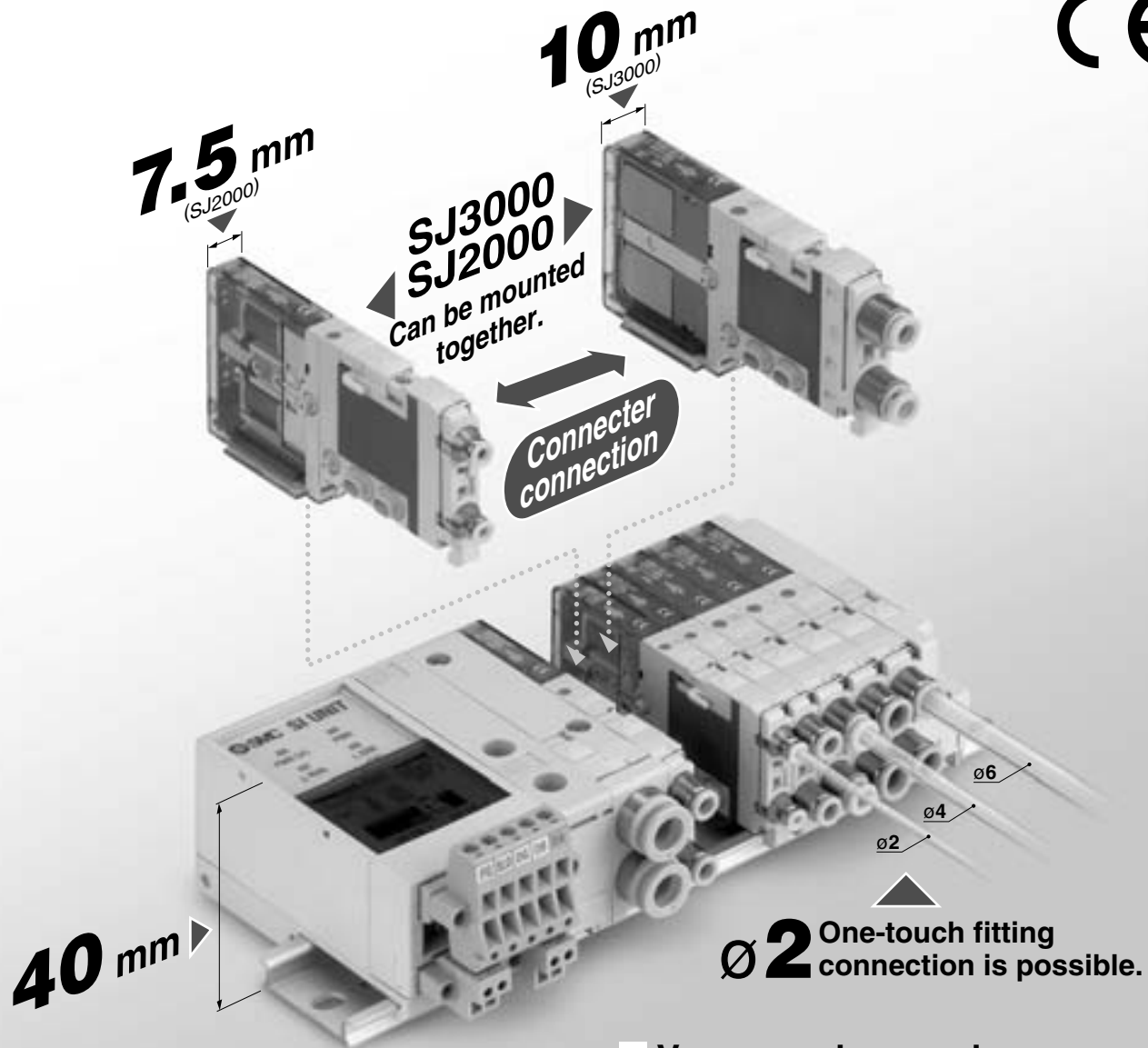


4 Port Solenoid Valve

Series SJ2000/3000

Rubber Seal

Cassette Type Manifold



SJ

SY

SV

SJY

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

VFR

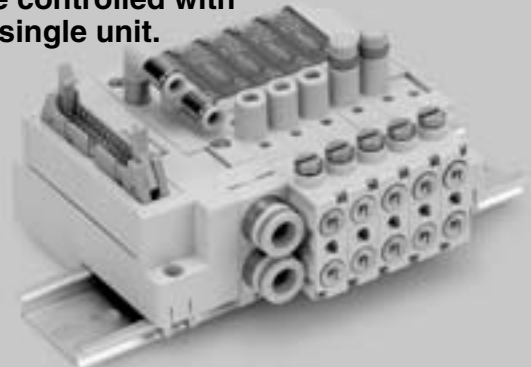
VQ7

■ Non plug-in type
Individual wiring manifold



■ Vacuum release valve with restrictor

Suction and release can be controlled with a single unit.



Power consumption

0.15 W (SJ3000 with power saving circuit)

0.23 W (SJ2000 with power saving circuit)

Manifold uses halogen-free lead wires.

Service life of 50 million cycles or more

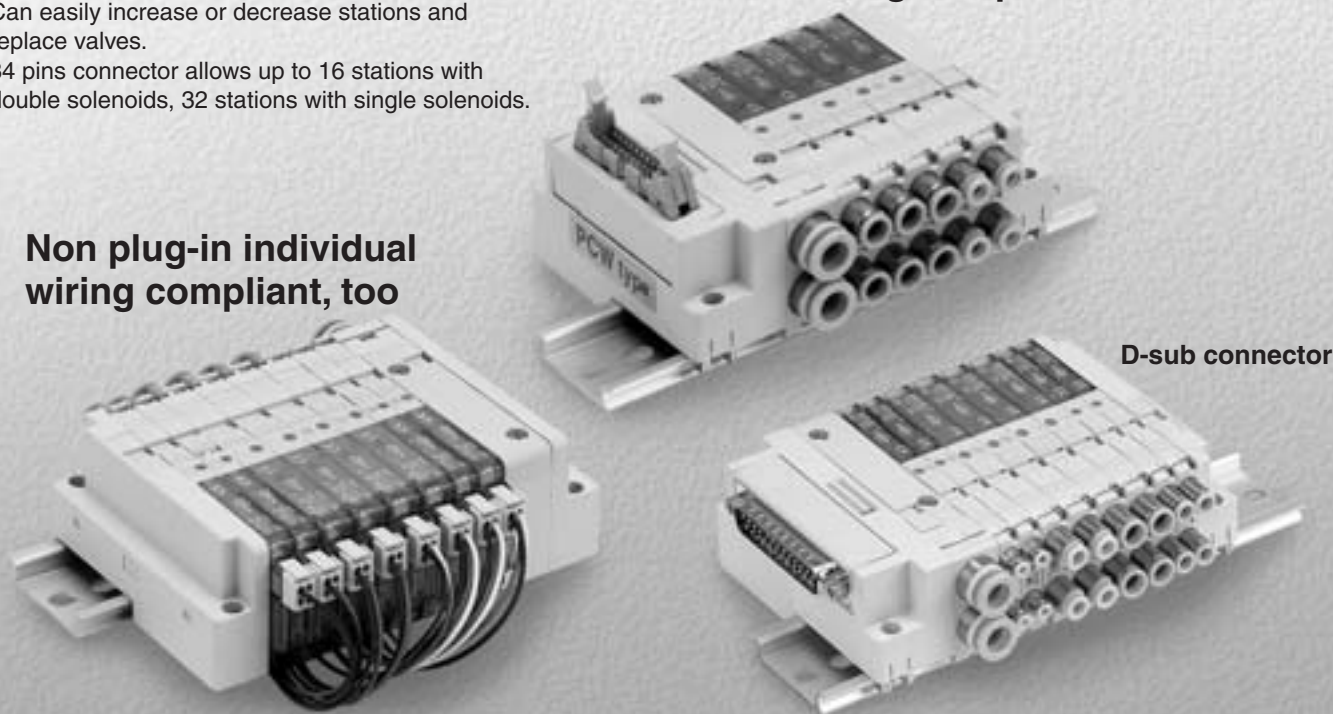
(Based on SMC life test conditions)

Connector type (Card edge type)

- Can easily increase or decrease stations and replace valves.
- 34 pins connector allows up to 16 stations with double solenoids, 32 stations with single solenoids.

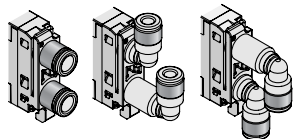
PC wiring compliant

Non plug-in individual wiring compliant, too

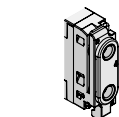


Piping variations

With one-touch fittings



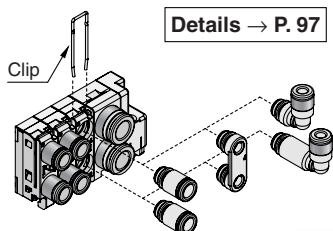
Threaded type



Threaded type is not available for 1(P), 3/5(E) port.

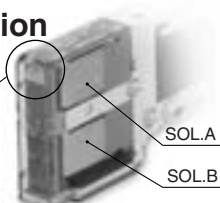
Fittings are replaceable.

Fittings (including type and size) can be easily changed by removing a clip.



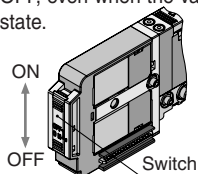
Light indication

SOL.A: ON Orange
SOL.B: ON Green



With switch

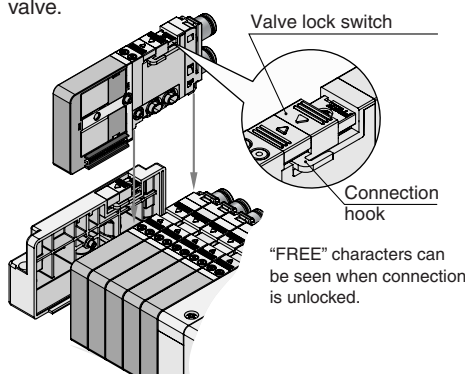
- Possible to shut the signal of each valves individually.
- Manual operation is possible by switching OFF, even when the valve is in the energized state.



The valve coil is kept in a deenergized state even when there is an electric signal from the manifold side connector, and this enables manifold operation.

Valve connection mechanism

Connection between valves can be fixed by the valve lock switch. Connection can be confirmed with the connection hook inserted into the connection groove of the adjacent valve.



Manual locking

Prevents wrong operation by sliding the switch to avoid a manual button from being pressed.

Locked

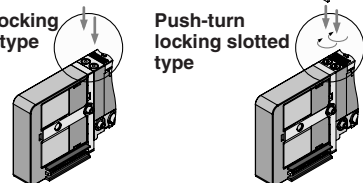
Unlocked



Type of manual override

Non-locking push type

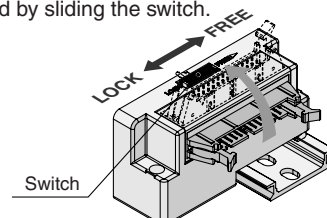
Push-turn locking slotted type



Manual button will hold the pushed (ON) status.

Connector mounting direction

Connector mounting direction can be changed by sliding the switch.

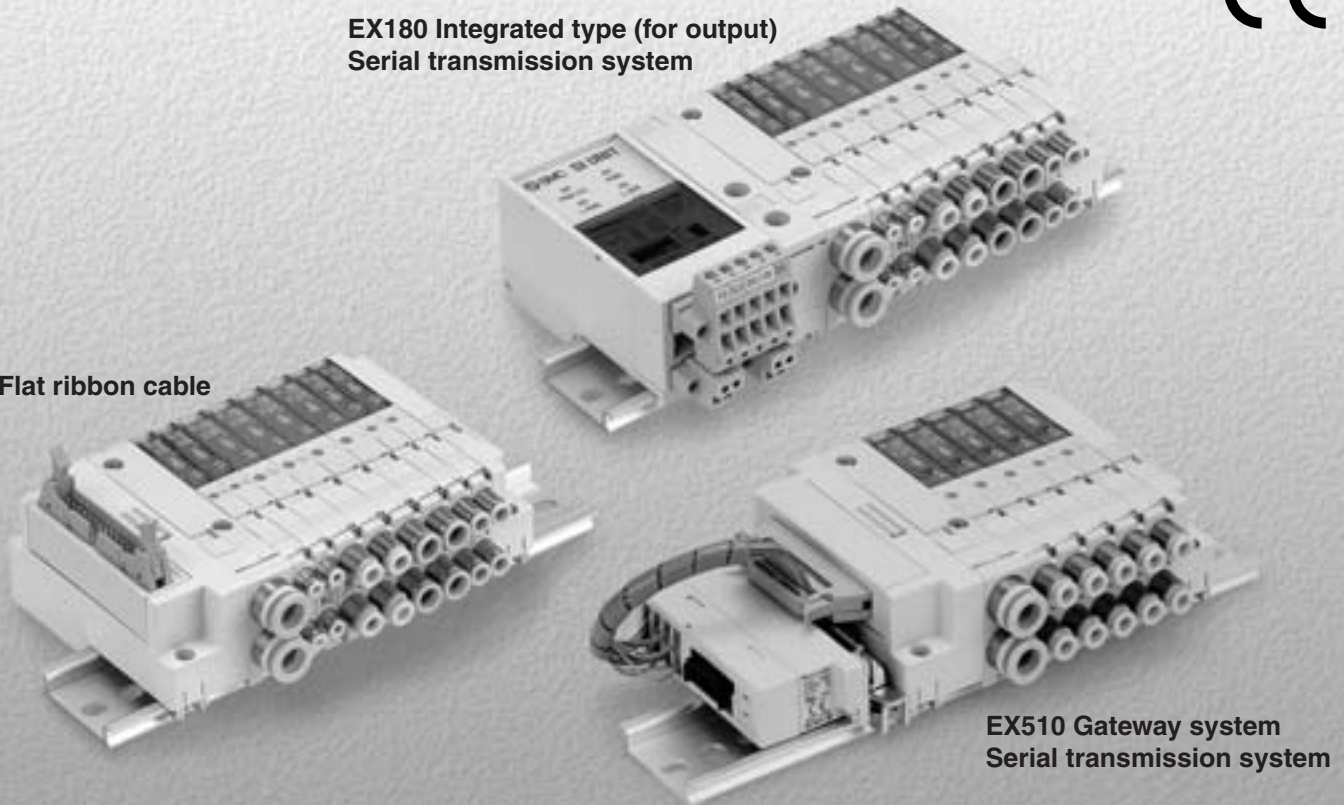


4 Port Solenoid Valve Cassette Type Manifold



EX180 Integrated type (for output)
Serial transmission system

Flat ribbon cable



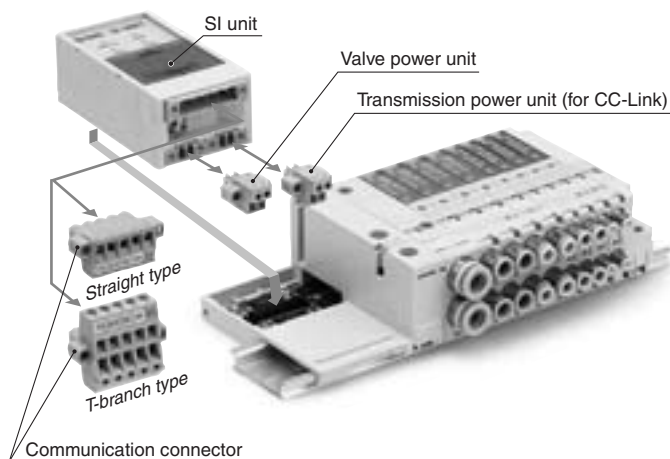
EX510 Gateway system
Serial transmission system

Series SJ2000/3000

EX180 Integrated type (for output) Serial transmission system

- CC-Link (32 outputs), DeviceNet (32, 16 outputs)
- Easy attaching/detaching of the SI unit and wiring by the connector

- Separated valve power unit and transmission power unit / Ensuring safety at maintenance
- Selectable between T-branch and straight type of communication connector



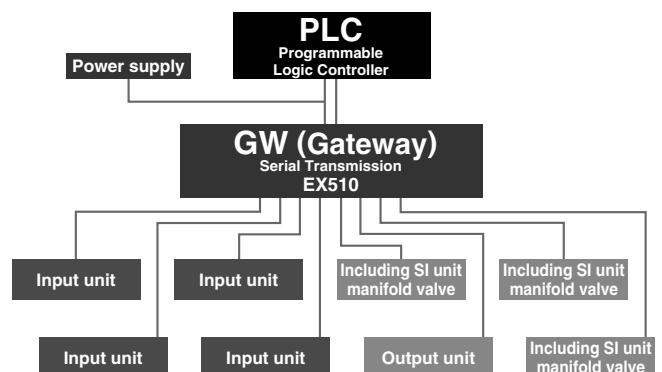
In case of DeviceNet, transmission power unit exists in the communication connector side of T-branch or straight type.

EX510 Gateway system Serial transmission system

- Max. 128 points (Input 64 points/Output 64 points)
- All wires can be plugged into the connector units.
- CC-Link, DeviceNet, PROFIBUS-DP compliant



System Configuration



SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

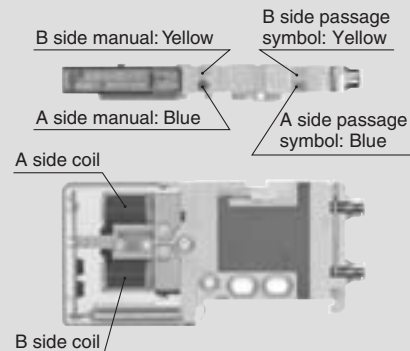
VFR

VQ7

4 Position Dual 3 Port Valve

- Integrated to a single valve from 3-port valve
- Possible to control 4(A), 2(B) port individually.
- Can be mounted on the same manifold with a 4-port valve.
- Prepared 3 types of combination
- Label with the same colors of the manual override is attached to show the functions of A side and B side.

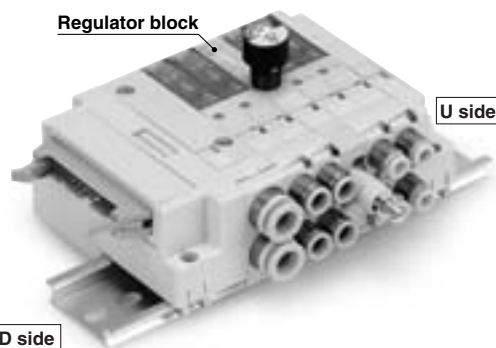
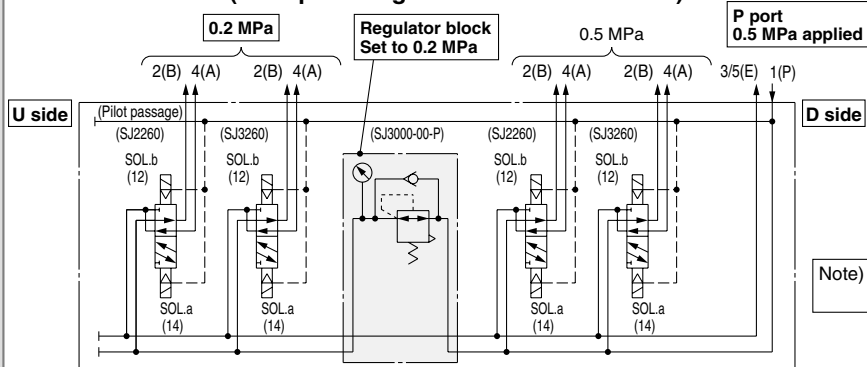
A side	B side	JIS symbol
N.C. valve	N.C. valve	
N.O. valve	N.O. valve	
N.C. valve	N.O. valve	



Regulator Block Details → P.79

This is a regulator block with the same width (10 mm) as the SJ3000. Pressure supplied from the D side is used to reduce pressure in the manifold. The U side valves are all depressurized from the regulator block.

Pneumatic circuit (example of regulator block installation)



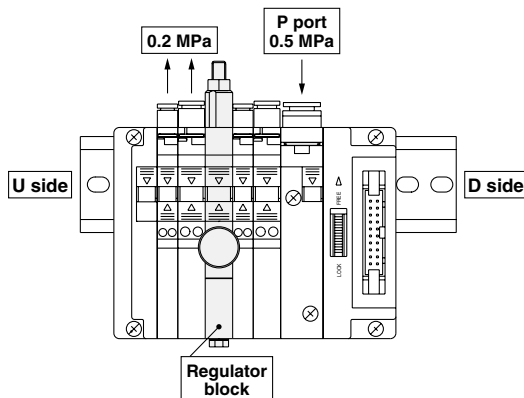
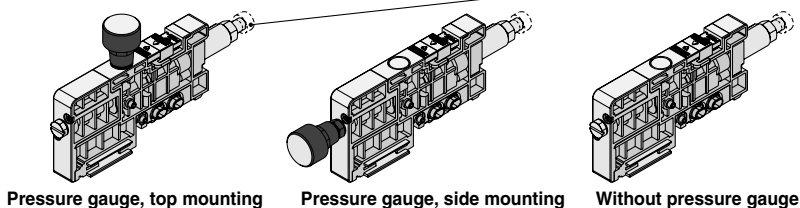
Both the pressure gauge mounting position and the method of operating the pressure adjustment screw can be selected.

SJ3000-00-P(-H)

SJ3000-01-P(-H)

SJ3000-M1-P(-H)

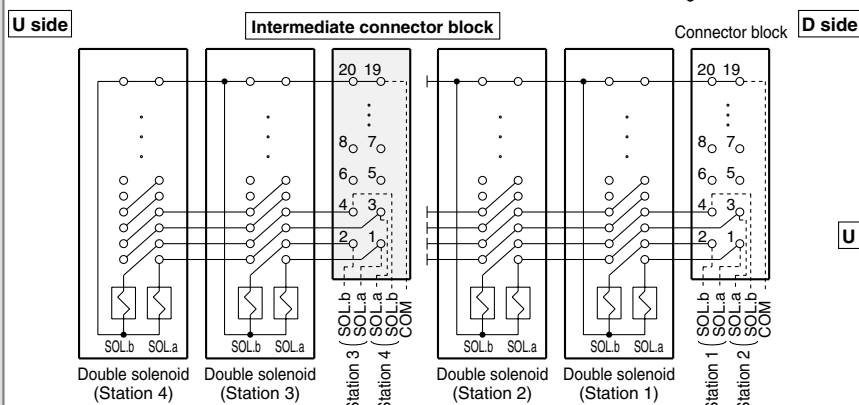
With manual operation of the pressure adjustment screw



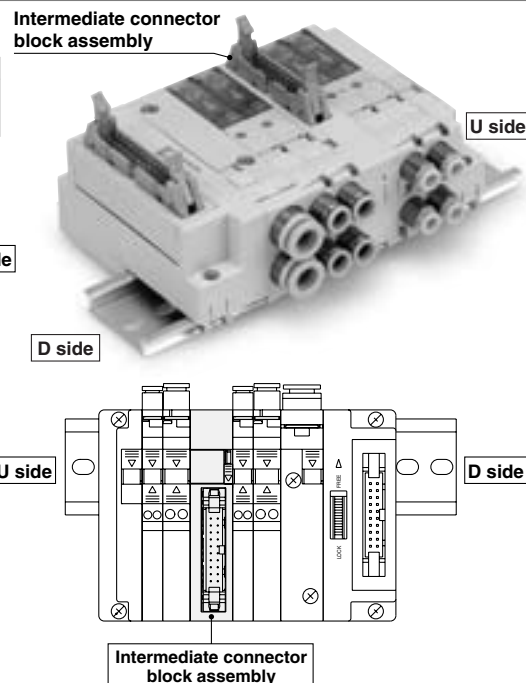
Intermediate Connector Block Assembly Details → P.80

This connector block can be used by inserting it into the middle of the manifold. This can be used, for example, when you wish to separate electrical control of valves in the same manifold, or when the number of control points is insufficient. The assembly is also compatible with PC wiring with the power supply terminal. (Consult SMC separately.)

Intermediate connector block assembly wiring example



* The U side solenoid valves can be controlled from the position where the intermediate connector block assembly is mounted.



Vacuum Release Valve with Restrictor C €

Two spool valves are built-in.
Vacuum suction and release can be controlled with a single valve.

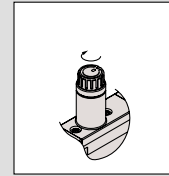
Plug-in

Connector connection

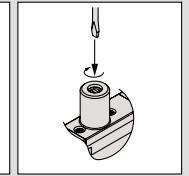
Restrictor

- Flow rate adjustment of release air
- Prevents workpiece blow-off.

Manual



Slotted locking type



PS port: Pressure detection port
(M5 x 0.8)

Filter

- Eliminates foreign matter on vacuum and release side.
- Replaceable

2(B)
Vacuum pad port

1(P)
Release pressure port

3/5(E)
Vacuum pressure port

Wiring variations

- D-sub connector
- Flat ribbon cable
- PC wiring
- Serial (EX180)
- Serial (EX510)

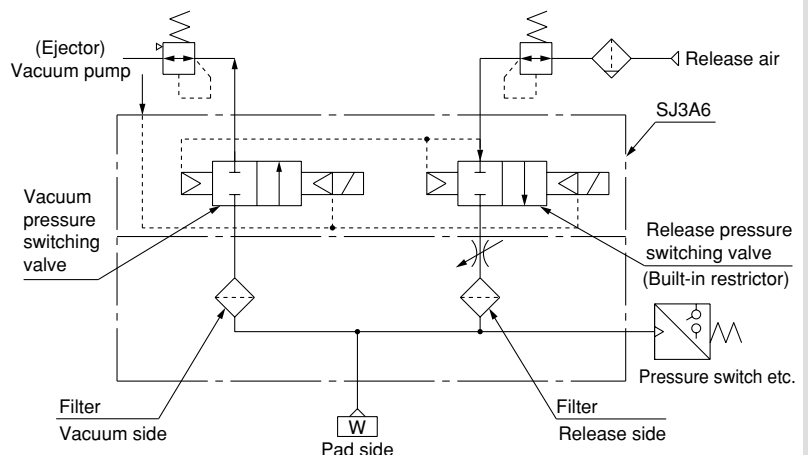
Non-plug-in

• Individual wiring

Series SJ3A6

- Power consumption 0.15 W (with power saving circuit)
- Width: 10 mm (same size as SJ3000 series)
- Equipped with restrictor to enable flow rate adjustment of release air.
- Replaceable filters are built-in on the vacuum and release sides.
- Equipped with a pressure detection port enabling connection of a pressure switch, etc.
- Can be combined with 4 port solenoid valve, SJ2000/3000 series (Made to Order). (Consult SMC for details.)
- Enables 2-system pressure switching where the 1(P) port and 3/5(E) are set to different positive pressures. (In this case, flow can be adjusted on the P-port side only.)

Adsorbing and Transferring System Circuit Example

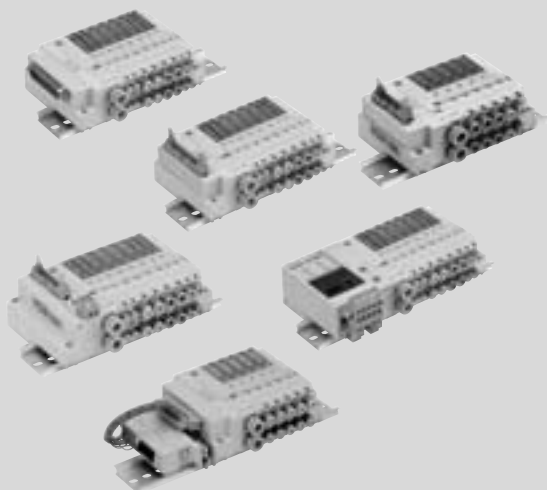


I N D E X

● 4 Port Solenoid Valve *Series SJ2000/3000*

Common Specifications	P.17
Connector Wiring Diagram	P.19
Construction	P.20

Plug-in Connector Type Manifold



D-sub Connector / Flat Ribbon Cable / PC Wiring	
How to Order	P.26
Manifold Electrical Wiring	P.28
Dimensions	P.29
PC Wiring System with Power Supply Terminal	
How to Order	P.42
Manifold Electrical Wiring	P.44
Dimensions	P.45
EX180 Integrated Type (for Output) Serial Transmission System	
How to Order	P.50
Dimensions	P.52
EX510 Gateway System Serial Transmission System	
How to Order Manifold	P.58
Dimensions	P.60
Manifold Exploded View	P.65
How to Add Manifold Stations	P.66

Non-plug-in Individual Wiring Manifold



Individual Wiring	
How to Order	P.68
Dimensions	P.70
Manifold Exploded View	P.75
Manifold Options	P.76
Made to Order	P.81

● Vacuum Release Valve with Restrictor *Series SJ3A6*

Common Specifications	P.84
Construction	P.85

Plug-in Connector Type Manifold



D-sub Connector / Flat Ribbon Cable / PC Wiring / Serial Wiring (EX180/EX510)	
How to Order	P.86
Dimensions	P.88

Non-plug-in Individual Wiring Manifold



Individual Wiring	
How to Order	P.90
Dimensions	P.92
Manifold Exploded View	P.93

Specific Product Precautions	P.94
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4 Port Solenoid Valve Common Specifications

Series SJ2000/3000



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						
Mass W (g) ⎧ n: Number of SUP/EXH blocks m: Mass 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 mass W is the value for the D-sub connector manifold only with internal pilot, SUP/EXH block straight fittings specifications. To obtain the mass with solenoid valves attached, add the solenoid valve weights given on page 19 for the appropriate number of stations. Refer to page 77 for the mass of DIN rail. (Please contact SMC for the mass 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.

Solenoid Valve Specifications



D-sub connector



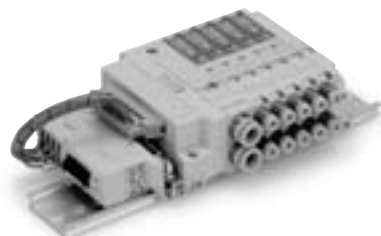
Flat ribbon cable



PC wiring



EX180 Integrated type (for output)
Serial transmission system



EX510 Gateway system
Serial transmission system



Individual wiring

Fluid			Air
Internal pilot operating pressure range (MPa)	2 position single		0.15 to 0.7
	4 position dual 3 port valve		
	2 position double		0.1 to 0.7
	3 position		0.2 to 0.7
External pilot operating pressure range (MPa)	Operating pressure range		−100 kPa to 0.7
	Pilot pressure range	2 position single	0.25 to 0.7
		2 position double	
		3 position	
Ambient and fluid temperature (°C)			−10 to 50 (No freezing)
Maximum operating frequency (Hz)	2 position single, double		10
	4 position dual 3 port valve		
	3 position		3
Manual override (Manual operation)			Non-locking push type
			Push-turn locking slotted type
Pilot exhaust method	Internal pilot		Main and pilot valve common exhaust
	External pilot		Pilot valve individual exhaust
Lubrication			Not required
Mounting orientation			Unrestricted
Shock/Vibration resistance (m/s ²)			150/30
Enclosure			Dustproof

Note) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Value in the initial state)

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000Hz. Test was performed to axis and right angle directions of the main valve when pilot signal is ON and OFF. (Value in the initial state)

Solenoid Specifications

Coil rated voltage		24 VDC, 12 VDC	
Allowable voltage fluctuation		±10% of rated voltage*	
Power consumption (W)	Standard	SJ2000	0.55
		SJ3000	0.4
	With power saving circuit (Continuous duty type)	SJ2000	0.23
		SJ3000	0.15
Surge voltage suppressor		Diode	
Indicator light		LED	

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

Z type 24 VDC: −7% to +10%

12 VDC: −4% to +10%

T type 24 VDC: −5% to +10%

12 VDC: −6% to +10%

Response Time

Type of actuation	Response time ms (at 0.5 MPa)	
	SJ2000	SJ3000
2 position single	16 or less	16 or less
2 position double	10 or less	10 or less
3 position	34 or less	22 or less
4 position dual 3 port valve	30 or less	30 or less

Note) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage)

Mass

Model/SJ2000

Valve model	Type of actuation		Port size 4(A), 2(B)	Mass (g)
SJ2□60-C2	2 position	Single	C2 (ø2 one-touch fitting)	43
		Double		46
	3 position	Closed center		50
		Exhaust center		
		Pressure center		
	4 position	Dual 3 port valve		46
SJ2□60-C4	2 position	Single	C4 (ø4 one-touch fitting)	41
		Double		44
	3 position	Closed center		48
		Exhaust center		
		Pressure center		
	4 position	Dual 3 port valve		44
SJ2□60-M3	2 position	Single	M3 x 0.5	39
		Double		42
	3 position	Closed center		46
		Exhaust center		
		Pressure center		
	4 position	Dual 3 port valve		42

Note) Please contact SMC for the mass of elbow fittings.

Model/SJ3000

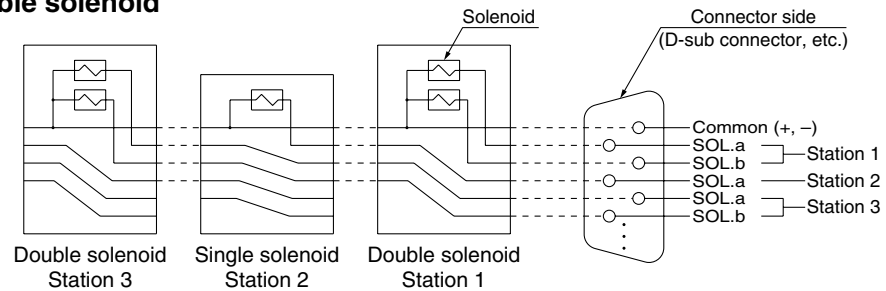
Valve model	Type of actuation		Port size 4(A), 2(B)	Mass (g)
SJ3□60-C2	2 position	Single	C2 (ø2 one-touch fitting)	63
		Double		71
	3 position	Closed center		75
		Exhaust center		
		Pressure center		
	4 position	Dual 3 port valve		71
SJ3□60-C4	2 position	Single	C4 (ø4 one-touch fitting)	65
		Double		73
	3 position	Closed center		77
		Exhaust center		
		Pressure center		
	4 position	Dual 3 port valve		73
SJ3□60-C6	2 position	Single	C6 (ø6 one-touch fitting)	61
		Double		69
	3 position	Closed center		73
		Exhaust center		
		Pressure center		
	4 position	Dual 3 port valve		69
SJ3□60-M5	2 position	Single	M5 x 0.8	57
		Double		65
	3 position	Closed center		69
		Exhaust center		
		Pressure center		
	4 position	Dual 3 port valve		65

Note) Please contact SMC for the mass of elbow fittings.

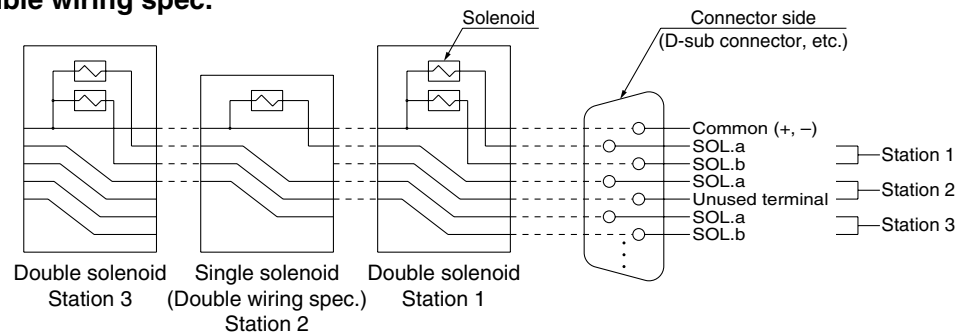
Connector Wiring Diagram

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.

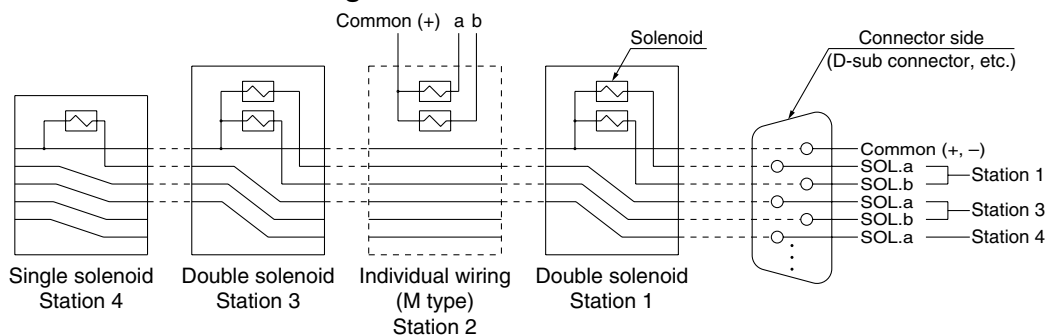
Single solenoid and double solenoid



Single solenoid with double wiring spec.



Mounting a valve with individual wiring

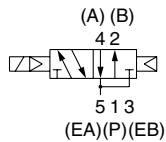


Series SJ2000/3000

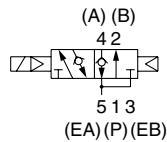
Construction: SJ2000

JIS symbol

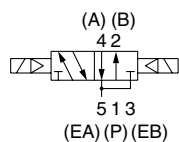
2 position single



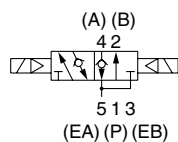
2 position single with back pressure check valve



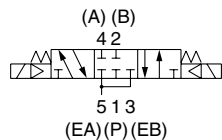
2 position double



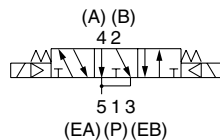
2 position double with back pressure check valve



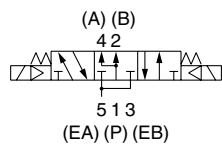
3 position closed center



3 position exhaust center



3 position pressure center



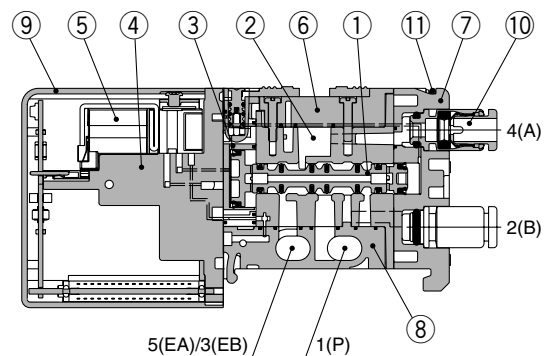
Component Parts

No.	Description	Material	Note
1	Spool valve assembly	Resin/H-NBR (3 position solenoid valve: Aluminum/H-NBR)	—
2	Body	Zinc die-cast	—
3	Adaptor plate	Resin	White
4	Pilot adaptor	Resin	White
5	Pilot valve assembly	—	—
6	Body cover	Resin	White
7	Port block	Resin	White
8	Bottom cover	Resin	White
9	Light cover	Resin	Light blue

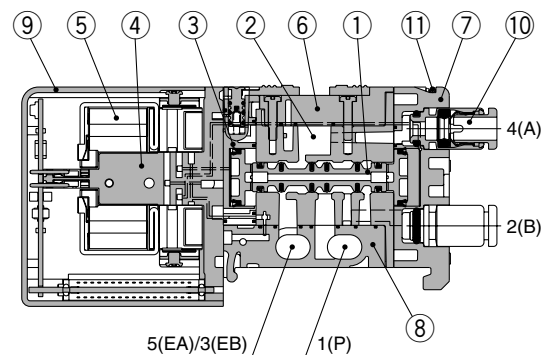
Replacement Parts

No.	Description	Part no.
10	One-touch fitting	Refer to the one-touch fitting part no. on page 97.
11	Clip	SJ2000-CL-1 (10 pcs.)

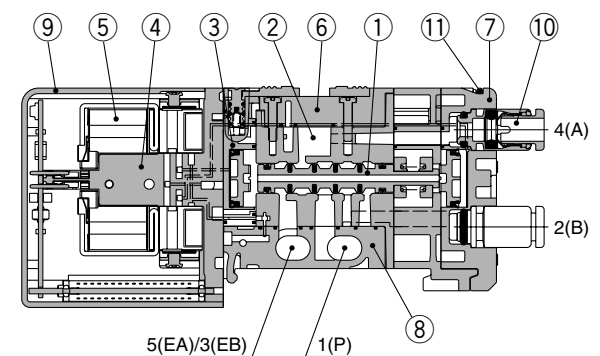
2 position single



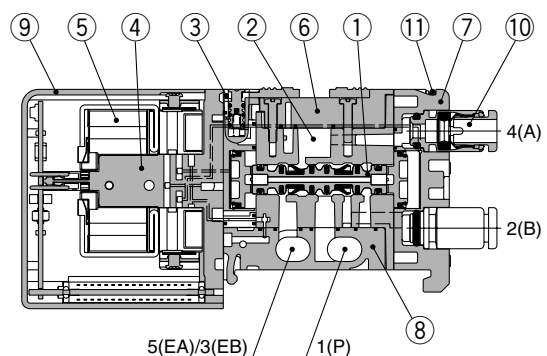
2 position double



3 position closed center/exhaust center/pressure center



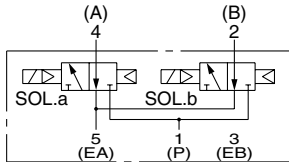
SJ2260K with back pressure check valve



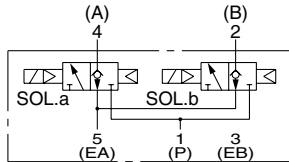
Construction: SJ2000

JIS symbol

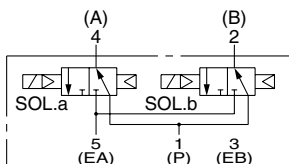
4 position dual 3 port valve
SJ2A60 [N.C. valve x 2]



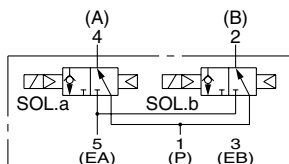
SJ2A60K with back pressure
check valve



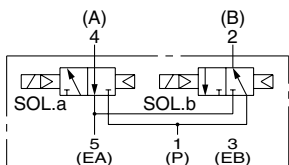
SJ2B60 [N.O. valve x 2]



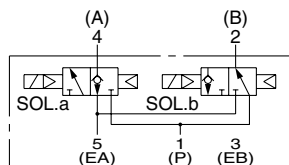
SJ2B60K with back pressure
check valve



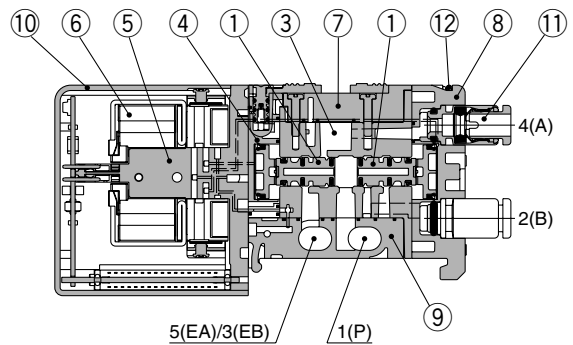
SJ2C60 [N.C., N.O. valve x 1
(each)]



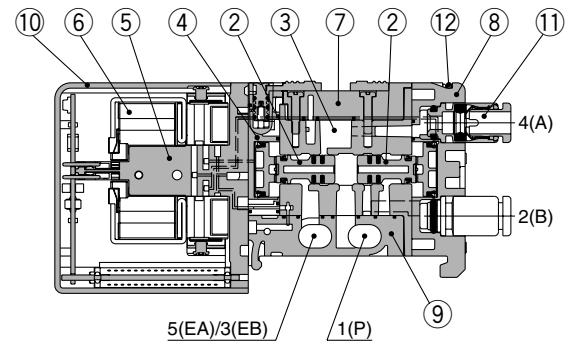
SJ2C60K with back pressure
check valve



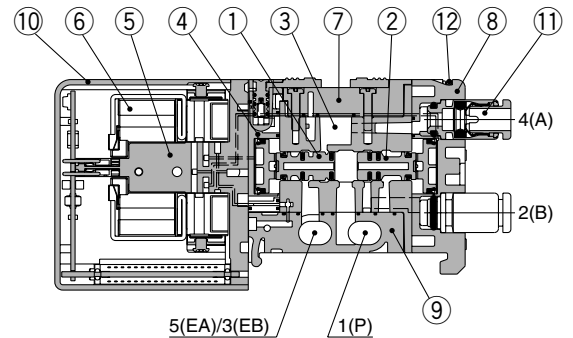
SJ2A60 [N.C. valve x 2]



SJ2B60 [N.O. valve x 2]



SJ2C60 [N.C. valve, N.O. valve x 1 (each)]



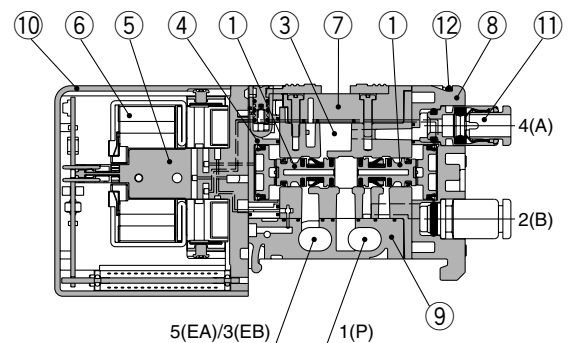
Component Parts

No.	Description	Material	Note
1	Spool valve assembly	Resin/H-NBR	N.C. (Normally closed)
2	Spool valve assembly	Resin/H-NBR	N.O. (Normally open)
3	Body	Zinc die-cast	—
4	Adaptor plate	Resin	White
5	Pilot adaptor	Resin	White
6	Pilot valve assembly	—	—
7	Body cover	Resin	White
8	Port block	Resin	White
9	Bottom cover	Resin	White
10	Light cover	Resin	Light blue

Replacement Parts

No.	Description	Part no.
11	One-touch fitting	Refer to the one-touch fitting part no. on page 97.
12	Clip	SJ2000-CL-1 (10 pcs.)

SJ2A60K with back pressure check valve



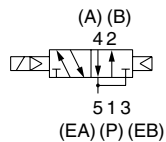
SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Series SJ2000/3000

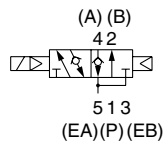
Construction: SJ3000

JIS symbol

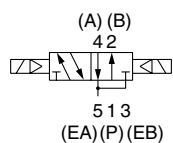
2 position single



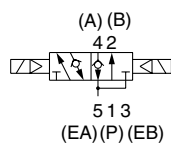
2 position single with back pressure check valve



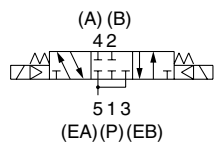
2 position double



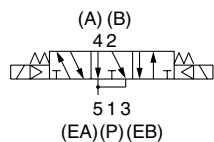
2 position double with back pressure check valve



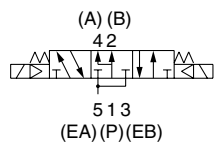
3 position closed center



3 position exhaust center



3 position pressure center



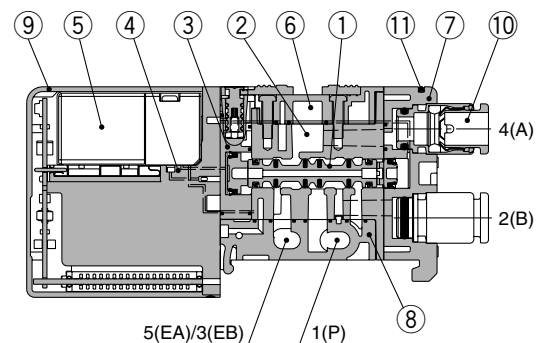
Component Parts

No.	Description	Material	Note
1	Spool valve assembly	Resin/H-NBR (3 position solenoid valve: Aluminum/H-NBR)	—
2	Body	Zinc die-cast	—
3	Adaptor plate	Resin	White
4	Pilot adaptor	Resin	White
5	Pilot valve assembly	—	—
6	Body cover	Resin	White
7	Port block	Resin	White
8	Bottom cover	Resin	White
9	Light cover	Resin	Light blue

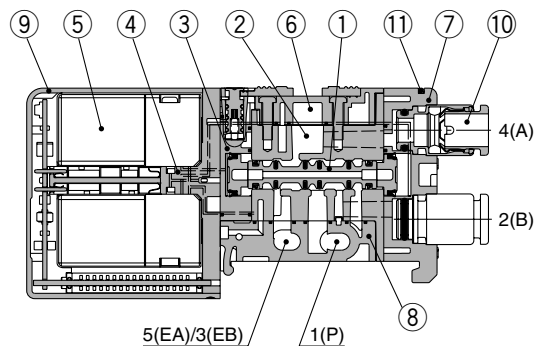
Replacement Parts

No.	Description	Part no.
10	One-touch fitting	Refer to the one-touch fitting part no. on page 97.
11	Clip	SJ3000-CL-1 (10 pcs.)

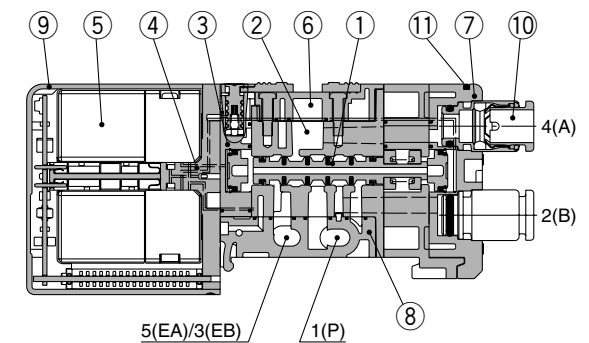
2 position single



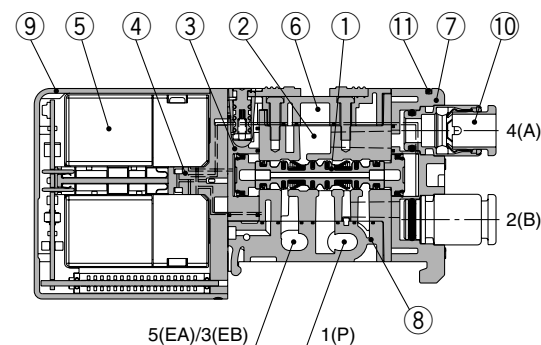
2 position double



3 position closed center/exhaust center/pressure center



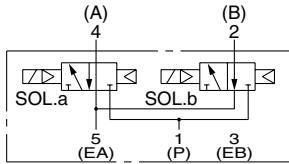
SJ3260K with back pressure check valve



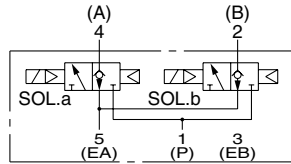
Construction: SJ3000

JIS symbol

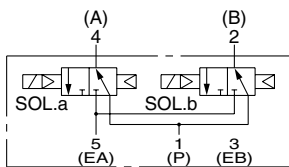
4 position dual 3 port valve
SJ3A60 [N.C. valve x 2]



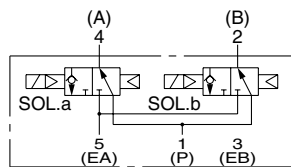
SJ3A60K with back pressure
check valve



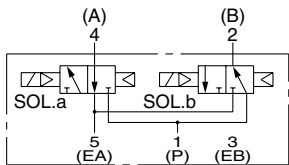
SJ3B60 [N.O. valve x 2]



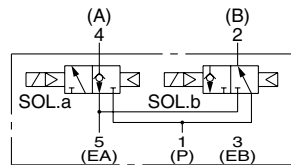
SJ3B60K with back pressure
check valve



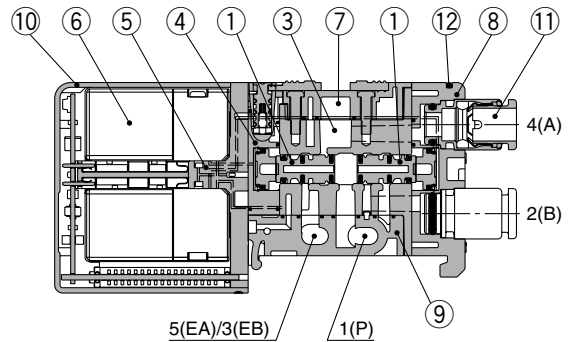
SJ3C60 [N.C., N.O. valve x 1
(each)]



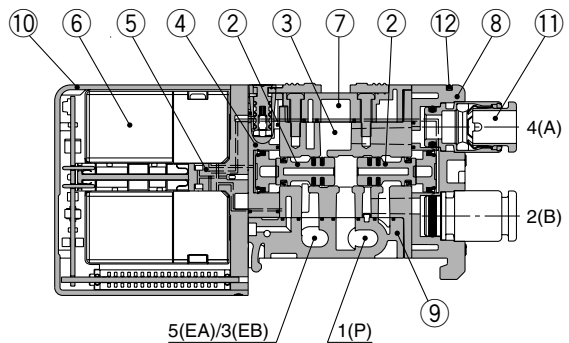
SJ3C60K with back pressure
check valve



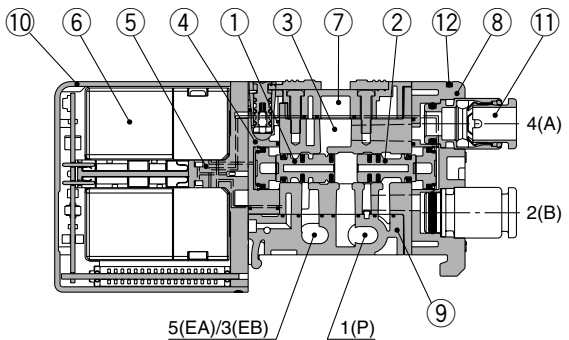
SJ3A60 [N.C. valve x 2]



SJ3B60 [N.O. valve x 2]



SJ3C60 [N.C. valve, N.O. valve x 1 (each)]



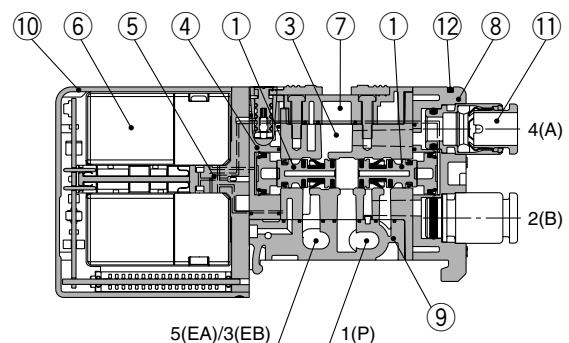
Component Parts

No.	Description	Material	Note
1	Spool valve assembly	Resin/H-NBR	N.C. (Normally closed)
2	Spool valve assembly	Resin/H-NBR	N.O. (Normally open)
3	Body	Zinc die-cast	—
4	Adaptor plate	Resin	White
5	Pilot adaptor	Resin	White
6	Pilot valve assembly	—	—
7	Body cover	Resin	White
8	Port block	Resin	White
9	Bottom cover	Resin	White
10	Light cover	Resin	Light blue

Replacement Parts

No.	Description	Part no.
11	One-touch fitting	Refer to the one-touch fitting part no. on page 97.
12	Clip	SJ3000-CL-1 (10 pcs.)

SJ3A60K with back pressure check valve



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Plug-in Connector Type Manifold

Series SJ2000/3000

P.26 D-sub Connector / Flat Ribbon Cable / PC Wiring



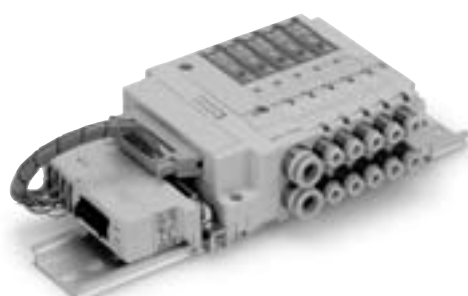
P.42 PC Wiring System with Power Supply Terminal



P.50 EX180 Integrated Type (for Output) Serial Transmission System



P.58 EX510 Gateway System Serial Transmission System



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Plug-in Connector Type

D-sub Connector / Flat Ribbon Cable / PC Wiring

Series SJ2000/3000



How to Order

● Connector type manifold

SS5J 3 - 60 F D 1 - 05 U

2	SJ2000
3	SJ3000 (SJ2000/3000 mixed)

Mixed mounting type

Nil	Standard Note 1)
M	Mixed mounting Note 2)

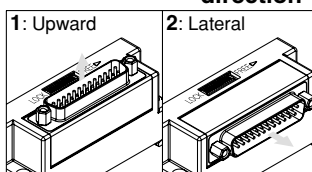
Note 1) There is no need to enter anything when you operate either the SJ2000 or SJ3000 series alone.

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

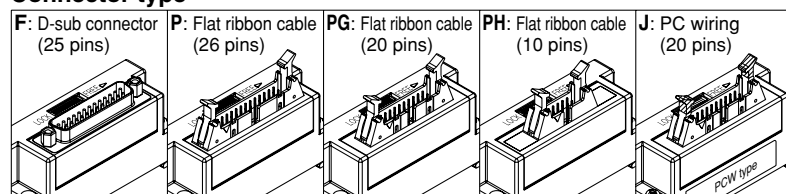
Connector mounting position

Symbol	Mounting position
D	D side

Connector entry direction



Connector type



How to Order Valve Manifold Assembly

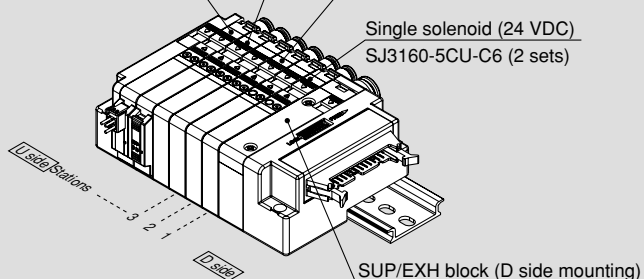
Ordering example (SS5J3-60PD2-□)

Double solenoid, individual wiring/lead wire length 300 mm (24 VDC)
SJ3260-5MZ-C6 (1 set)

Double solenoid, with switch (24 VDC)
SJ3260-5CZJ-C6 (1 set)

Double solenoid (24 VDC)
SJ3260-5CU-C6 (2 sets)

Single solenoid (24 VDC)
SJ3160-5CU-C6 (2 sets)



SS5J3-60PD2-06D 1 set (Manifold part no.)

* **SJ3160-5CU-C6** 2 sets (Single solenoid part no.)

* **SJ3260-5CU-C6** 2 sets (Double solenoid part no.)

* **SJ3260-5CZJ-C6** 1 set (Double solenoid, with switch part no.)

* **SJ3260-5MZ-C6** 1 set (Double solenoid, individual wiring/lead wire length 300 mm 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.

DIN rail length specified

Nil	Standard length	
3	3 stations	Specify a longer rail than the standard length.
24	24 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 24 stations)
M*	Special specifications

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

Valve stations

F: D-sub connector

Symbol	Stations	Note
02	2 stations	Up to 24 solenoids possible.
24	24 stations	

PG: Flat ribbon cable (20 pins)

Symbol	Stations	Note
02	2 stations	Up to 18 solenoids possible.
18	18 stations	

P: Flat ribbon cable (26 pins)

Symbol	Stations	Note
02	2 stations	Up to 24 solenoids possible.
24	24 stations	

PH: Flat ribbon cable (10 pins)

Symbol	Stations	Note
02	2 stations	Up to 8 solenoids possible.
08	8 stations	

J: PC wiring (20 pins)

Symbol	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. (Refer to page 77.)

* Refer to page 42 through to 49 for PCW type with power supply terminal.

How to Order Solenoid Valves

Standard

SJ 3 1 60 - 5 CU - C6

With switch

SJ 3 1 60 - 5 CZJ - C6

Individual wiring [For plug-in mixed mounting]

SJ 3 1 60 - 5 MZ - C6

Note) Refer to pages 68 and 69 for the dedicated non-plug-in individual wiring.

Series	
2	SJ2000
3	SJ3000

Back pressure check valve

Nil	None
K	Built-in

* Back pressure check valve is not applicable for 3 position valve.

Pilot spec.

Nil	Internal pilot
R	External pilot

* External pilot spec. is not applicable for 4 position dual 3 port valves.

Coil spec.

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

* Be sure to select "with power saving circuit" when the solenoid valve will be energized continuously for long period.

Rated voltage

5	24 VDC
6	12 VDC

Single solenoid wiring spec.

Nil	Single wiring
D	Double wiring

* There is no need to enter anything for 2 position double, 3 position and 4 position solenoid valves. Select this when the unused numbers to wiring are set. Refer to page 19 for details.

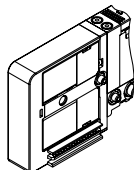
Type of actuation

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	Dual 3 port valve: N.C./N.C.
B	Dual 3 port valve: N.O./N.O.
C	Dual 3 port valve: N.C./N.O.

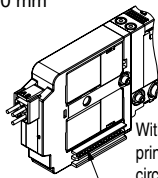
* Refer to pages 20 through to 23 for the JIS symbol.

Connector entry

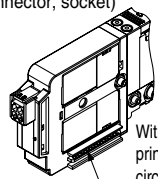
C: Dedicated for centralized wiring



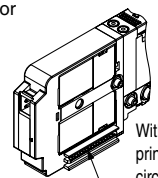
M: Individual wiring, With lead wire
Length 300 mm



MN: Individual wiring, Without lead wire
(With connector, socket)



MO: Individual wiring, Without connector

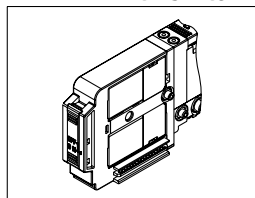


Light/surge voltage suppressor

U	With light/surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Polar type)

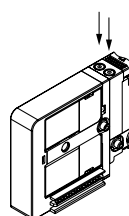
* When the types with power saving circuit, with switches, and individual wiring are used, the non-polar type cannot be selected.
* "Z" is +COM. spec.

With switch

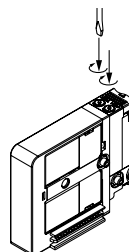


Manual override

Nil: Non-locking push type



D: Push-turn locking slotted type



A, B port size

Straight
(Metric size)

C2: ø2 one-touch fitting
C4: ø4 one-touch fitting
C6: ø6 one-touch fitting
(SJ3000 only)

(Inch size)

N1: ø1/8" one-touch fitting
N3: ø5/32" one-touch fitting
N7: ø1/4" one-touch fitting
(SJ3000 only)

M3: M3 x 0.5 (SJ2000 only)
M5: M5 x 0.8 (SJ3000 only)

Elbow fitting assembly (Upward entry)
(Metric size)

L2: ø2 elbow fitting assembly
L4: ø4 elbow fitting assembly
L6: ø6 elbow fitting assembly
(SJ3000 only)

(Inch size)

LN1: ø1/8" elbow fitting assembly
LN3: ø5/32" elbow fitting assembly
LN7: ø1/4" elbow fitting assembly
(SJ3000 only)

Elbow fitting assembly (Downward entry)
(Metric size)

B2: ø2 elbow fitting assembly
B4: ø4 elbow fitting assembly
B6: ø6 elbow fitting assembly
(SJ3000 only)

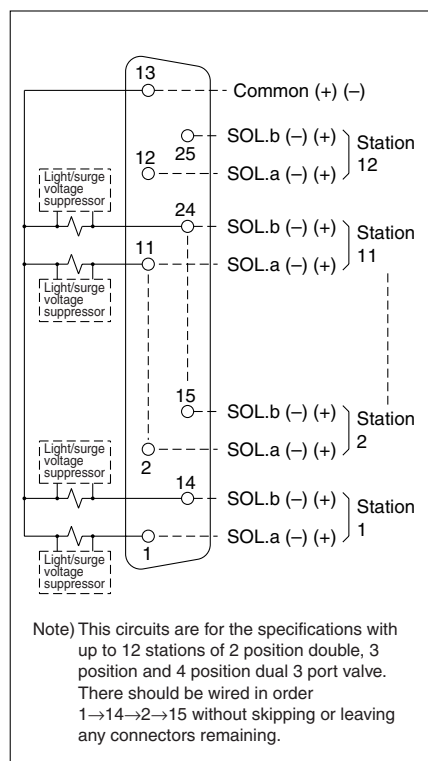
(Inch size)

BN1: ø1/8" elbow fitting assembly
BN3: ø5/32" elbow fitting assembly
BN7: ø1/4" elbow fitting assembly
(SJ3000 only)

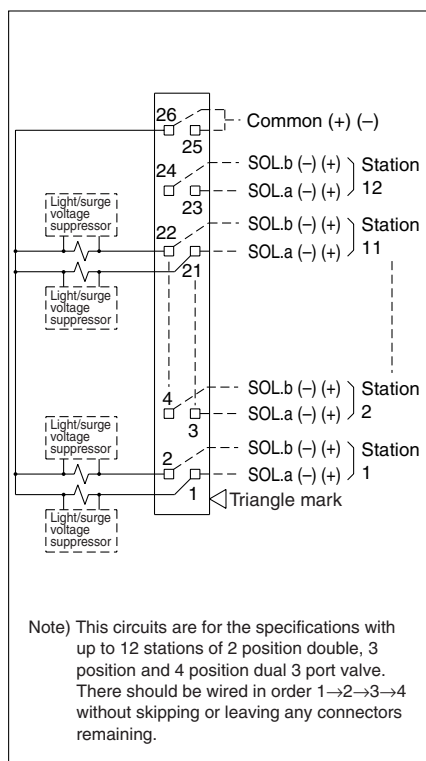
Note 2) The electrical connection to the manifold will be +COM. spec. when light/surge voltage suppressor is "Z" (Polar type).

Manifold Electrical Wiring (Non-polar type)

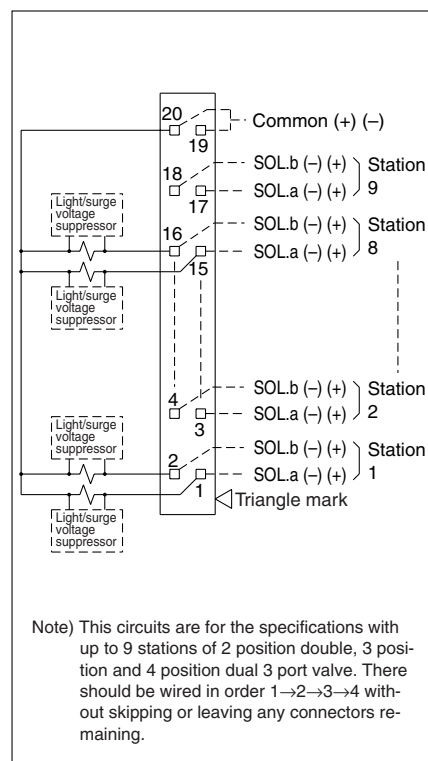
Type 60F: D-sub connector (25 pins)



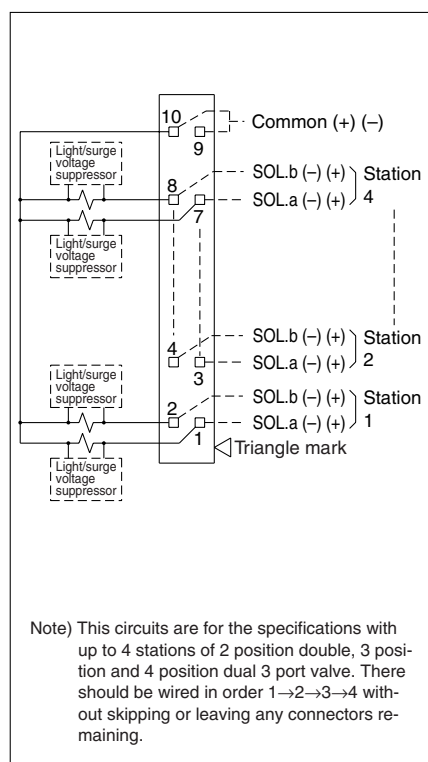
Type 60P: Flat ribbon cable (26 pins)



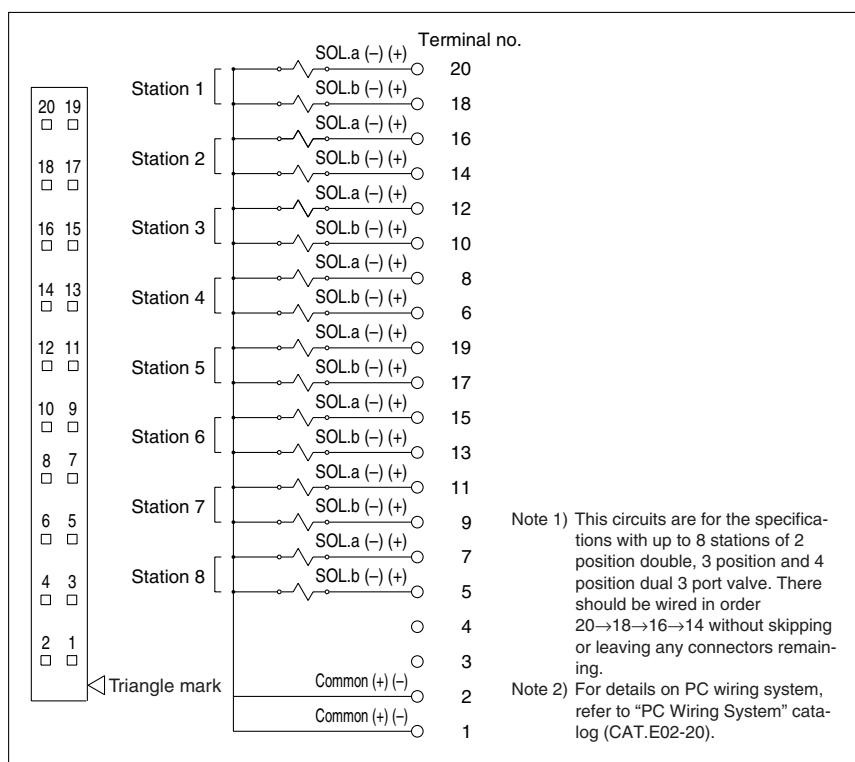
Type 60PG: Flat ribbon cable (20 pins)



Type 60PH: Flat ribbon cable (10 pins)



Type 60J: Flat ribbon cable (20 pins, PC wiring)

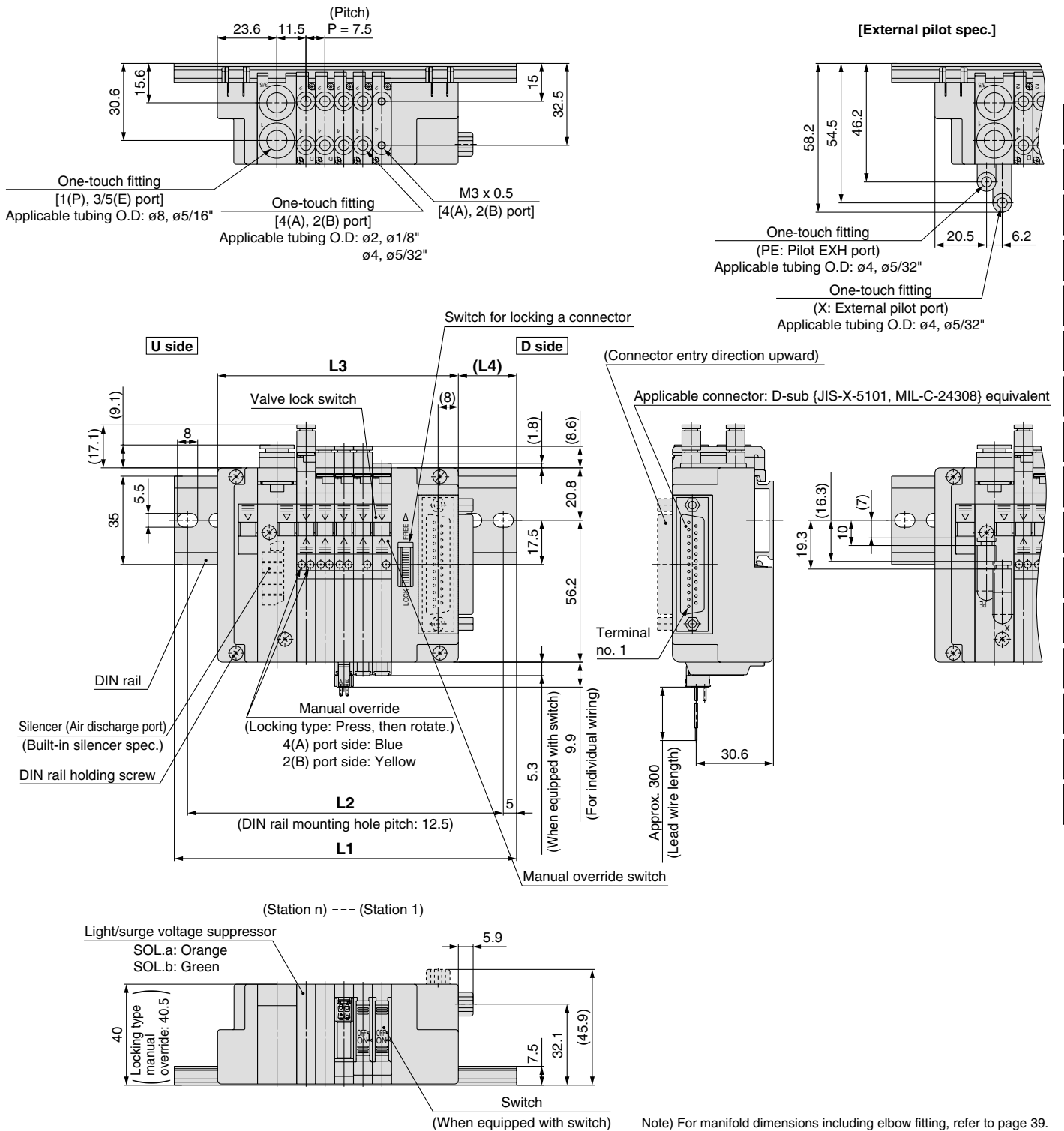


Caution

When the non-polar U type valves are used, either negative COM or positive COM wiring of the manifold is possible. However, the valve does not switch with negative COM if a Z type is used. Be sure to use positive COM.

Dimensions: Series SJ2000 for D-sub Connector

SS5J2-60FD₂-[Stations] U (S, R, RS)



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

L: Dimensions

n: Stations

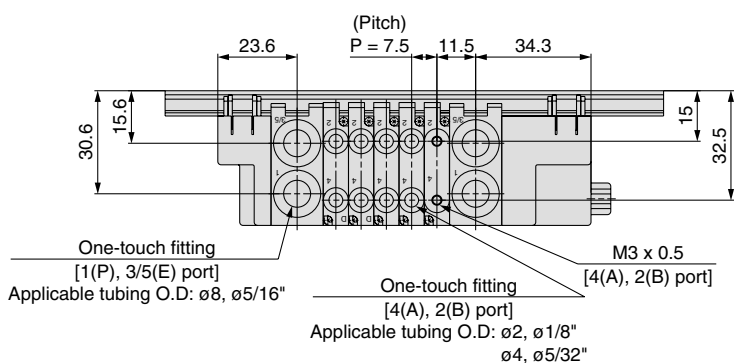
L \ n	2	3	4	5	6	7	8	9	10
L1	110.5	110.5	123	135.5	135.5	148	148	160.5	173
L2	100	100	112.5	125	125	137.5	137.5	150	162.5
L3	72.8	80.3	87.8	95.3	102.8	110.3	117.8	125.3	132.8
L4	22	18	20.5	23	19.5	22	18	20.5	23

Note) For manifold dimensions including elbow fitting, refer to page 39.

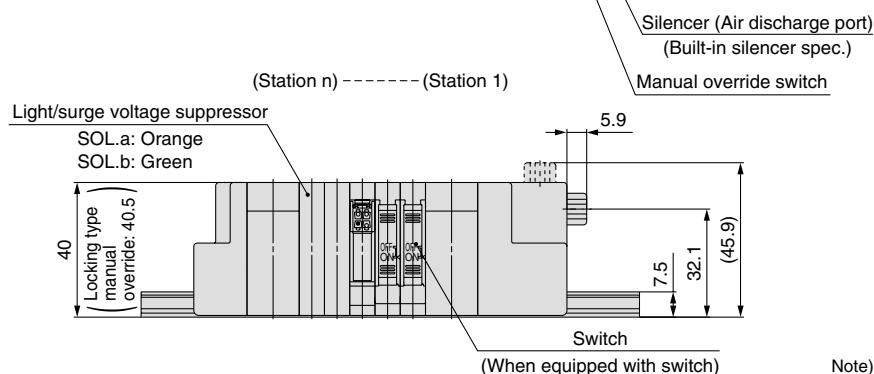
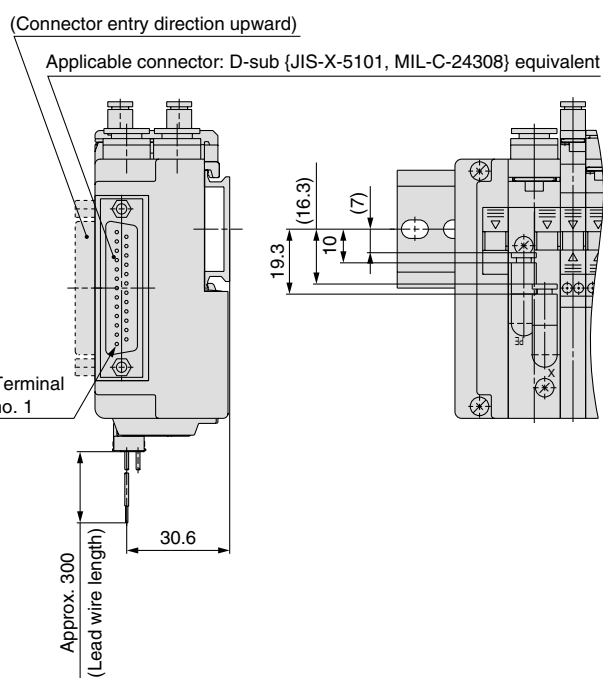
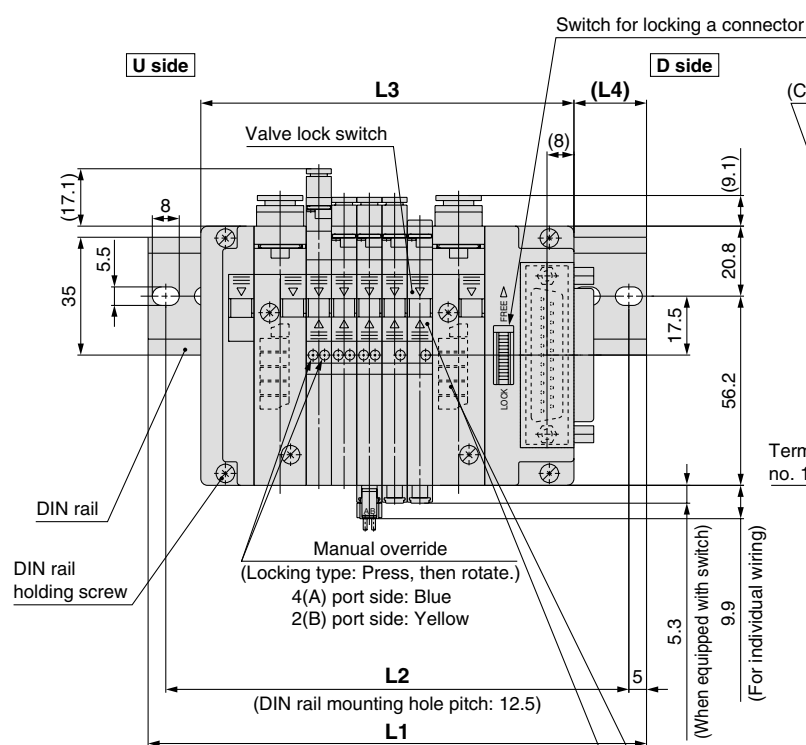
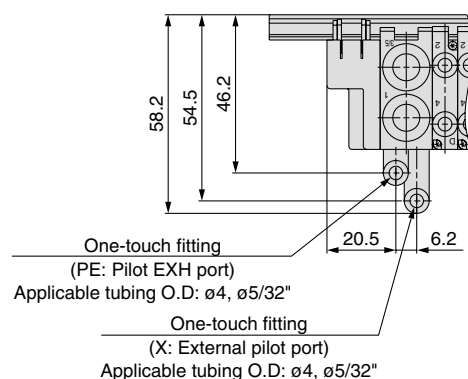
Series SJ2000/3000

Dimensions: Series SJ2000 for D-sub Connector

SS5J2-60FD₂- [Stations] B (S, R, RS)



[External pilot spec.]
(There is a piping of X, PE port in the both sides.)



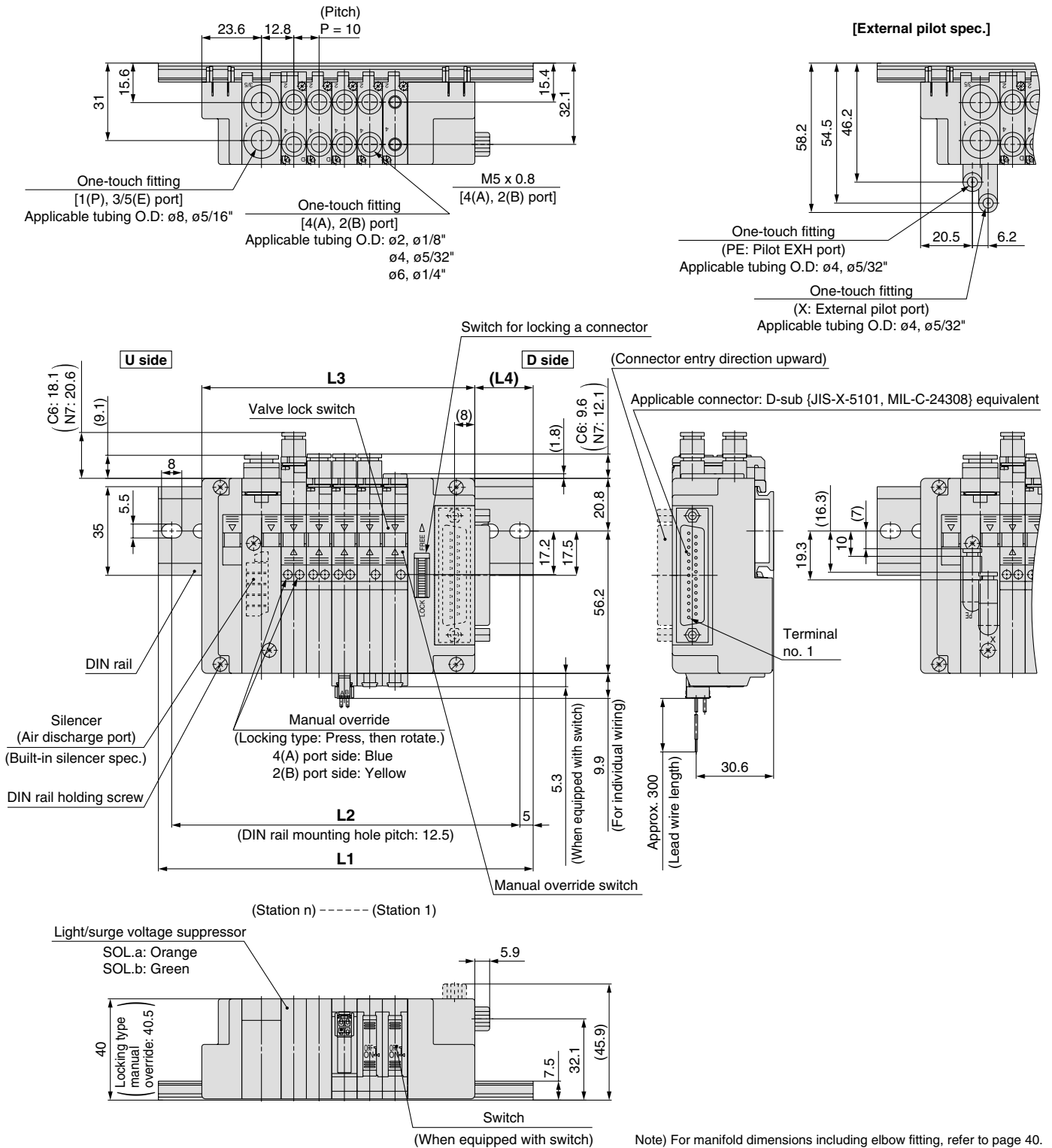
Note) For manifold dimensions including elbow fitting, refer to page 39.

L: Dimensions

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	123	135.5	135.5	148	148	160.5	173	173	185.5	185.5	198	210.5	210.5	223	223	235.5	248	248	260.5	260.5	273	285.5	285.5
L2	112.5	125	125	137.5	137.5	150	162.5	162.5	175	175	187.5	200	200	212.5	212.5	225	237.5	237.5	250	250	262.5	275	275
L3	88.3	95.8	103.3	110.8	118.3	125.8	133.3	140.8	148.3	155.8	163.3	170.8	178.3	185.8	193.3	200.8	208.3	215.8	223.3	230.8	238.3	245.8	253.3
L4	20.5	23	19	21.5	18	20.5	23	19	21.5	18	20.5	23	19	21.5	18	20.5	23	19	21.5	18	20.5	23	19

Dimensions: Series SJ3000 for D-sub Connector

SS5J3-60FD¹- [Stations] U (S, R, RS)



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

L: Dimensions

n: Stations

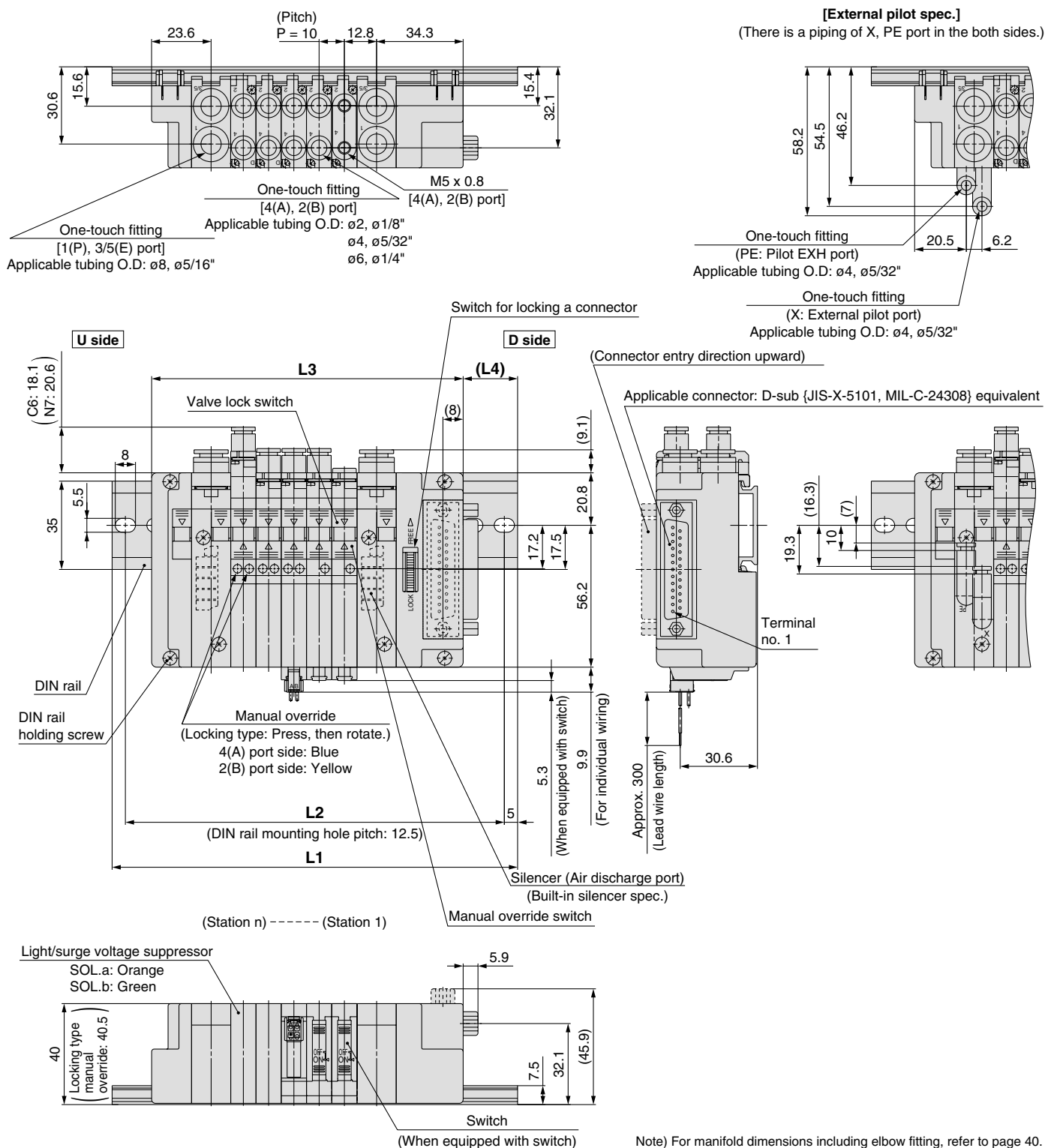
L	n	2	3	4	5	6	7	8	9	10
L1		110.5	123	135.5	148	148	160.5	173	185.5	198
L2		100	112.5	125	137.5	137.5	150	162.5	175	187.5
L3		77.8	87.8	97.8	107.8	117.8	127.8	137.8	147.8	157.8
L4		19	20.5	21.5	22.5	17.5	18.5	20	21	22

Note) For manifold dimensions including elbow fitting, refer to page 40.

Series SJ2000/3000

Dimensions: Series SJ3000 for D-sub Connector

SS5J3-60FD¹- [Stations] B (S, R, RS)



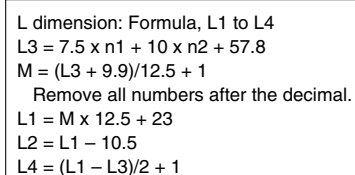
Note) For manifold dimensions including elbow fitting, refer to page 40.

L: Dimensions

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	123	135.5	148	160.5	173	185.5	185.5	198	210.5	223	235.5	235.5	248	260.5	273	285.5	298	298	310.5	323	335.5	348	348
L2	112.5	125	137.5	150	162.5	175	175	187.5	200	212.5	225	225	237.5	250	262.5	275	287.5	287.5	300	312.5	325	337.5	337.5
L3	93.3	103.3	113.3	123.3	133.3	143.3	153.3	163.3	173.3	183.3	193.3	203.3	213.3	223.3	233.3	243.3	253.3	263.3	273.3	283.3	293.3	303.3	313.3
L4	17.5	19	20	21	22	23.5	18.5	19.5	20.5	21.5	23	18	19	20	21	22.5	23.5	18.5	19.5	20.5	22	23	18

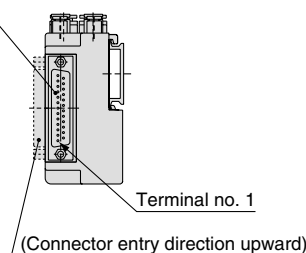
n: Stations

SS5J3-M60FD₂- Stations U (S, R, RS)



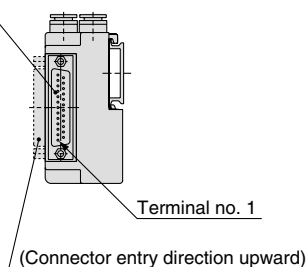
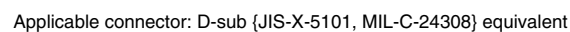
n1: Piece of the SJ2000
n2: Piece of the S.J3000

* The dimensions of L1 to L4 for **SS5J3-M60FD1/2-StationsD** are the same as those of **SS5J3-M60FD1/2-StationsU**.



L dimension: Formula, L1 to L4
 $L3 = 7.5 \times n1 + 10 \times n2 + 73.3$
 $M = (L3 + 9.9) / 12.5 + 1$
 Remove all numbers after the decimal.
 $L1 = M \times 12.5 + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3) / 2 + 1$

n1: Piece of the SJ2000
n2: Piece of the SJ3000

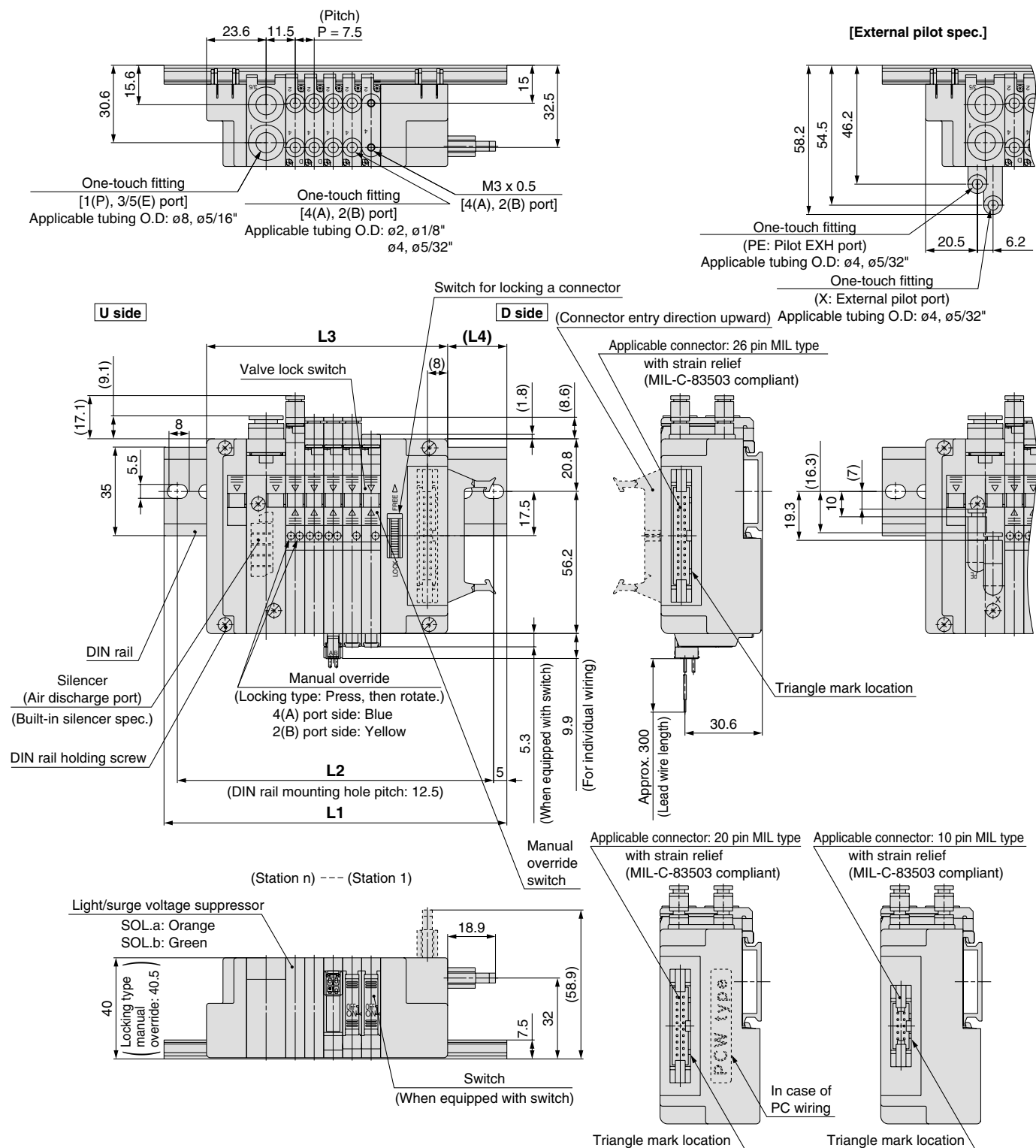


SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Series SJ2000/3000

Dimensions: Series SJ2000 for Flat Ribbon Cable / PC Wiring

SS5J2-60^PD₂- [Stations] U (S, R, RS)



L: Dimensions

n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L1	110.5	110.5	123	135.5	135.5	148	148	160.5	173
L2	100	100	112.5	125	125	137.5	137.5	150	162.5
L3	72.8	80.3	87.8	95.3	102.8	110.3	117.8	125.3	132.8
L4	22	18.5	21	23.5	19.5	22	18.5	21	23.5

In case of 60^{PG} (20 pins)

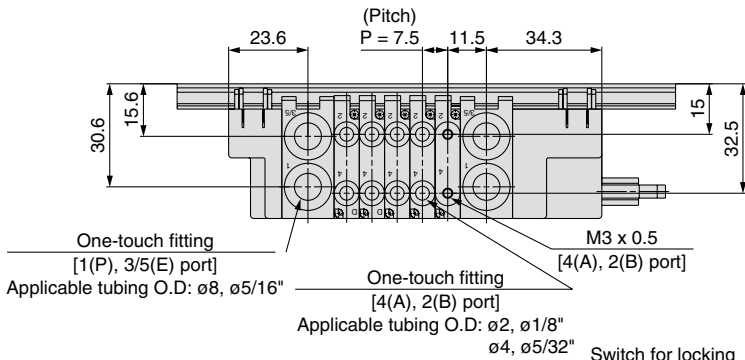
In case of 60PH (10 pins)

Note 1) Type 60PG, 60PH and 60J differ only in their connectors, and the L1 through L4 dimensions are the same as type 60P.

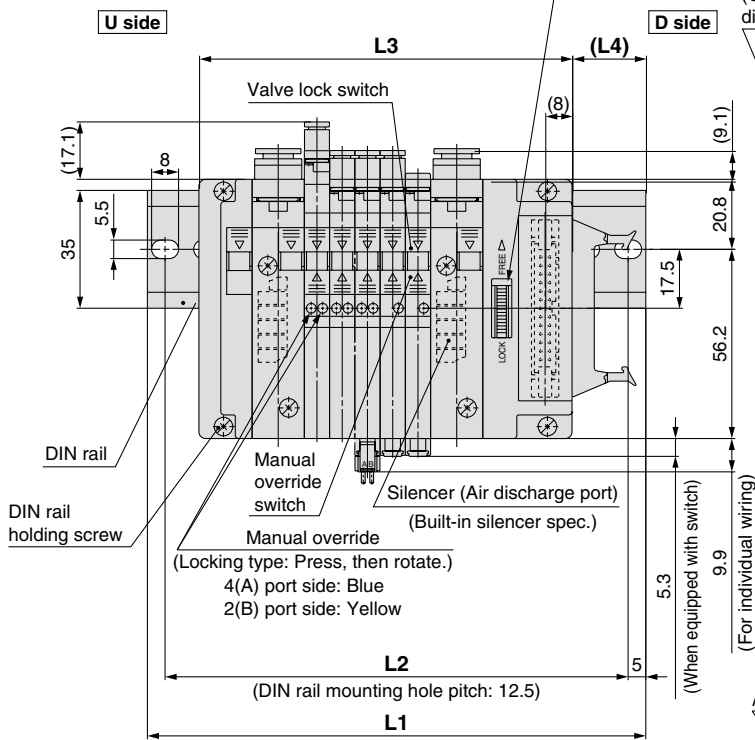
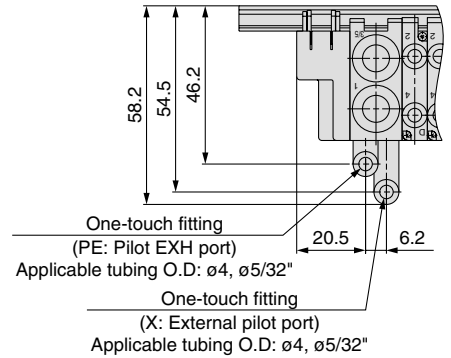
Note 2) For manifold dimensions including elbow fitting, refer to page 39.

Dimensions: Series SJ2000 for Flat Ribbon Cable / PC Wiring

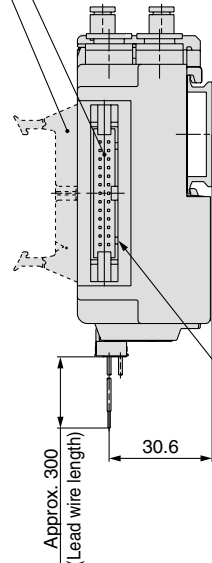
SS5J2-60^PD₂- [Stations] B (S, R, RS)



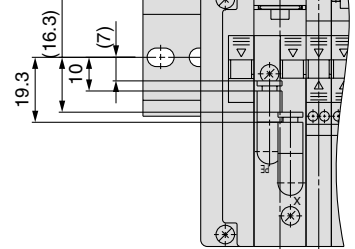
[External pilot spec.]
(There is a piping of X, PE port in the both sides.)



(Connector entry direction upward)
Applicable connector: 26 pin MIL type with strain relief (MIL-C-83503 compliant)

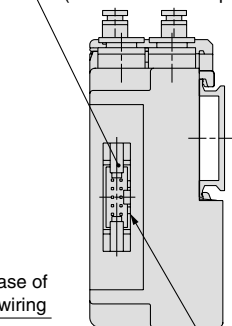
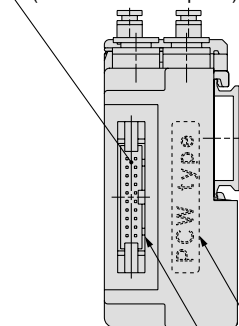


Triangle mark location



Applicable connector: 20 pin MIL type with strain relief (MIL-C-83503 compliant)

Applicable connector: 10 pin MIL type with strain relief (MIL-C-83503 compliant)



In case of 60^{PG} (20 pins)

In case of 60^{PH} (10 pins)

Note 1) Type 60PG, 60PH and 60J differ only in their connectors, and the L1 through L4 dimensions are the same as type 60P.

Note 2) For manifold dimensions including elbow fitting, refer to page 39.

L: Dimensions

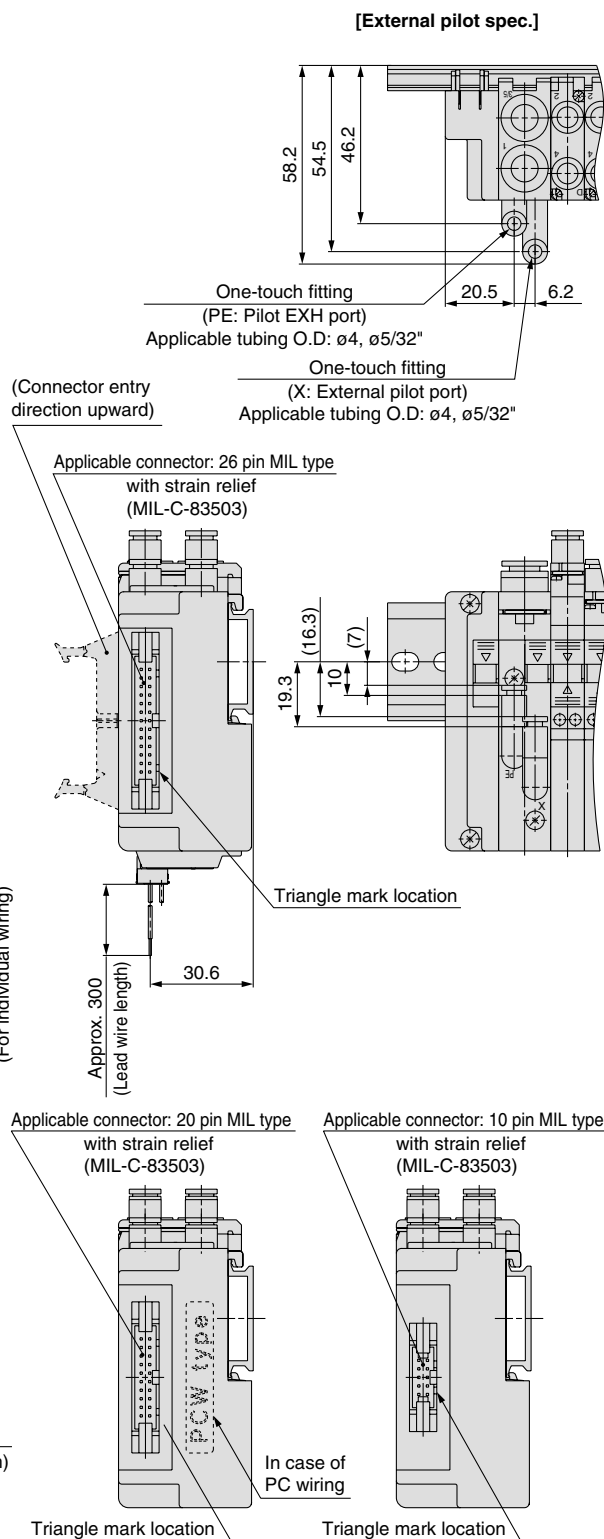
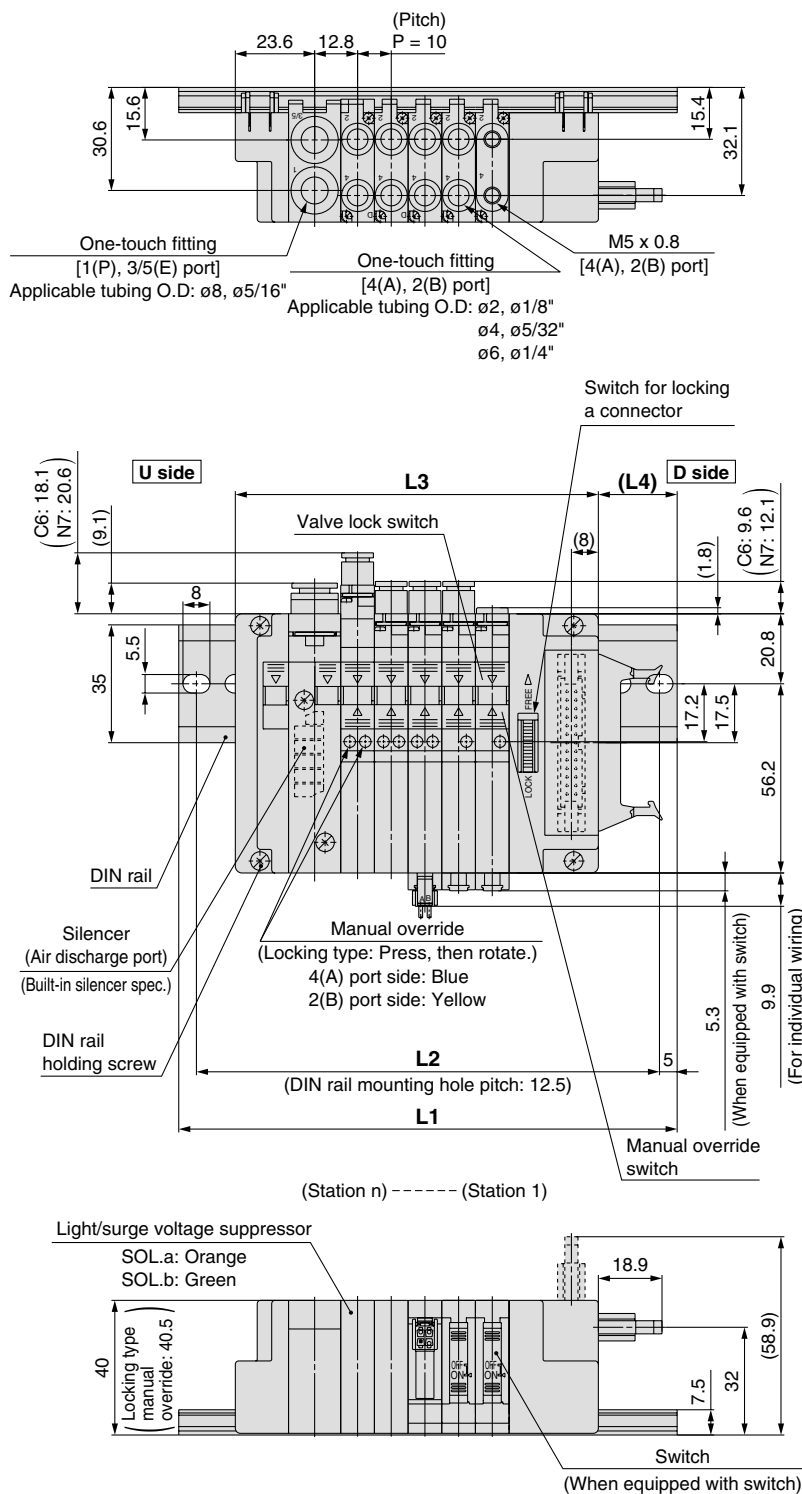
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	123	135.5	135.5	148	148	160.5	173	173	185.5	185.5	198	210.5	210.5	223	223	235.5	248	248	260.5	260.5	273	285.5	285.5
L2	112.5	125	125	137.5	137.5	150	162.5	162.5	175	175	187.5	200	200	212.5	212.5	225	237.5	237.5	250	250	262.5	275	275
L3	88.3	95.8	103.3	110.8	118.3	125.8	133.3	140.8	148.3	155.8	163.3	170.8	178.3	185.8	193.3	200.8	208.3	215.8	223.3	230.8	238.3	245.8	253.3
L4	20.5	23	19.5	22	18	20.5	23	19.5	22	18	20.5	23	19.5	22	18	20.5	23	19.5	22	18	20.5	23	19.5

n: Stations

Series SJ2000/3000

Dimensions: Series SJ3000 for Flat Ribbon Cable / PC Wiring

SS5J3-60^PD₂- [Stations] U (S, R, RS)



L: Dimensions

n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L1	110.5	123	135.5	148	160.5	160.5	173	185.5	198
L2	100	112.5	125	137.5	150	150	162.5	175	187.5
L3	77.8	87.8	97.8	107.8	117.8	127.8	137.8	147.8	157.8
L4	19.5	20.5	22	23	24	19	20	21.5	22.5

In case of 60^{PG} (20 pins)

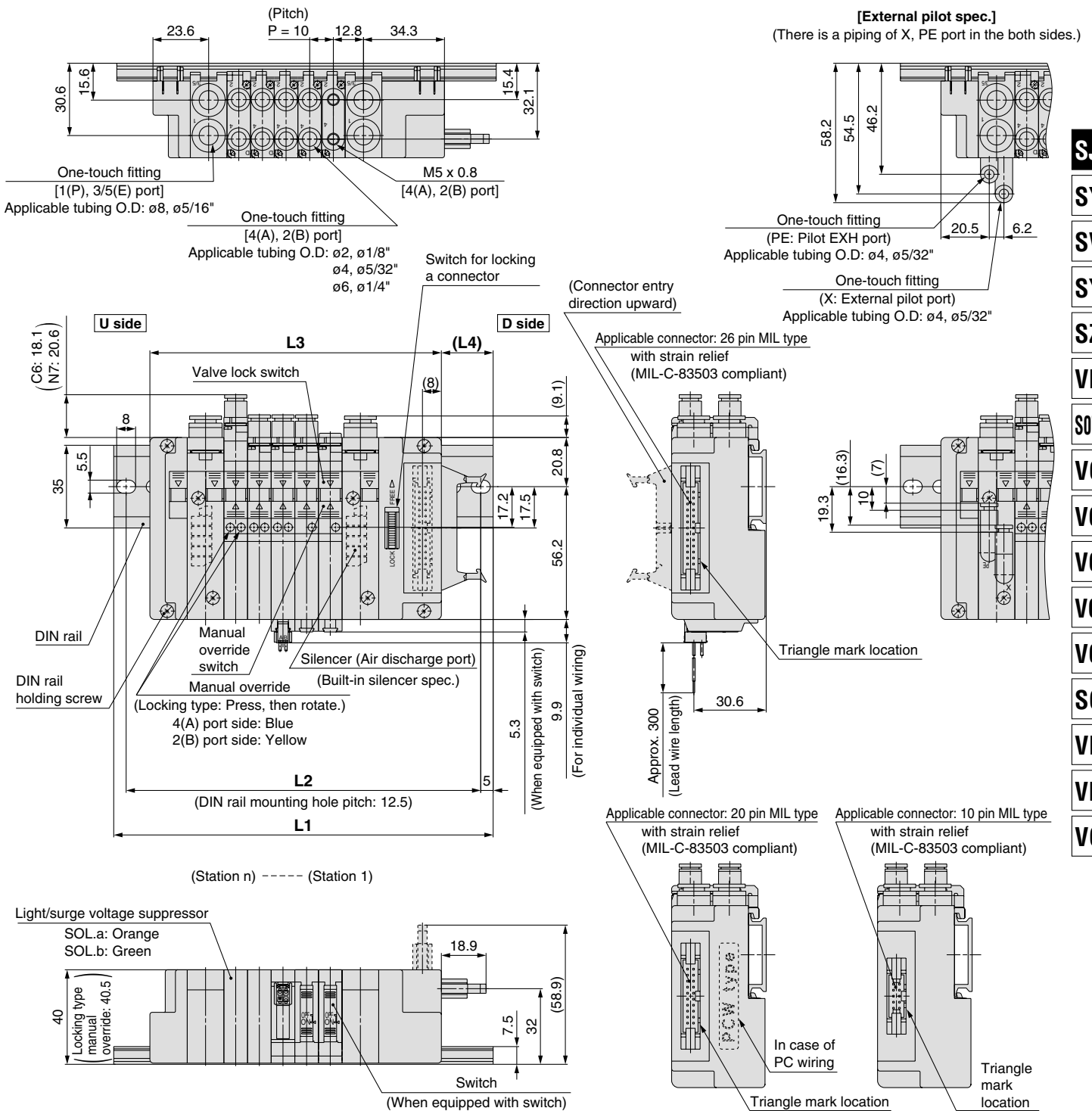
In case of 60PH (10 pins)

Note 1) Type 60PG, 60PH and 60J differ only in their connectors, and the L1 through L4 dimensions are the same as type 60P.

Note 2) For manifold dimensions including elbow fitting, refer to page 40.

Dimensions: Series SJ3000 for Flat Ribbon Cable / PC Wiring

SS5J3-60^PD₂- [Stations] B (S, R, RS)



In case of 60^{PG} (20 pins)

In case of 60PH (10 pins)

Note 1) Type 60PG, 60PH and 60J differ only in their connectors, and the L1 through L4 dimensions are the same as type 60P.

Note 2) For manifold dimensions including elbow fitting, refer to page 40.

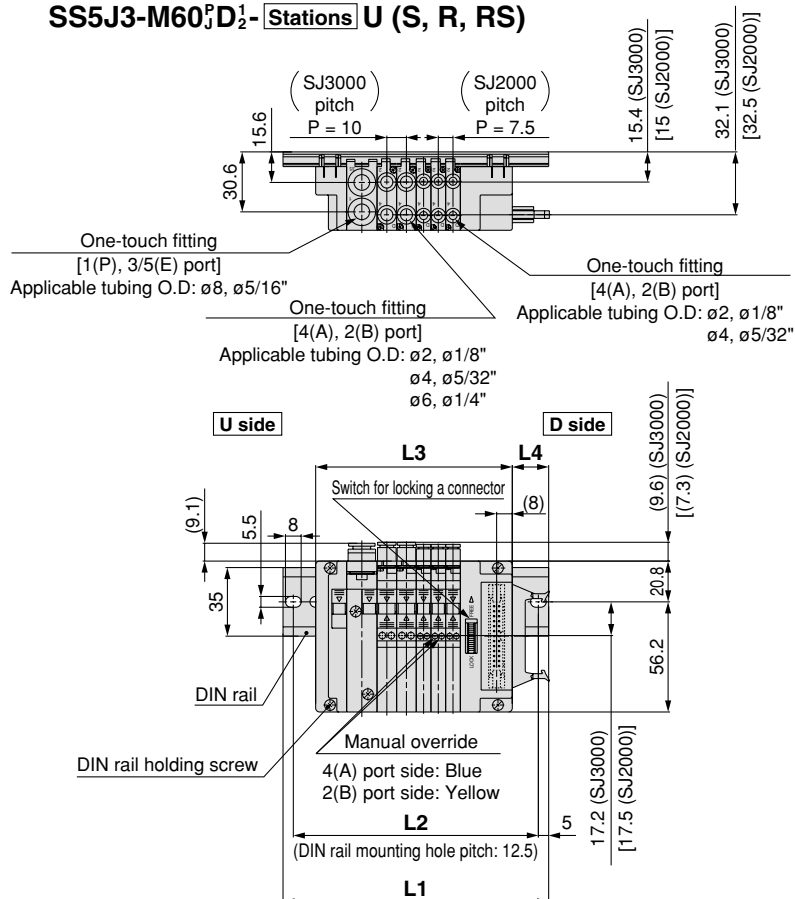
L: Dimensions

L: Dimensions		n: Stations																							
L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
L1		135.5	135.5	148	160.5	173	185.5	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	298	310.5	323	335.5	348	348	
L2		125	125	137.5	150	162.5	175	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	287.5	300	312.5	325	337.5	337.5	
L3		93.3	103.3	113.3	123.3	133.3	143.3	153.3	163.3	173.3	183.3	193.3	203.3	213.3	223.3	233.3	243.3	253.3	263.3	273.3	283.3	293.3	303.3	313.3	
L4		24	19	20.5	21.5	22.5	23.5	18.5	20	21	22	23	24.5	19.5	20.5	21.5	22.5	24	19	20	21	22	23.5	18.5	

Series SJ2000/3000

Dimensions: SJ2000/3000 Mixed Manifold

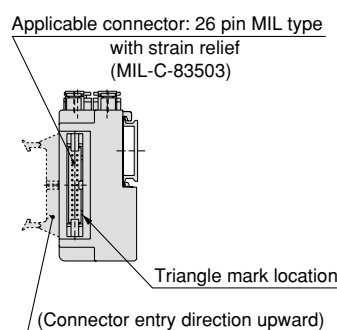
SS5J3-M60PD₁-[Stations]U (S, R, RS)



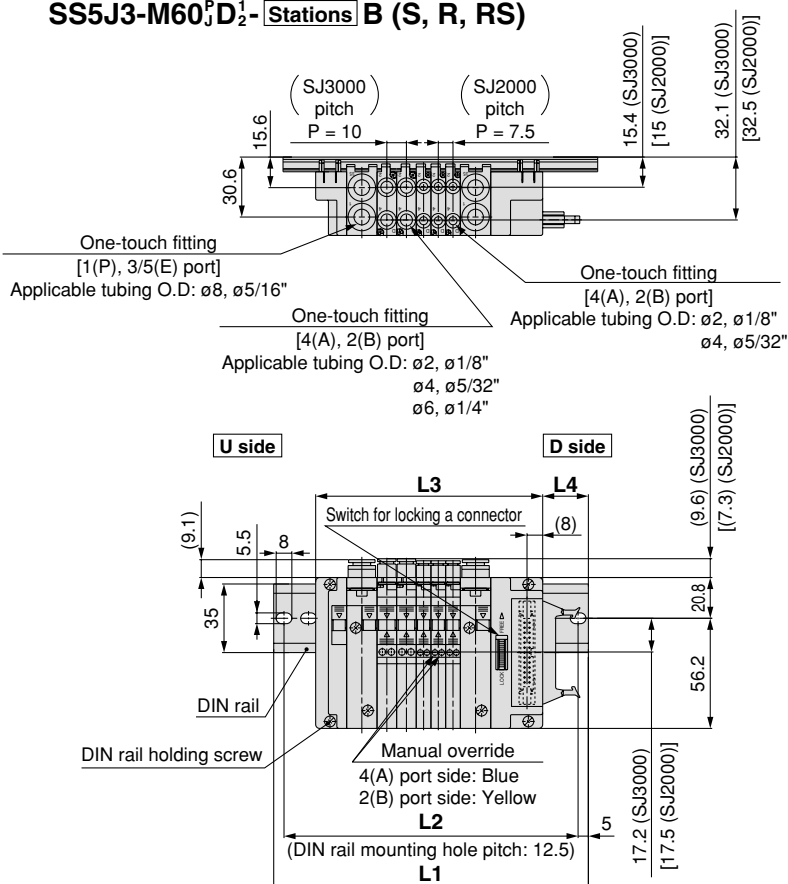
L dimension: Formula, L1 to L4
 $L3 = 7.5 \times n1 + 10 \times n2 + 57.8$
 $M = (L3 + 10.6)/12.5 + 1$
 Remove all numbers after the decimal.
 $L1 = M \times 12.5 + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3)/2 + 1.3$

n1: Piece of the SJ2000
 n2: Piece of the SJ3000

* The dimensions of L1 to L4 for **SS5J3-M60PD1/2-[Stations]D** are the same as those of **SS5J3-M60PD1/2-[Stations]U**.

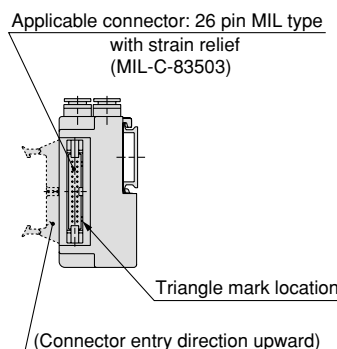


SS5J3-M60PD₁-[Stations]B (S, R, RS)



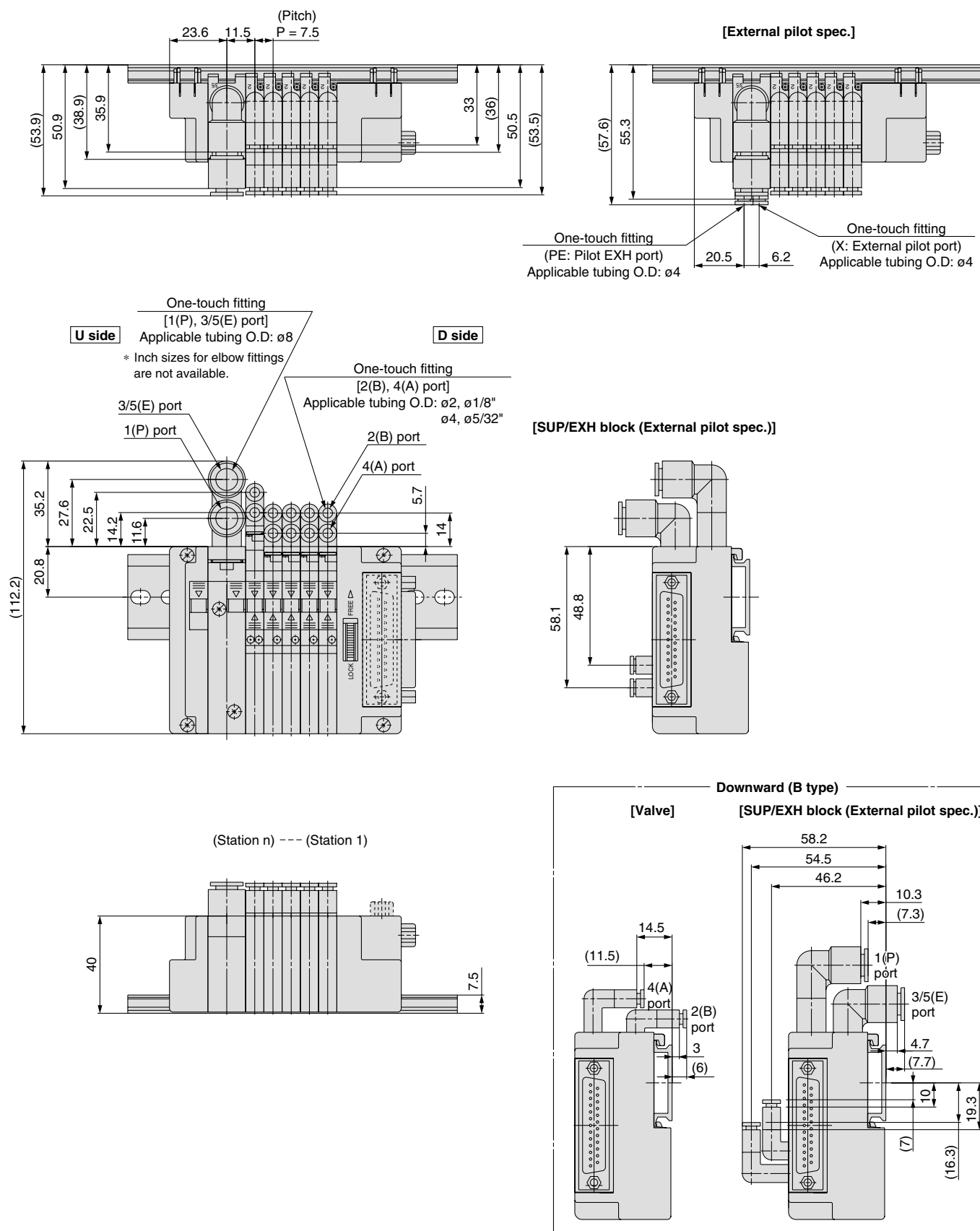
L dimension: Formula, L1 to L4
 $L3 = 7.5 \times n1 + 10 \times n2 + 73.3$
 $M = (L3 + 10.6)/12.5 + 1$
 Remove all numbers after the decimal.
 $L1 = M \times 12.5 + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3)/2 + 1.3$

n1: Piece of the SJ2000
 n2: Piece of the SJ3000



Dimensions: Series SJ2000 with Elbow Fittings

SS5J2-60FD₂¹- Stations U_B

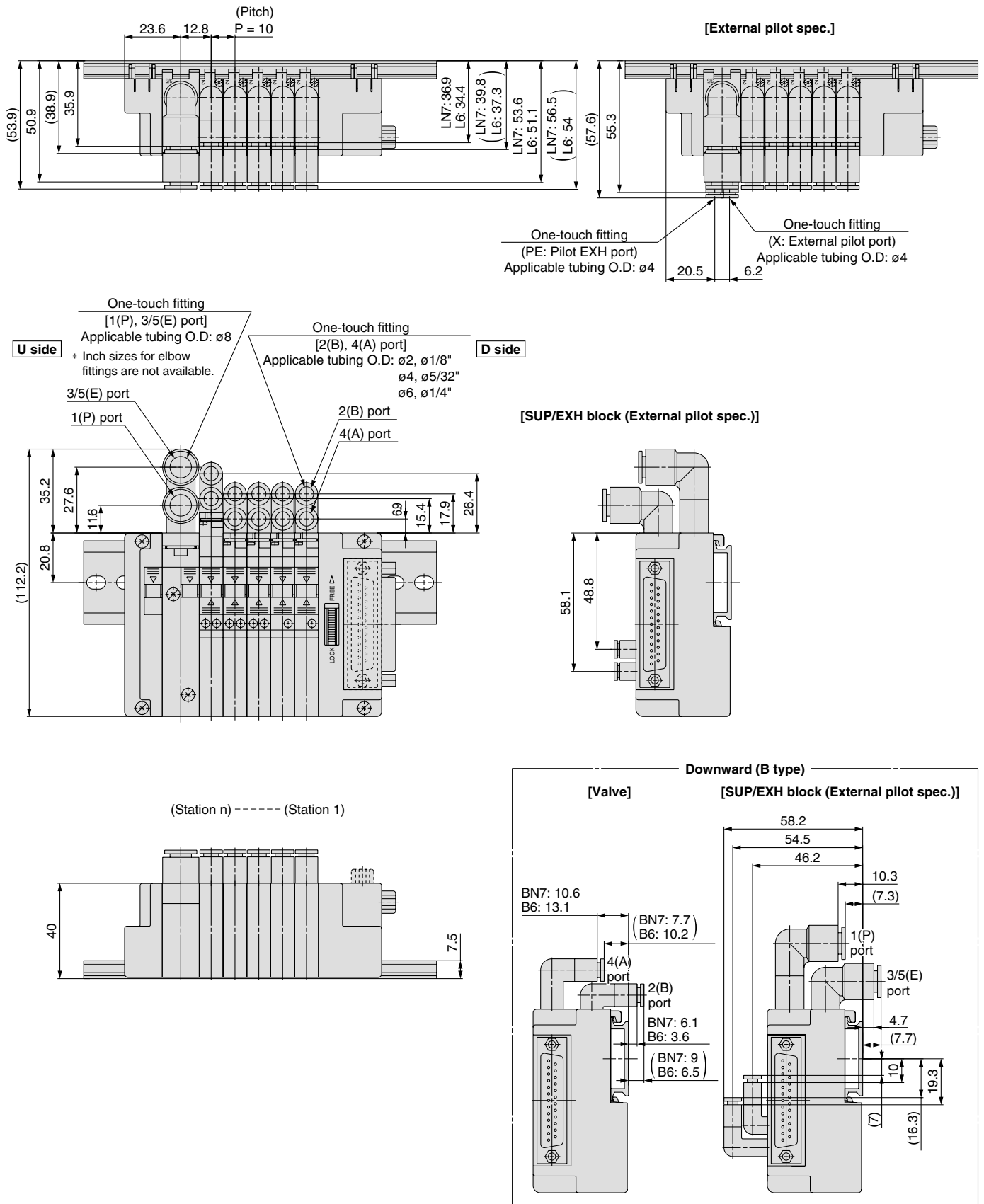


SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Series SJ2000/3000

Dimensions: Series SJ3000 with Elbow Fittings

SS5J3-60FD¹₂- [Stations] U_B



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Plug-in Connector Type PC Wiring System with Power Supply Terminal Series **SJ2000/3000**



How to Order

● Connector type manifold

SS5J 3 - 60 G D - 05 U

Series

2	SJ2000
3	SJ3000 (SJ2000/3000 mixed)

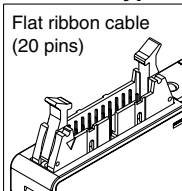
Mixed mounting type

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.

Connector type



Connector mounting position

Symbol	Mounting position
D	D side

DIN rail length specified

Nil	Standard length
3	3 stations
⋮	⋮
16	16 stations

* Specify the valve stations not exceeding the maximum stations.

SUP/EXH block fitting spec.

Nil	Straight fitting	
L	Elbow fitting (Upward)	
B	Elbow fitting (Downward)	

* 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.

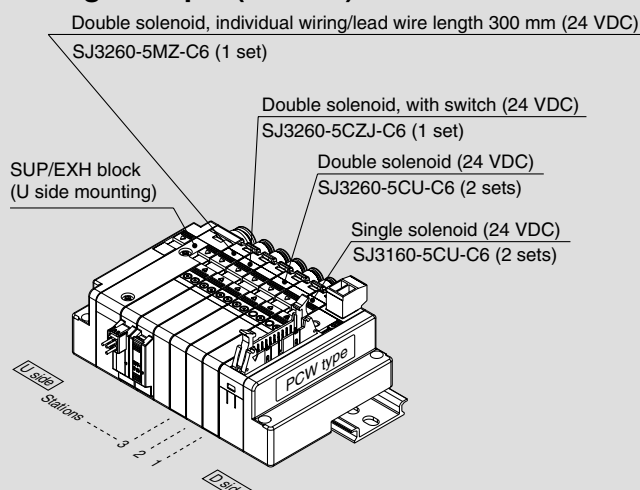
Valve stations

Symbol	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. (Refer to page 77.)

How to Order Valve Manifold Assembly

Ordering example (SJ3000)



SS5J3-60GD-06U 1 set (Manifold part no.)

* **SJ3160-5CU-C6 2 sets (Single solenoid part no.)**

* **SJ3260-5CU-C6 2 sets (Double solenoid part no.)**

* **SJ3260-5CZJ-C6 1 set (Double solenoid, with switch part no.)**

* **SJ3260-5MZ-C6 1 set (Double solenoid, individual wiring/lead wire length 300 mm 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 the wiring to power supply terminal, refer to page 100.

How to Order Solenoid Valves

Standard

SJ 3 1 60 - 5 C U - C6 -

With switch

SJ 3 1 60 - 5 C Z J - C6 -

Individual wiring
[For plug-in mixed mounting] (Note 1)

SJ 3 1 60 - 5 M Z - C6

Note) Refer to pages 68 and 69 for the dedicated non plug-in individual wiring.

Series

2	SJ2000
3	SJ3000

Back pressure check valve

Nil	None
K	Built-in

* Back pressure check valve is not applicable for 3 position valve.

Single solenoid wiring spec.

Nil	Single wiring
D	Double wiring

* There is no need to enter anything for 2 position double, 3 position and 4 position solenoid valves. Select this when the unused numbers to wiring are set. Refer to page 19 for details.

Type of actuation

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	Dual 3 port valve: N.C./N.C.
B	Dual 3 port valve: N.O./N.O.
C	Dual 3 port valve: N.C./N.O.

* Refer to page 20 through to 23 for the JIS symbol.

Pilot spec.

Nil	Internal pilot
R	External pilot

* External pilot spec. is not applicable for 4 position dual 3 port valves.

Coil spec.

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

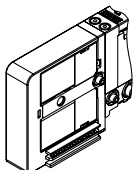
* Be sure to select "with power saving circuit" when the solenoid valve will be energized continuously for long period.

Rated voltage

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

Connector entry

C: Dedicated for centralized wiring

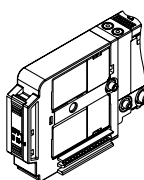


Light/surge voltage suppressor

U	With light/surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Polar type)

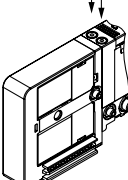
* When the types with power saving circuit, with switches, and/or individual wiring are used, the non-polar type cannot be selected.
* "Z" is +COM. spec.

With switch

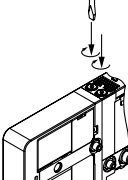


Manual override

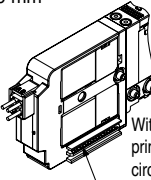
Nil: Non-locking push type



D: Push-turn locking slotted type

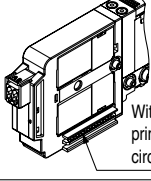


M: Individual wiring, With lead wire
Length 300 mm



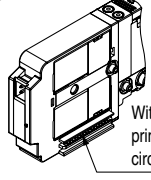
With linkage printed circuit board

MN: Individual wiring, Without lead wire
(With connector, socket)



With linkage printed circuit board

MO: Individual wiring, Without connector



With linkage printed circuit board

A, B port size

Straight (Metric size)
C2: ø2 one-touch fitting
C4: ø4 one-touch fitting
C6: ø6 one-touch fitting (SJ3000 only)

(Inch size)
N1: ø1/8" one-touch fitting
N3: ø5/32" one-touch fitting
N7: ø1/4" one-touch fitting (SJ3000 only)

M3: M3 x 0.5 (SJ2000 only)
M5: M5 x 0.8 (SJ3000 only)

Elbow fitting assembly (Upward entry) (Metric size)
L2: ø2 elbow fitting assembly
L4: ø4 elbow fitting assembly
L6: ø6 elbow fitting assembly (SJ3000 only)

(Inch size)
LN1: ø1/8" elbow fitting assembly
LN3: ø5/32" elbow fitting assembly
LN7: ø1/4" elbow fitting assembly (SJ3000 only)

Elbow fitting assembly (Downward entry) (Metric size)
B2: ø2 elbow fitting assembly
B4: ø4 elbow fitting assembly
B6: ø6 elbow fitting assembly (SJ3000 only)

(Inch size)
BN1: ø1/8" elbow fitting assembly
BN3: ø5/32" elbow fitting assembly
BN7: ø1/4" elbow fitting assembly (SJ3000 only)

Note 2) The electrical connection to the manifold will be +COM. spec. when light/surge voltage suppressor is "Z" (Polar type).

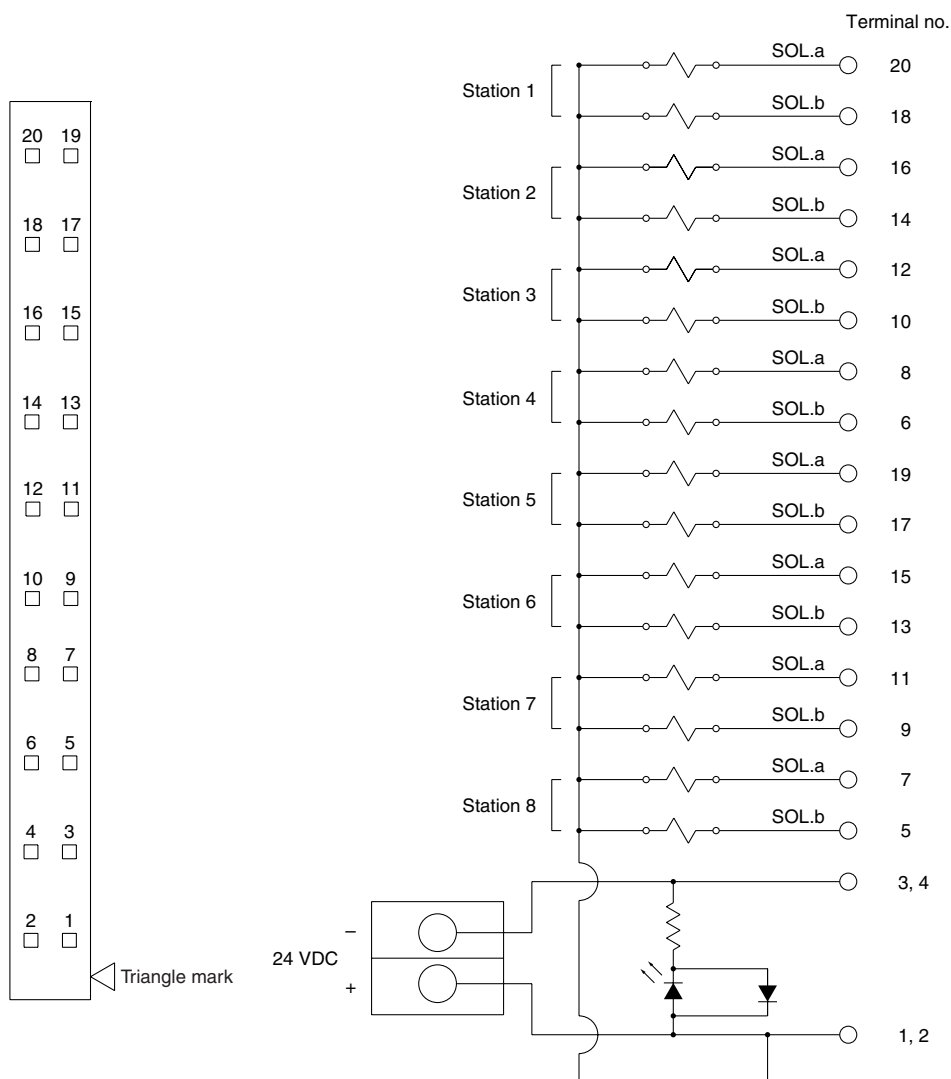
SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

SMC

43

Manifold Electrical Wiring

Type 60G: Flat ribbon cable (20 pins, PC wiring with power supply terminal)

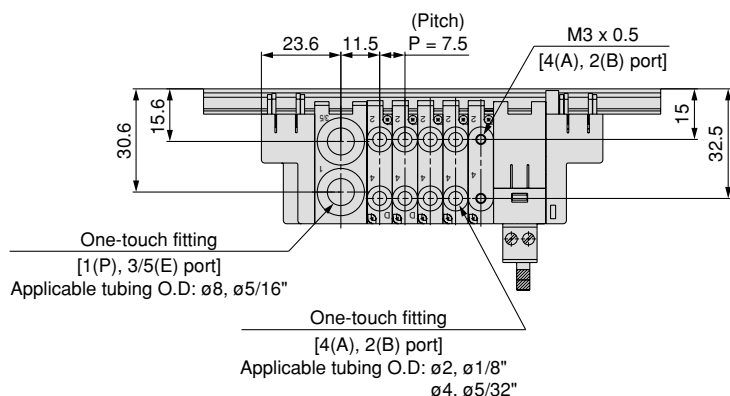


Note 1) This circuits are for the specifications with up to 8 stations of 2 position double, 3 position and 4 position dual 3 port valves. These should be wired in order 20→18→16→14 without skipping or leaving any connectors remaining.

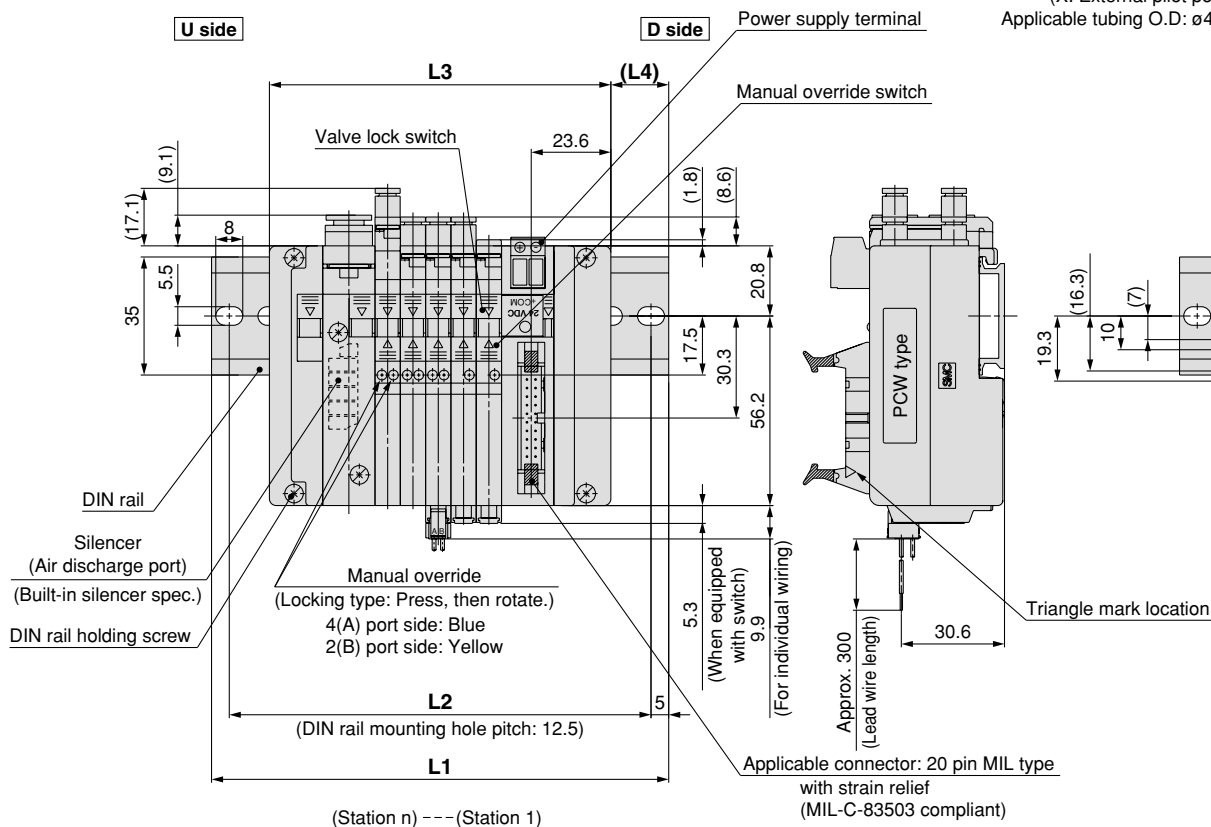
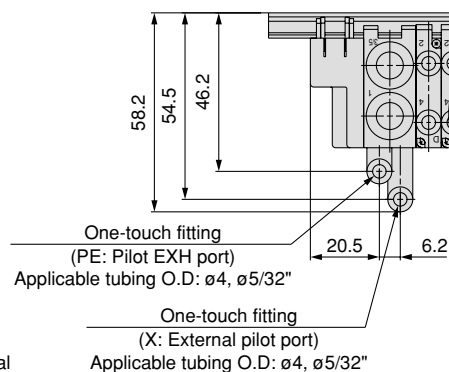
Note 2) For details on PC wiring systems, refer to "PC Wiring System" catalog (CAT.E02-20).

Dimensions

SS5J2-60GD- Stations U (S, R, RS)



[External pilot spec.]



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

L: Dimensions

n: Stations

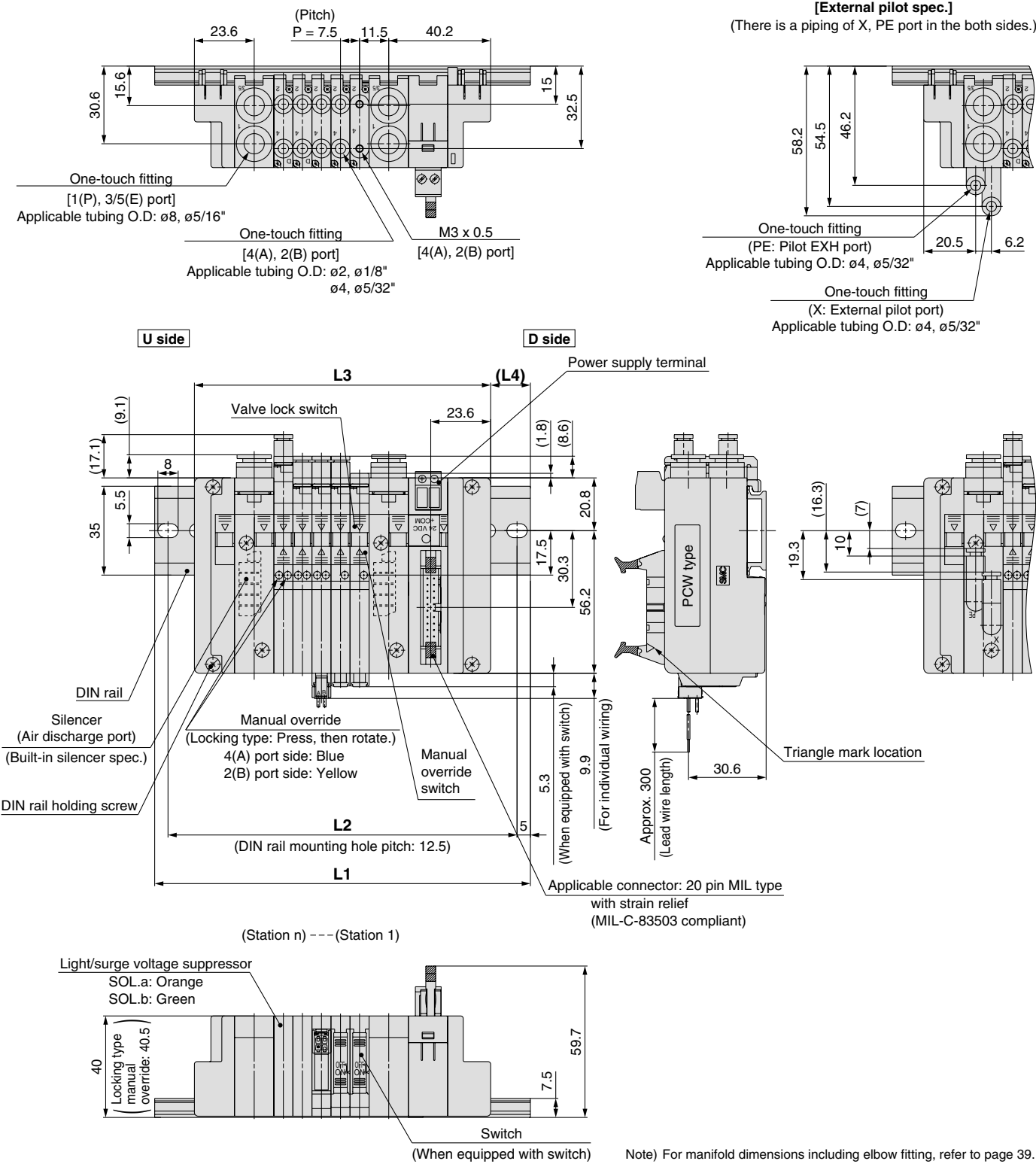
L \ n	2	3	4	5	6	7	8	9	10
L1	110.5	110.5	123	135.5	135.5	148	148	160.5	173
L2	100	100	112.5	125	125	137.5	137.5	150	162.5
L3	78.7	86.2	93.7	101.2	108.7	116.2	123.7	131.2	138.7
L4	16	12	14.5	17	13.5	16	12	14.5	17

Note) For manifold dimensions including elbow fitting, refer to page 39.

Series SJ2000/3000

Dimensions

SS5J2-60GD- Stations B (S, R, RS)



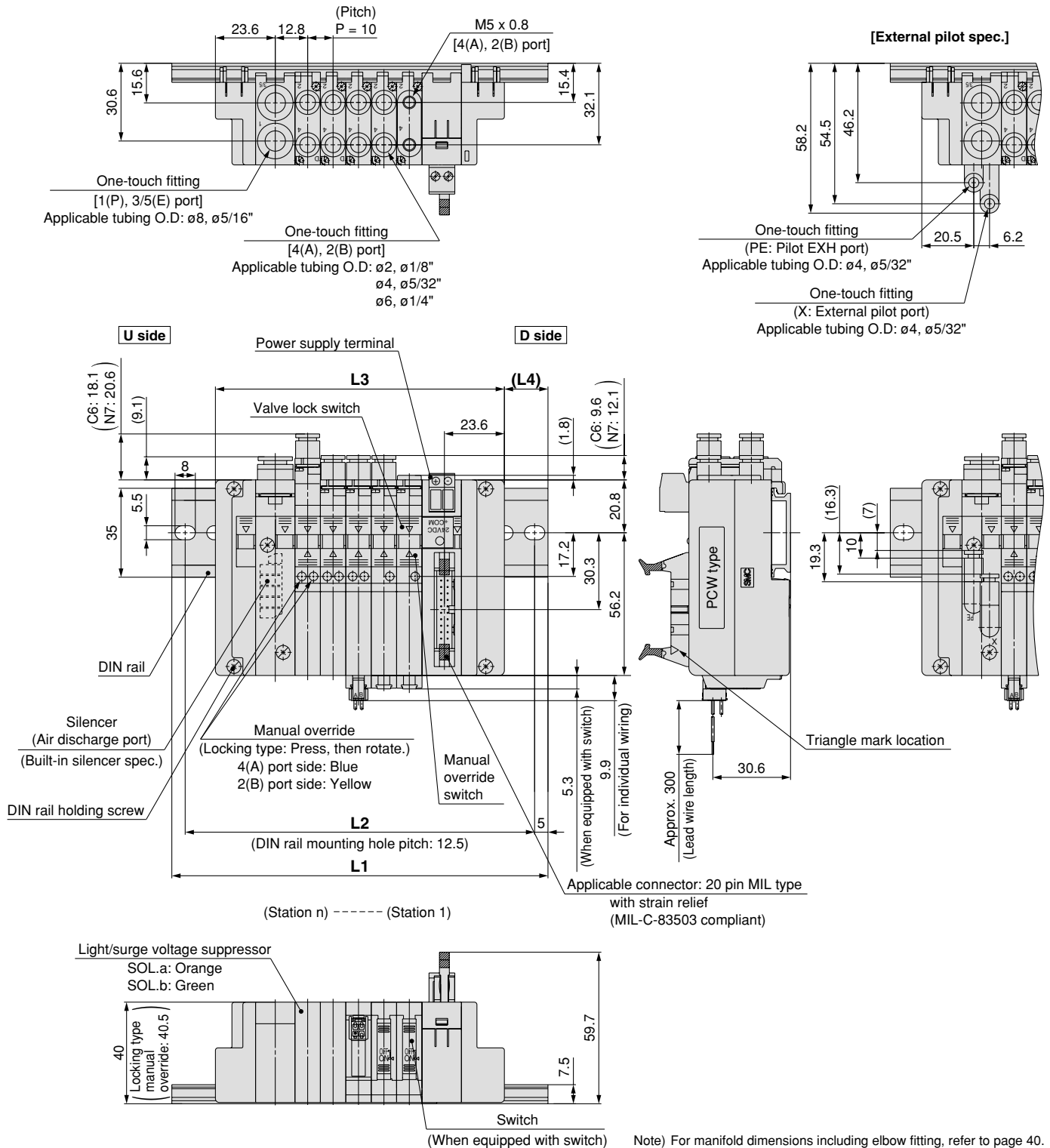
L: Dimensions

		n: Stations													
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	123	135.5	135.5	148	148	160.5	173	173	185.5	185.5	198	210.5	210.5	223	223
L2	112.5	125	125	137.5	137.5	150	162.5	162.5	175	175	187.5	200	200	212.5	212.5
L3	94.2	101.7	109.2	116.7	124.2	131.7	139.2	146.7	154.2	161.7	169.2	176.7	184.2	191.7	199.2
L4	14.5	17	13	15.5	12	14.5	17	13	15.5	12	14.5	17	13	15.5	12

Note) For manifold dimensions including elbow fitting, refer to page 39.

Dimensions

SS5J3-60GD- Stations U (S, R, RS)



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

L: Dimensions

n: Stations

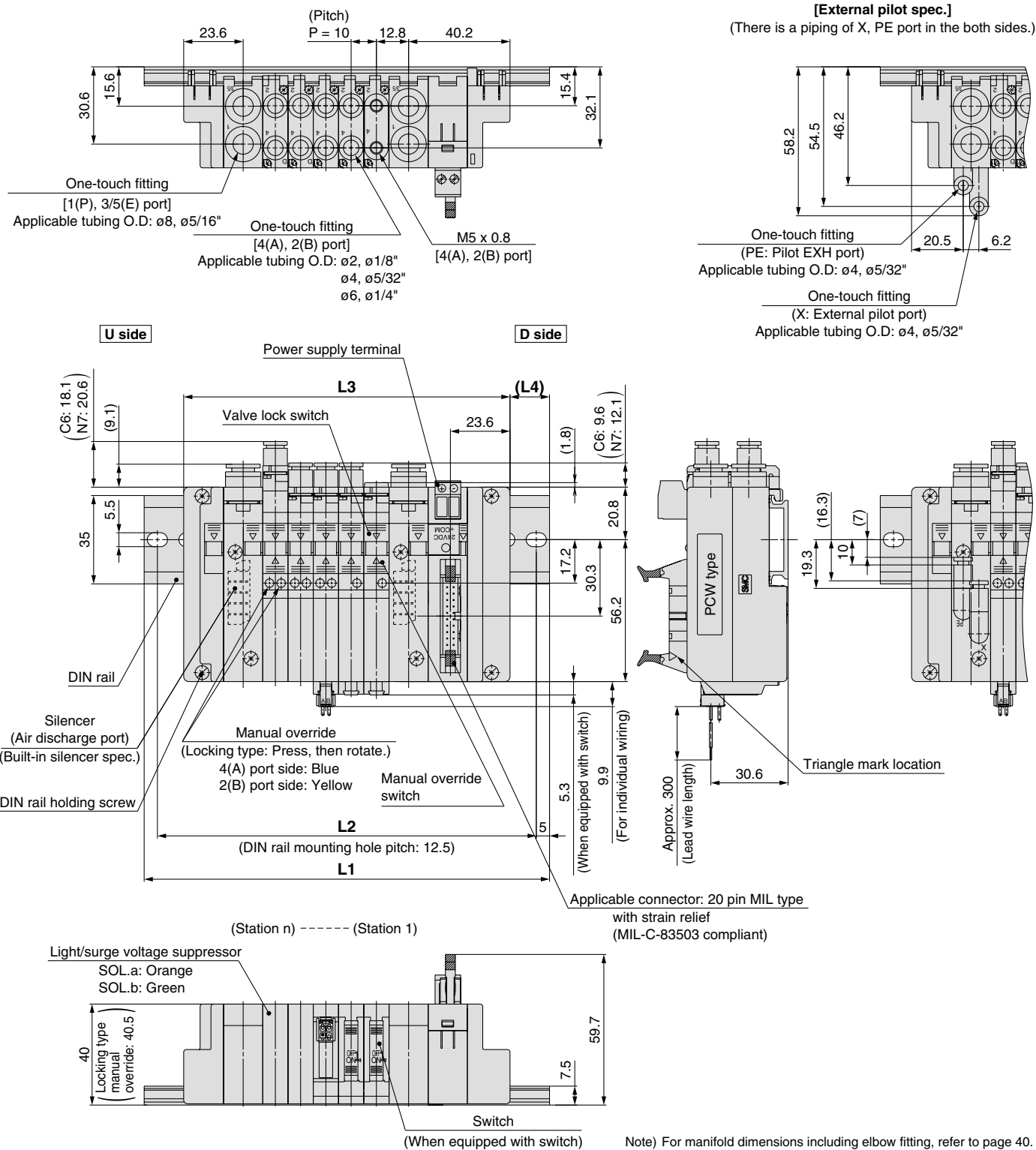
L \ n	2	3	4	5	6	7	8	9	10
L1	110.5	123	135.5	148	148	160.5	173	185.5	198
L2	100	112.5	125	137.5	137.5	150	162.5	175	187.5
L3	83.7	93.7	103.7	113.7	123.7	133.7	143.7	153.7	163.7
L4	13	14.5	15.5	16.5	11.5	12.5	14	15	16

Note) For manifold dimensions including elbow fitting, refer to page 40.

Series SJ2000/3000

Dimensions

SS5J3-60GD- Stations B (S, R, RS)



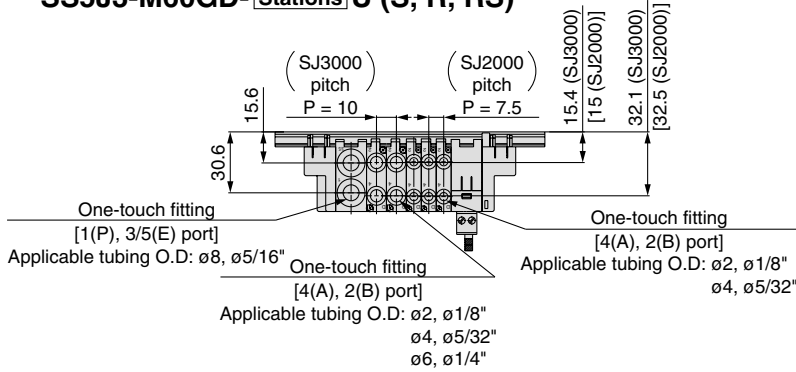
L: Dimensions

L: Dimensions															n: Stations	
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
L1	123	135.5	148	160.5	173	185.5	185.5	198	210.5	223	235.5	235.5	248	260.5	273	
L2	112.5	125	137.5	150	162.5	175	175	187.5	200	212.5	225	225	237.5	250	262.5	
L3	99.2	109.2	119.2	129.2	139.2	149.2	159.2	169.2	179.2	189.2	199.2	209.2	219.2	229.2	239.2	
L4	11.5	13	14	15	16.5	17.5	12.5	13.5	14.5	16	17	12	13	14	15.5	

Note) For manifold dimensions including elbow fitting, refer to page 40.

Dimensions

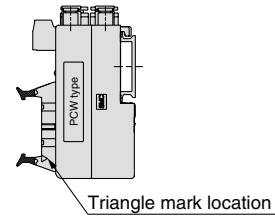
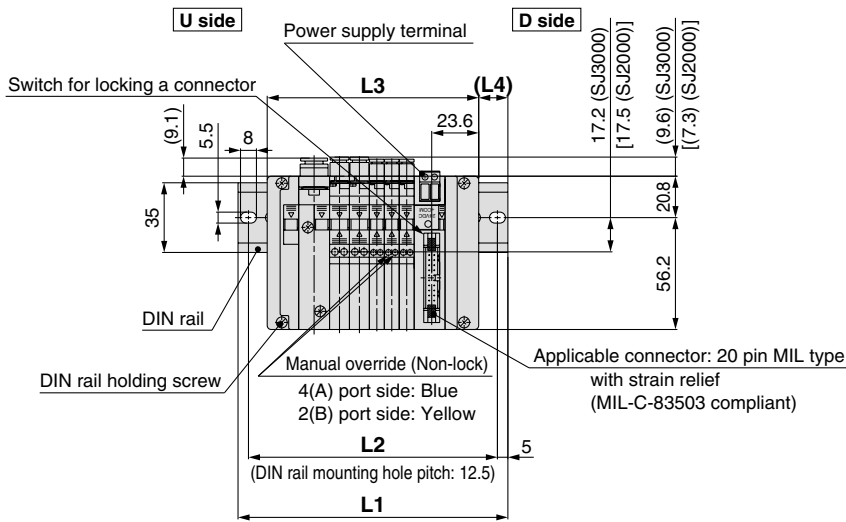
SS5J3-M60GD- Stations U (S, R, RS)



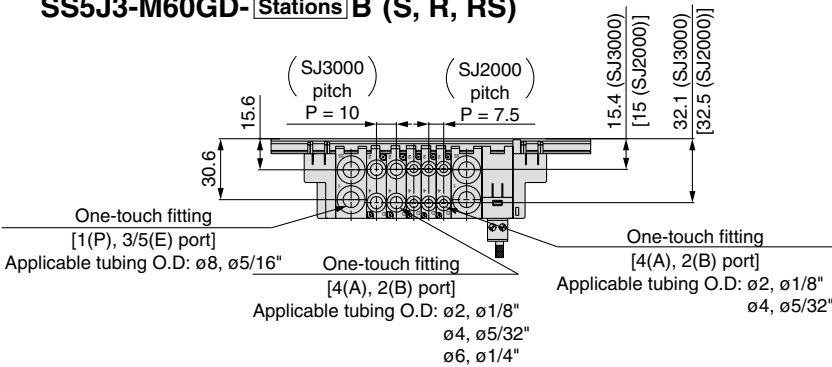
L dimension: Formula, L1 to L4
 $L3 = 7.5 \times n1 + 10 \times n2 + 63.7$
 $M = (L3 + 4)/12.5 + 1$
 Remove all numbers after the decimal.
 $L1 = M \times 12.5 + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3)/2 - 2$

n1: Piece of the SJ2000
 n2: Piece of the SJ3000

* The dimensions of L1 to L4 for SS5J3-M60GD- Stations D are the same as those of SS5J3-M60GD- Stations U.

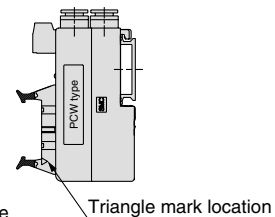
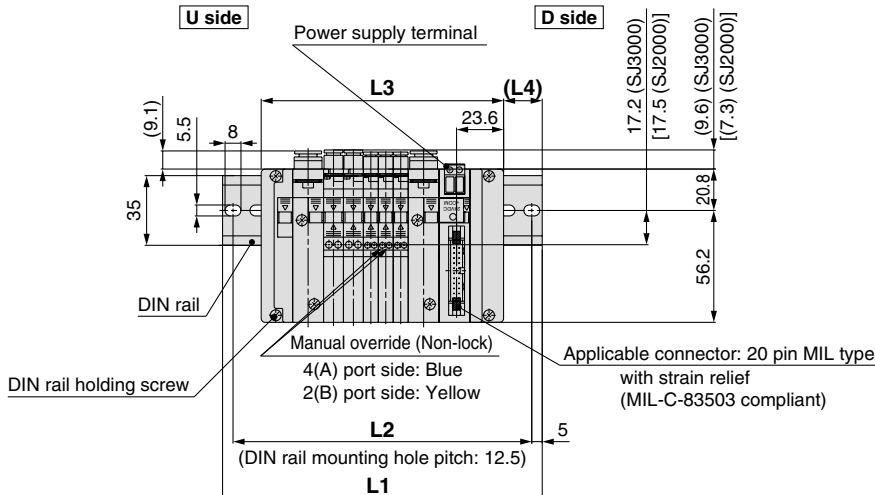


SS5J3-M60GD- Stations B (S, R, RS)



L dimension: Formula, L1 to L4
 $L3 = 7.5 \times n1 + 10 \times n2 + 79.2$
 $M = (L3 + 4)/12.5 + 1$
 Remove all numbers after the decimal.
 $L1 = M \times 12.5 + 23$
 $L2 = L1 - 10.5$
 $L4 = (L1 - L3)/2 - 2$

n1: Piece of the SJ2000
 n2: Piece of the SJ3000



Type 60S

Plug-in Connector Type

EX180 Integrated Type (for Output) Serial Transmission System

Series SJ2000/3000



How to Order

SS5J3-60SV-05U

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.

Component module

0	Without SI unit
V	CC-Link compliant (32 points)
Q	DeviceNet compliant (32 points)
Q1	DeviceNet compliant (16 points)

* Please contact SMC for a specification of the SI unit.

Communication connector spec.

Nil	T-branch type
A	Straight type

* Communication connector, power connector are shipped together with manifold. Power connector is available of straight type only.

Valve stations

Symbol	Stations	Note
02	2 stations	Up to 32 solenoids possible.
⋮	⋮	
32	32 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. (Refer to page 77.)

DIN rail length specified

Nil	Standard length	Specify a longer rail than the standard length.
3	3 stations	
32	32 stations	

* Specify the valve stations not exceeding the maximum stations.

SUP/EXH block fitting spec.

Nil	Straight fitting	
L	Elbow fitting (Upward)	
B	Elbow fitting (Downward)	

* 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.

How to Order Valve Manifold Assembly

Ordering example (SS5J3-60SV-06D)

Double solenoid, individual wiring/lead wire length 300 mm (24 VDC)
SJ3260-5MZ-C6 (1 set)

Double solenoid, with switch (24 VDC)
SJ3260-5CZJ-C6 (1 set)

Double solenoid (24 VDC)
SJ3260-5CU-C6 (2 sets)

Single solenoid (24 VDC)
SJ3160-5CU-C6 (2 sets)

SS5J3-60SV-06D 1 set (Manifold part no.)
 * **SJ3160-5CU-C6** 2 sets (Single solenoid part no.)
 * **SJ3260-5CU-C6** 2 sets (Double solenoid part no.)
 * **SJ3260-5CZJ-C6** 1 set (Double solenoid, with switch part no.)
 * **SJ3260-5MZ-C6** 1 set (Double solenoid, individual wiring/lead wire length 300 mm 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.

SUP/EXH block mounting position

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 32 stations)
M*	Special specifications

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

SI Unit Part No.

Symbol	Component module/Communication connector specifications	For SS5J□-60S
V	CC-LINK compliant (32 points), T-branch type	EX180-SMJ1
VA	CC-LINK compliant (32 points), Straight type	EX180-SMJ1A
Q	DeviceNet compliant (32 points), T-branch type	EX180-SDN1
QA	DeviceNet compliant (32 points), Straight type	EX180-SDN1A
Q1	DeviceNet compliant (16 points), T-branch type	EX180-SDN2
Q1A	DeviceNet compliant (16 points), Straight type	EX180-SDN2A

Item	Specifications
Power source for driving valve	Non-polar
	24 VDC + 10%/-5%
	With energy saving circuit (Continuous duty)
	24 VDC + 10%/0%

Refer to pages 1658 to 1660 for the details of EX180 integrated type (for output) serial transmission system.

How to Order Solenoid Valves

Standard

SJ 3 1 60 [] [] [] - 5 C U [] - C6 - []

With switch

SJ 3 1 60 [] [] [] - 5 C Z J [] - C6 - []

Individual wiring
 [For plug-in mixed mounting] (Note 1)

SJ 3 1 60 [] [] [] - 5 M Z [] - C6

Note 1) Refer to pages 68 and 69 for the dedicated non plug-in individual wiring.

Series

2	SJ2000
3	SJ3000

Pilot spec.

Nil	Internal pilot
R	External pilot

* External pilot spec. is not applicable for 4 position dual 3 port valves.

Back pressure check valve

Nil	None
K	Built-in

* Back pressure check valve is not applicable for 3 position valve.

Type of actuation

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	Dual 3 port valve: N.C./N.C.
B	Dual 3 port valve: N.O./N.O.
C	Dual 3 port valve: N.C./N.O.

* Refer to pages 20 through to 23 for the JIS symbol.

Coil spec.

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

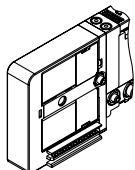
* Be sure to select "with power saving circuit" when the solenoid valve will be energized continuously for long period.

Rated voltage

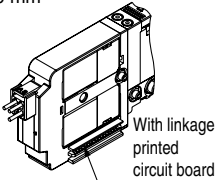
5	24 VDC
---	--------

Connector entry

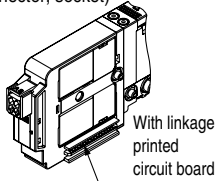
C: Dedicated for centralized wiring



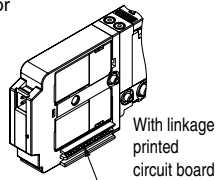
M: Individual wiring, With lead wire
Length 300 mm



MN: Individual wiring, Without lead wire
(With connector, socket)



MO: Individual wiring, Without connector

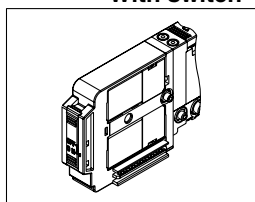


Light/surge voltage suppressor

U	With light/surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Polar type)

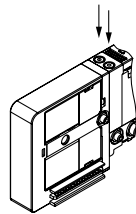
* When the types with power saving circuit, with switches, and/or individual wiring are used, the non-polar type cannot be selected.
* "Z" is +COM. spec.

With switch

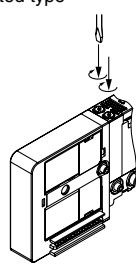


Manual override

Nil: Non-locking push type



D: Push-turn locking slotted type



Single solenoid wiring spec.

Nil	Single wiring
D	Double wiring

* There is no need to enter anything for 2 position double, 3 position and 4 position solenoid valves. Select this when the unused numbers to wiring are set. Refer to page 19 for details.

A, B port size

Straight (Metric size)

C2: ø2 one-touch fitting
C4: ø4 one-touch fitting
C6: ø6 one-touch fitting (SJ3000 only)

(Inch size)

N1: ø1/8" one-touch fitting
N3: ø5/32" one-touch fitting
N7: ø1/4" one-touch fitting (SJ3000 only)

M3: M3 x 0.5 (SJ2000 only)
M5: M5 x 0.8 (SJ3000 only)

Elbow fitting assembly (Upward entry) (Metric size)

L2: ø2 elbow fitting assembly
L4: ø4 elbow fitting assembly
L6: ø6 elbow fitting assembly (SJ3000 only)

(Inch size)

LN1: ø1/8" elbow fitting assembly
LN3: ø5/32" elbow fitting assembly
LN7: ø1/4" elbow fitting assembly (SJ3000 only)

Elbow fitting assembly (Downward entry) (Metric size)

B2: ø2 elbow fitting assembly
B4: ø4 elbow fitting assembly
B6: ø6 elbow fitting assembly (SJ3000 only)

(Inch size)

BN1: ø1/8" elbow fitting assembly
BN3: ø5/32" elbow fitting assembly
BN7: ø1/4" elbow fitting assembly (SJ3000 only)

Note 2) The electrical connection to the manifold will be +COM. spec. when light/surge voltage suppressor is "Z" (Polar type).

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

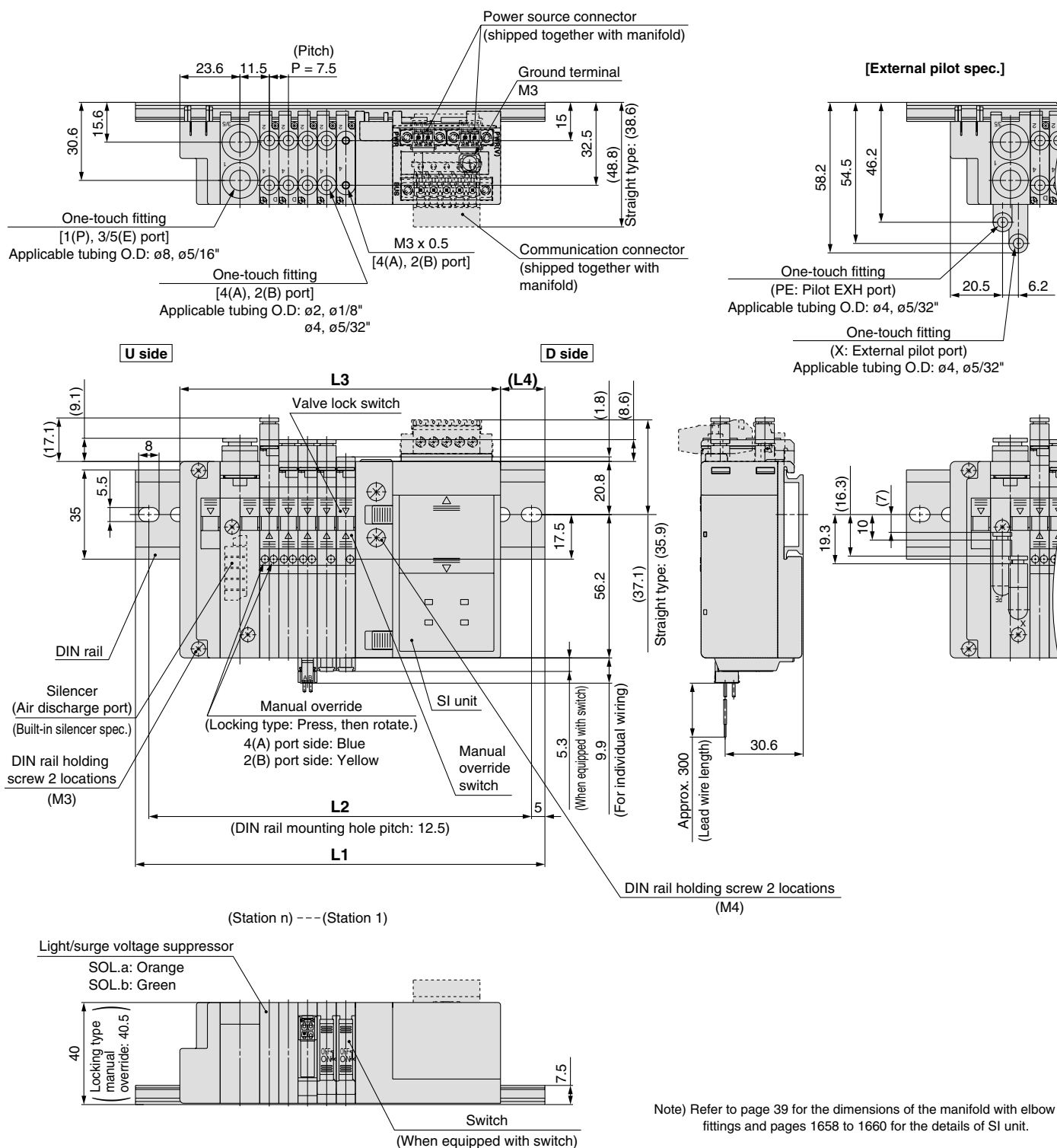
VFR

VQ7

Series SJ2000/3000

Dimensions: Series SJ2000 for EX180 Integrated Type (for Output) Serial Transmission System

SS5J2-60S□□-Stations U (S, R, RS)



Note) Refer to page 39 for the dimensions of the manifold with elbow fittings and pages 1658 to 1660 for the details of SI unit.

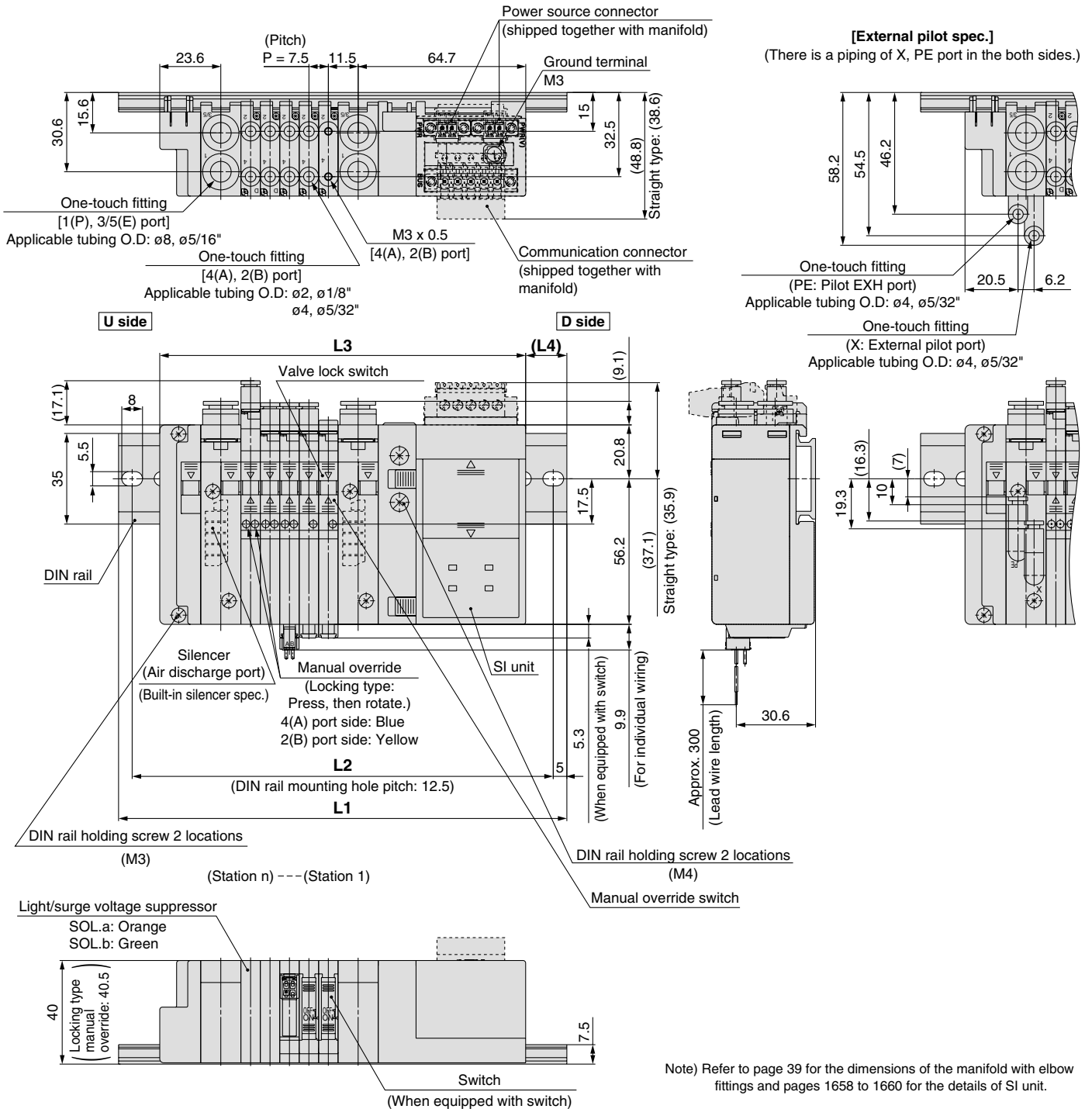
L: Dimensions

n: Stations

L	n	2	3	4	5	6	7	8	9	10
L1		135.5	135.5	148	160.5	160.5	173	173	185.5	198
L2		125	125	137.5	150	150	162.5	162.5	175	187.5
L3		103.2	110.7	118.2	125.7	133.2	140.7	148.2	155.7	163.2
L4		16	12.5	15	17.5	13.5	16	12.5	15	17.5

Dimensions: Series SJ2000 for EX180 Integrated Type (for Output) Serial Transmission System

SS5J2-60S□□-Stations **B (S, R, RS)**



L: Dimensions

n: Stations

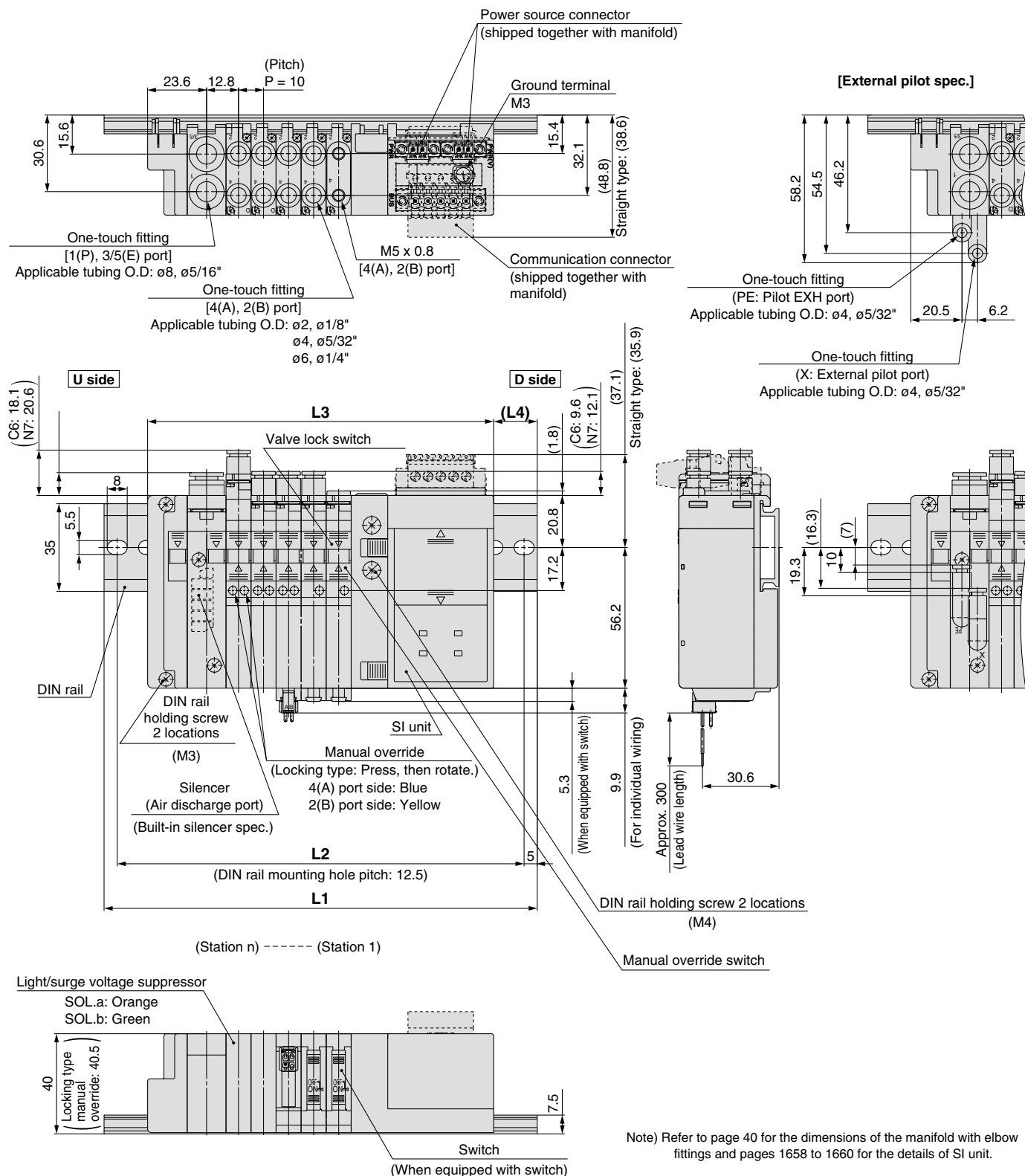
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
L1	148	160.5	160.5	173	173	185.5	198	198	210.5	210.5	223	235.5	235.5	248	248	260.5
L2	137.5	150	150	162.5	162.5	175	187.5	187.5	200	200	212.5	225	225	237.5	237.5	250
L3	118.7	126.2	133.7	141.2	148.7	156.2	163.7	171.2	178.7	186.2	193.7	201.2	208.7	216.2	223.7	231.2
L4	14.5	17	13.5	16	12	14.5	17	13.5	16	12	14.5	17	13.5	16	12	14.5

L \ n	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
L1	273	273	285.5	285.5	298	310.5	310.5	323	323	335.5	348	348	360.5	360.5	373
L2	262.5	262.5	275	275	287.5	300	300	312.5	312.5	325	337.5	337.5	350	350	362.5
L3	238.7	246.2	253.7	261.2	268.7	276.2	283.7	291.2	298.7	306.2	313.7	321.2	328.7	336.2	343.7
L4	17	13.5	16	12	14.5	17	13.5	16	12	14.5	17	13.5	16	12	14.5

Series SJ2000/3000

Dimensions: Series SJ3000 for EX180 Integrated Type (for Output) Serial Transmission System

SS5J3-60S□□ - Stations U (S, R, RS)



Note) Refer to page 40 for the dimensions of the manifold with elbow fittings and pages 1658 to 1660 for the details of SI unit.

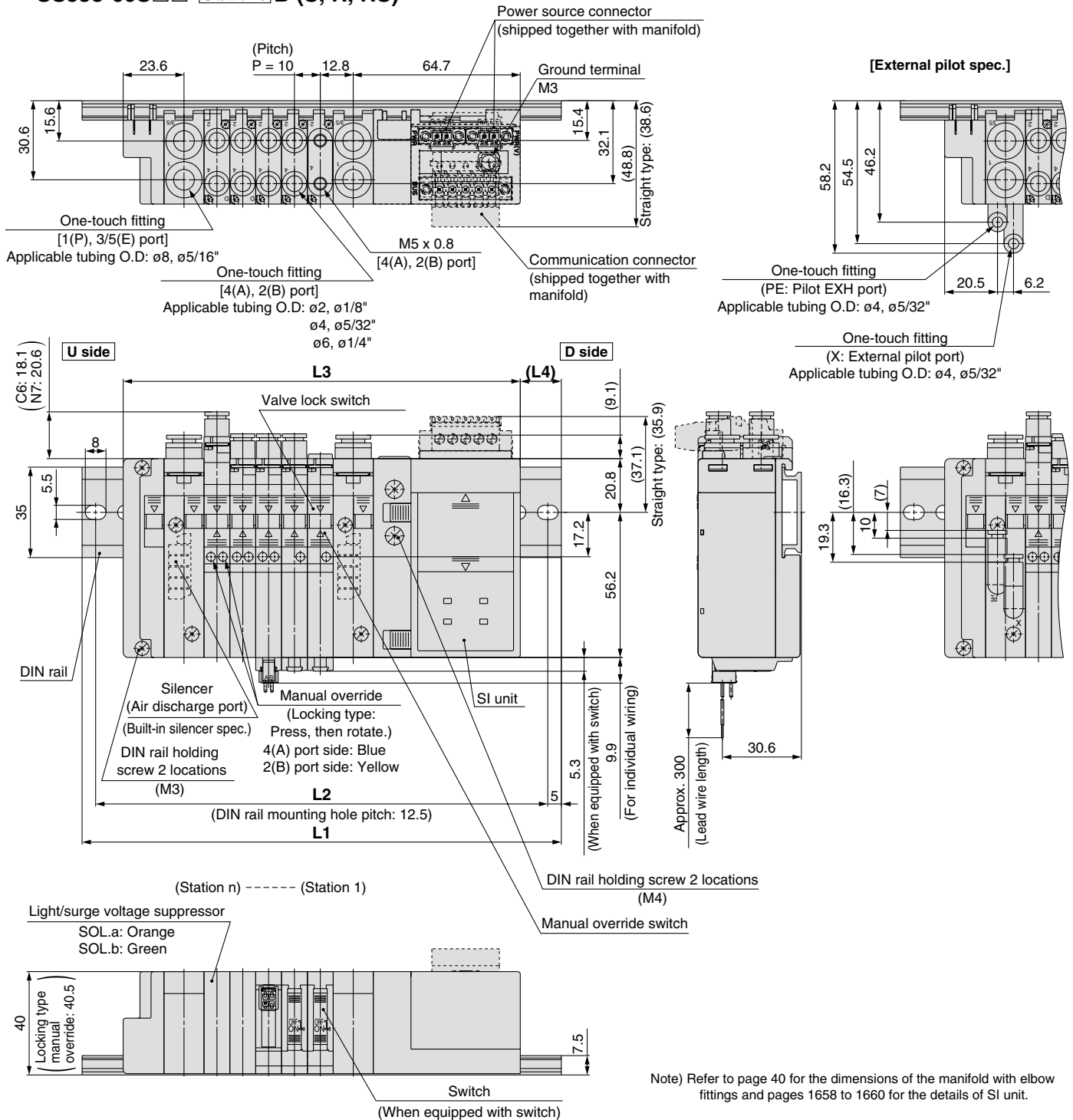
L: Dimensions

n: Stations

L	n	2	3	4	5	6	7	8	9	10
L1		135.5	148	160.5	173	173	185.5	198	210.5	223
L2		125	137.5	150	162.5	162.5	175	187.5	200	212.5
L3		108.2	118.2	128.2	138.2	148.2	158.2	168.2	178.2	188.2
L4		13.5	14.5	16	17	12	13	14	15.5	16.5

Dimensions: Series SJ3000 for EX180 Integrated Type (for Output) Serial Transmission System

SS5J3-60S□□-Stations B (S, R, RS)



L: Dimensions

n: Stations

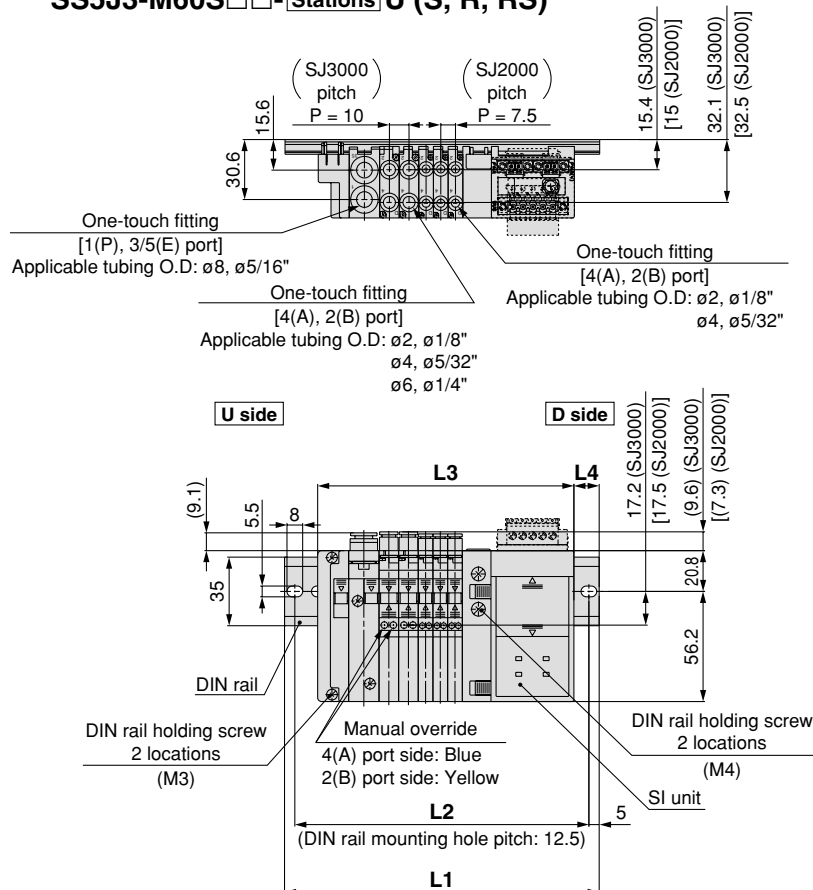
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
L1	148	160.5	173	185.5	198	210.5	210.5	223	235.5	248	260.5	260.5	273	285.5	298	310.5
L2	137.5	150	162.5	175	187.5	200	200	212.5	225	237.5	250	250	262.5	275	287.5	300
L3	123.7	133.7	143.7	153.7	163.7	173.7	183.7	193.7	203.7	213.7	223.7	233.7	243.7	253.7	263.7	273.7
L4	12	13	14.5	15.5	16.5	17.5	12.5	14	15	16	17	12	13.5	14.5	15.5	16.5

L \ n	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
L1	310.5	323	335.5	348	360.5	373	373	385.5	398	410.5	423	423	435.5	448	460.5
L2	300	312.5	325	337.5	350	362.5	362.5	375	387.5	400	412.5	412.5	425	437.5	450
L3	283.7	293.7	303.7	313.7	323.7	333.7	343.7	353.7	363.7	373.7	383.7	393.7	403.7	413.7	423.7
L4	11.5	13	14	15	16	17.5	12.5	13.5	14.5	15.5	17	12	13	14	15

Series SJ2000/3000

Dimensions: SJ2000/3000 Mixed Manifold

SS5J3-M60S□□-Stations U (S, R, RS)



L dimension: Formula, L1 to L4

$$L3 = 7.5 \times n1 + 10 \times n2 + 88.2$$

$$M = (L3 + 4) / 12.5 + 1$$

Remove all numbers after the decimal.

$$L1 = M \times 12.5 + 23$$

$$L2 = L1 - 10.5$$

$$L4 = (L1 - L3) / 2 - 2$$

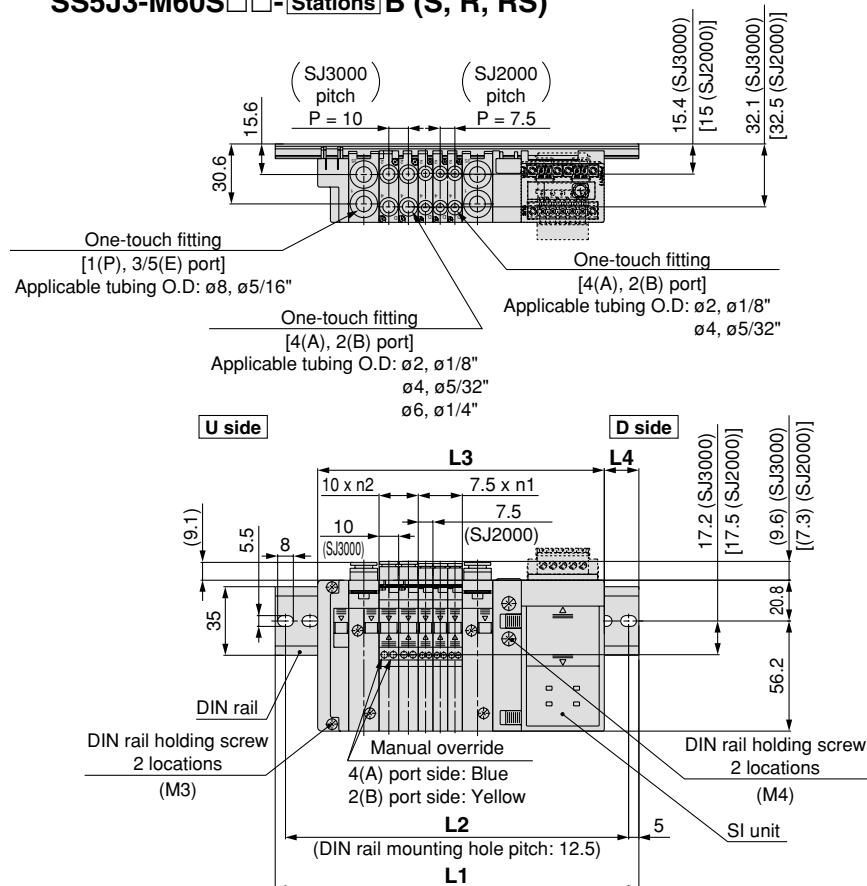
n1: Piece of the SJ2000

n2: Piece of the SJ3000

* The dimensions of L1 to L4 for

SS5J3-M60S□□-Stations D are the same as those of SS5J3-M60S□□-Stations U.

SS5J3-M60S□□-Stations B (S, R, RS)



L dimension: Formula, L1 to L4

$$L3 = 7.5 \times n1 + 10 \times n2 + 103.7$$

$$M = (L3 + 4) / 12.5 + 1$$

Remove all numbers after the decimal.

$$L1 = M \times 12.5 + 23$$

$$L2 = L1 - 10.5$$

$$L4 = (L1 - L3) / 2 - 2$$

n1: Piece of the SJ2000

n2: Piece of the SJ3000

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Plug-in Connector Type EX510 Gateway System Serial Transmission System

Type **60S6B**

Series *SJ2000/3000*



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	Specify a longer rail than the standard length.
3	3 stations	
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.

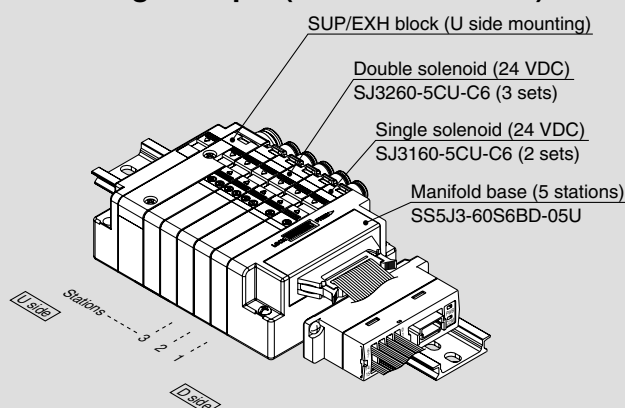
SUP/EXH block mounting position

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.

SI Unit Part No.

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+COM.)	EX510-S002C	P.1715 to 1717
N	PNP output (-COM.)	EX510-S102C	

Refer to pages 1696 to 1724 for the details of EX510 gateway system serial transmission system.

How to Order Solenoid Valves

Standard

With switch

Individual wiring
[For plug-in mixed mounting] (Note 1)

SJ 3 1 60 [] [] [] - 5 C U [] - C6 - []

SJ 3 1 60 [] [] [] - 5 C Z J [] - C6 - []

SJ 3 1 60 [] [] [] - 5 M Z [] - C6

Series

2	SJ2000
3	SJ3000

Back pressure check valve

Nil	None
K	Built-in

* Back pressure check valve is not applicable for 3 position solenoid valve.

Single solenoid wiring spec.

Nil	Single wiring
D	Double wiring

* There is no need to enter anything for 2 position double, 3 position and 4 position solenoid valves. Select this when the unused numbers to wiring are set. Refer to page 19 for details.

Type of actuation

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	Dual 3 port valve: N.C./N.C.
B	Dual 3 port valve: N.O./N.O.
C	Dual 3 port valve: N.C./N.O.

* Refer to pages 20 through to 23 for the JIS symbol.

Pilot spec.

Nil	Internal pilot
R	External pilot

* External pilot spec. is not applicable for 4 position solenoid dual 3 port valves.

Coil spec.

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

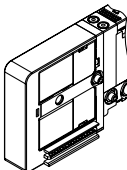
* Be sure to select "with power saving circuit" when the solenoid valve will be energized continuously for long period.

Rated voltage

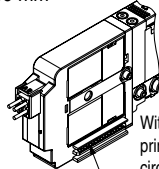
5	24 VDC
---	--------

Connector entry

C: Dedicated for centralized wiring

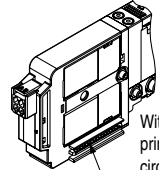


M: Individual wiring, With lead wire
Length 300 mm



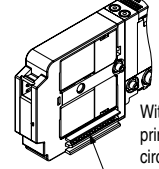
With linkage printed circuit board

MN: Individual wiring, Without lead wire



With linkage printed circuit board

MO: Individual wiring, Without connector



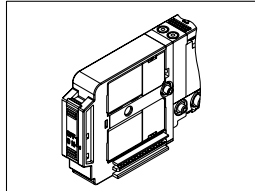
With linkage printed circuit board

Light/surge voltage suppressor

U	With light/surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Polar type)

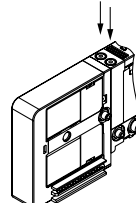
* When the types with power saving circuit, with switches, and individual wiring are used, the non-polar type cannot be selected.
* "Z" is +COM. spec.
* When -COM of SI unit common specifications is used, select the non-polar type.

With switch

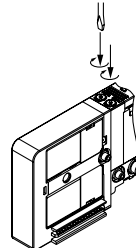


Manual override

Nil: Non-locking push type



D: Push-turn locking slotted type



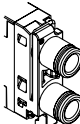
A, B port size

Straight (Metric size)

C2: ø2 one-touch fitting
C4: ø4 one-touch fitting
C6: ø6 one-touch fitting (SJ3000 only)

(Inch size)

N1: ø1/8" one-touch fitting
N3: ø5/32" one-touch fitting
N7: ø1/4" one-touch fitting (SJ3000 only)



M3: M3 x 0.5 (SJ2000 only)
M5: M5 x 0.8 (SJ3000 only)

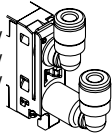


Elbow fitting assembly (Upward entry) (Metric size)

L2: ø2 elbow fitting assembly
L4: ø4 elbow fitting assembly
L6: ø6 elbow fitting assembly (SJ3000 only)

(Inch size)

LN1: ø1/8" elbow fitting assembly
LN3: ø5/32" elbow fitting assembly
LN7: ø1/4" elbow fitting assembly (SJ3000 only)

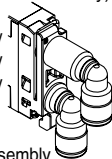


Elbow fitting assembly (Downward entry) (Metric size)

B2: ø2 elbow fitting assembly
B4: ø4 elbow fitting assembly
B6: ø6 elbow fitting assembly (SJ3000 only)

(Inch size)

BN1: ø1/8" elbow fitting assembly
BN3: ø5/32" elbow fitting assembly
BN7: ø1/4" elbow fitting assembly (SJ3000 only)



Note 2) The electrical connection to the manifold will be +COM. spec. when light/surge voltage suppressor is "Z" (Polar type).

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

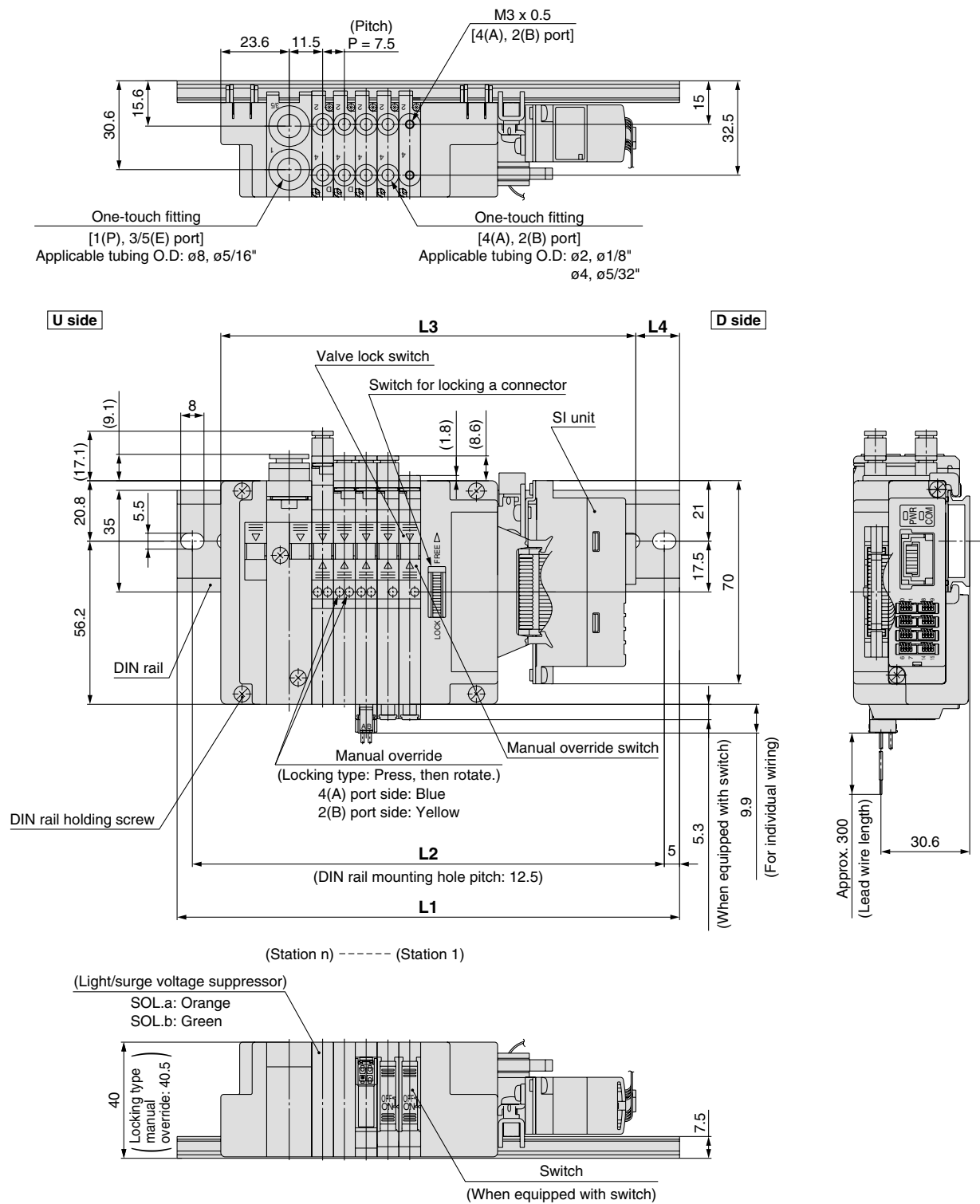
VFR

VQ7

Series **SJ2000/3000**

Dimensions: Series SJ2000 for EX510 Gateway System Serial Transmission System

SS5J2-60S6B□D-**Stations**U-□

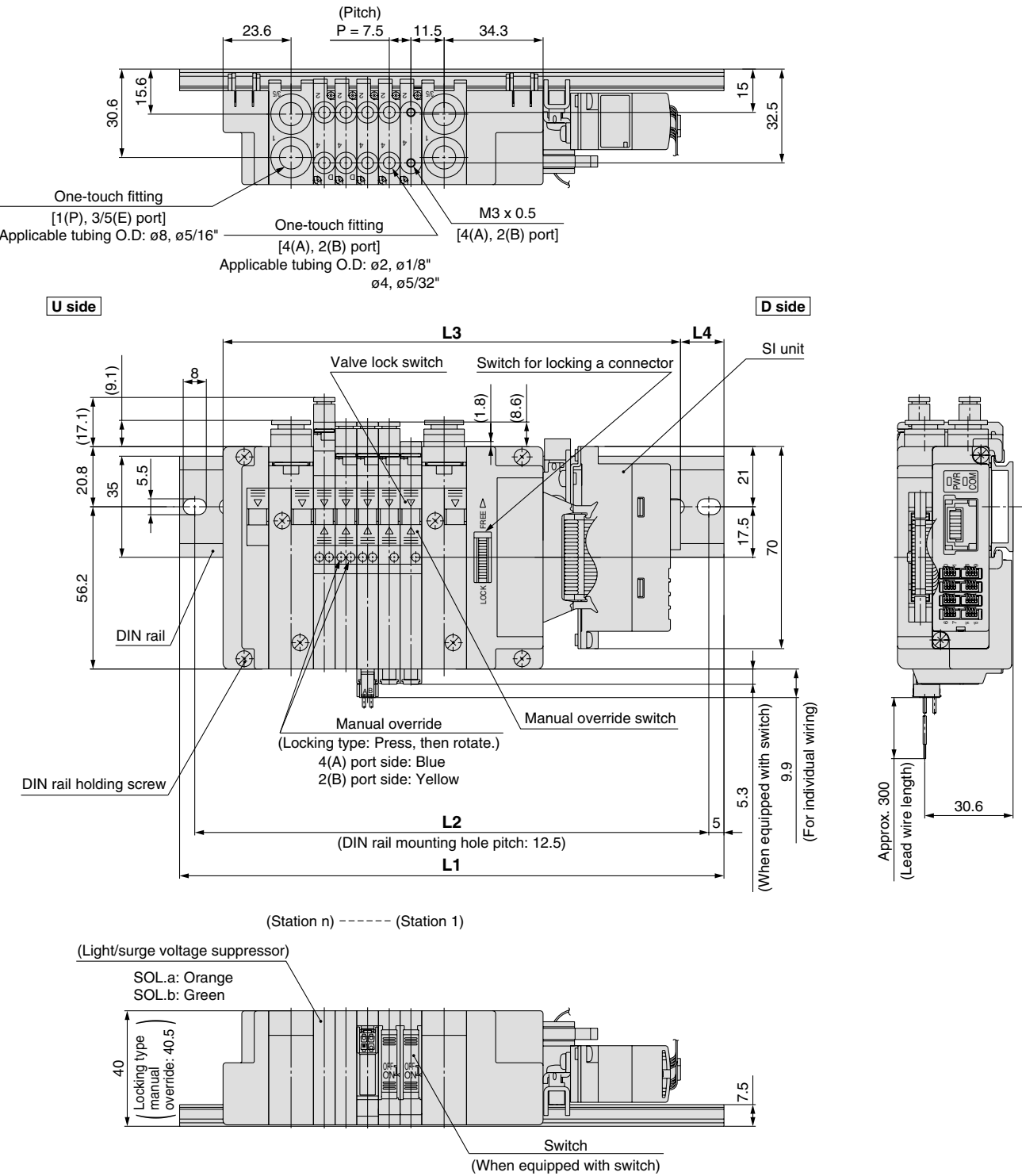


Note) Refer to page 52 for the external pilot specifications, page 39 for the dimensions of the manifold with elbow fittings, and pages 1696 to 1724 for the details of SI unit.

L: Dimensions		n: Stations								
L \ n	2	3	4	5	6	7	8	9	10	
L1	148	160.5	160.5	173	185.5	185.5	198	198	210.5	
L2	137.5	150	150	162.5	175	175	187.5	187.5	200	
L3	120.4	127.9	135.4	142.9	150.4	157.9	165.4	172.9	180.4	
L4	14	16.5	12.5	15	17.5	14	16.5	12.5	15	

Dimensions: Series SJ2000 for EX510 Gateway System Serial Transmission System

SS5J2-60S6B□D- Stations B-□



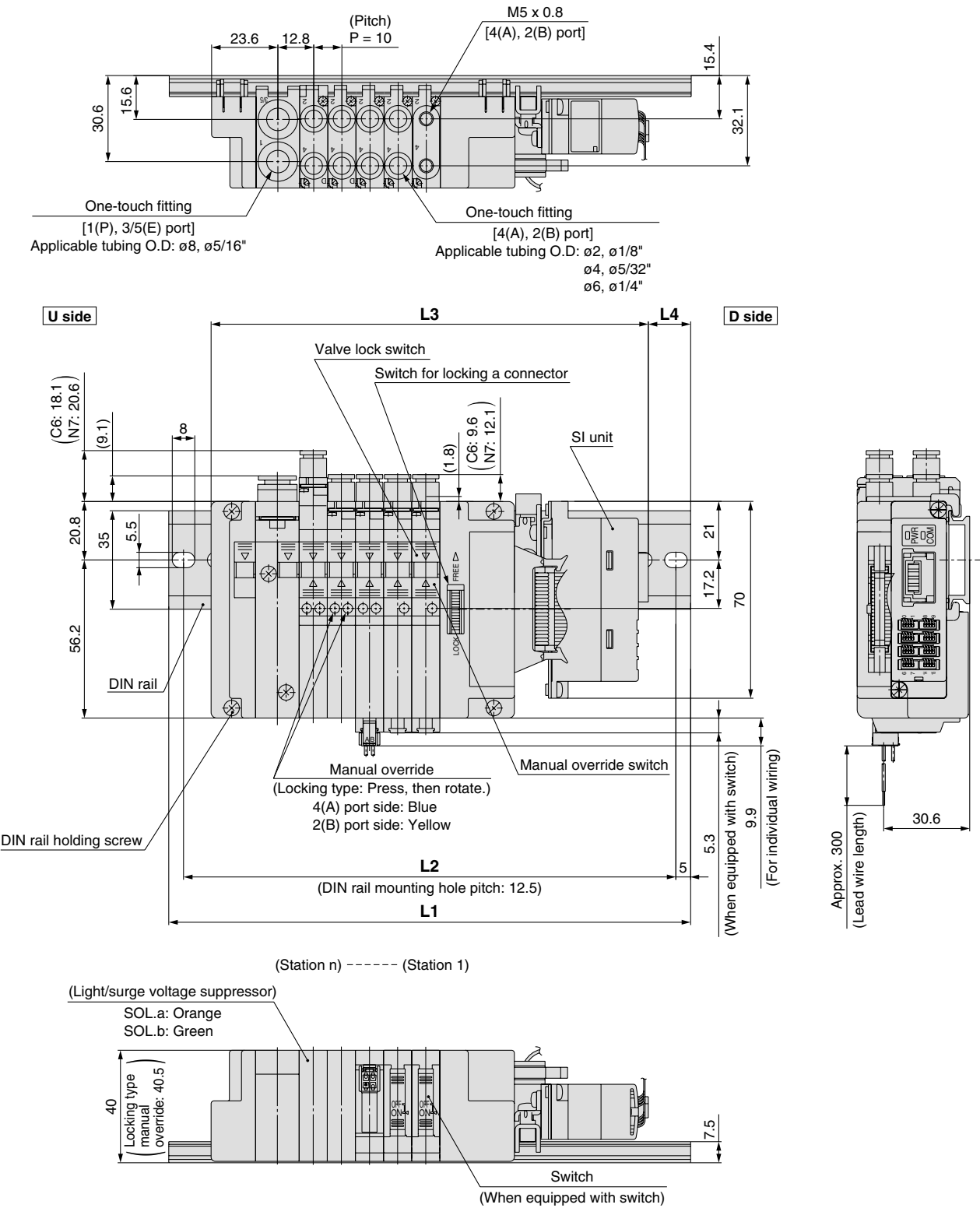
Note) Refer to page 53 for the external pilot specifications, page 39 for the dimensions of the manifold with elbow fittings, and pages 1696 to 1724 for the details of SI unit.

L: Dimensions															
															n: Stations
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	160.5	173	185.5	185.5	198	198	210.5	223	223	235.5	248	248	260.5	260.5	273
L2	150	162.5	175	175	187.5	187.5	200	212.5	212.5	225	237.5	237.5	250	250	262.5
L3	135.9	143.4	150.9	158.4	165.9	173.4	180.9	188.4	195.9	203.4	210.9	218.4	225.9	233.4	240.9
L4	12.5	15	17.5	13.5	16	12.5	15	17.5	13.5	16	18.5	15	17.5	13.5	16

Series **SJ2000/3000**

Dimensions: Series SJ3000 for EX510 Gateway System Serial Transmission System

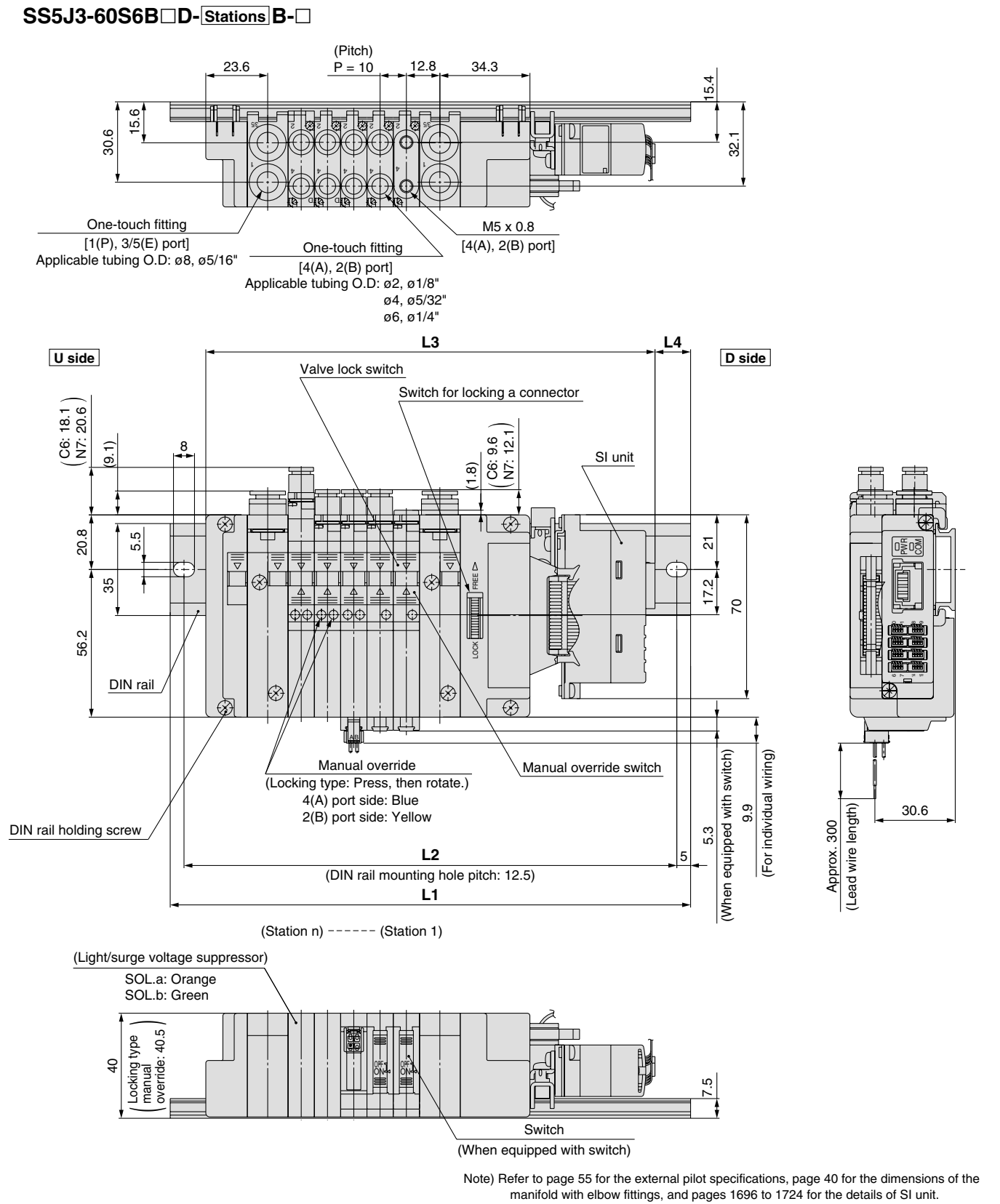
SS5J3-60S6B□D-**Stations**U-□



Note) Refer to page 54 for the external pilot specifications, page 40 for the dimensions of the manifold with elbow fittings, and pages 1696 to 1724 for the details of 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: Series SJ3000 for EX510 Gateway System Serial Transmission System

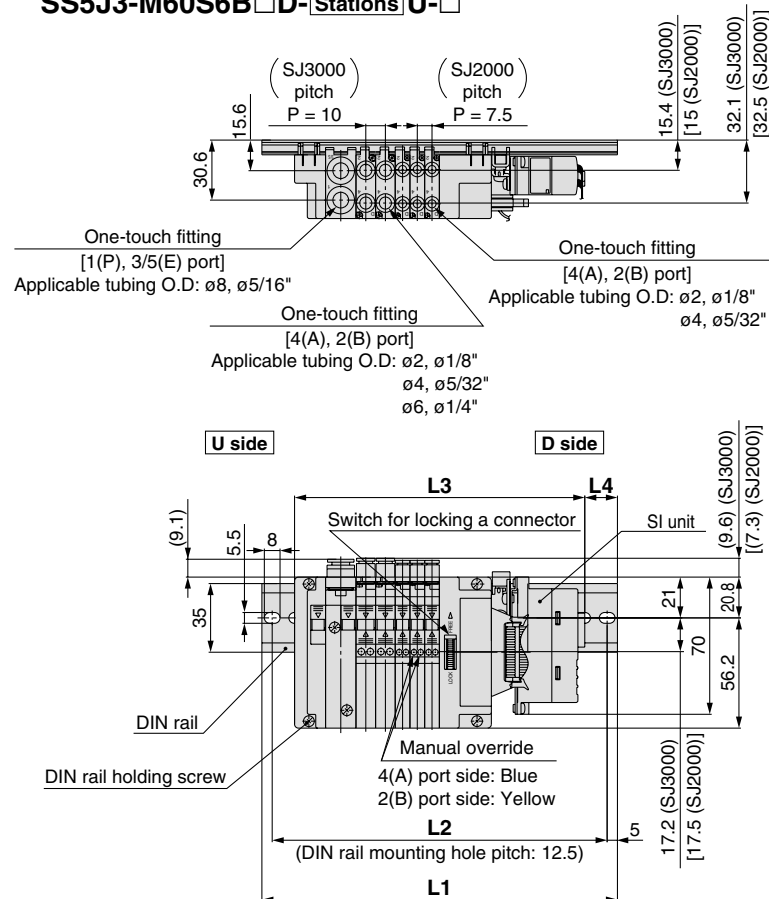


L: Dimensions															
n: Stations															
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	173	185.5	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	298	310.5
L2	162.5	175	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	287.5	300
L3	140.9	150.9	160.9	170.9	180.9	190.9	200.9	210.9	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

Series SJ2000/3000

Dimensions: SJ2000/3000 Mixed Manifold for EX510 Gateway System Serial Transmission System

SS5J3-M60S6B□D- Stations U-□



L dimension: Formula, L1 to L4

$$L3 = 7.5 \times n1 + 10 \times n2 + 105.4$$

$$M = (L3 + 4) / 12.5 + 1$$

Remove all numbers after the decimal.

$$L1 = M \times 12.5 + 23$$

$$L2 = L1 - 10.5$$

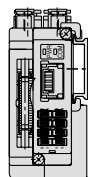
$$L4 = (L1 - L3) / 2 - 2$$

n1: Piece of the SJ2000

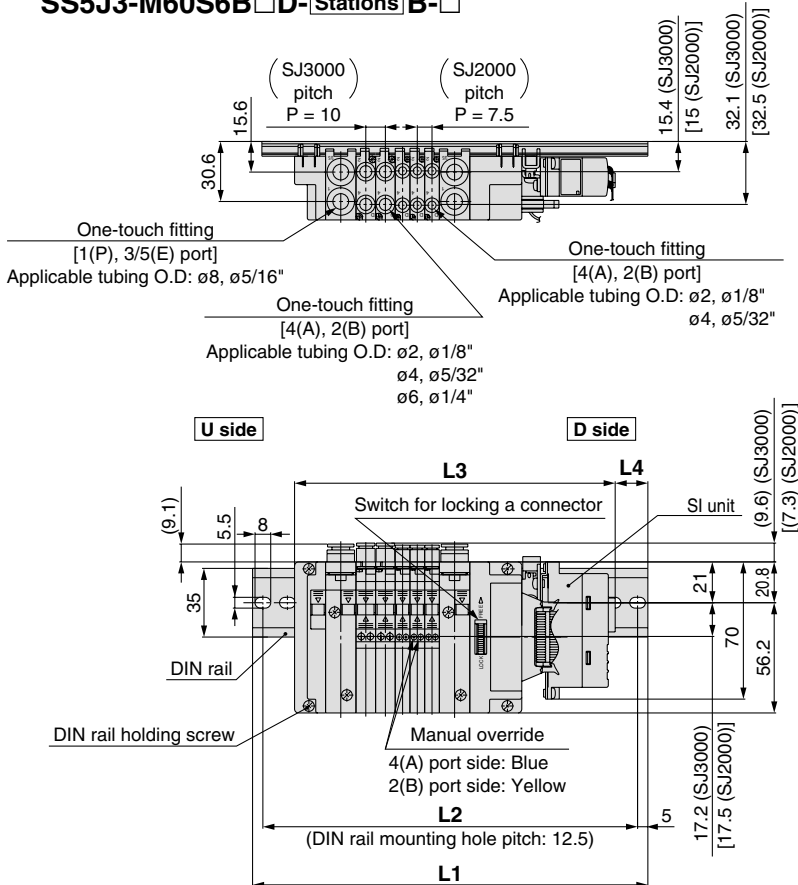
n2: Piece of the SJ3000

* The dimensions of L1 to L4 for

SS5J3-M60S6B□D- Stations D are the same as those of SS5J3-M60S6B□D- Stations U.



SS5J3-M60S6B□D- Stations B-□



L dimension: Formula, L1 to L4

$$L3 = 7.5 \times n1 + 10 \times n2 + 120.9$$

$$M = (L3 + 4) / 12.5 + 1$$

Remove all numbers after the decimal.

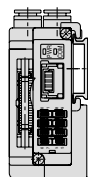
$$L1 = M \times 12.5 + 23$$

$$L2 = L1 - 10.5$$

$$L4 = (L1 - L3) / 2 - 2$$

n1: Piece of the SJ2000

n2: Piece of the SJ3000

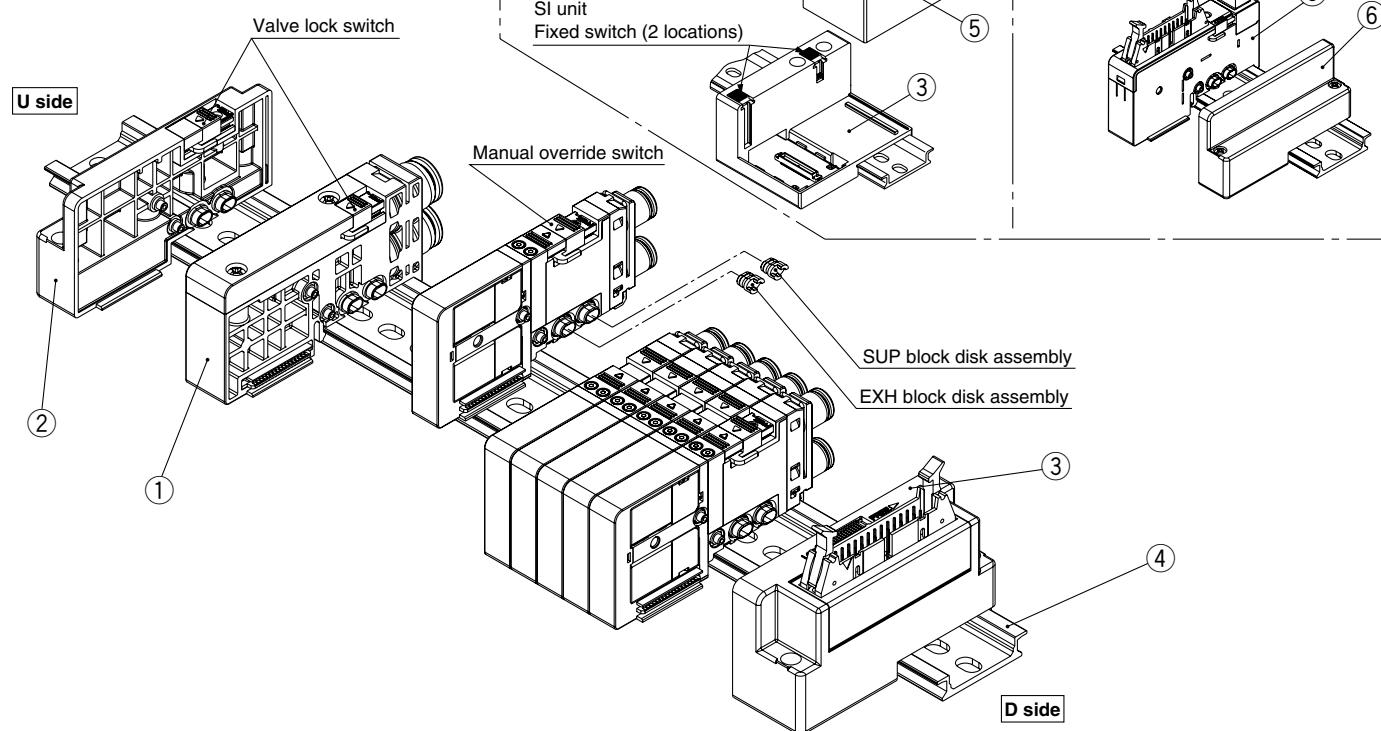


Manifold Exploded View

Type 60P (Flat ribbon cable)
manifold

Type 60S (Plug-in, EX180 Integrated
type (for output) serial
transmission system)
manifold

Type 60G (Plug-in,
PC wiring with power
supply terminal) manifold



Component Parts / Plug-in

No.	Description	Part no.	Note
1	SUP/EXH block assembly		
	Internal pilot	SJ3000-50-1A-□□	(Metric size) C6: With ø6 one-touch fitting (straight) C8: With ø8 one-touch fitting (straight) L6: With ø6 one-touch fitting (elbow upward entry) L8: With ø8 one-touch fitting (elbow upward entry) B6: With ø6 one-touch fitting (elbow downward entry) B8: With ø8 one-touch fitting (elbow downward entry)
	Internal pilot / Built-in silencer	SJ3000-50-1AS-□□	
	External pilot	SJ3000-50-1AR-□□ (X, PE port: Metric size ø4 Inch size ø5/32")	
	External pilot / Built-in silencer	SJ3000-50-1ARS-□□ (X port: Metric size ø4 Inch size ø5/32")	(Inch size) N7: With 1/4" one-touch fitting (straight) N9: With 5/16" one-touch fitting (straight)
	For different pressures, internal pilot ^{Note 1)}	SJ3000-50-3A-□□	
2	End block assembly	SJ3000-53-1A	For U side
3	Connector block assembly	SJ3000-42-□A-□ SJ3000-76-2A-05	Refer to the connector block assembly part no. shown below.
4	DIN rail	VZ1000-11-1-□	Refer to page 77.
5	SI unit	EX180-□□	Refer to the SI unit part numbers on page 50.
6	End block assembly	SJ3000-53-2A	For D side

Note 1) The valves cannot be operated only with the SUP/EXH block assembly for different pressure, select them in combination with the SUP/EXH block assembly for internal/external pilot.

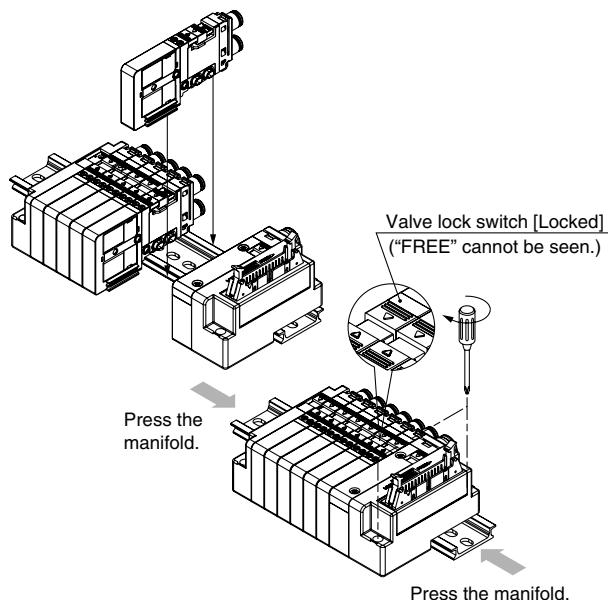
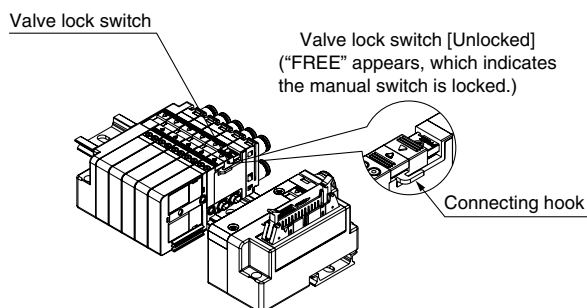
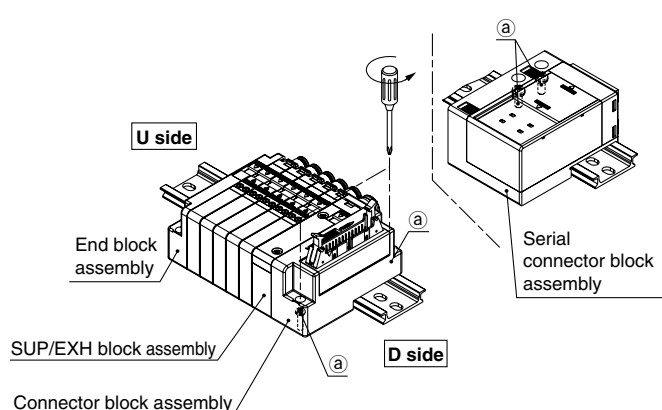
Note 2) Refer to page 76 about the SUP/EXH block disk assembly and method of handling of parts at different pressures.

Connector Block Assembly Part No.

Connector specifications	Mounting position	Part no.	Note
For D-sub connector	D side	SJ3000-42-1A-□	□: 1 (Connector upward) □: 2 (Connector lateral)
For flat ribbon cable 26 pins		SJ3000-42-2A-□	
For flat ribbon cable 20 pins		SJ3000-42-3A-□	
For flat ribbon cable 10 pins		SJ3000-42-4A-□	
For PC wiring 20 pins		SJ3000-42-6A-□	
For EX180 serial wiring ^{Note)}		SJ3000-42-5A	
For EX510 serial wiring ^{Note)}		SJ3000-42-3A-2	
For PC wiring 20 pins with power supply terminal		SJ3000-76-2A-05	

Note) SI unit is not included.

How to Add Manifold Stations

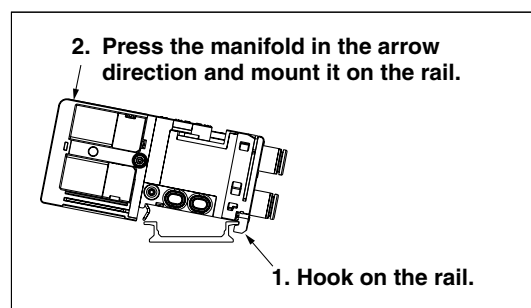


1 Loosen threads (a), which are fixed onto the DIN rail (two locations on one side).

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 block assembly block 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 (a) 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

- When increasing the number of stations from 10 or below to 11 or above, increase the number of SUP/EXH block assemblies as well.
- 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.
- 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.
- 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.

Non Plug-in Individual Wiring Manifold

Series SJ2000/3000

P.68

Individual Wiring



SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

VFR

VQ7

Non plug-in Individual Wiring

Series SJ2000/3000



How to Order

● Individual wiring manifold

SS5J 3 - 60 - 05 U

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.

Valve stations

Symbol	Stations
02	2 stations
⋮	⋮
20	20 stations

DIN rail length specified

Nil	Standard length	
3	3 stations	Specify a longer rail than the standard length.
⋮	⋮	
20	20 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.

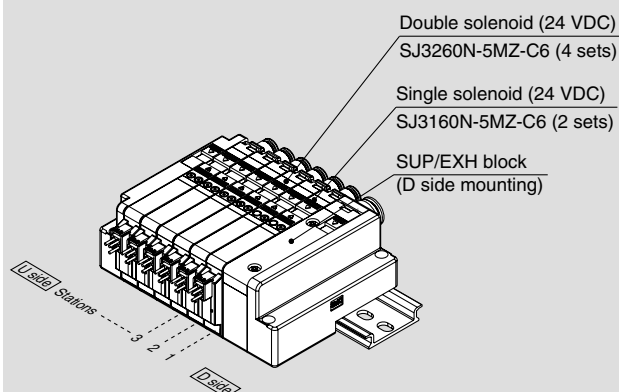
SUP/EXH block mounting position

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 20 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 (SS5J3-60-□)



SS5J3-60-06D 1 set (Manifold part no.)
 * SJ3160N-5MZ-C6 2 sets (Single solenoid part no.)
 * SJ3260N-5MZ-C6 4 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.

How to Order Solenoid Valves

SJ 3 1 60 [] [] [] N- 5 M Z [] - C6

Series

2	SJ2000
3	SJ3000

Type of actuation

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	Dual 3 port valve: N.C./N.C.
B	Dual 3 port valve: N.O./N.O.
C	Dual 3 port valve: N.C./N.O.

* Refer to pages 20 through to 23 for the JIS symbol.

Pilot spec.

Nil	Internal pilot
R	External pilot

* External pilot spec. is not applicable for 4 position dual 3 port valves.

Back pressure check valve

Nil	None
K	Built-in

* Back pressure check valve is not applicable for 3 position solenoid valve.

Coil spec.

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

* Be sure to select "with power saving circuit" when the solenoid valve will be energized continuously for long period.

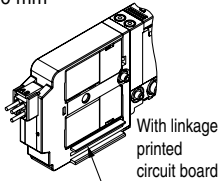
Non-plug-in

Rated voltage

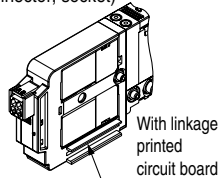
5	24 VDC
6	12 VDC

Connector entry

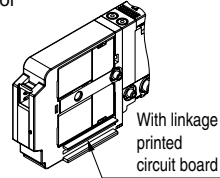
M: Individual wiring, With lead wire
Length 300 mm



MN: Individual wiring, Without lead wire
(With connector, socket)



MO: Individual wiring, Without connector

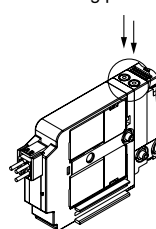


* When ordering a connector assembly separately, refer to page 99.

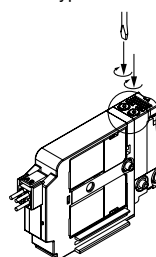
With light/surge voltage suppressor (Note)

Manual override

Nil: Non-locking push type



D: Push-turn locking slotted type



A, B port size

Straight
(Metric size)

C2: ø2 one-touch fitting

C4: ø4 one-touch fitting

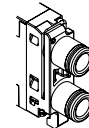
C6: ø6 one-touch fitting
(SJ3000 only)

(Inch size)

N1: ø1/8" one-touch fitting

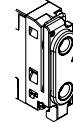
N3: ø5/32" one-touch fitting

N7: ø1/4" one-touch fitting
(SJ3000 only)



M3: M3 x 0.5 (SJ2000 only)

M5: M5 x 0.8 (SJ3000 only)



Elbow fitting assembly
(Upward entry)
(Metric size)

L2: ø2 elbow fitting assembly

L4: ø4 elbow fitting assembly

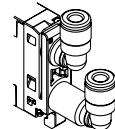
L6: ø6 elbow fitting assembly
(SJ3000 only)

(Inch size)

LN1: ø1/8" elbow fitting assembly

LN3: ø5/32" elbow fitting assembly

LN7: ø1/4" elbow fitting assembly
(SJ3000 only)



Elbow fitting assembly
(Downward entry)
(Metric size)

B2: ø2 elbow fitting assembly

B4: ø4 elbow fitting assembly

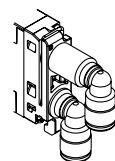
B6: ø6 elbow fitting assembly
(SJ3000 only)

(Inch size)

BN1: ø1/8" elbow fitting assembly

BN3: ø5/32" elbow fitting assembly

BN7: ø1/4" elbow fitting assembly
(SJ3000 only)



SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

VFR

VQ7

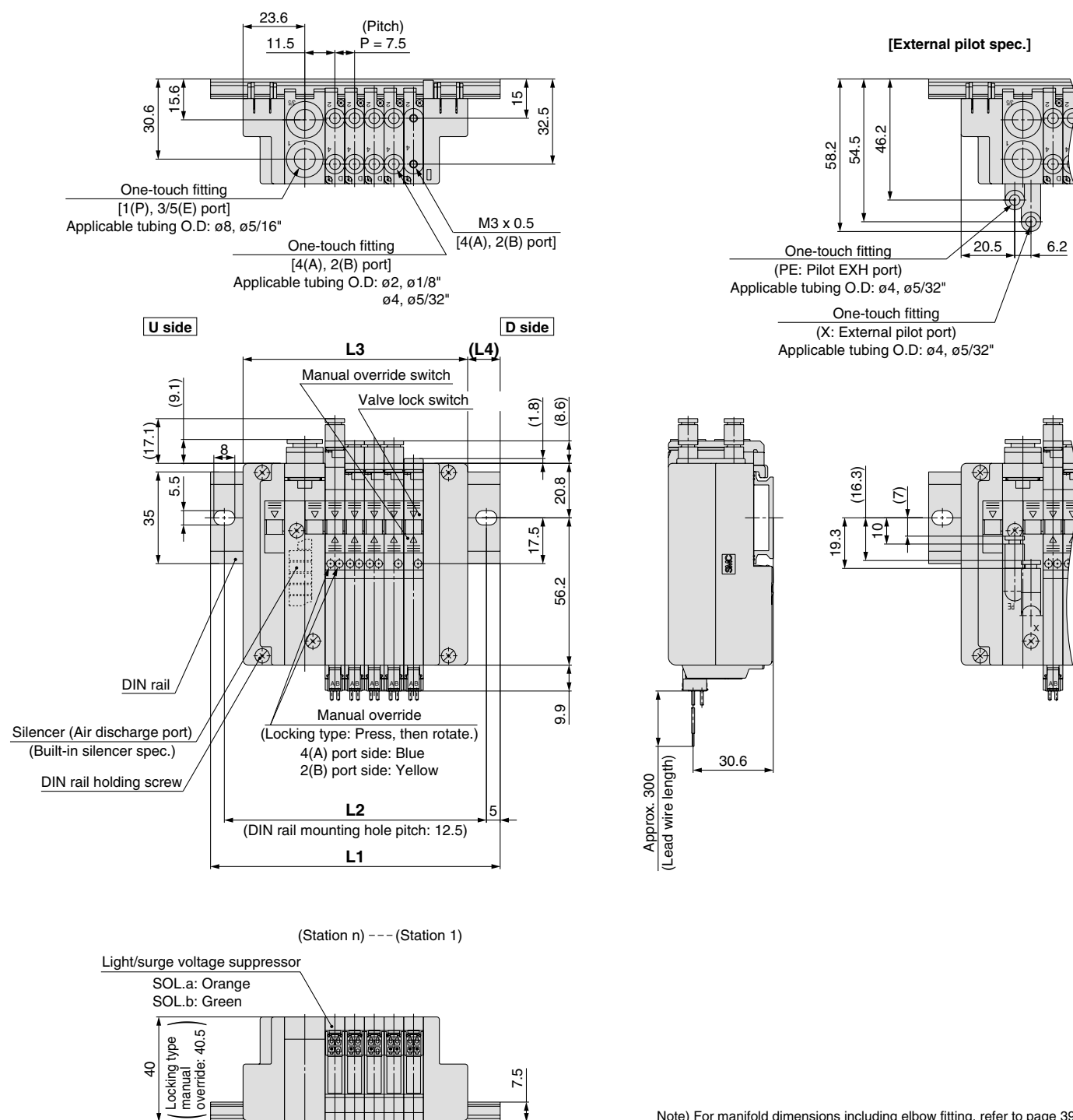


(Note) The electrical connection to the manifold will be +COM.

Series SJ2000/3000

Dimensions

SS5J2-60- Stations U (S, R, RS)



Note) For manifold dimensions including elbow fitting, refer to page 39.

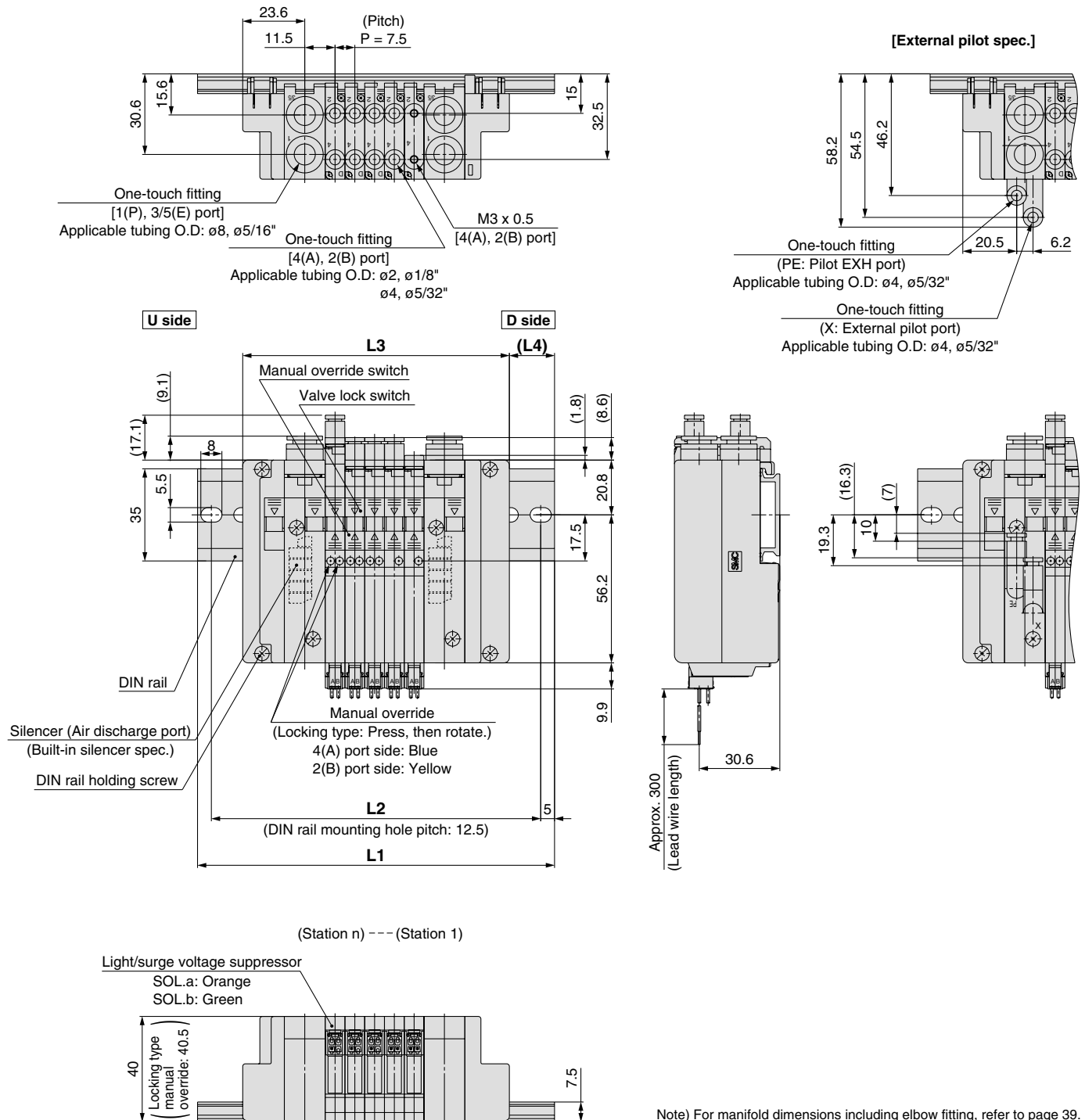
L: Dimensions

n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L1	98	98	110.5	110.5	123	135.5	135.5	148	148
L2	87.5	87.5	100	100	112.5	125	125	137.5	137.5
L3	63.2	70.7	78.2	85.7	93.2	100.7	108.2	115.7	123.2
L4	17.5	13.5	16	12.5	15	17.5	13.5	16	12.5

Dimensions

SS5J2-60- Stations B (S, R, RS)



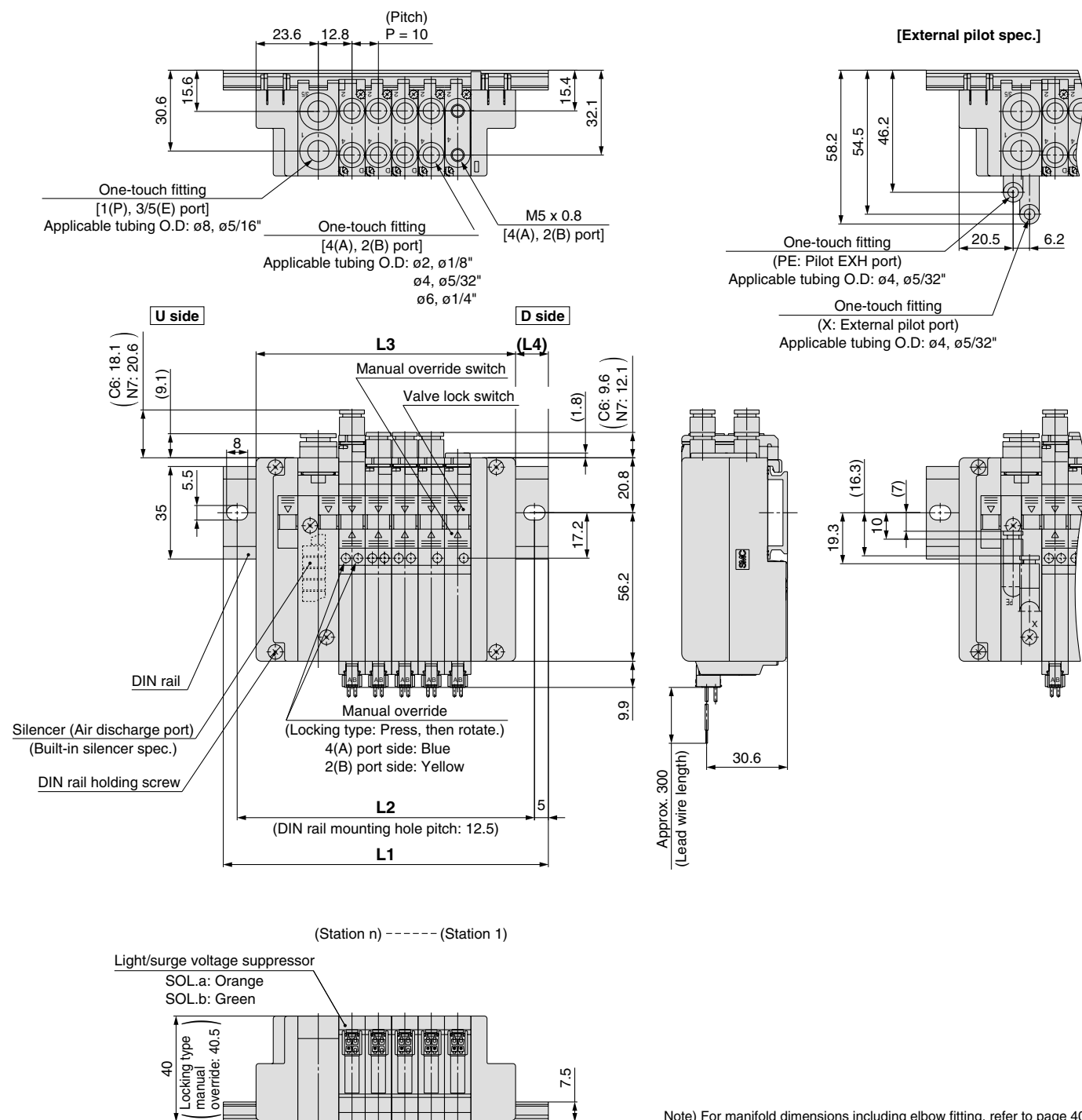
L: Dimensions

		n: Stations																		
L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1		110.5	110.5	123	135.5	135.5	148	148	160.5	173	173	185.5	185.5	198	210.5	210.5	223	223	235.5	248
L2		100	100	112.5	125	125	137.5	137.5	150	162.5	162.5	175	175	187.5	200	200	212.5	212.5	225	237.5
L3		78.7	86.2	93.7	101.2	108.7	116.2	123.7	131.2	138.7	146.2	153.7	161.2	168.7	176.2	183.7	191.2	198.7	206.2	213.7
L4		16	12	14.5	17	13.5	16	12	14.5	17	13.5	16	12	14.5	17	13.5	16	12	14.5	17

Series SJ2000/3000

Dimensions

SS5J3-60- Stations U (S, R, RS)



Note) For manifold dimensions including elbow fitting, refer to page 40.

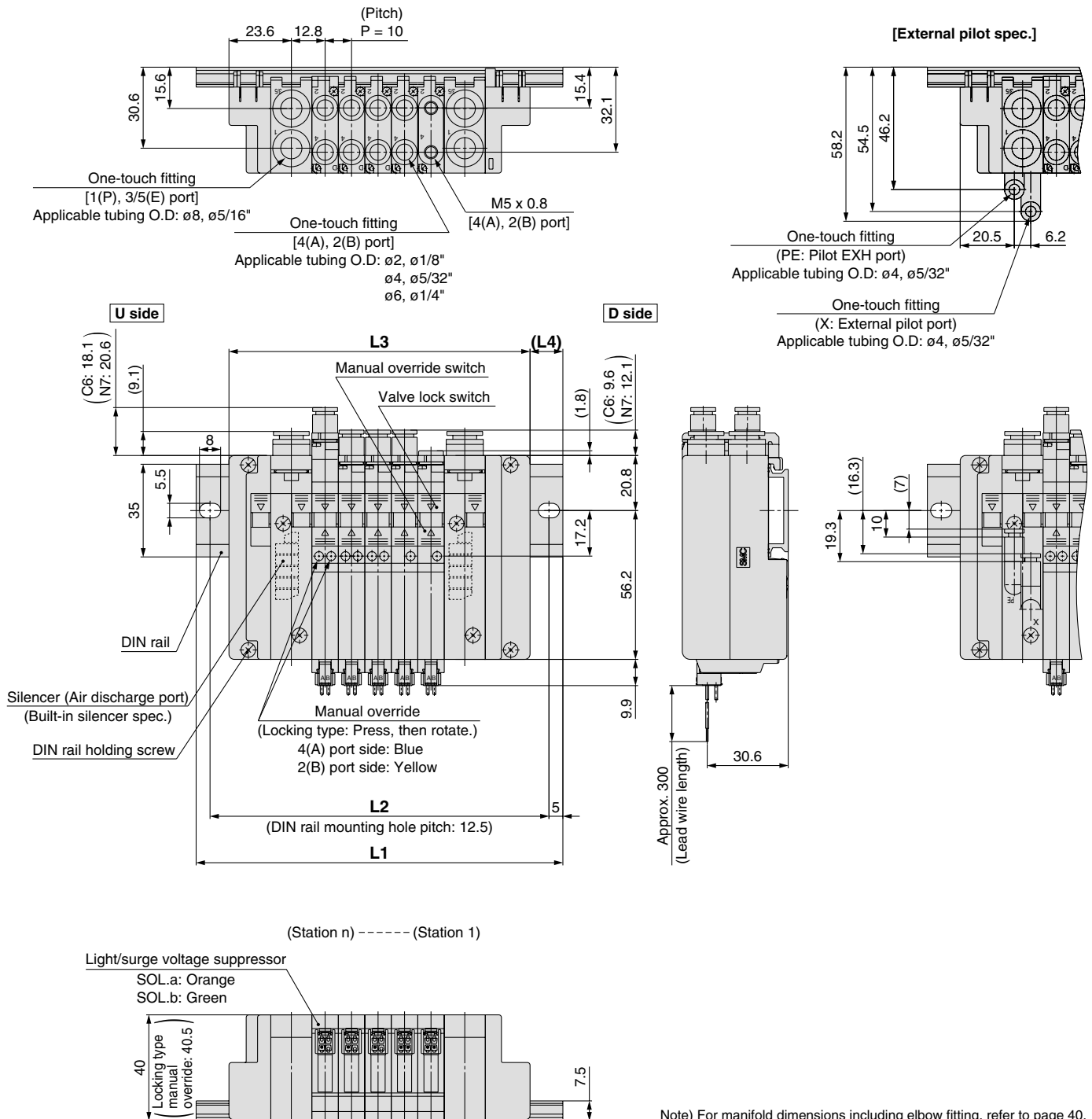
L: Dimensions

n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L1	98	110.5	123	123	135.5	148	160.5	173	185.5
L2	87.5	100	112.5	112.5	125	137.5	150	162.5	175
L3	68.2	78.2	88.2	98.2	108.2	118.2	128.2	138.2	148.2
L4	14.5	16	17	12	13	14	15.5	16.5	17.5

Dimensions

SS5J3-60- Stations B (S, R, RS)



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Note) For manifold dimensions including elbow fitting, refer to page 40.

L: Dimensions

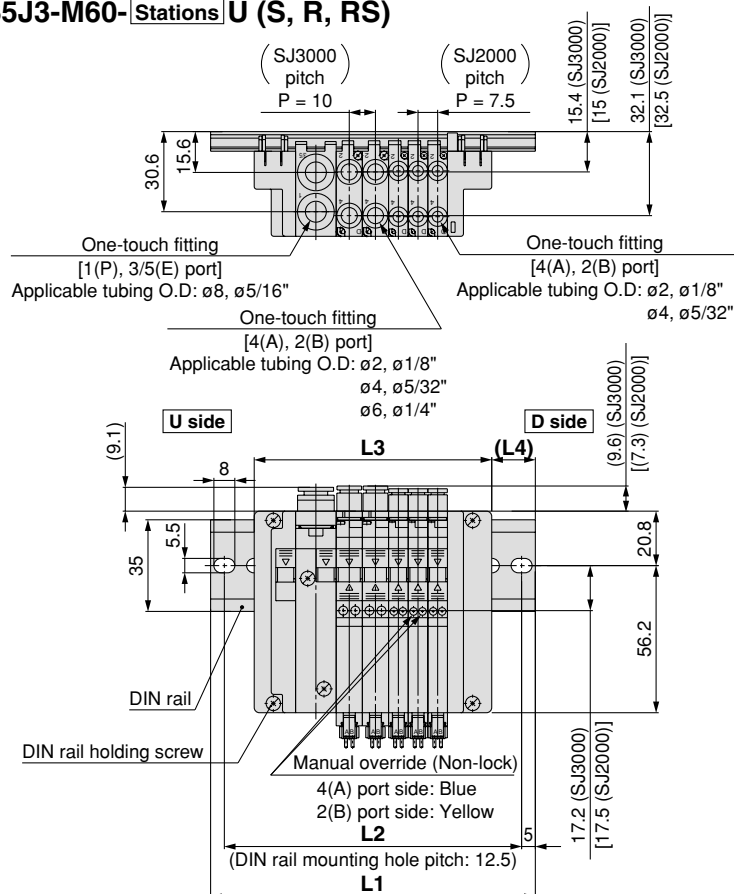
n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	110.5	123	135.5	148	148	160.5	173	185.5	198	210.5	210.5	223	235.5	248	260.5	260.5	273	285.5	298
L2	100	112.5	125	137.5	137.5	150	162.5	175	187.5	200	200	212.5	225	237.5	250	250	262.5	275	287.5
L3	83.7	93.7	103.7	113.7	123.7	133.7	143.7	153.7	163.7	173.7	183.7	193.7	203.7	213.7	223.7	233.7	243.7	253.7	263.7
L4	13	14.5	15.5	16.5	11.5	12.5	14	15	16	17.5	12	13.5	14.5	15.5	17	11.5	13	14	15

Series SJ2000/3000

Dimensions: SJ2000/3000 Mixed Manifold

SS5J3-M60-Stations U (S, R, RS)



L dimension: Formula, L1 to L4

$$L3 = 7.5 \times n1 + 10 \times n2 + 48.2$$

$$M = (L3 + 4) / 12.5 + 1$$

Remove all numbers after the decimal.

$$L1 = M \times 12.5 + 23$$

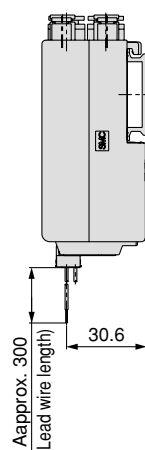
$$L2 = L1 - 10.5$$

$$L4 = (L1 - L3) / 2 - 2$$

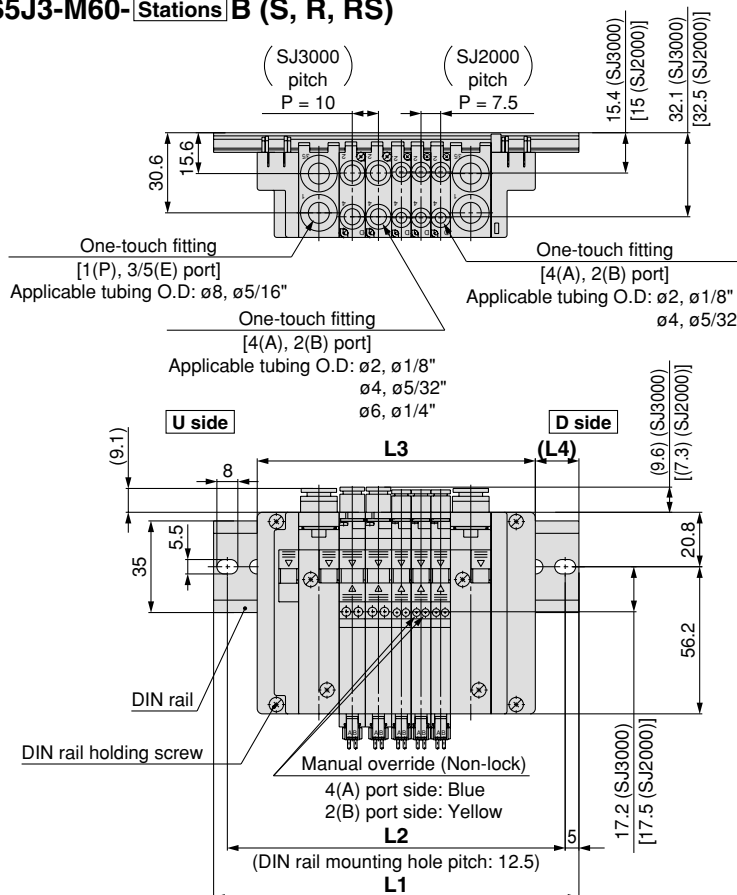
n1: Piece of the SJ2000

n2: Piece of the SJ3000

* The dimensions of L1 to L4 for **SS5J3-M60-Stations D** are the same as those of **SS5J3-M60-Stations U**.



SS5J3-M60-Stations B (S, R, RS)



L dimension: Formula, L1 to L4

$$L3 = 7.5 \times n1 + 10 \times n2 + 63.7$$

$$M = (L3 + 4) / 12.5 + 1$$

Remove all numbers after the decimal.

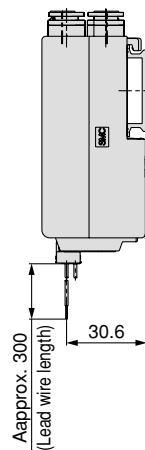
$$L1 = M \times 12.5 + 23$$

$$L2 = L1 - 10.5$$

$$L4 = (L1 - L3) / 2 - 2$$

n1: Piece of the SJ2000

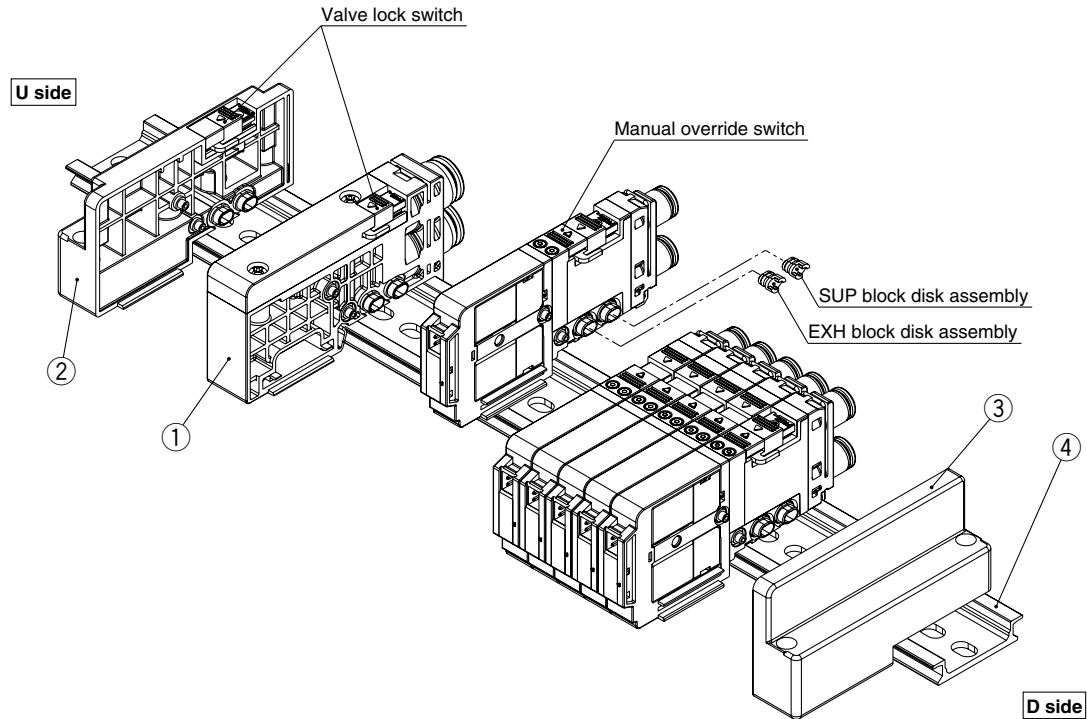
n2: Piece of the SJ3000



Manifold Exploded View

Type 60 (Non plug-in) manifold

Note) Refer to page 66 for "How to Add Manifold Stations."



Component Parts / Non-plug-in

No.	Description		Part no.	Note
1	SUP/EXH block assembly	Internal pilot	SJ3000-50-5A-□□	(Metric size) C6: With ø6 one-touch fitting (straight) C8: With ø8 one-touch fitting (straight) L6: With ø6 one-touch fitting (elbow upward entry) L8: With ø8 one-touch fitting (elbow upward entry) B6: With ø6 one-touch fitting (elbow downward entry) B8: With ø8 one-touch fitting (elbow downward entry)
		Internal pilot / Built-in silencer	SJ3000-50-5AS-□□	
		External pilot	SJ3000-50-5AR-□□ (X, PE port: Metric size ø4 Inch size ø5/32")	
		External pilot / Built-in silencer	SJ3000-50-5ARS-□□ (X port: Metric size ø4 Inch size ø5/32")	
		For different pressures, internal pilot ^{Note 1)}	SJ3000-50-6A-□□	
		For different pressures ^{Note 1)} Internal pilot / Built-in silencer	SJ3000-50-6AS-□□	
2	End block assembly		SJ3000-53-1A	For U side
3	End block assembly		SJ3000-53-2A	For D side
4	DIN rail		VZ1000-11-1-□	Refer to page 77.

Note 1) The valves cannot be operated only with the SUP/EXH block assembly for different pressure, select them in combination with the SUP/EXH block assembly for internal/ external pilot.

Note 2) Refer to page 76 about the SUP/EXH block disk assembly and method of handling of parts at different pressure.

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

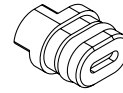
Series SJ2000/3000

Manifold Options

Manifold Options

■ SUP block disk assembly

By placing a SUP block disk in a manifold valve's pressure supply passage, two different high and low pressures can be supplied to one manifold. When supplying different pressures using the manifold of the internal pilot, fill out a manifold specification sheet to place an order for an SUP/EXH assembly for the internal pilot specifications and another SUP/EXH assembly for the different-pressure internal pilot specifications (Refer to Circuit Diagram 1).

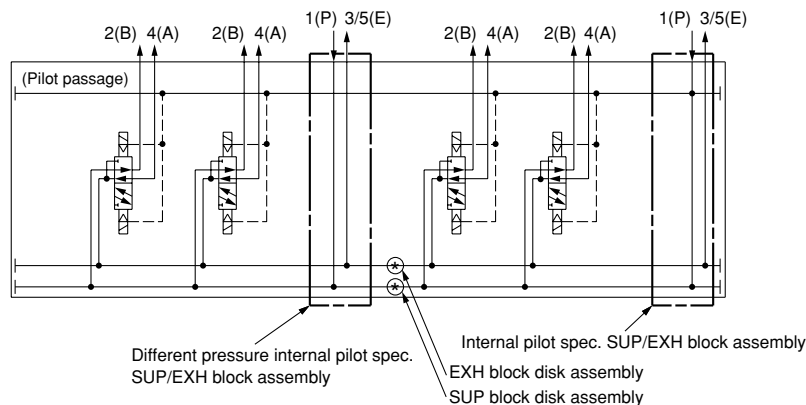


Series	Part no.
SJ2000	SJ3000-44-1A
SJ3000	

[Different pressure pneumatic circuit diagram]

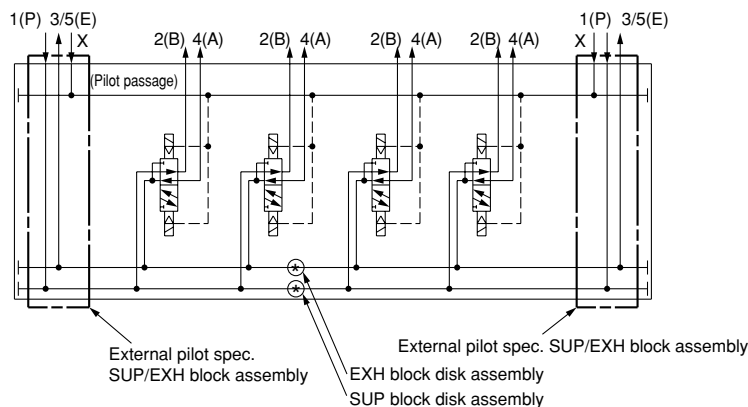
- The SJ series supplies air to the pilot port of each valve using a 1(P) port of the SUP/EXH block assembly. When using in situations such as where there are different pressures, combine SUP/EXH block assemblies for internal pilot, external pilot and different-pressure by referring to the circuit below.

1. Different-pressure spec. using the internal pilot



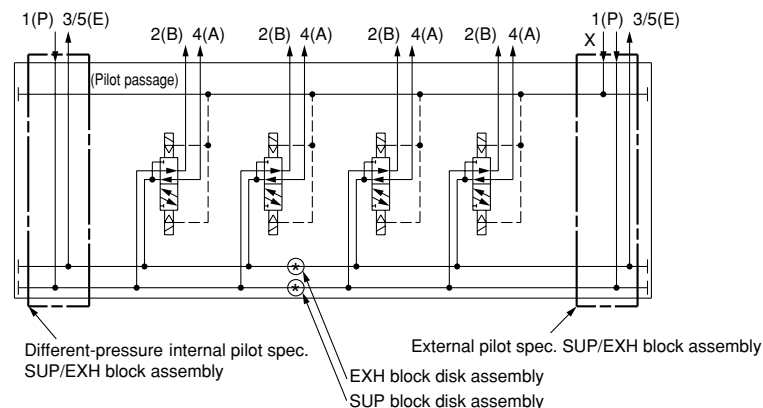
2. Different-pressure spec. using the external pilot

(For using the SUP/EXH block assembly for external pilot)



3. Different-pressure spec. using the external pilot

(For using the SUP/EXH block assembly for different-pressure internal pilot spec.)



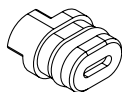
Note 1) When operating under the different-pressure spec., supply the higher pressure to the pilot passage.

Note 2) If there is a need to partition the pilot passage, consult SMC.

Manifold Options

■ EXH block disk assembly

By installing an EXH block disk in a manifold valve's exhaust passage, the valve's exhaust can be separated so that it will not affect other valves.



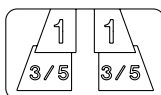
Series	Part no.
SJ2000	SJ3000-44-1A
SJ3000	

■ Label for block disk

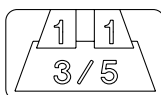
These labels are attached to manifolds in which SUP and EXH block disks have been installed, in order to identify the installed locations. (Three sheets each included.)

SJ3000-155-1A

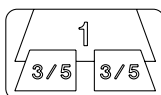
Label for
SUP/EXH block disk



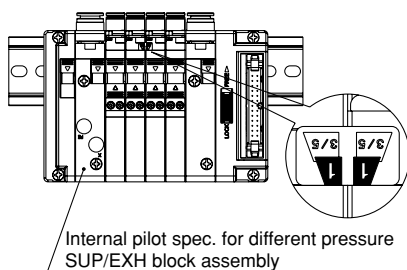
Label for
SUP block disk



Label for
EXH block disk

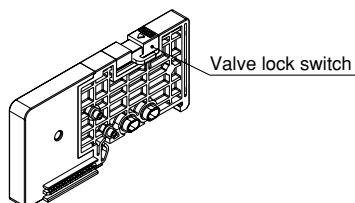


* When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.



■ Blanking block assembly

These are mounted when later addition of valves is planned, etc.

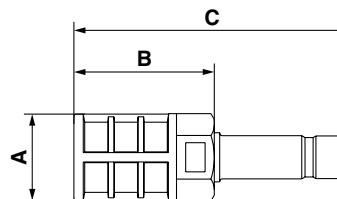


Series	Part no.	Note	Width
SJ2000	SJ3000-49-1A	Single wiring	7.5 mm
SJ3000	SJ3000-49-2A	Double wiring	
SJ3A6	SJ3000-49-2A-N	Double wiring Note)	

Note) Valve lock switch is not available for the SJ3A6.

■ Silencer with one-touch fitting

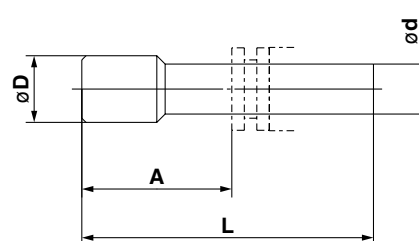
This silencer can be mounted on the manifolds' port 3/5 (E: Exhaust) with a single touch.



Series	Model	Effective area	A	B	C
For SJ2000 SJ3000 (ø8)	AN203-KM8	14 mm ²	ø16	26	51

■ Plug

These are inserted in unused cylinder ports and P, E ports.



Dimensions

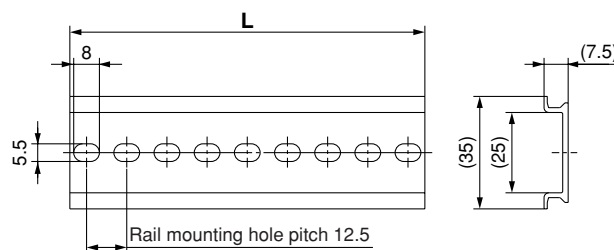
Applicable fitting size ød	Model	A	L	D
2	KJP-02	8.2	17	3
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10

■ DIN rail

VZ1000-11-1-□

● L dimension

* Enter a number from the DIN rail dimension table shown below.



No.	0	1	2	3	4	5	6	7	8	9
L dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5
Weight (g)	17.6	19.9	22.1	24.4	26.6	28.9	31.1	33.4	35.6	37.9

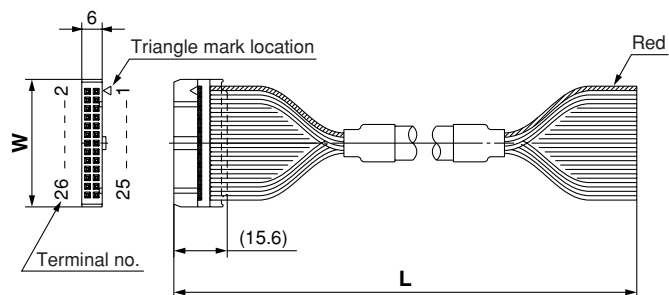
No.	10	11	12	13	14	15	16	17	18	19
L dimension	223	235.5	248	260.5	273	285.5	298	310.5	323	335.5
Weight (g)	40.1	42.4	44.6	46.9	49.1	51.4	53.6	55.9	58.1	60.4

No.	20	21	22	23	24	25	26	27	28	29
L dimension	348	360.5	373	385.5	398	410.5	423	435.5	448	460.5
Weight (g)	62.6	64.9	67.1	69.4	71.6	73.9	76.1	78.4	80.6	82.9

Manifold Options

■ Flat ribbon cable assembly

AXT100-FC $\square$ ¹₂³



Flat Ribbon Cable Assembly

Cable length (L)	10 pins	20 pins	26 pins
1.5 m	AXT100-FC10-1	AXT100-FC20-1	AXT100-FC26-1
3 m	AXT100-FC10-2	AXT100-FC20-2	AXT100-FC26-2
5 m	AXT100-FC10-3	AXT100-FC20-3	AXT100-FC26-3
Connector width (W)	17.2	30	37.5

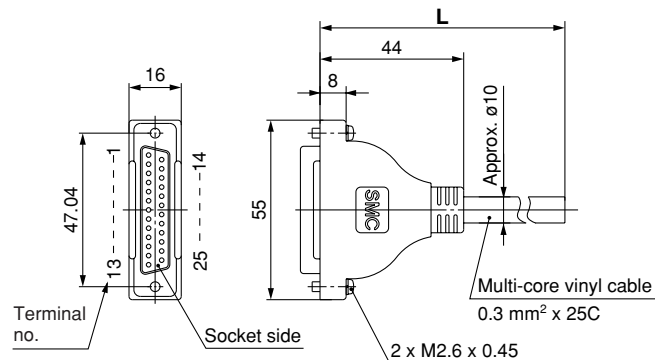
* For other commercial connectors, use a type with strain relief that conforms to MIL-C-83503.

Connector manufacturers:

- Hirose Electric Co., Ltd.
- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

■ D-sub connector (25 pins)/Cable assembly

AXT100-DS25-⁰¹⁵₀₃₀⁰⁵⁰



D-sub Connector Cable Assembly

Cable Color List of Each Terminal No.

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

D-sub Connector Cable Assembly

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 25 cores x 24AWG
3 m	AXT100-DS25-030	
5 m	AXT100-DS25-050	

* For other commercial connectors, use a 25 pins type with female connector conforming to MIL-C-24308.

Electric Characteristics

Item	Characteristics
Conductor resistance Ω/km, 20°C	65 or less
Withstand pressure V, 1 min, AC	1000
Insulation resistance MΩkm, 20°C	5 or less

Note) The minimum bending radius for D-sub connector cables is 20 mm.

Connector manufacturers:

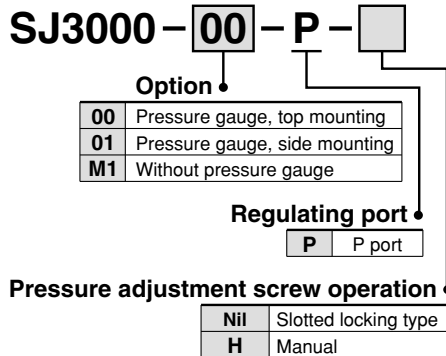
- Hirose Electric Co., Ltd.
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

Manifold Options

■ Regulator block

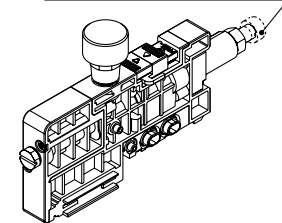
How to Order Regulator Block

This is used to reduce the pressure supplied from the D side inside the manifold.
All valves on the U side are depressurized from the regulator block.



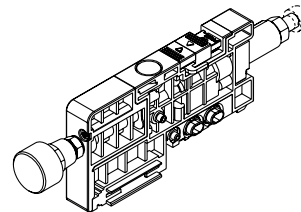
SJ3000-00-P(-H)

With manual operation of pressure adjustment screw



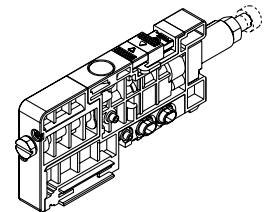
Pressure gauge, top mounting

SJ3000-01-P(-H)



Pressure gauge, side mounting

SJ3000-M1-P(-H)



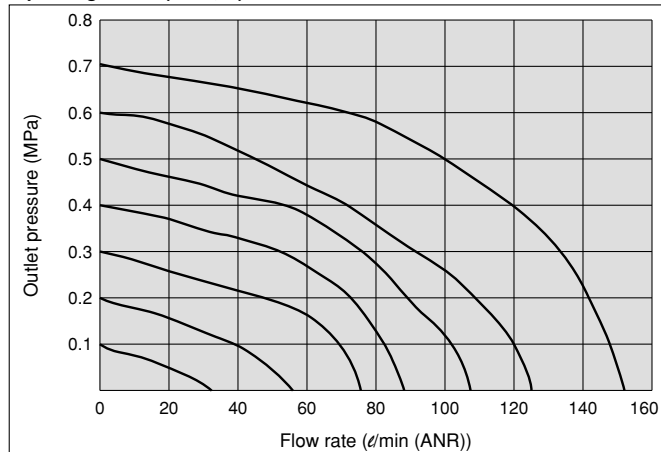
Without pressure gauge

Note) When ordering with a regulator block installed in the manifold, please order using the manifold specification sheet.

Flow Characteristics (Conditions: Inlet pressure 0.7 MPa 2 position solenoid valve mounting)

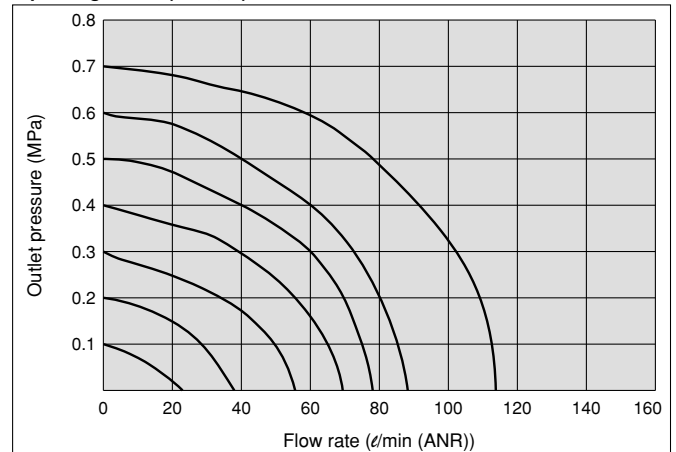
SJ3000

P port regulation (P→A, B)

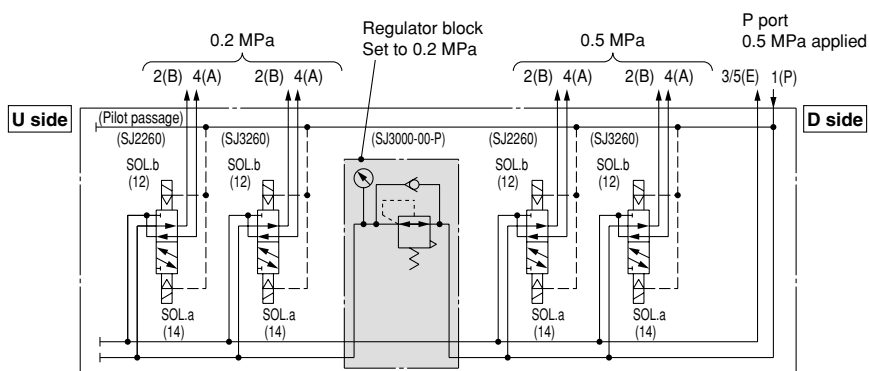


SJ2000

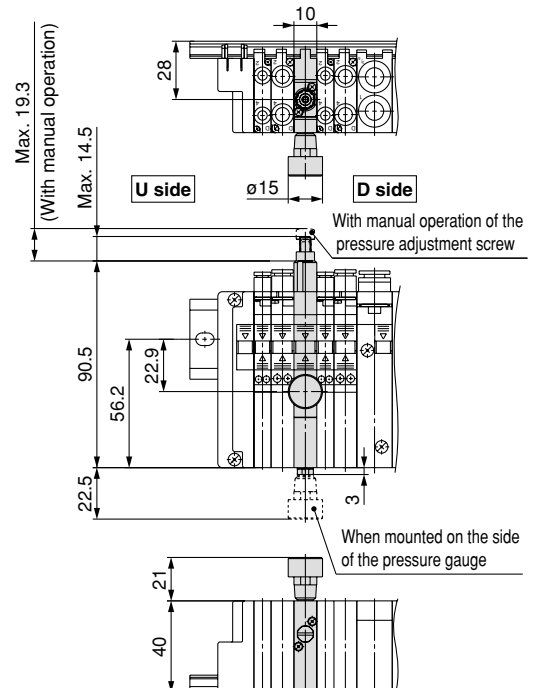
P port regulation (P→A, B)



Pneumatic circuit (Regulator block mounting example)



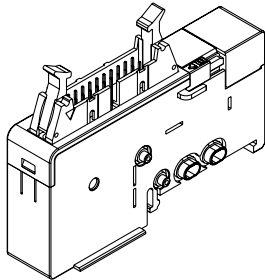
Note) Reduces supply pressure from the D side of manifold.
Supply pressure from the U side cannot be reduced.



Manifold Options

■ Intermediate connector block assembly

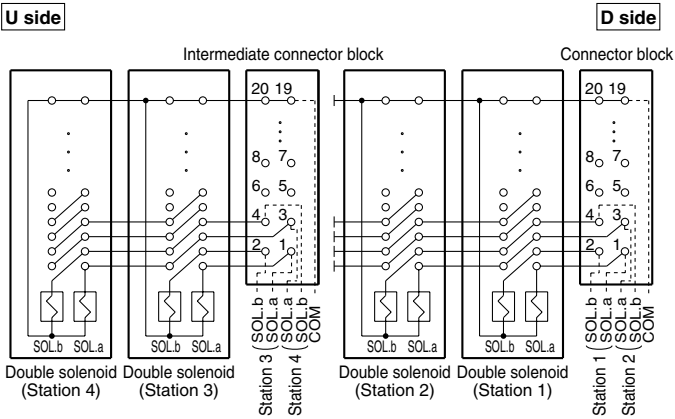
This connector block can be used by inserting it into the middle of the manifold.
This can be used, for example, when you wish to separate electrical control of valves in the same manifold, or when the number of control points is insufficient.



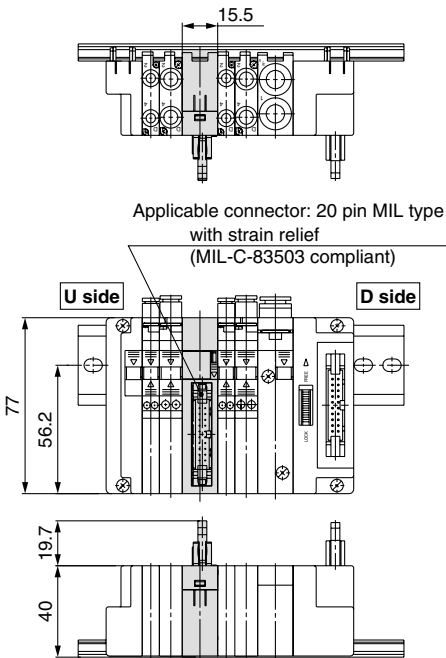
Series	Part no.	Note
SJ2000	SJ3000-76-1A	
SJ3000	SJ3000-76-2A-05	With power supply terminal (for PC wiring)

Note) When ordering with an intermediate connector block assembly installed in the manifold, please order using the manifold specification sheet.

Intermediate connector block assembly wiring example



* Enables control of U side solenoid valves from the position where the intermediate connector block assembly is installed.



■ Dual flow fitting (Set for SJ3000 series)

SJ3000-120-1A-CB

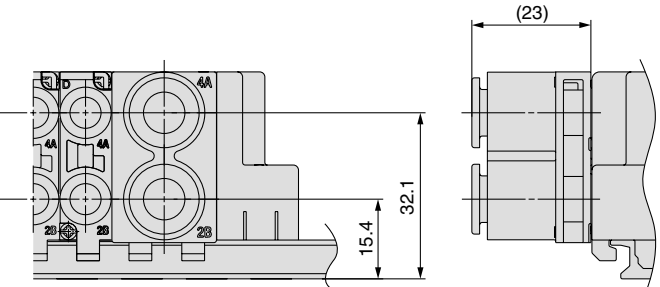
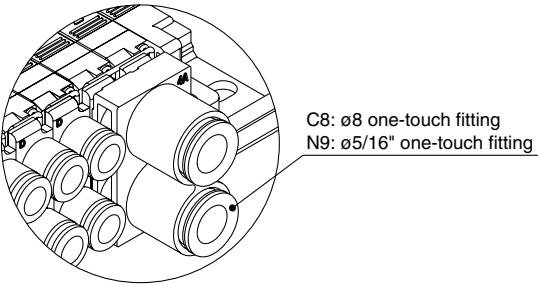
Port size	
C8	ø8
N9	ø5/16"

This is a fitting for cylinder ports which enables simultaneous actuation and increase in flow rate of valves for 2 stations. This is a one-touch fitting with port sizes of ø8 and ø5/16.

* When arranging mounted to the valve, arrange the valve part no. using the part no. without the one-touch fitting, and then add the part no. for the dual flow fitting. If the arrangement is complicated, please specify them by means of the manifold specification sheet.

Example) Valve type (without one-touch fitting)

SJ3160-5CU-C0 2 sets
* **SJ3000-120-1A-C8** 1 set



Series *SJ2000/3000* Made to Order

For detailed specifications, delivery and pricing, please contact SMC.



1 Main Valve Fluoro Rubber Specifications

Symbol

-X90

Fluoro rubber is used for rubber parts of the main valve to allow use in applications such as the following.

1. When using a lubricant other than the recommended turbine oil, and there is a possibility of malfunction due to swelling of the spool valve seals.
2. When ozone enters or is generated in the air supply.

Part no. **SJ** $\frac{2}{3}$ 60 (T) - - - -X90

• Entry is the same as standard products.

Note) Because in series -X90 fluoro rubber is used for only main valve, the rubber parts of the application/usage in conditions requiring heat resistance should be avoided.

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

VFR

VQ7



Series SJ2000/3000

Specific Product Precautions 1

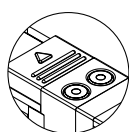
Be sure to read before handling.

Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

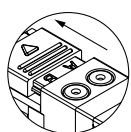
Manual Override Switch Operation

Warning

For manual override operation, move the manual override switch to a position where letters A and B can be seen. [Manual override switch release status (refer to the figure below)] Operation with the manual override switch in a locked status can cause damage to the manual override and air leakage, so be sure to release the manual override switch before use. After manual override operation, lock the manual switch for use (when the manual override of the push-turn locking slotted type is locked, a manual override switch cannot be locked).



Manual override switch locked status



Manual override switch unlocked status

Manual override switch slide direction

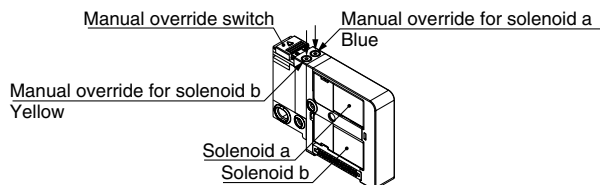
Manual Override Operation

Warning

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

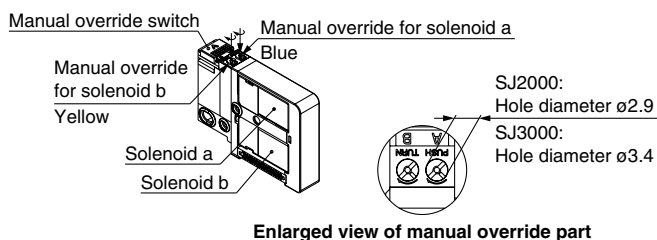
Non-locking push type

Press in the direction of the arrow.



Push-turn locking slotted type

While pressing, turn in the direction of the arrow (90° clockwise). If it is not turned, it can be used in the same way as the non-locking push type.



Caution

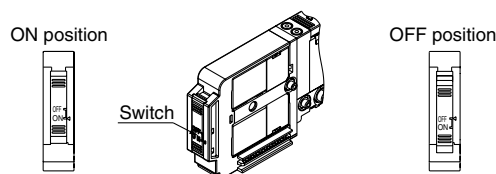
When you operate the D type with a screwdriver, turn it gently using a watchmaker's screwdriver. [Torque: under 0.05 N·m] When you lock the manual override of the D type, be sure to push it before turning. [Load: 10 N or less] Turning without pushing can cause damage to the manual override and trouble such as air leakage, etc.

Valve with Switch

Warning

When turning OFF the valve using the switch, move it to the position where the valve is locked. If the switch is at an improper position and is energized, equipment connected to the valve could be actuated.

Also, if the switch is turned OFF on the valve in the energized state, be careful because any actuators connected to a single solenoid, a dual 3 port valve or a 3 position valve will actuate.

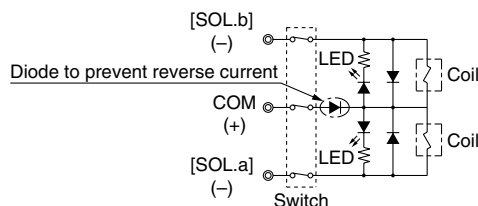


Normal operation: The valve is switched according to electric signals from the connector on the manifold side.

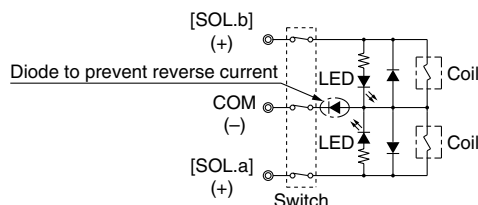
The valve coil is kept in a deenergized state even when there is an electric signal from the connector on the manifold side.

Electric circuit diagram

(with positive common and light/surge voltage suppressor)



(with negative common and light/surge voltage suppressor)



Built-in Back Pressure Check Valve Type

Caution

Valves with built-in back pressure check valve is to protect the back pressure inside a valve. For this reason, use caution the valves with external pilot specification cannot be pressurized from exhaust port [3/5(E)].

As compared with the types which do not integrate the back pressure check valve, C value of the flow characteristics goes down. For details, please contact SMC.

Exhaust Restriction

Caution

Since the SJ series is a type in which the pilot valve exhaust joins the main valve exhaust inside the valve, use caution, so that the piping from the exhaust port is not restricted.



Series SJ2000/3000

Specific Product Precautions 2

Be sure to read before handling.

Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

When Using a 4 Port Valve as a 3 Port Valve

Caution

When using a 4 port valve as a 3 port valve

The SJ2000/3000 series can be used as normally closed (N.C.) or normally open (N.O.) 3 port valves by plugging one of the cylinder ports 4(A) or 2(B). However, exhaust ports should be left open. It is convenient when a double solenoid 3 port valve is required.

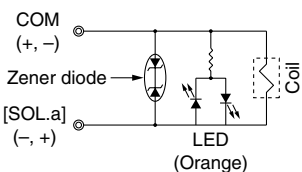
Plug position	2(B) port	4(A) port
Type of actuation	N.C.	N.O.
Number of solenoids	Single	Single
	Double	Double

Light/surge Voltage Suppressor

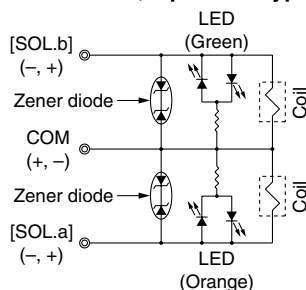
Caution

Non-polar type

Single solenoid

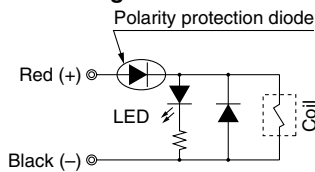


Double solenoid, 3 position type

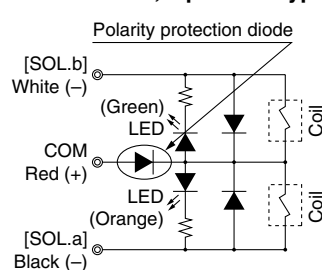


Positive common

Single solenoid

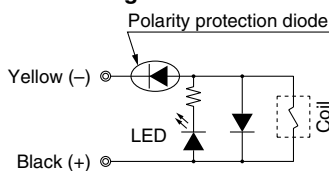


Double solenoid, 3 position type

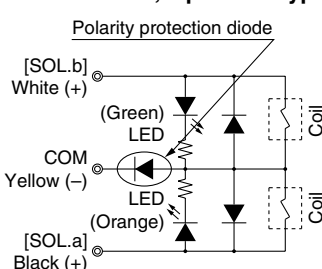


Negative common

Single solenoid



Double solenoid, 3 position type



Continuous Duty

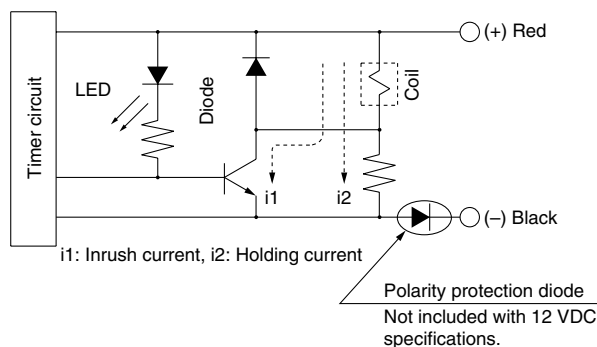
Caution

If a valve is energized continuously for a long time, the rise in temperature due to heat-up of the coil may cause a decline in solenoid valve performance, reduce service life, or have adverse effects on peripheral equipment. If a valve will be energized continuously, please be sure to use the "Continuous duty type" with a power saving circuit. In particular, there will be a large increase in temperature if 3 or more neighboring stations are simultaneously energized for a long time, or if the A and B sides are simultaneously continuously energized for a long time in a dual 3 port valve. Please be very careful in such cases.

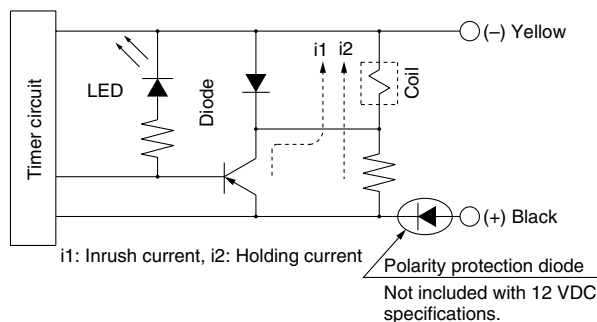
With power saving circuit

Compared to the standard products, power consumption is reduced down to approx. 1/3 (in case of SJ3□60T) by cutting the unnecessary wattage required to hold the valve in an energized state. (Effective energizing time is over 67 ms at 24 VDC.)

Electric circuit diagram (with power saving circuit) In case of positive common, single solenoid



In case of negative common, single solenoid





Series SJ2000/3000

Specific Product Precautions 3

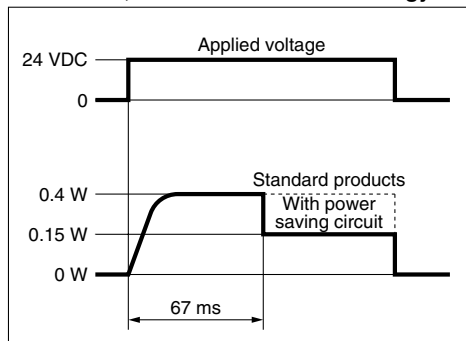
Be sure to read before handling.

Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

Working Principle

With the circuit of page 95, the current consumption, when holding, is reduced to save energy. Please refer to the electric wave data below.

In case of SJ3□60T, electric waveform of energy saving type

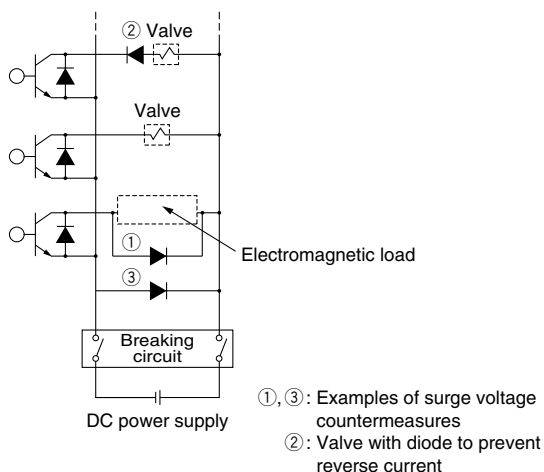


- When a power saving circuit is installed, a diode to prevent reverse current is not available for 12 V DC spec. Therefore, use caution not to connect in reverse.
- Be careful about the allowable voltage fluctuation since a voltage drop of about 0.5 V occurs due to a transistor. (Refer to the solenoid specifications of each valve for details.)

Measures to prevent detours of surge voltage

When the DC power supply is shut off, by the emergency breaking circuit for example, valve misoperation may occur due to surge voltage produced by other electrical parts (such as electromagnetic coils). Please take measures to prevent surges from detouring to the valve (surge protection diode etc.), or use a valve with diode to prevent reverse current (polar: Z type). However, surge countermeasures are provided on the serial unit side of the serial type.

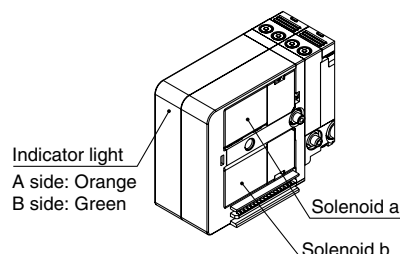
Circuit example



Light Indication

Caution

When equipped with light/surge voltage suppressor, the light window turns orange when solenoid a is energized, and it turns green when solenoid b is energized.

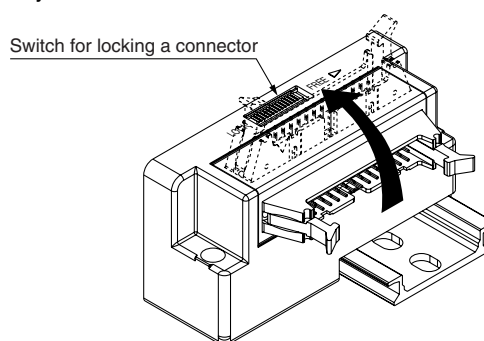


Changing the Connector Entry Direction

Caution

To change the connector's entry direction, set the switch on the top of the connector block to the FREE position, before turning the connector. Make sure to set the switch back to the LOCK position before connecting the connector. (When the switch is difficult to slide, move the connector a little so that it will slide easier.)

If an excessive force is applied on the connector in the LOCK position, the connector block may be damaged. Also, using in such a way that the connector floats in the FREE position, it may cause the lead wire, etc. to break. Thus, refrain from using in these ways.



Manifold Mounting

When attaching a manifold to a mounting surface, etc., with bolts, if the entire bottom surface of the DIN rail contacts the mounting surface in a horizontal mounting, it can be used by simply securing both ends of the DIN rail. However, for any other mounting method or for side facing and rear facing, etc., secure the DIN rail with bolts at uniform intervals using the following as a guide: 2 to 5 stations at 2 locations, 6 to 10 stations at 3 locations, 11 to 15 stations at 4 locations, 16 to 20 stations at 5 locations, 21 to 25 stations at 6 locations, 26 to 30 stations at 7 locations and more than 30 stations at 8 locations.

In addition, even in the case of a horizontal mounting, if the mounting surface is subject to vibration, etc., take the same measures indicated above. If secured at fewer than the specified number of locations, warping or twisting may occur in the DIN rail and manifold, causing trouble such as air leakage.



Series SJ2000/3000

Specific Product Precautions 4

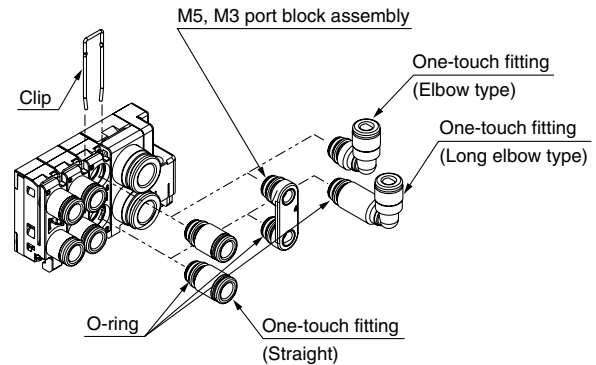
Be sure to read before handling.

Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

Fitting Assembly Replacement

Caution

By replacing a valve's fitting assembly, it is possible to change the port size of the 4(A), 2(B), 1(P), and 3/5(E) ports. When replacing it, pull out the fitting assembly after removing the clip with a flat head screwdriver, etc. To mount a new fitting assembly, insert it into place and then fully reinsert the clip.



Fitting Assembly Part No.

Metric Size

Port	Port size	Part no.
SJ2000 4(A) 2(B)	ø2 one-touch fitting assembly (Straight)	KJH02-C1
	ø4 one-touch fitting assembly (Straight)	KJH04-C1
	ø2 one-touch fitting assembly (Elbow type)	KJL02-C1
	ø4 one-touch fitting assembly (Elbow type)	KJL04-C1-N
	ø2 one-touch fitting assembly (Long elbow type)	KJW02-C1
	ø4 one-touch fitting assembly (Long elbow type)	KJW04-C1-N
	M3 port block assembly	SJ2000-56-1A
SJ3000 4(A) 2(B)	ø2 one-touch fitting assembly (Straight)	KJH02-C2
	ø4 one-touch fitting assembly (Straight)	KJH04-C2
	ø6 one-touch fitting assembly (Straight)	KJH06-C2
	ø2 one-touch fitting assembly (Elbow type)	KJL02-C2
	ø4 one-touch fitting assembly (Elbow type)	KJL04-C2
	ø6 one-touch fitting assembly (Elbow type)	KJL06-C2-N
	ø2 one-touch fitting assembly (Long elbow type)	KJW02-C2
	ø4 one-touch fitting assembly (Long elbow type)	KJW04-C2
	ø6 one-touch fitting assembly (Long elbow type)	KJW06-C2-N
	M5 port block assembly	SJ3000-56-1A
1(P) 3/5(E)	ø6 one-touch fitting assembly (Straight)	VVQ1000-51A-C6
	ø6 one-touch fitting assembly (Elbow type)	SZ3000-74-1A-L6
	ø6 one-touch fitting assembly (Long elbow type)	SZ3000-74-2A-L6
	ø8 one-touch fitting assembly (Straight)	VVQ1000-51A-C8
	ø8 one-touch fitting assembly (Elbow type)	SZ3000-74-1A-L8
	ø8 one-touch fitting assembly (Long elbow type)	SZ3000-74-2A-L8

Inch Size

Port	Port size	Part no.
SJ2000 4(A) 2(B)	ø1/8" one-touch fitting assembly (Straight)	KJH01-C1
	ø5/32" one-touch fitting assembly (Straight)	KJH03-C1
	ø1/8" one-touch fitting assembly (Elbow type)	KJL01-C1
	ø5/32" one-touch fitting assembly (Elbow type)	KJL03-C1
	ø1/8" one-touch fitting assembly (Long elbow type)	KJW01-C1
	ø5/32" one-touch fitting assembly (Long elbow type)	KJW03-C1
	ø1/4" one-touch fitting assembly (Long elbow type)	KJW07-C1
SJ3000 4(A) 2(B)	ø1/8" one-touch fitting assembly (Straight)	KJH01-C2
	ø5/32" one-touch fitting assembly (Straight)	KJH03-C2
	ø1/4" one-touch fitting assembly (Straight)	KJH07-C2
	ø1/8" one-touch fitting assembly (Elbow type)	KJL01-C2
	ø5/32" one-touch fitting assembly (Elbow type)	KJL03-C2
	ø1/4" one-touch fitting assembly (Elbow type)	KJL07-C2
	ø1/8" one-touch fitting assembly (Long elbow type)	KJW01-C2
	ø5/32" one-touch fitting assembly (Long elbow type)	KJW03-C2
	ø1/4" one-touch fitting assembly (Long elbow type)	KJW07-C2
	ø1/4" one-touch fitting assembly (Straight)	VVQ1000-51A-N7
1(P) 3/5(E)	ø5/16" one-touch fitting assembly (Straight)	VVQ1000-51A-N9

Note 1) To change the port size of the 1(P), 3/5(E) ports into the port sizes other than ø8 (straight), specify the change by means of the manifold specification sheet.

Note 2) Be careful to avoid damage or contamination to the O-rings, as this can cause air leakage.

Note 3) When removing a straight-type fitting assembly from a valve, after removing the clip, attach tubing or a plug (KJP-02, KQ2P-□□) to the one-touch fitting, and pull it out while holding the tubing or plug. If it is pulled out while holding the release button of the fitting assembly (resin part), the release button may be damaged.

Note 4) 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 starting any work.

Note 5) While inserting a tubing into an elbow-type fitting assembly, hold the main body of the assembly by hand. Failure to do so will exert an undue force on the valve or the fitting assembly, resulting in air leakage or damage.



Series SJ2000/3000

Specific Product Precautions 5

Be sure to read before handling.

Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

One-touch Fittings

⚠ Caution

The pitch of the SJ series piping ports (A, B etc.) has been set assuming the use of KJ series one-touch fittings. Therefore, when using fittings with an M3 or M5 port block assembly, there may be some interference between fittings, depending on the type and size, so please use after checking dimensions in the catalog for the pipe fitting being used.

1. Tube attachment/detachment for one-touch fittings

1) Attaching of tubing

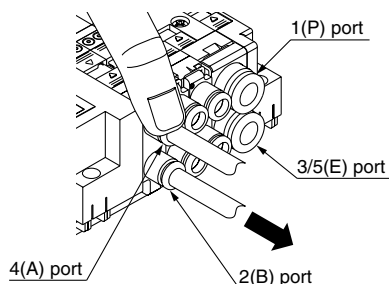
- (1) Take a tube having no flaws on its periphery and cut it off at a right angle. When cutting the tube, use tube cutters TK-1, 2 or 3. Do not use pinchers, nippers or scissors, etc. If cutting is done with tools other than tube cutters, there is the danger that the tube may be cut diagonally or become flattened, etc., making a secure installation impossible, and causing problems such as the tube pulling out after installation or air leakage.

Also allow some extra length in the tube.

- (2) Grasp the tube and push it in slowly, inserting it securely all the way into the fitting.
- (3) After inserting the tube, pull on it lightly to confirm that it will not come out. If it is not installed securely all the way into the fitting, this can cause problems such as air leakage or the tube pulling out.

2) Detaching of tubing

- (1) The 4(A) and 2(B) ports use the KJ series, so the tube can be removed by pressing on part of the release bush. However, for the 1(P) and 3/5(E) ports, please press the release bush evenly as before.
- (2) Pull out the tube while holding down the release button so that it does not come out. If the release button is not pressed down sufficiently, there will be increased bite on the tube and it will become more difficult to pull it out.
- (3) When the removed tube is to be used again, cut off the portion which has been chewed before reusing it. If the chewed portion of the tube is used as is, this can cause trouble such as air leakage or difficulty in removing the tube.



Hold down part of the release bush with your finger or a similar tool, as shown in the diagram, and pull out in the direction indicated by the arrow.

Other Tubing Brands

⚠ Caution

1. When using tube other than SMC brand, confirm the following specifications are satisfied with respect to the outside diameter tolerance of the tube.

- | | |
|------------------------|-------------------------------------|
| 1) Nylon tubing | within ± 0.1 mm |
| 2) Soft nylon tubing | within ± 0.1 mm |
| 3) Polyurethane tubing | within $+0.15$ mm, within -0.2 mm |

Do not use tubing which does not meet these outside diameter tolerances. It may not be possible to connect them, or they may cause other troubles, such as air leakage or the tube pulling out after connection.

How to Use Plug Connector

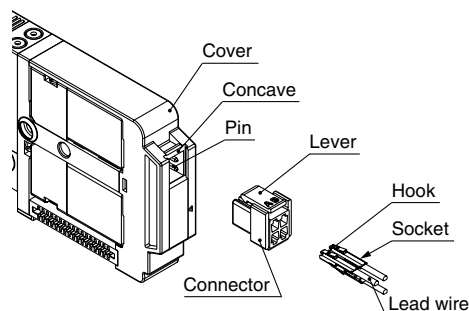
⚠ Caution

When attaching and detaching a connector, first shut off the electric power and the air supply.

Also, crimp the lead wires and sockets securely.

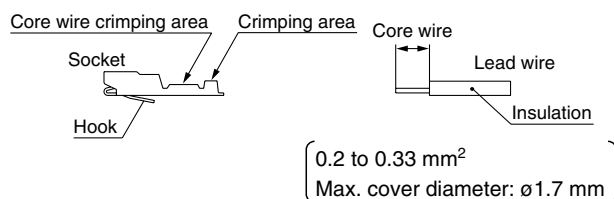
1. Attaching and detaching connectors

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



2. Crimping of lead wires and sockets

Peel 3.2 to 3.7 mm of the tip of lead wire, enter the core wires neatly into a socket and crimp it with a special crimp tool. Be careful so that the cover of lead wire does not enter into the crimping part. (Crimping tool: Model no. DXT170-75-1)





Series SJ2000/3000

Specific Product Precautions 6

Be sure to read before handling.

Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

How to Use Plug Connector

⚠ Caution

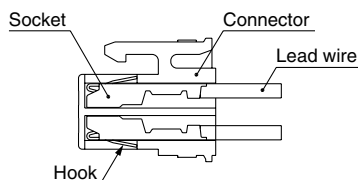
3. Attaching and detaching lead wires with sockets

• Attaching

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

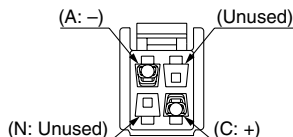
• Detaching

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

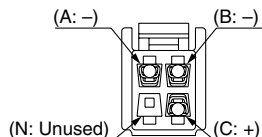


<Positive common>

Single solenoid

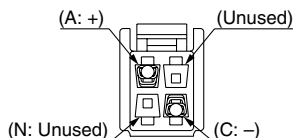


Double solenoid

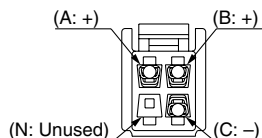


<Negative common>

Single solenoid



Double solenoid



Plug Connector Lead Wire Length

⚠ Caution

Plug connector lead wires have a standard length of 300 mm, however, the following lengths are also available.

Connector Assembly Part No.

Single solenoid

SJ3000-46-S-□ (for positive common)

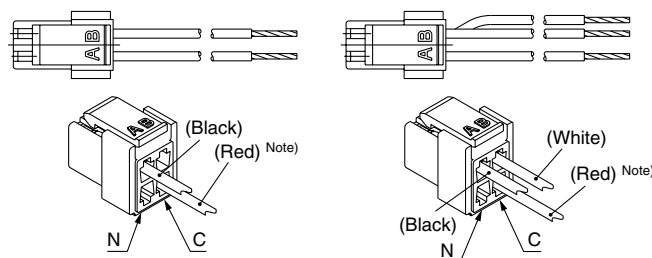
SJ3000-47-S-□ (for negative common)

Double solenoid,

3 position type, 4 position type

SJ3000-46-D-□ (for positive common)

SJ3000-47-D-□ (for negative common)



Note) In case of negative common, the lead wire changes from red to yellow.

For single solenoid: SJ3000-46-S-□

For double solenoid

For 3 position type: SJ3000-46-D-□

For 4 position type

Common specifications

46	For positive common
47	For negative common

• Lead wire length

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

For single solenoid

Without lead wire : SJ3000-46-S-N (positive/negative common)

(Connector, Socket x 2 pcs. only)

For double solenoid

Without lead wire : SJ3000-46-D-N (positive/negative common)

(Connector, Socket x 3 pcs. only)

How to Order

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

(Example) In case of lead wire length 2000 mm and positive common

SJ3160-5MOZ-C6

SJ3000-46-S-20

Connector Assembly for Manifolds (for Junction Common)

⚠ Caution

Using the connector assembly (for junction common) for solenoid valves installed in the manifold reduces the labor involved in wiring work because common wiring for all solenoid valves is integrated into a single wire.

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

VFR

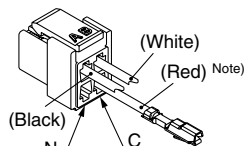
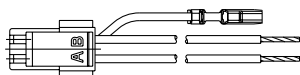
VQ7



Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

Single solenoid
SJ3000-46-SC-☐ (for positive common)
SJ3000-47-SC-☐ (for negative common)

**Double solenoid,
3 position type, 4 position type**
SJ3000-46-DC-☐ (for positive common)
SJ3000-47-DC-☐ (for negative common)



For single solenoid: SJ3000-46-SC-□

For double solenoid

For 3 position type : SJ3000-46-DC-□

For 4 position type

Common specifications

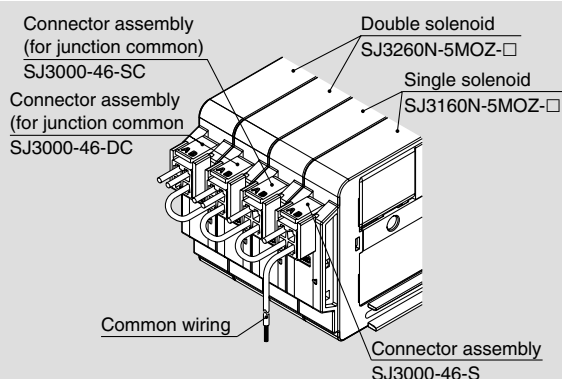
46	For positive common
47	For negative common

Lead wire length

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

For junction common

Note 3) Connector assembly with lead wire for place where the signals are transmitted to the common wiring. (Only the valves of first station and/or last station of manifold are compatible to connector with lead wire for common.)



Ⓐ 100

Caution

Socket

Common wiring

Insert the socket into the connector (N) of the neighboring solenoid valve

Caution

1. Strip 6.5 to 7.5 mm from the tip of the lead wire.
2. Loosen the terminal screws (slotted screws) of the power supply terminal connectors, plug the core wire of the lead wire into the square holes of the connector, tighten terminal screws at the proper torque, and fasten them securely. (Gently pull the lead wire and check that it is fastened.)

- To remove the power supply terminal connector, pull it upward as is. When mounting, push it in until it makes a snapping noise.
- When connecting wire, be careful because using lead wire that is outside of compatible lead wire ranges, or that are tightened to anything other than the proper torque, creates a risk of defective contact and other problems.

