4 Port Solenoid Valve
Common Specifications
Series SJ2000/3000

CE

Manifold Specifications

Model			D-sub connector	Flat ribbon cable			Serial wiring		Individual wiring
			Type 60F	Type 60P	Type 60PG Type 60J Type 60G	Type 60PH	Type 60S□ (EX180)	Type 60S6B (EX510)	Type 60
Manifold type			Plug-in, Connector type						Non-plug-in
1(P: SUP), 3/5(E: EXH)			Common SUP, EXH						
Valve stations			2 to 24 stations		2 to 18 stations (Type PG) 2 to 16 stations (Type J, Type G)	2 to 8 stations	2 to 32 stations	2 to 16 stations	2 to 20 stations
Applicable connector			D-sub connector Conforming to MIL-C-24308 JIS-X-5101	Flat ribbon cable connector Socket: 26 pins MIL type with strain relief Conforming to MIL-C-83503	Flat ribbon cable connector Socket: 20 pins MIL type with strain relief Conforming to MIL-C-83503	Flat ribbon cable connector Socket: 10 pins MIL type with strain relief Conforming to MIL- C-83503	—	—	—
Internal wiring			Non-polar, +COM						
4(A), 2(B) port piping spec.		**Location**	Valve						
		Direction	Horizontal, Upward, Downward (Using elbow fittings for upward or downward)						
Port size	**1(P), 3/5(E) port**		C6, C8, N7, N9 (Inch size elbow fitting is not available.)						
	4(A), 2(B) port	**SJ2000**	C2, C4, N1, N3, M3						
		SJ3000	C2, C4, C6, N1, N3, N7, M5						
Weight W (g) Note 2) **n: Number of SUP/EXH blocks** **m: Weight of DIN rail**			W = 51n + m + 133						

Note 1) When many valves are operated simultaneously, use B type (SUP/EXH both sides), applying pressure to the 1(P) ports on both sides and exhaust from the 3/5(E) ports on both sides.

Note 2) The weight W is the value for the D-sub connector manifold only with internal pilot, SUP/EXH block straight fittings specifications. To obtain the weight with solenoid valves attached, add the solenoid valve weights given on page 3 for the appropriate number of stations. Refer to page 61 for the weight of DIN rail. (Please contact SMC for the weight of external pilot specifications, elbow fittings.)

Flow Characteristics

SJ2000

Port size		Flow characteristics					
1(P) 3/5(E)	4, 2 (A, B)	1→2/4 (P→A/B)			4/2→3/5 (A/B→E)		
		C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
C8	C2	0.13	0.55	0.04	0.13	0.50	0.04
	C4	0.33	0.16	0.08	0.36	0.13	0.08
	M3	0.18	0.52	0.06	0.20	0.29	0.06

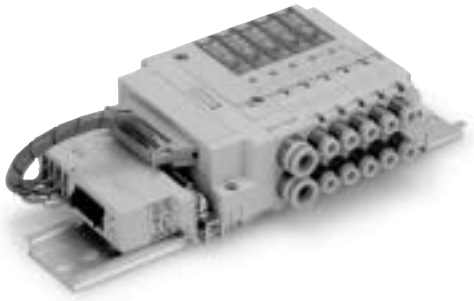
SJ3000

Port size		Flow characteristics					
1(P) 3/5(E)	4, 2 (A, B)	1→2/4 (P→A/B)			4/2→3/5 (A/B→E)		
		C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
C8	C2	0.13	0.56	0.04	0.14	0.51	0.04
	C4	0.42	0.17	0.11	0.45	0.16	0.11
	C6	0.55	0.10	0.12	0.56	0.11	0.12
	M5	0.40	0.28	0.11	0.45	0.15	0.11

Note) The value is for manifold base with 5 stations and individually operated 2 position type.
Please contact SMC for 4 position dual 3 port valves.

Plug-in
Connecter Type Manifold

Series SJ2000/3000



Type 60S6B

Plug-in Connector Type
EX510 Gateway System
Serial Transmission System
Series SJ2000/3000

CE

How to Order Manifold

SS5J 3 – □ 60S6B □ D – 05 D □ □ □

Manifold series

2	SJ2000
3	SJ3000 (SJ2000/3000 mixed)

Mixed mounting type

Nil	Standard Note 1)
M	Mixed mounting Note 2)

Note 1) There is no need to enter anything when you operate either the SJ2000 or SJ3000 series alone.

Note 2) Enter "M" when the SJ2000 or SJ3000 series will be mounted on the same manifold base together.

SI unit COM. spec.

Nil	+COM.
N	–COM.

Unit mounting position

D	D side

Valve stations

Symbol	No. of stations	Note
02	2 stations	Up to 16 solenoids possible.
⋮	⋮	
16	16 stations	

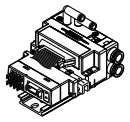
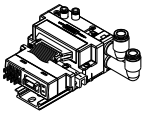
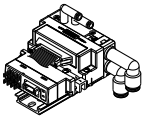
∗ The number of the blanking block assembly is also included. Since single and double wiring are available with the blanking block assembly, select a model compatible with the valve wiring spec. planned for the future.

DIN rail length specified

Nil	Standard length	
3	3 stations	Specify a longer rail than the standard length.
⋮	⋮	
16	16 stations	

∗ Specify the valve stations not exceeding the maximum stations.

SUP/EXH block fitting spec.

Nil	Straight fitting With external pilot spec. X, PE port	
L	Elbow fitting (Upward) With external pilot spec. X, PE port	
B	Elbow fitting (Downward) With external pilot spec. X, PE port	

∗ There is no need to enter anything when the SUP/EXH block mounting position "M" is selected.

Pilot spec.

Nil	Internal pilot
S	Internal pilot / Built-in silencer
R	External pilot
RS	External pilot / Built-in silencer

∗ There is no need to enter anything when the SUP/EXH block mounting position "M" is selected.

∗ For built-in silencers, the 3/5(E) ports are plugged.

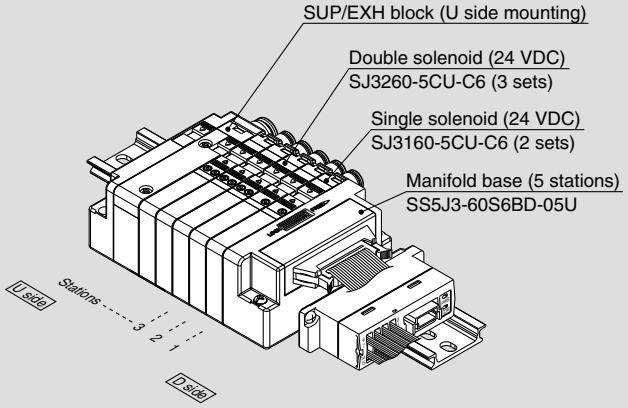
SUP/EXH block mounting position

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 16 stations)
M∗	Special specifications

∗ Specify the required specifications (including port sizes other than ø8) by means of the manifold specification sheet.

How to Order Valve Manifold Assembly

Ordering example (SS5J3-60S6BD-□)



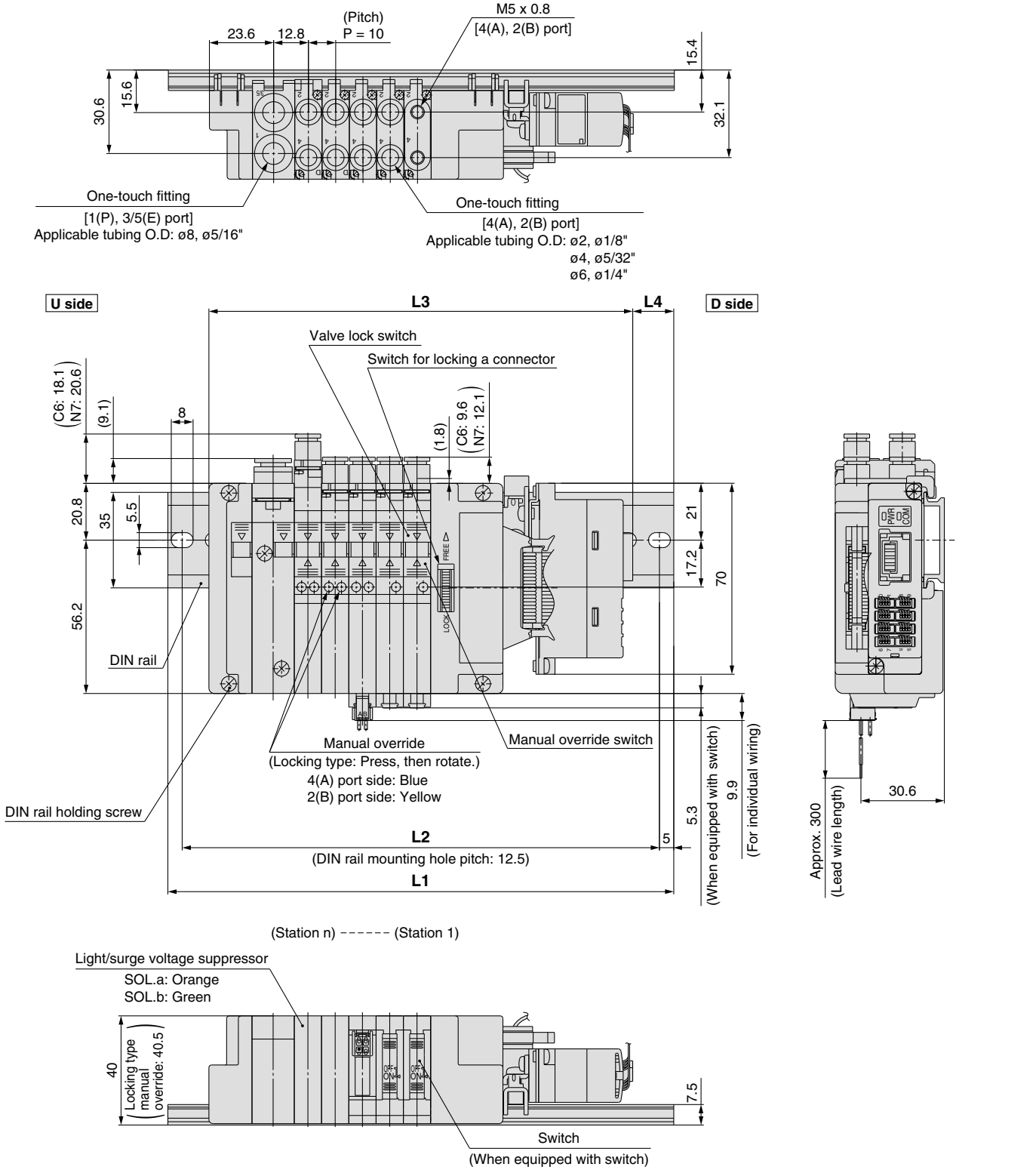
SS5J3-60S6BD-05U ····· **1 set (Type 60S6B, 5 station manifold base part no.)**
∗ **SJ3160-5CU-C6** ····· **2 sets (Single solenoid part no.)**
∗ **SJ3260-5CU-C6** ····· **3 sets (Double solenoid part no.)**
→ **The asterisk denotes the symbol for assembly. Prefix to the part no. of the solenoid valve, etc.**

- The valve arrangement is numbered as the 1st station from D side.
- Indicate the valves to be attached below the manifold part number, in order starting from station 1 as shown in the drawing. In the case of complex arrangement, specify them in the manifold specification sheet.

For details on "Gateway System Serial Transmission System Series EX510," refer to CAT.E02-22B catalog.

Dimensions

SS5J3-60S6B□D-Stations U-□



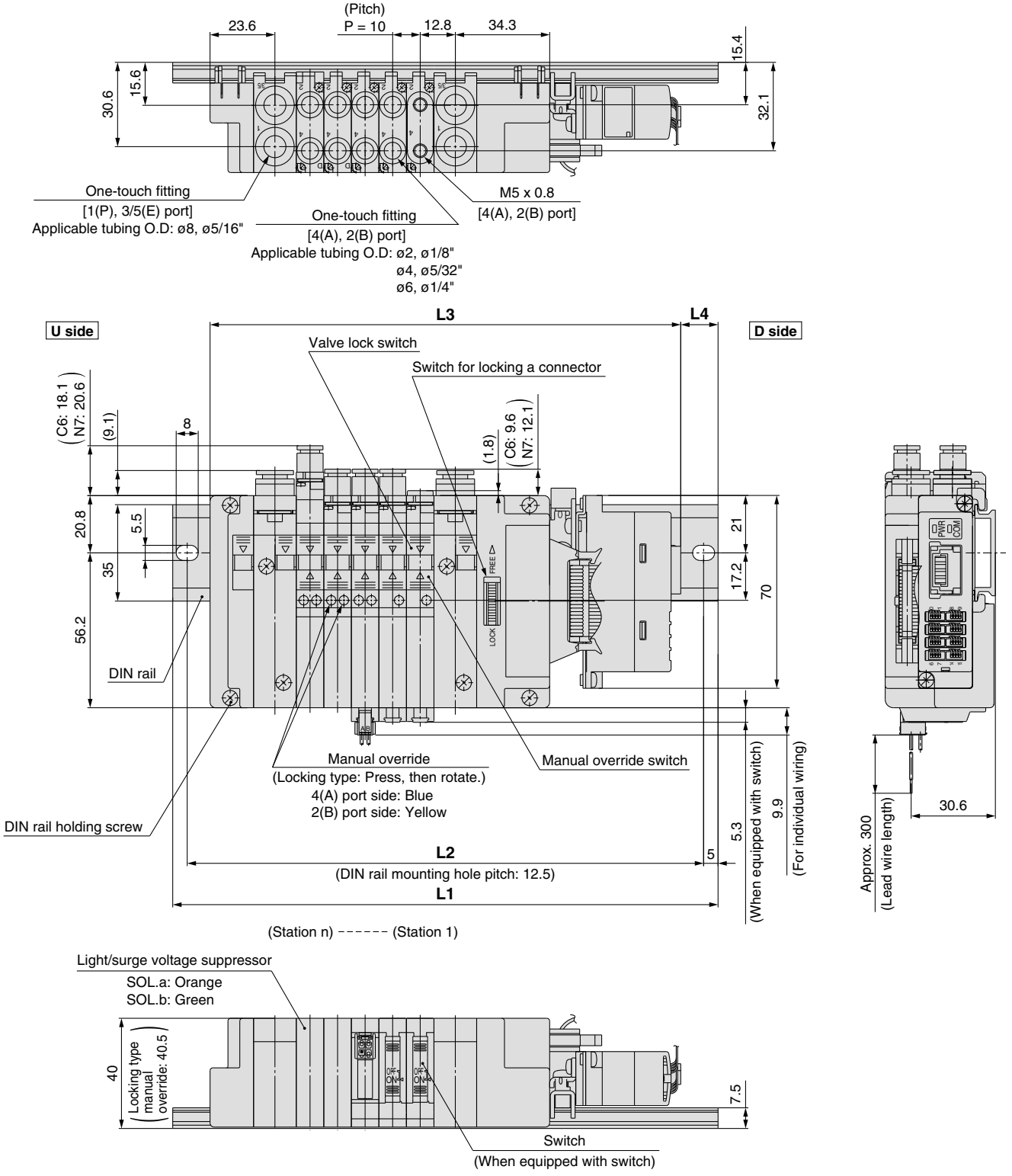
Note) Refer to page 38 for external pilot spec. and page 24 for elbow fitting manifold dimensions.
Please contact SMC regarding the SI unit.

L: Dimensions n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L1	160.5	160.5	173	185.5	198	210.5	210.5	223	235.5
L2	150	150	162.5	175	187.5	200	200	212.5	225
L3	125.4	135.4	145.4	155.4	165.4	175.4	185.4	195.4	205.4
L4	17.5	12.5	14	15	16.5	17.5	12.5	14	15

Dimensions

SS5J3-60S6B□D-Stations B-□



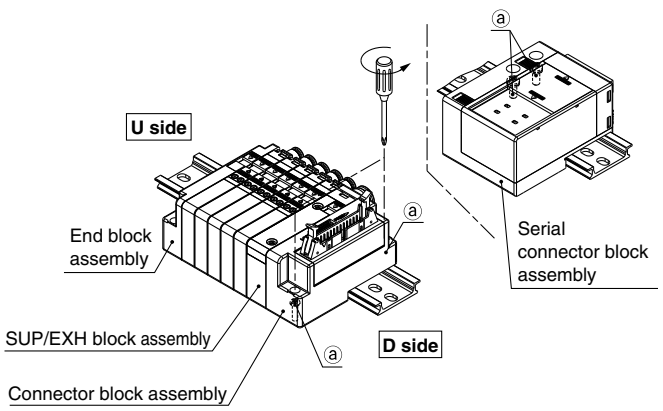
Note) Refer to page 39 for external pilot spec. and page 24 for elbow fitting manifold dimensions.
Please contact SMC regarding the SI unit.

L: Dimensions

n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	173	185.5	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	298	310.5
L2	162.5	175	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	287.5	300
L3	140.9	150.9	160.9	170.9	180.9	190.9	200.9	210.9	220.9	230.9	240.9	250.9	260.9	260.9	280.9
L4	16	17.5	12.5	13.5	15	16	17.5	18.5	13.5	15	16	17.5	18.5	18.5	15

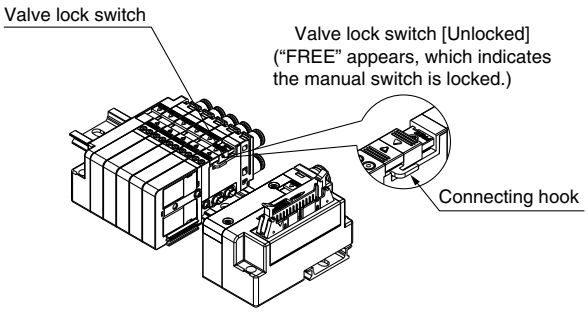
How to Add Manifold Stations



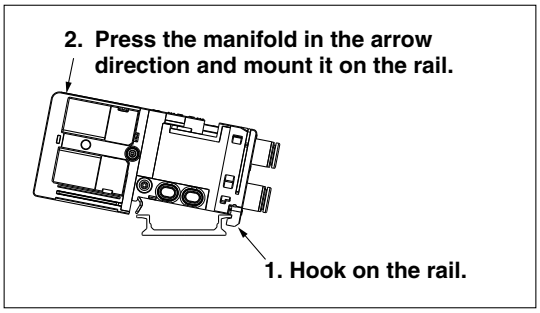
1 **Loosen threads ⓐ, which are fixed onto the DIN rail (two locations on one side).**

2 **In the direction of the coil, slide the valve where the station is desired to add and the valve lock switch on each block.**

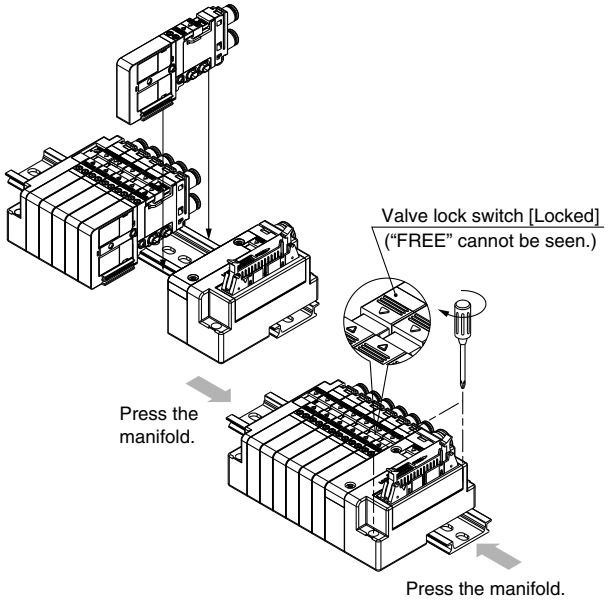
If blocks are removed without completely releasing the valve lock switch, the connection hook of that switch could be damaged or deformed.



3 **Install an additional valve or an SUP/EXH assembly on the DIN rail.**



A manifold equipped with a valve or a block assembly can be mounted on the DIN rail. However, a serial connector block assembly cannot be mounted on the DIN rail when it is connected with another block; the serial connector block must be mounted separately.



4 **Press the valves and block assemblies to each other for connection. Press the valve lock switch in the cylinder port direction until it does not go any further. Fasten threads ⓐ onto the DIN rail.**

After fixing the connector block assembly, fasten the threads onto the end block assembly while holding it lightly by hand. This is necessary to improve sealing.

⚠Caution **D-sub, Connector block assembly for flat ribbon cable, End block assembly M3: 0.6 N·m**
Connector block assembly for EX180 serial wiring M4: 1.4 N·m
Mounting bracket for EX510 serial wiring M4: 0.6 N·m

⚠Caution

1. When increasing the number of stations from 10 or below to 11 or above, increase the number of SUP/EXH assemblies as well.
2. Be sure to turn off the power and stop the supply of air before disassembly. Furthermore, since air may remain inside the actuator, piping and manifold, confirm that the air is completely exhausted before performing any work.
3. After assembly and disassembly, air leakage could occur if blocks are not well connected or a thread is not tightly fastened onto the end block assembly. Before supplying air, make sure that no gaps exist in between blocks and that the valve and block are tightly fastened onto the DIN rail. Also, make sure that air is not leaking before use.
4. For the SJ3A6 series manifold with vacuum release valve with restrictor, there is no valve lock switch for connecting, so when mounting, tighten the screws after checking that there are no gaps between valves.