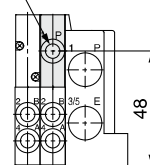
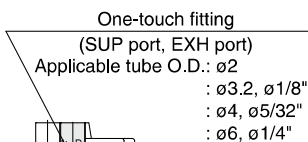
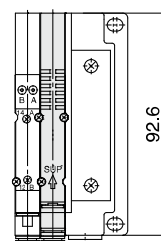


<Type 50, 51, 52>



<Type 10, 12>

■ Individual SUP/EXH block assembly (Side ported)

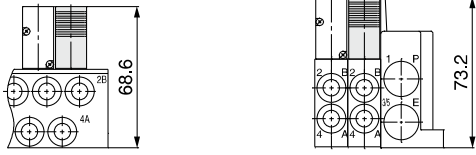
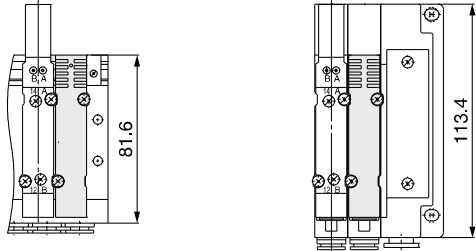


<Type 10>

*: The dimensions within () applies to the SY30M-□-□-3.

Dimensions: Manifold Options/Series SY5000

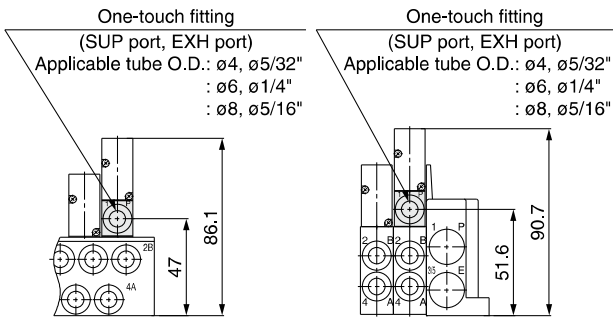
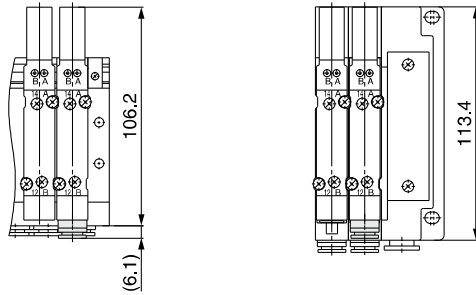
■ **Blanking plate assembly**



<Type 50, 51, 52>

<Type 10, 11, 12>

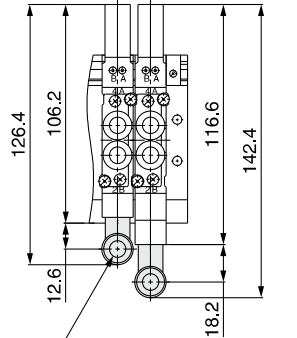
■ **Individual SUP/EXH spacer assembly (Side ported)**



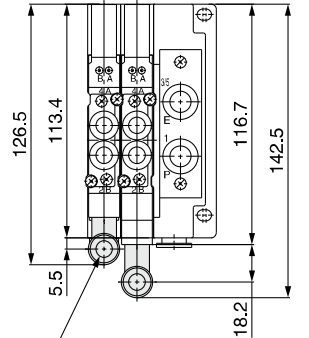
<Type 50>

<Type 10>

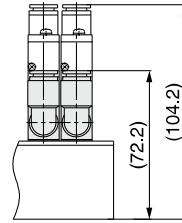
■ **Individual SUP/EXH spacer assembly (Top/Bottom ported)**



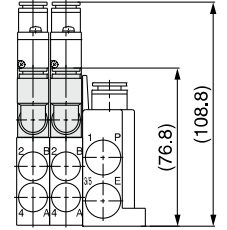
One-touch fitting
(SUP port, EXH port)
Applicable tube O.D.: $\phi 4$
: $\phi 6, \phi 1/4"$
: $\phi 8, \phi 5/16"$



One-touch fitting
(SUP port, EXH port)
Applicable tube O.D.: $\phi 4$
: $\phi 6, \phi 1/4"$
: $\phi 8, \phi 5/16"$

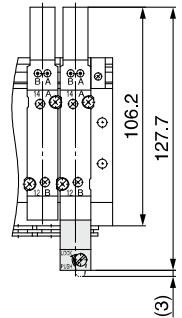


<Type 51, 52>

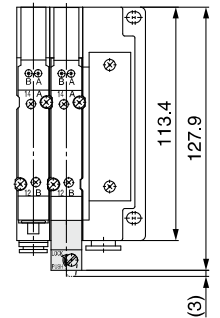


<Type 11, 12>

■ **SUP stop valve spacer assembly with residual pressure release valve**



<Type 50, 51, 52>



<Type 10, 11, 12>

*: The dimensions within () applies to the SY50-50-1AE.

Valve

Plug-in Sub-plate

Plug-in Metal Base

Type 50, 51, 52
Manifold Exploded View

Plug-in Connector Connecting Base

Type 10, 11, 12
Manifold Exploded View

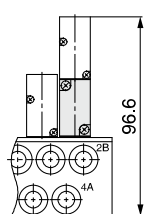
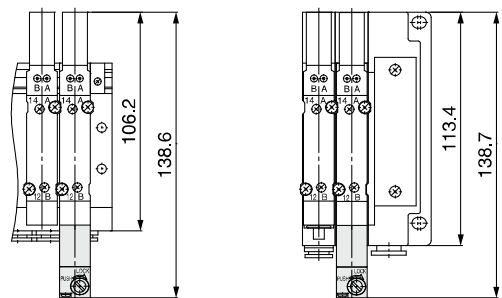
One-touch Fittings/
Plug Assembly Part No.

Manifold Options

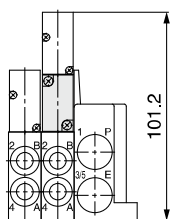
Series SY3000/5000/7000

Dimensions: Manifold Options/Series SY5000

Double check spacer assembly with residual pressure release valve

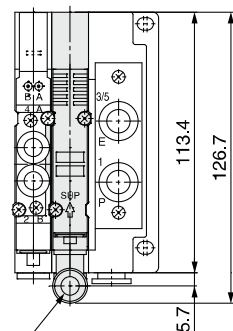


<Type 50, 51>

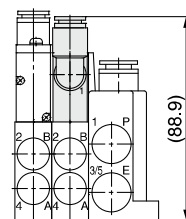


<Type 10, 11>

Individual SUP/EXH block assembly (Top ported)

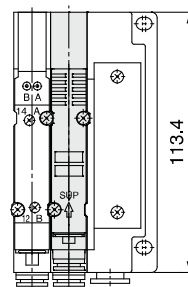


One-touch fitting
(SUP port, EXH port)
Applicable tube O.D.: $\phi 4$
: $\phi 6$, $\phi 1/4$ "
: $\phi 8$, $\phi 5/16$ "

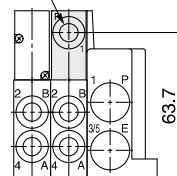


<Type 12>

Individual SUP/EXH block assembly (Side ported)

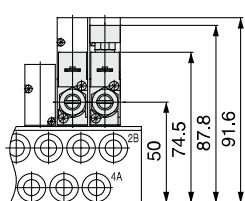
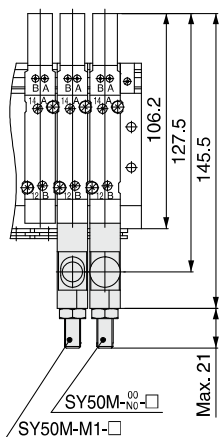


One-touch fitting
(SUP port, EXH port)
Applicable tube O.D.: $\phi 4$, $\phi 5/32$ "
: $\phi 6$, $\phi 1/4$ "
: $\phi 8$, $\phi 5/16$ "

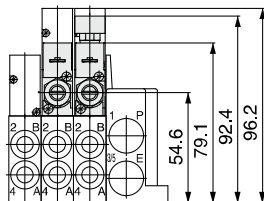
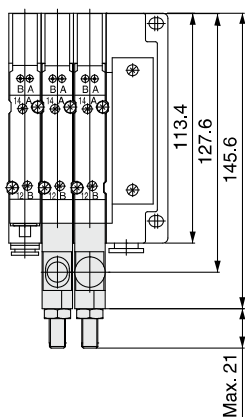


<Type 10>

Interface regulator

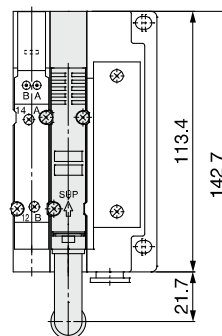


<Type 50, 51, 52>

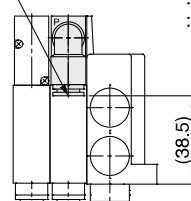


<Type 10, 11, 12>

Individual SUP/EXH block assembly (Bottom ported)



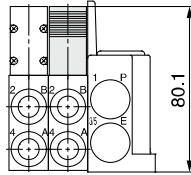
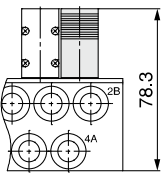
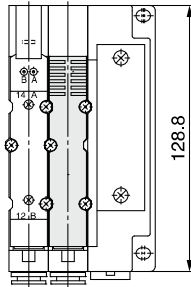
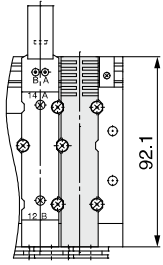
One-touch fitting
(SUP port, EXH port)
Applicable tube O.D.: $\phi 4$,
: $\phi 6$, $\phi 1/4$ "
: $\phi 8$, $\phi 5/16$ "



<Type 11>

Dimensions: Manifold Options/Series SY7000

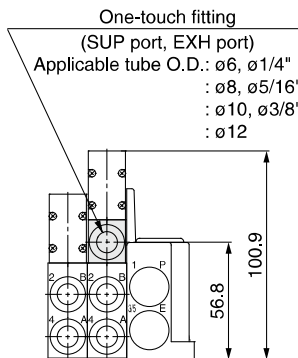
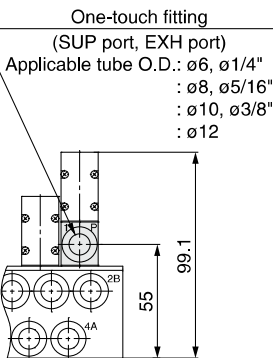
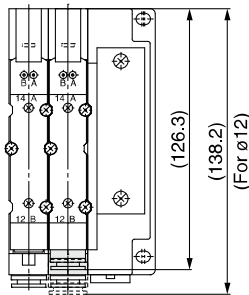
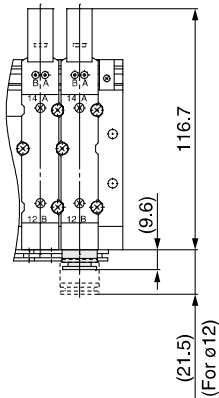
■ **Blanking plate assembly**



<Type 50, 51, 52>

<Type 10, 11, 12>

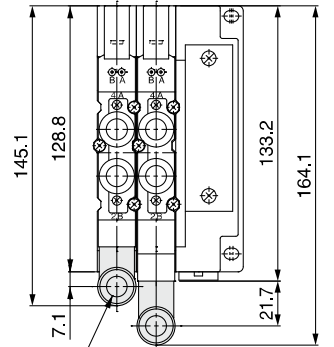
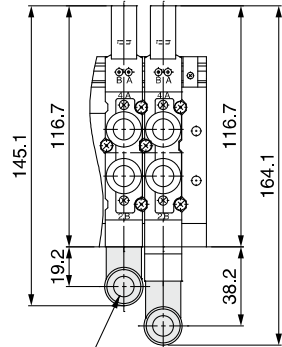
■ **Individual SUP/EXH spacer assembly (Side ported)**



<Type 50>

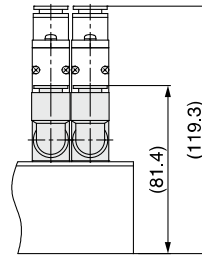
<Type 10>

■ **Individual SUP/EXH spacer assembly (Top/Bottom ported)**

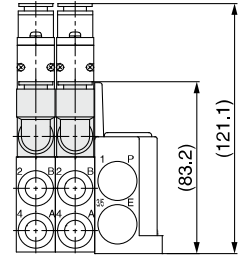


One-touch fitting
(SUP port, EXH port)
Applicable tube O.D.: ø6, ø3/8"
: ø8
: ø10
: ø12

One-touch fitting
(SUP port, EXH port)
Applicable tube O.D.: ø6, ø3/8"
: ø8
: ø10
: ø12

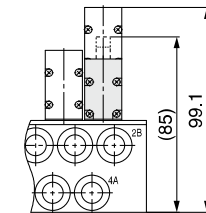
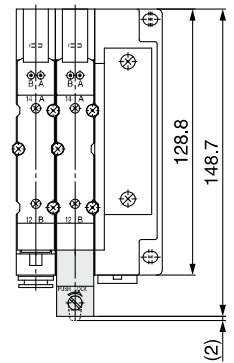
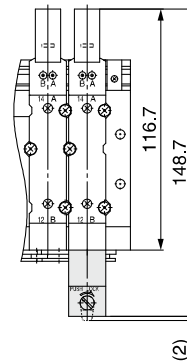


<Type 51, 52>

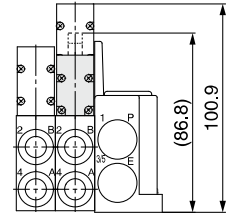


<Type 11, 12>

■ **SUP stop valve spacer assembly with residual pressure release valve**



<Type 50, 51, 52>



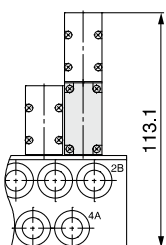
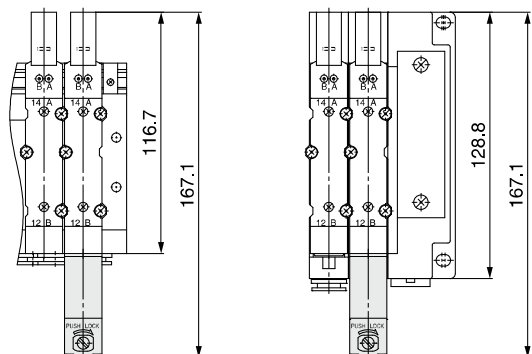
<Type 10, 11, 12>

*: The dimensions within () applies to the SY70-50-1AE.

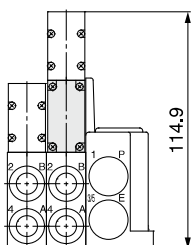
Series SY3000/5000/7000

Dimensions: Manifold Options/Series SY7000

Double check spacer assembly with residual pressure release valve

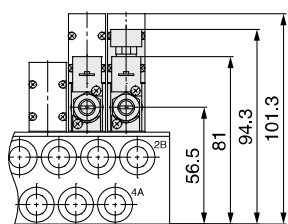
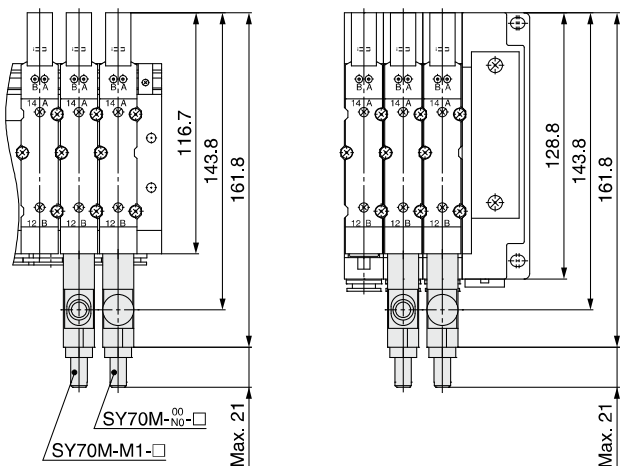


<Type 50, 51>

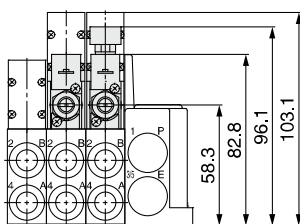


<Type 10, 11>

Interface regulator

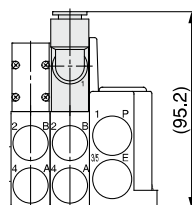
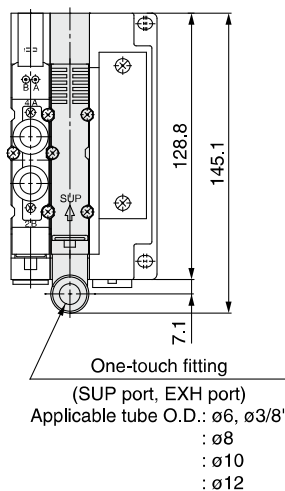


<Type 50, 51, 52>



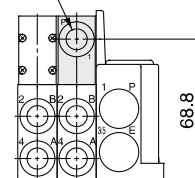
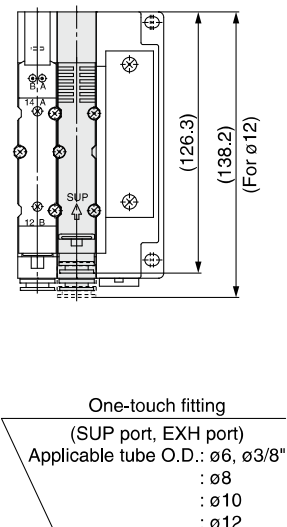
<Type 10, 11, 12>

Individual SUP/EXH block assembly (Top ported)



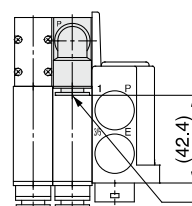
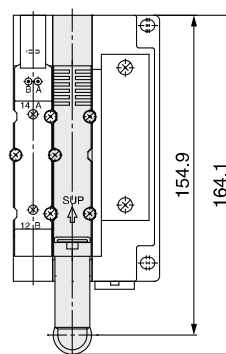
<Type 12>

Individual SUP/EXH block assembly (Side ported)



<Type 10>

Individual SUP/EXH block assembly (Bottom ported)



<Type 11>

One-touch fitting
(SUP port, EXH port)
Applicable tube O.D.: $\phi 8$, $\phi 3/8''$
: $\phi 10$
: $\phi 12$