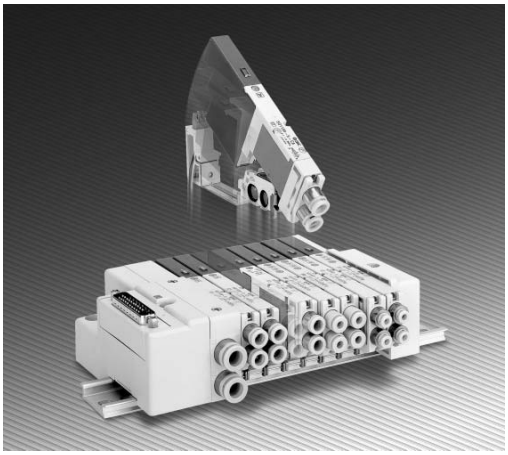
5 Port Solenoid Valve
Metal Seal/Rubber Seal
Series SQ1000/2000

Stacking Manifold

The use of cassette style valves and manifolds makes it easy to increase or decrease the number of stations on a DIN rail. The plug-in type includes two extra valve station connectors. This design makes rewiring unnecessary during manifold expansion.
Also, the use of a single part number simplifies the ordering process.



Manifold Mounted Type

Valve maintenance is simple and labor time is reduced by a single mounting screw.

Easy Replacement of Clip Type One-touch Fittings

One-touch fittings can be replaced without removing valves.

Built-in Back Pressure Check Valve (Option symbol: B)

Eliminates trouble with back pressure when driving a single acting cylinder or when using an exhaust center type valve, etc.

Connector Entry Direction Can be Changed with a Single Push.

The connector entry direction can be changed from the top to the side by simply pressing the manual release button.
It is not necessary to use the manual release button when switching from the side to the top.

Unprecedented High Speed Response and Long Service Life

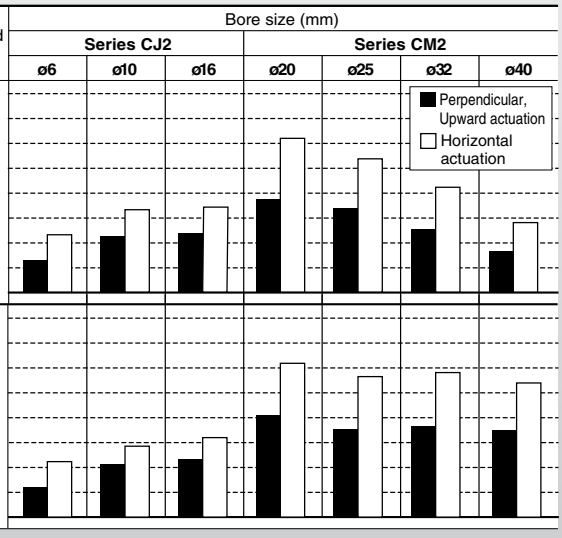
Model	Response time	Life[Note)]
SQ1000	12 ms or less	200 million cycles
SQ2000	20 ms or less	

Note) For metal seal, single type, DC specifications, based on SMC life conditions.
∗ For applications which demand high speed, high frequency, long life and a precise response time.

Cylinder Speed Chart

Pressure: 0.5 MPa/Load factor: 50%

Base mounted	Flow Characteristics Note)						Average speed (mm/s)
	Metal seal			Rubber seal			
	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	
SQ1000	0.63	0.11	0.14	0.80	0.20	0.19	
SQ2000	2.4	0.14	0.75	3.1	0.18	0.71	



Note) 2 position single, 4/2 → 5/3 (A/B → R1/R2)

∗ It is when the cylinder is extending that is meter-out controlled by speed controller which is directly connected with cylinder, and its needle valve with being fully open.
∗ The average velocity of the cylinder is what the stroke is divided by the total stroke time.
∗ Load factor: ((Load weight x 9.8) /Theoretical force) x 100%

Conditions

Base mounted		Series CJ2	Series CM2	Series MB/CA1
SQ1000	Tube x Length	TO604 x 1 m		
	Speed controller	AS3001F-06		
	Silencer	AN110-01		
SQ2000	Tube x Length	T0604 x 1 m	T1075 x 1 m	T1209 x 1 m
	Speed controller	AS3001F-06	AS4001F-10	
	Silencer	AN200-02		

⚠ Precautions 1

Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 2-9-2.

Manual Override

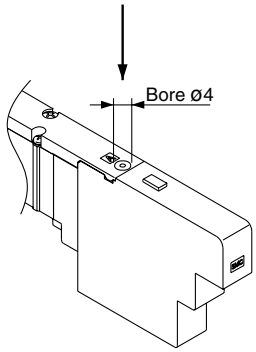
⚠ Warning

Use to switch the main valve.

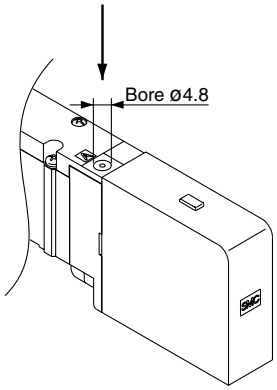
Push Type (Tool required)

Push down on the manual override button with a small screwdriver until it stops.
(Available for all types except 2 position double (Latching).)

SQ1000

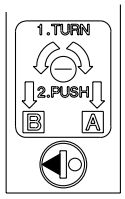


SQ2000

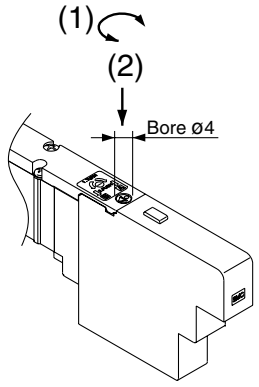


Push Type (Tool required) 2 Position Double (Latching) Type

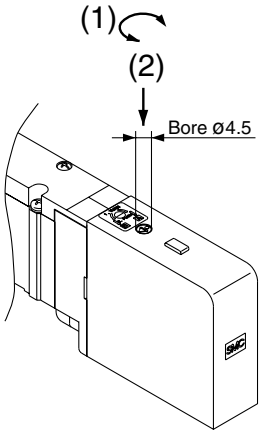
- To lock in set position (Flow path: P → A): Turn the manual override clockwise by 180° to ▶ mark press down. Valve is now locked in the set condition. (Flow path: P → A)
- To reset (Flow path: P → B): Turn manual override counterclockwise to mark ▶ and press down. Valve will then be in the reset condition.



SQ1000



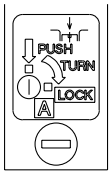
SQ2000



<Caution>
Do not turn the manual override when it is pushed in, as this may cause damage.
The construction is such that the operating force is different on sides A and B.

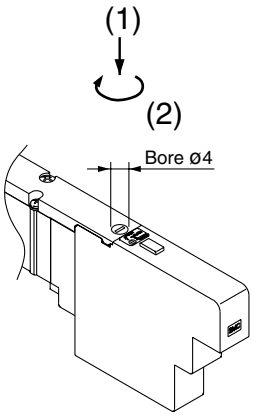
Locking Type (Tool required)

Push down completely on the manual override button with a small screwdriver. While down, turn clockwise 90° to lock it. Turn it counterclockwise to release it.

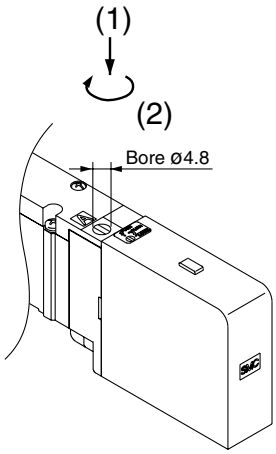


(Available for all types except 2 position double (Latching).)

SQ1000



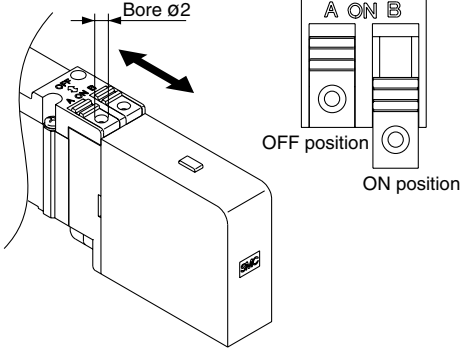
SQ2000



Slide Locking Type (Manual type) (SQ2000 only)

The manual override is locked by sliding it all the way to the pilot valve side (ON side) with a small flat head screwdriver or finger. Slide it to the fitting side (OFF side) to release it. In addition, it can also be used as a push type by using a screwdriver, etc., of ø2 or less. (Available for all types except 2 position double (Latching).)

SQ2000



⚠ Precautions 2

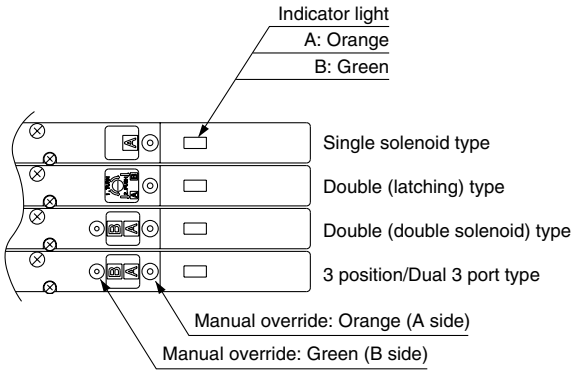
Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 2-9-2.

Light/Surge Voltage Suppressor

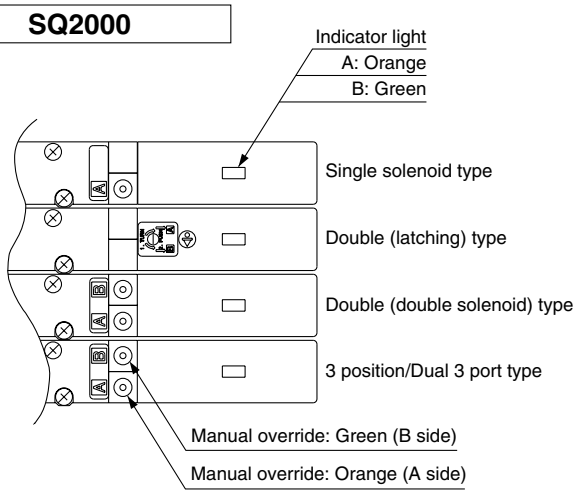
⚠ Caution

Indicator lights are all positioned on one side for both single solenoid and double solenoid types.
For double, 3 position, and 4 position dual 3 port types, 2 colors are used to indicate the energization of A side or B side.

SQ1000

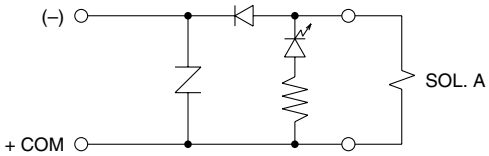


SQ2000

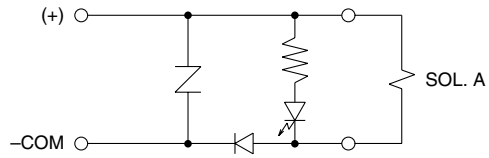


● Single Solenoid Type (SQ1000/2000)

Positive common specifications

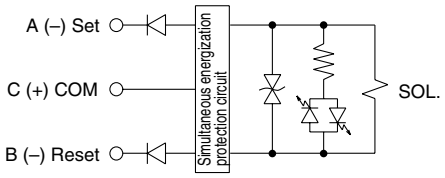


Negative common specifications

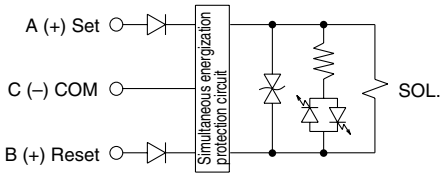


● Double (Latching) Type (SQ1000/2000)

Positive common specifications



Negative common specifications

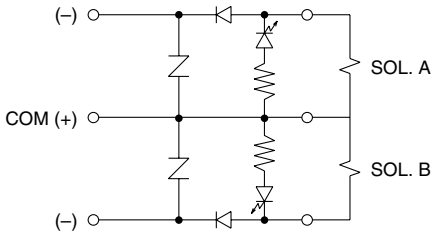


● Double (Double solenoid) Type (SQ1000/2000)

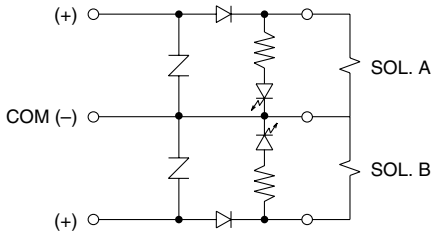
● 3 Position Type (SQ1000/2000)

● 4 Position Dual 3 Port Type (SQ1000/2000)

Positive common specifications



Negative common specifications



⚠Precautions 3

Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 2-9-2.

2 Position Double (Latching solenoid) Type

⚠Caution

Within the double type, a latching (with self holding mechanism) solenoid type is available in addition to the conventional double solenoid. The appearance is the same as the single solenoid. However, the construction allows the armature inside the solenoid to hold the A side ON position and B side ON position during momentary energization (20 ms or longer). The operating method and functions are the same as the conventional double solenoid type.

<Special precautions for latching solenoid>

1. Use in a circuit that does not have simultaneous energization of ON and OFF signals.

2. To operate with momentary energization, the energized time should be 20 ms or longer.

3. Although there is no problem for normal operations and environments, do not operate in an environment with vibration (3 G or more) or strong magnetic field.

4. This valve is shipped with the armature inside the solenoid holding the B side ON position (Reset). However, energize to conform whether it is holding the A side ON position or B side ON position before operation.

5. To operate for an extended time, use SQ$\frac{1}{2}$2$\frac{30}{41}$-□□-□□-X11 with energy savign circuit.

Mounting and Removal of Valves

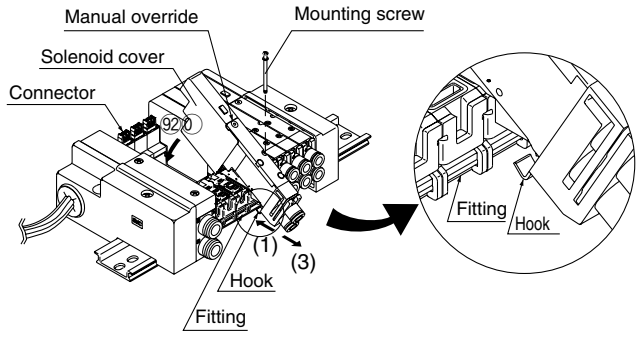
⚠Caution

Mounting

- Insert the hook of the valve into the fitting on the manifold block, then push the valve down into place and tighten the mounting screw.
- Tighten the screw with the appropriate tightening torque shown below.

SQ1000	0.17 to 0.23 N·m
SQ2000	0.25 to 0.35 N·m

- When pushing the valve down, press it on the area near the manual override. Be careful not to push the solenoid cover.



Removing

- Loosen the valve mounting screw, lift the valve from the solenoid cover side and remove it by sliding it in the direction of arrow (3).

If it is difficult to loosen the screw, loosen it while pressing the valve gently on the area near the manual override.

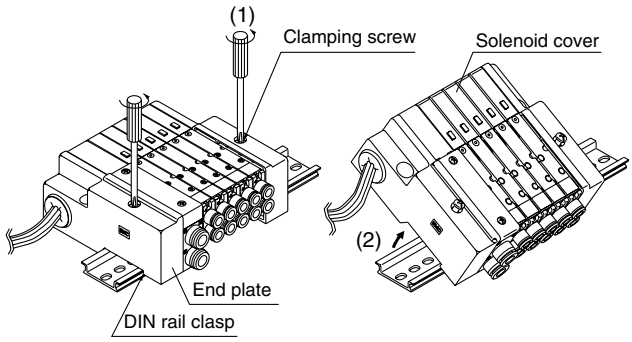
Mounting and Removal of Manifold with DIN Rail

⚠Caution

Removing Manifold from DIN Rail

(1) Loosen the end plate clamping screws on both sides until they turn freely. (The screws do not come out.)

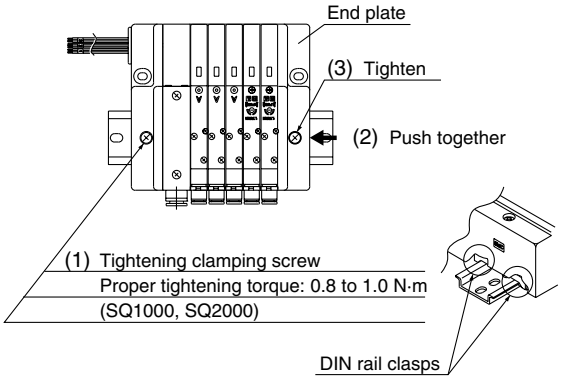
(2) Remove the manifold from the DIN rail by lifting it from the solenoid cover side.



When a manifold contains a large number of stations and is difficult to remove all at once, separate the manifold into several sections before removing it.

Mounting Manifold on DIN Rail

The procedure is the reverse of that above. After tightening the clamping screw on one side, push on the opposite end plate so that there are no gaps between the manifold blockes and then tighten the other clamping screw.



Confirm that the DIN rail clasps are securely hooked into the DIN rail.

⚠ Precautions 4

Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 2-9-2.

Replacement of Cylinder Port Fittings

⚠ Caution

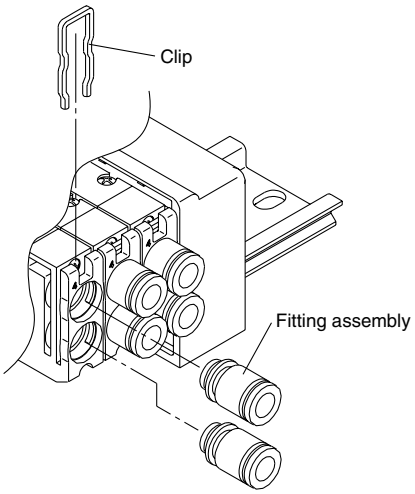
The cylinder port fittings are a cassette for easy replacement.
Fittings are secured with a clip that is inserted from the top side of the valve. Remove the clip with a flat head screwdriver, etc., to replace the fittings.
To mount a fitting, insert the fitting assembly until it stops and reinsert the clip to its designated position.

Applicable tubing O.D. (mm)	Fitting assembly part no.	
	SQ1000	**SQ2000**
3.2	VVQ1000-50A-C3	—
4	VVQ1000-50A-C4	VVQ1000-51A-C4
6	VVQ1000-50A-C6	VVQ1000-51A-C6
8	—	VVQ1000-51A-C8

∗ Part numbers above are for one fitting; however, order them in 10 piece units.

⚠ Caution

Use caution that O-rings must be free from scratches and dust. Otherwise, air leakage may result.



Built-in Silencer Replacement Element

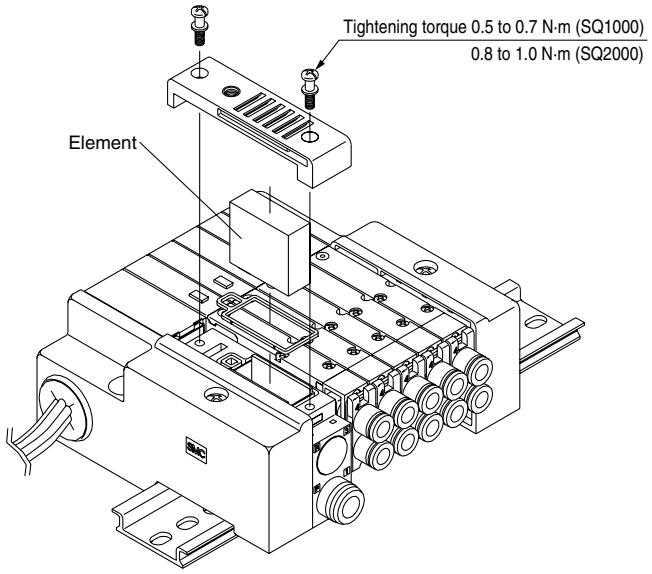
⚠ Caution

A filter element is built into the manifold base end plate. When the element becomes dirty and clogged, this will cause trouble such as a drop in the cylinder speed, etc. Therefore, replace the element regularly.

Element part no.

Type	Element part no.	
	SQ1000	**SQ2000**
Built-in silencer direct exhaust (-S)	SSQ1000-SE	SSQ2000-SE

∗ Part numbers above are for a set of ten elements.



To replace an element, remove the cover on the top side of the end plate and remove the old element with a flat head screwdriver, etc.

How to Calculate the Flow Rate

For obtaining the flow rate, refer to pages 2-1-8 to 2-1-11.

Series SQ1000
Plug-in Unit

How to Order Manifold

SS5Q13 — 08 | FD2 — D | □

Stations

01	1 station
⋮	⋮
24 Note)	24 stations

Note) The maximum number of stations depends on the type of electrical entries.

Option

Nil	None
02 to 24 (1)	DIN rail length specified
B	Back pressure check valve
K (2)	Special wiring specifications (Except double wiring)
N	With name plate (Side ported only)
R	External pilot specifications
S	Built-in silencer, direct exhaust

Note 1) Specify DIN rail length with "D□" at the end. (Enter the number of stations inside □.) Example: -D08

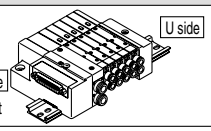
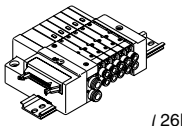
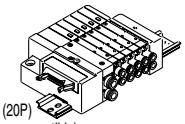
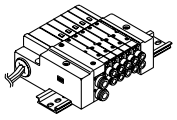
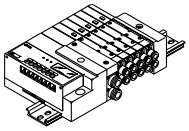
Note 2) Standard wiring specifications are for double wiring. Indicate wiring specifications for single wiring or mixed single and double wiring, or when exceeding the standard maximum number of stations. (Except L kit.)

Note 3) For specifying two or more options, enter them alphabetically. Example: -BKN

Manifold mounting

D	DIN rail mounting style
E	Direct mounting style

Electrical entry

Kit type		Lead wire connector location	Cable specifications	Station	Max. number of stations for special wiring specifications	Max. number of solenoids (2)
F kit  D-sub connector kit	FD0	D side	D-sub connector (25P) kit, without cable	1 to 12 stations	24 stations	24
	FD1		D-sub connector (25P) kit, with 1.5 m cable			
	FD2		D-sub connector (25P) kit, with 3.0 m cable			
	FD3		D-sub connector (25P) kit, with 5.0 m cable			
P kit  Flat ribbon cable connector kit (26P 20P)	PD0	D side (1)	Flat ribbon cable (26P) kit, without cable	1 to 12 stations	24 stations	24
	PD1		Flat ribbon cable (26P) kit, with 1.5 m cable			
	PD2		Flat ribbon cable (26P) kit, with 3.0 m cable			
	PD3		Flat ribbon cable (26P) kit, with 5.0 m cable			
	PDC		Flat ribbon cable (20P) kit, without cable	1 to 9 stations	18 stations	18
J kit  Flat ribbon cable (20P) (PC Wiring System compatible)	JD0	D side	Flat ribbon cable (20P) PC Wiring System compatible	1 to 8 stations	16 stations	16
L kit  Lead wire kit	LD0	D side	Lead wire kit with 0.6 m cable	1 to 12 stations	—	—
	LU0	U side				
	LD1	D side	Lead wire kit, with 1.5 m cable			
	LU1	U side				
	LD2	D side	Lead wire kit, with 3.0 m cable			
	LU2	U side				
S kit  Serial transmission kit	SDF	D side	NKE Corp.: Uni-wire System	1 to 8 stations	16 stations	16
	SDH		NKE Corp.: Uni-wire H System			
	SDJ1		SUNX Corp.: S-LINK System (16 output points)			
	SDJ2		SUNX Corp.: S-LINK System (8 output points)	1 to 4 stations	8 stations	8
	SDQ		DeviceNet, CompoBus/D (OMRON Corp.)	1 to 8 stations	16 stations	16
	SDR1		OMRON Corp.: CompoBus/S System (16 output points)			
	SDR2		OMRON Corp.: CompoBus/S System (8 output points)	1 to 4 stations	8 stations	8
	SDV		Mitsubishi Electric Corp.: CC-LINK System	1 to 8 stations	16 stations	16

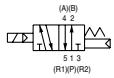
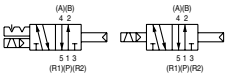
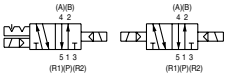
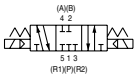
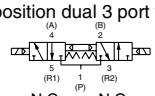
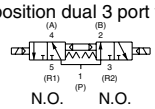
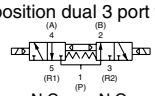
Note 1) Separately order the 20P type cable assembly for the P kit.

Note 2) The maximum number of stations should not be more than the maximum number of solenoids. (The number of solenoids are counted as: 1 for single solenoids and 2 for type 3P and 4P double solenoids.)

How to Order Valves

SQ1 [1] 3 [0] [ ] — [5] [ ] — [C6] [ ] — [ ]

Type of actuation

1	2 position single 
2	2 position double (Latching)  Metal seal / Rubber seal
	2 position double (Double solenoid) (1)  Metal seal / Rubber seal
3	3 position closed center 
4	3 position exhaust center 
5	3 position pressure center 
A (2)	4 position dual 3 port valve  N.C. N.C.
B (2)	4 position dual 3 port valve  N.O. N.O.
C (2)	4 position dual 3 port valve  N.C. N.O.

Note 1) For double solenoid specification, the function symbol below is "D".
Note 2) Only rubber seal types are applicable.

Seal

0	Metal seal
1	Rubber seal

Function

Nil	Standard type (1.0 W DC)
D	2 position double (Double solenoid specifications)
K (1)	High pressure type (1.0 MPa, 1.0 W DC) [Applicable to metal seal only]
N	Negative COM
Y (1)	Low wattage type (0.5 W DC)
R (2)	External pilot specifications

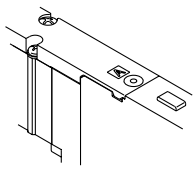
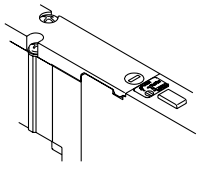
Note 1) Except double (latching) type.
Note 2) Except dual 3 port valves.
Note 3) When two or more symbols are specified, indicate them alphabetically.

Coil voltage

5	24 VDC
6	12 VDC

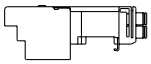
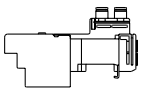
Note) Light/Surge voltage suppressor is built-in.

Manual override

Nil	**B** Note)
Non-locking push type (Tool required)	Locking type (Tool required)
	

Note) Except double (latching) type.

Cylinder port

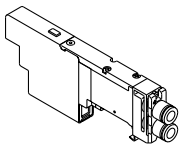
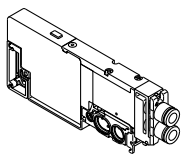
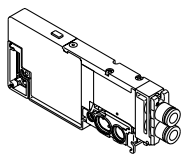
C3	One-touch fitting for ø3.2	Side ported	
C4	One-touch fitting for ø4		
C6	One-touch fitting for ø6		
M5	M5 thread		
L3	One-touch fitting for ø3.2	Note) Top ported	
L4	One-touch fitting for ø4		
L6	One-touch fitting for ø6		
L5	M5 thread		

Note) Can be changed to side ported configuration.

Port plug mounting port

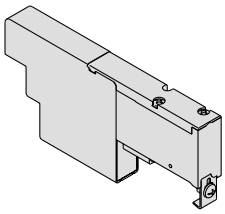
Nil	None
A	Port 4(A)
B	Port 2(B)

With/Without manifold block

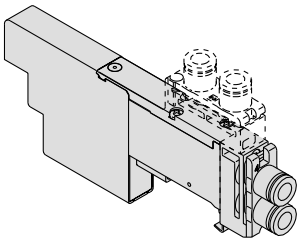
Nil	**M**	**MB**
Without manifold block	With manifold block	With manifold block, built-in back pressure check valve
	 ∗ Lead wire is not included.	 ∗ Lead wire is not included.
• When ordering with manifolds • When only valves are required.	For adding stations	

Manifold Option

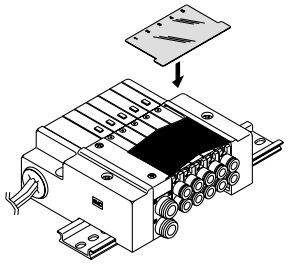
Blanking plate P. 2-3-44
SSQ1000-10A-3



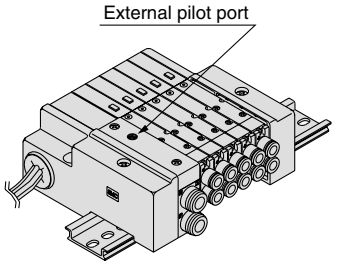
Individual SUP/EXH spacer P. 2-3-45
SSQ1000-PR1-3- C6 / L6



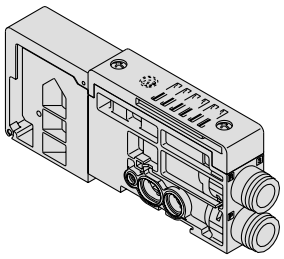
Name plate (-N) P. 2-3-47
SSQ1000-N3-n



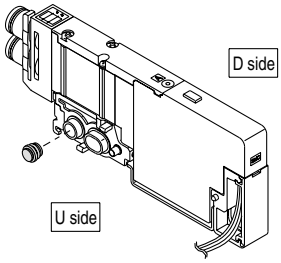
External pilot specifications (-R) P. 2-3-48



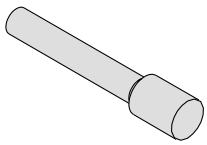
SUP/EXH block P. 2-3-44
SSQ1000-PR-3-C8 (-S)



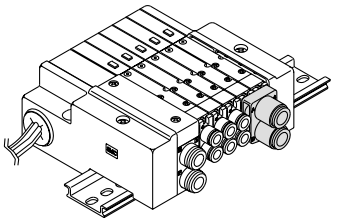
SUP block plate P. 2-3-46
SSQ1000-B-P



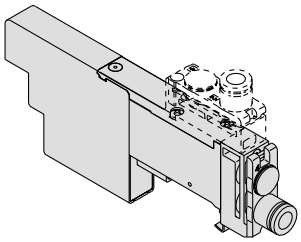
Blanking plug P. 2-3-47
KQ2P-23/04/06/08



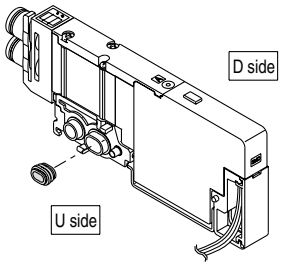
Dual flow fitting P. 2-3-48
SSQ1000-52A- C8 / N9



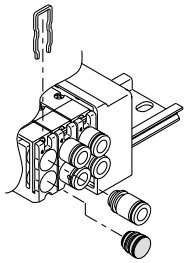
Individual SUP spacer P. 2-3-44
SSQ1000-P-3- C6 / L6



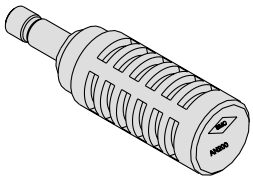
EXH block plate P. 2-3-46
SSQ1000-B-R



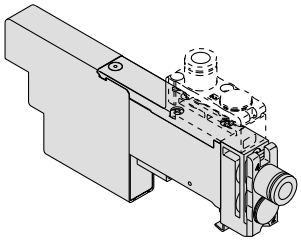
Port plug P. 2-3-47
VVQZ100-CP



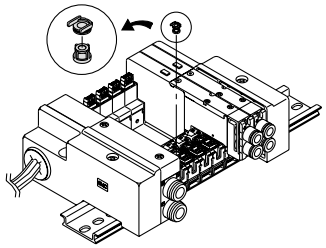
Silencer (For EXH port) P. 2-3-48



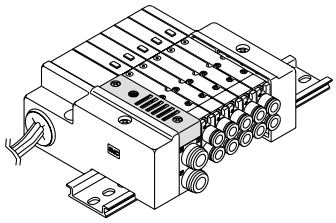
Individual EXH spacer P. 2-3-45
SSQ1000-R-3- C6 / L6



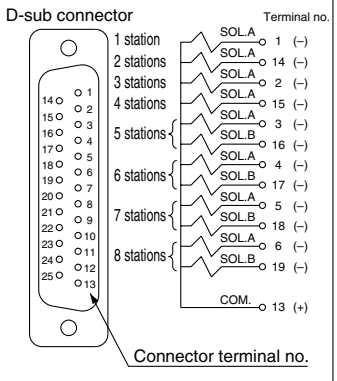
Back pressure check valve (-B) P. 2-3-46
SSQ1000-BP



Built-in silencer (-S) P. 2-3-47



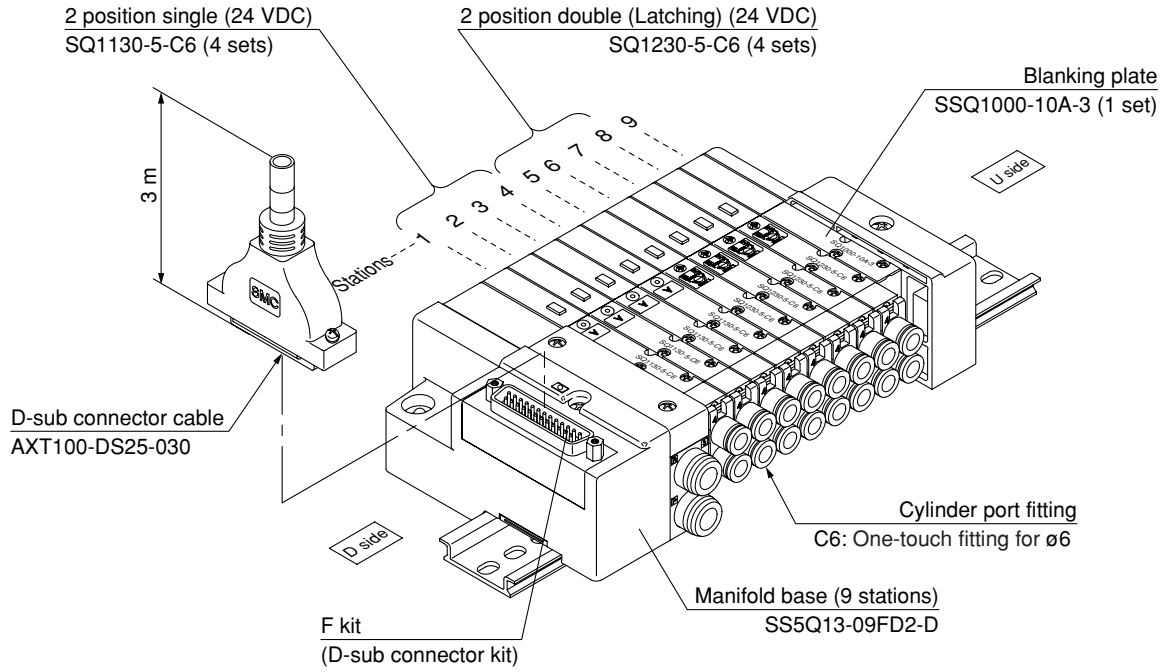
Special wiring specifications (-K) P. 2-3-49



Although the standard products come with double wiring, mixed single and double wiring is available upon request.

How to Order Manifold Assembly (Example)

Example: D-sub connector kit, with cable (3 m)



SS5Q13-09FD2-D ····· 1 set (F kit 9 station manifold base)
∗SQ1130-5-C6 ····· 4 sets (2 position single)
∗SQ1230-5-C6 ····· 4 sets (2 position double [latching])
∗SSQ1000-10A-3 ····· 1 set (Blanking plate)

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

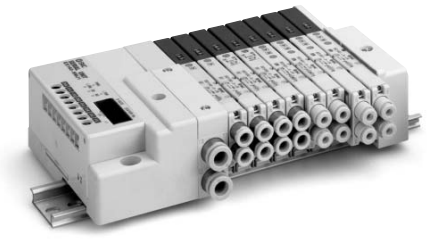
Add the valve and option part numbers in order starting from the first station on the D side.
When entry of part numbers becomes complicated, indicate on the manifold specification sheet.

Valve Specifications

Model

Series		Number of solenoids	Model		Flow characteristic						Response time (ms)(2)		Weight (g)
					1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R1/R2)			Standard: 1 W	Low wattage	
					C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv			
SQ1000	2 position	Single	Metal seal	SQ1130	0.62	0.10	0.14	0.63	0.11	0.14	12 or less	15 or less	80
			Rubber seal	SQ1131	0.79	0.20	0.19	0.80	0.20	0.19	15 or less	20 or less	80
		Double (Latching)	Metal seal	SQ1230	0.62	0.10	0.14	0.63	0.11	0.14	15 or less	—	80
			Rubber seal	SQ1231	0.79	0.20	0.19	0.80	0.20	0.19	20 or less	—	80
		Double (Double solenoid)	Metal seal	SQ1230D	0.62	0.10	0.14	0.63	0.11	0.14	10 or less	13 or less	95
			Rubber seal	SQ1231D	0.79	0.20	0.19	0.80	0.20	0.19	15 or less	20 or less	95
	3 position	Closed center	Metal seal	SQ1330	0.58	0.12	0.14	0.63	0.11	0.14	20 or less	26 or less	100
			Rubber seal	SQ1331	0.64	0.20	0.15	0.58	0.26	0.16	25 or less	33 or less	100
		Exhaust center	Metal seal	SQ1430	0.58	0.12	0.14	0.60	0.14	0.14	20 or less	26 or less	100
			Rubber seal	SQ1431	0.64	0.20	0.15	0.80	0.20	0.19	25 or less	33 or less	100
		Pressure center	Metal seal	SQ1530	0.62	0.12	0.14	0.63	0.14	0.14	20 or less	26 or less	100
			Rubber seal	SQ1531	0.79	0.21	0.19	0.59	0.20	0.14	25 or less	33 or less	100
	4 position	Dual 3 port valve	Rubber seal	SQ1$^{A}_{B}_{C}$31	0.59	0.28	0.15	0.59	0.28	0.15	25 or less	33 or less	95

Note 1) Values for the cylinder port size of C6.
Note 2) Based on JIS B 8375-1981. (Values with a supply pressure of 0.5 MPa and light/surge voltage suppressor. Values fluctuate depending on the pressure and air quality.)



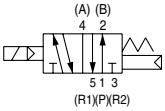
Specifications

			Metal seal	Rubber seal
Valve specifications	Valve construction		Metal seal	Rubber seal
	Fluid		Air/Inert gas	
	Maximum operating pressure		0.7 MPa (High pressure type: 1.0 MPa)(3)	
	Min. operating pressure	Single	0.1 MPa	0.15 MPa
		Double (Latching)	0.18 MPa	0.18 MPa
		Double (Double solenoid)	0.1 MPa	0.1 MPa
		3 position	0.1 MPa	0.2 MPa
		4 position	—	0.15 MPa
	Ambient and fluid temp.		–10 to 50°C(1)	
	Lubrication		Not required	
	Pilot valve manual override		Push type/Locking type (Tool required)	
	Vibration/Impact resistance(2)		30/150 m/s²	
	Protection structure		Dust tight	
Solenoid specifications	Coil rated voltage		12 VDC, 24 VDC	
	Allowable voltage fluctuation		±10% of rated voltage	
	Coil insulation type		Equivalent to class B	
	Power consumption (Current)	24 VDC	1 W DC (42 mA), 0.5 W DC (21 mA)(4)	
		12 VDC	1 W DC (83 mA), 0.5 W DC (42 mA)(4)	

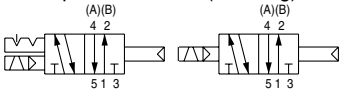
Note 1) Use dry air to prevent condensation when operating at low temperatures.
Note 2) Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)
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. (Values at the initial period)
Note 3) Metal seal type only. [Except double (latching) type.]
Note 4) Values for the low wattage (0.5 W) specifications.

JIS Symbol

2 position single

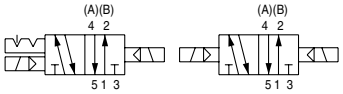


2 position double (Latching)



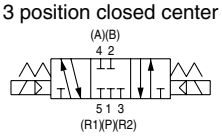
Metal seal Rubber seal

2 position double (Double solenoid)

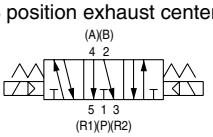


Metal seal Rubber seal

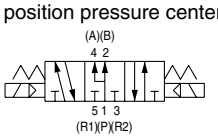
3 position closed center



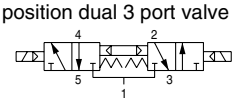
3 position exhaust center



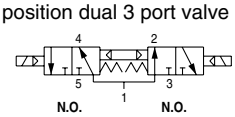
3 position pressure center



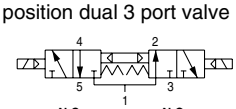
4 position dual 3 port valve (A)



4 position dual 3 port valve (B)



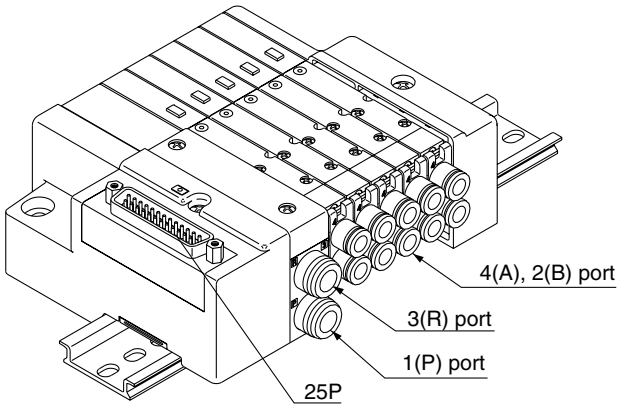
4 position dual 3 port valve (C)



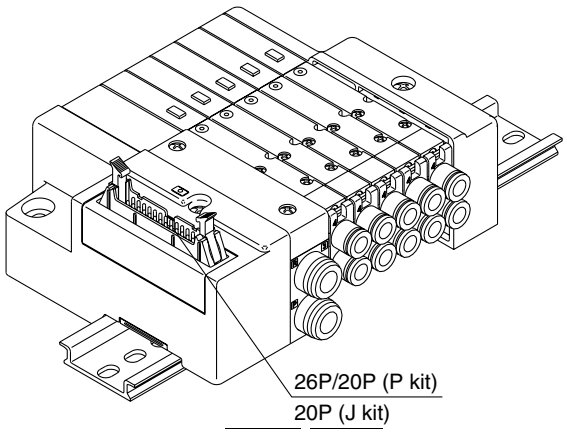
Manifold Specifications

Base model	Porting specifications: Port size (1) 1(P), 3(R)	Porting specifications: Port size (1) 4(A), 2(B) Port location	Porting specifications: Port size (1) 4(A), 2(B) Port size	Applicable solenoid valve	Type of connection		Applicable station (3)	5 station weight (g) (4)	1 station weight (g) (4)
SS5Q13-□□-□	C8 (For ø8) Option Built-in silencer, direct exhaust	Side	C3 (For ø3.2) C4 (For ø4) C6 (For ø6) M5 (M5 thread)	SQ1□30 SQ1□31	F kit: D-sub connector		1 to 12 stations	420	20
					P kit: Flat ribbon cable	26P	1 to 12 stations	420	20
						20P	1 to 9 stations		
		Top (2)	L3 (For ø3.2) L4 (For ø4) L6 (For ø6) L5 (M5 thread)		J kit: Flat ribbon cable PC Wiring System compatible		1 to 8 stations	420	20
					L kit: Lead wire		1 to 12 stations	460	35
					S kit: Serial transmission		1 to 8 stations	475	20

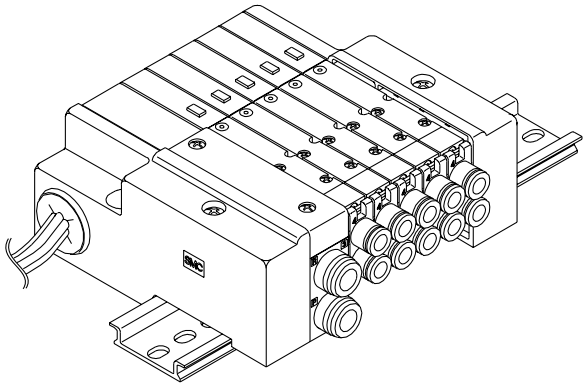
Note 1) One-touch fittings in inch sizes are also available. For details, refer to page 2-3-56.
Note 2) Can be changed to side ported configuration.
Note 3) An optional specification for special wiring is available to increase the maximum number of stations. Refer to page 2-3-54 for details.
Note 4) Except valves. For valve weight, refer to page 2-3-10.



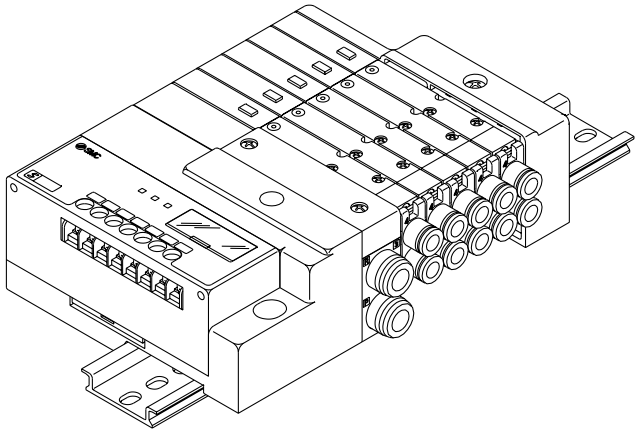
F kit



P kit **J kit**

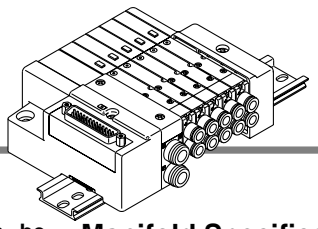


L kit



S kit

F Kit (D-sub connector kit)

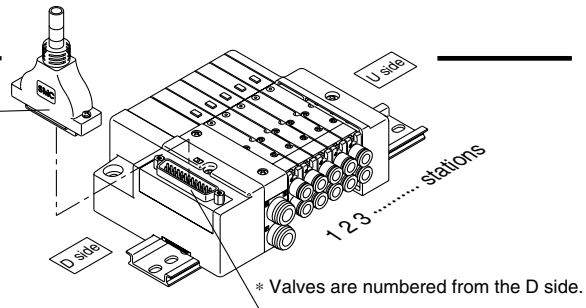


- **Simplification and labor savings for wiring work can be achieved by using a D-sub connector for the electrical connection.**
- **Using connector for flat ribbon cable (25P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	12 stations (24 as an option)

D-sub Connector (25 pins)

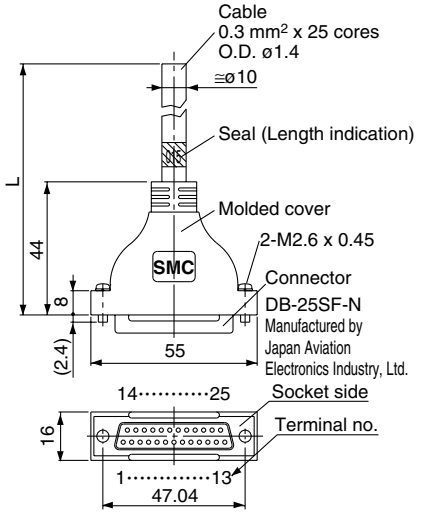


∗ Valves are numbered from the D side.

Cable assembly ●

AXT100-DS25-$^{015}_{030}_{050}$

(D-sub connector cable assemblies can be ordered with manifolds. Refer to manifold ordering.)



D-sub Connector Cable Assembly Terminal No.

Terminal number	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 (Option)

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 0.3 mm² x 25 cores
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.

∗ Cannot be used for transfer wiring.

Electric Characteristics

Item	Characteristics
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit VAC, 1 min.	1000
Insulation resistance MΩ/km, 20°C	5 or less

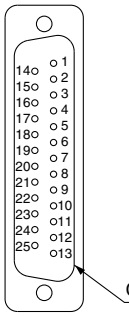
Note) The minimum bending radius for D-sub connector cables is 20 mm.

Connector manufacturers' example

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

Electrical wiring specifications ●

D-sub connector



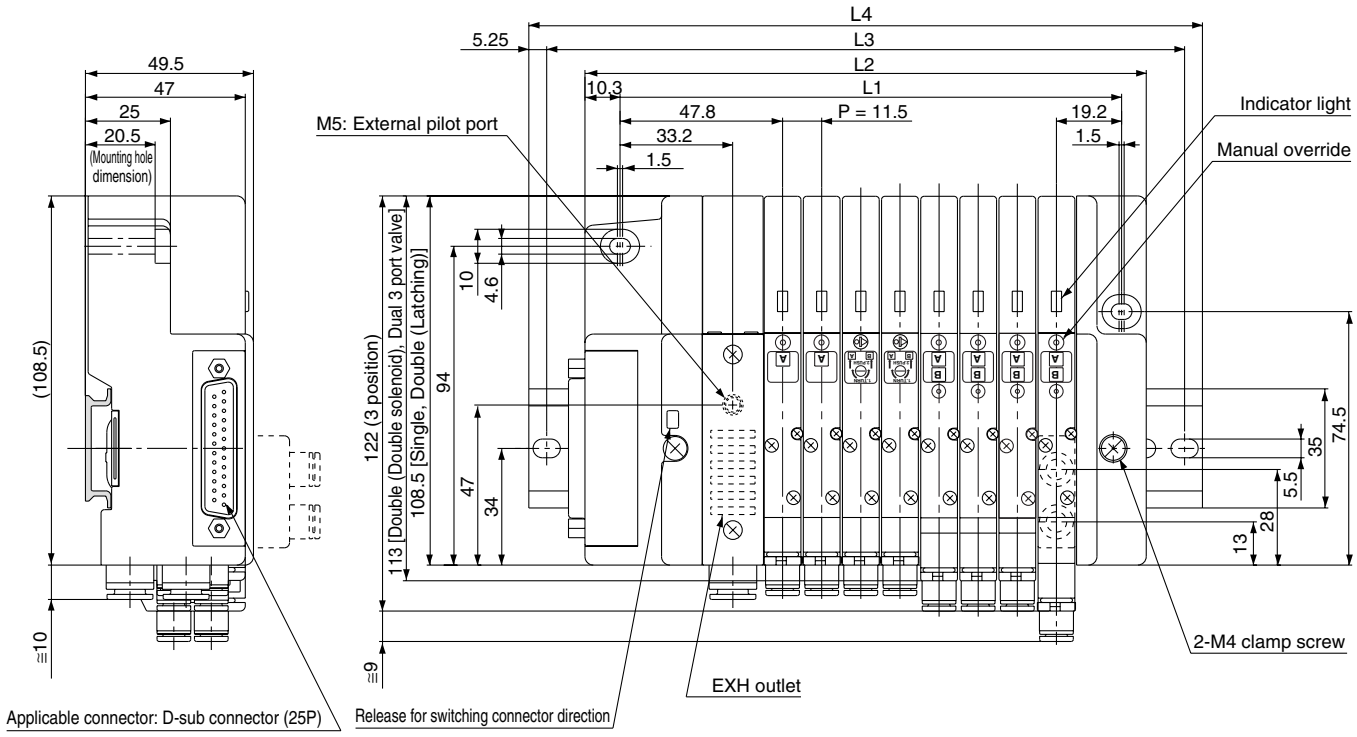
Connector terminal no.

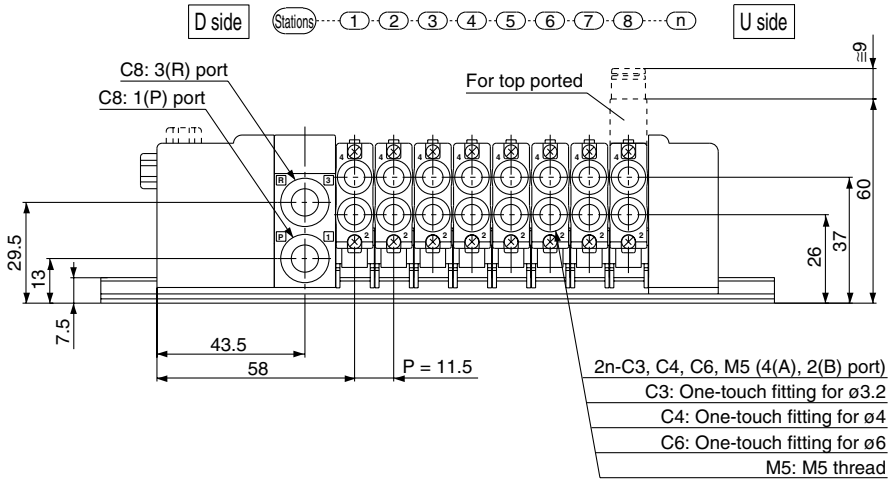
As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-54.

Lead wire colors for D-sub connector assembly (AXT100-DS25-$^{015}_{030}_{050}$)

		Terminal no.	Polarity		Lead wire color	Dot marking
1 station	SOL.A	1	(–)	(+)	Black	None
	SOL.B	14	(–)	(+)	Yellow	Black
2 stations	SOL.A	2	(–)	(+)	Brown	None
	SOL.B	15	(–)	(+)	Pink	Black
3 stations	SOL.A	3	(–)	(+)	Red	None
	SOL.B	16	(–)	(+)	Blue	White
4 stations	SOL.A	4	(–)	(+)	Orange	None
	SOL.B	17	(–)	(+)	Purple	None
5 stations	SOL.A	5	(–)	(+)	Yellow	None
	SOL.B	18	(–)	(+)	Gray	None
6 stations	SOL.A	6	(–)	(+)	Pink	None
	SOL.B	19	(–)	(+)	Orange	Black
7 stations	SOL.A	7	(–)	(+)	Blue	None
	SOL.B	20	(–)	(+)	Red	White
8 stations	SOL.A	8	(–)	(+)	Purple	White
	SOL.B	21	(–)	(+)	Brown	White
9 stations	SOL.A	9	(–)	(+)	Gray	Black
	SOL.B	22	(–)	(+)	Pink	Red
10 stations	SOL.A	10	(–)	(+)	White	Black
	SOL.B	23	(–)	(+)	Gray	Red
11 stations	SOL.A	11	(–)	(+)	White	Red
	SOL.B	24	(–)	(+)	Black	White
12 stations	SOL.A	12	(–)	(+)	Yellow	Red
	SOL.B	25	(–)	(+)	White	None
	COM.	13	(+)	(–)	Orange	Red
			Positive common specifications	Note) Negative common specifications		

Note) When using the negative common specifications, use valves for negative common.



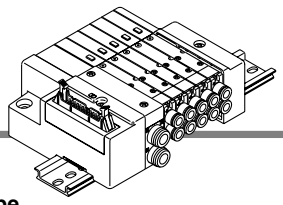


Dimensions

Formula: L1 = 11.5n + 55.5, L2 = 11.5n + 73 n: Stations (Maximum 24 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	67	78.5	90	101.5	113	124.5	136	147.5	159	170.5	182	193.5	205	216.5	228	239.5	251	262.5	274	285.5	297	308.5	320	331.5
L2	84.5	96	107.5	119	130.5	142	153.5	165	176.5	188	199.5	211	222.5	234	245.5	257	268.5	280	291.5	303	314.5	326	337.5	349
L3	112.5	125	137.5	150	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	300	312.5	325	337.5	350	362.5	375
L4	123	135.5	148	160.5	160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	310.5	323	335.5	348	360.5	373	385.5

P Kit (Flat ribbon cable connector)

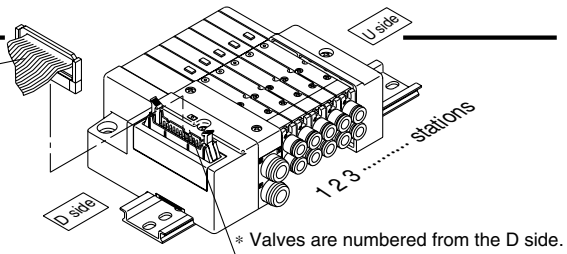


- **Simplification and labor savings for wiring work can be achieved by using a flat ribbon cable for the electrical connection.**
- **Using connector for flat ribbon cable (26P, 20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	12 stations (24 as an option)

Flat Ribbon Cable (26 pins, 20 pins)

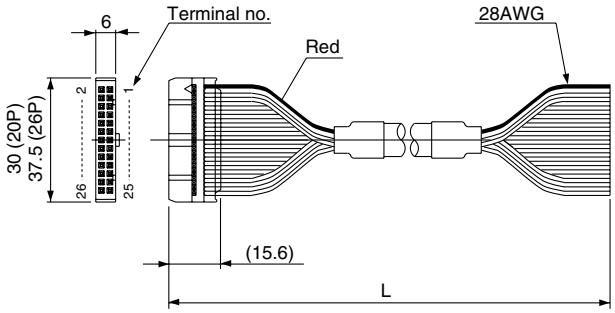


∗ Valves are numbered from the D side.

Cable assembly ●

AXT100-FC $\frac{20}{26}$ **-** $\frac{1}{2}$ **3**

(Type 26P flat ribbon cable connector assemblies can be ordered with manifolds. Refer to manifold ordering.)



Flat Ribbon Cable Connector Assembly (Option)

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

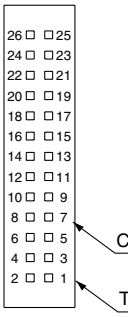
∗ For other commercial connectors, use a 26 pins or 20 pins with strain relief conforming to MIL-C-83503.
∗ Cannot be used for transfer wiring.

Connector manufacturers' example

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

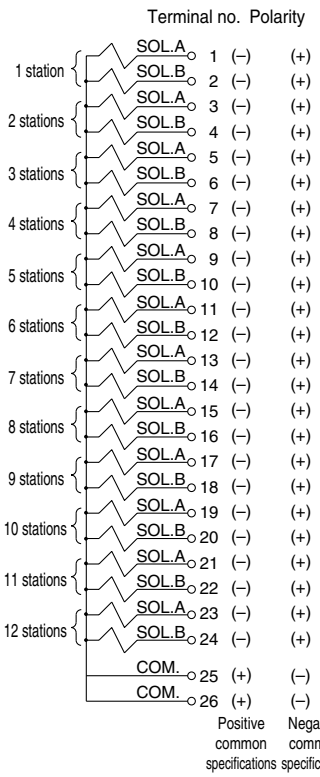
Electrical wiring specifications ●

Flat ribbon cable connector

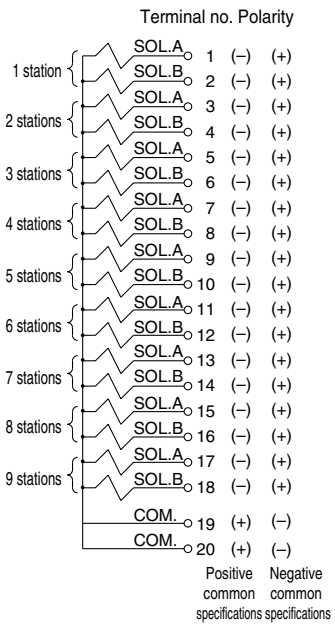


Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-54.

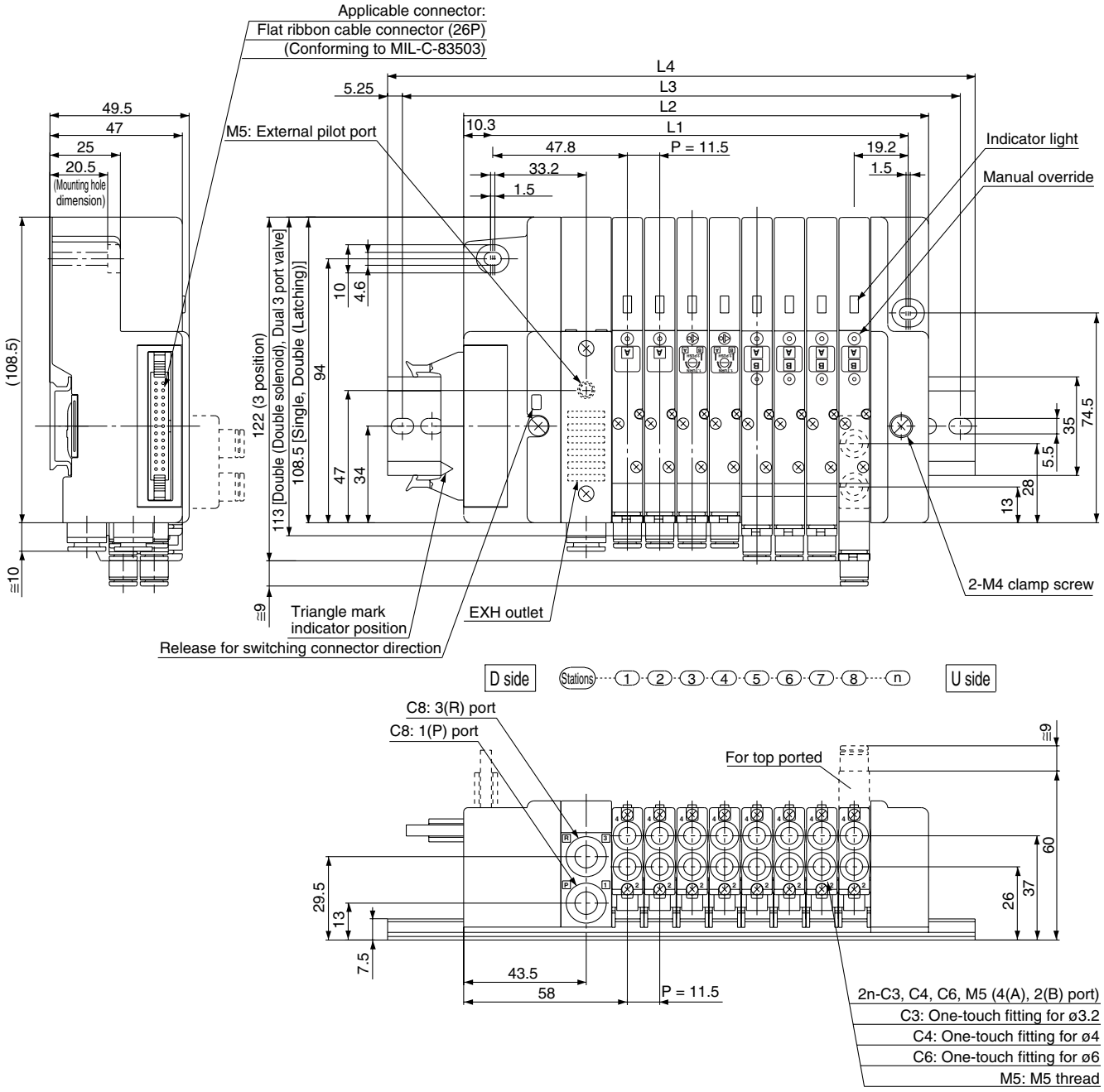
<26P>



<20P>



Note) When using the negative common specifications, use valves for negative common.

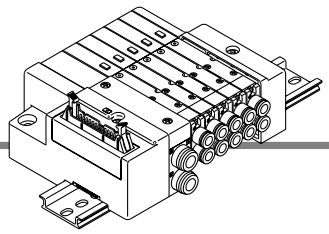


Dimensions

Formula: L1 = 11.5n + 55.5, L2 = 11.5n + 73 n: Stations (Maximum 24 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	67	78.5	90	101.5	113	124.5	136	147.5	159	170.5	182	193.5	205	216.5	228	239.5	251	262.5	274	285.5	297	308.5	320	331.5
L2	84.5	96	107.5	119	130.5	142	153.5	165	176.5	188	199.5	211	222.5	234	245.5	257	268.5	280	291.5	303	314.5	326	337.5	349
L3	112.5	125	137.5	150	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	300	312.5	325	337.5	350	362.5	375
L4	123	135.5	148	160.5	160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	310.5	323	335.5	348	360.5	373	385.5

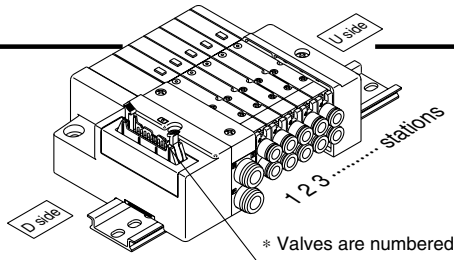
J Kit (PC Wiring System compatible flat ribbon cable kit)



- **PC Wiring System compatible.**
- **Using connector for flat ribbon cable (20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	8 stations (16 as an option)

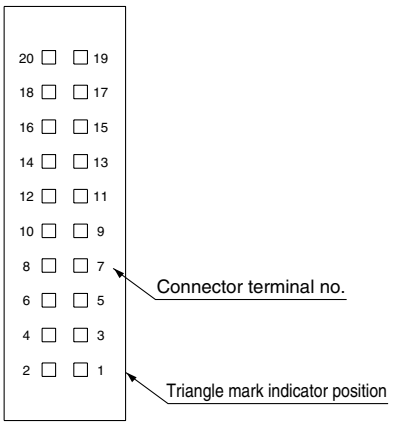


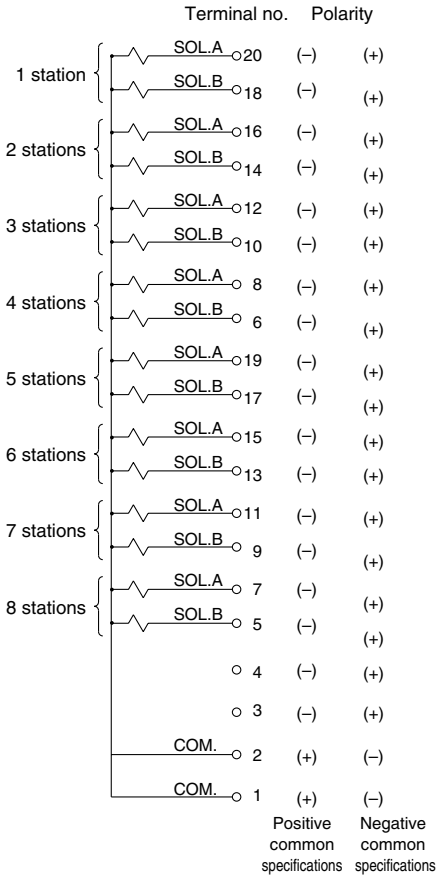
∗ Valves are numbered from the D side.

Electrical wiring specifications ●

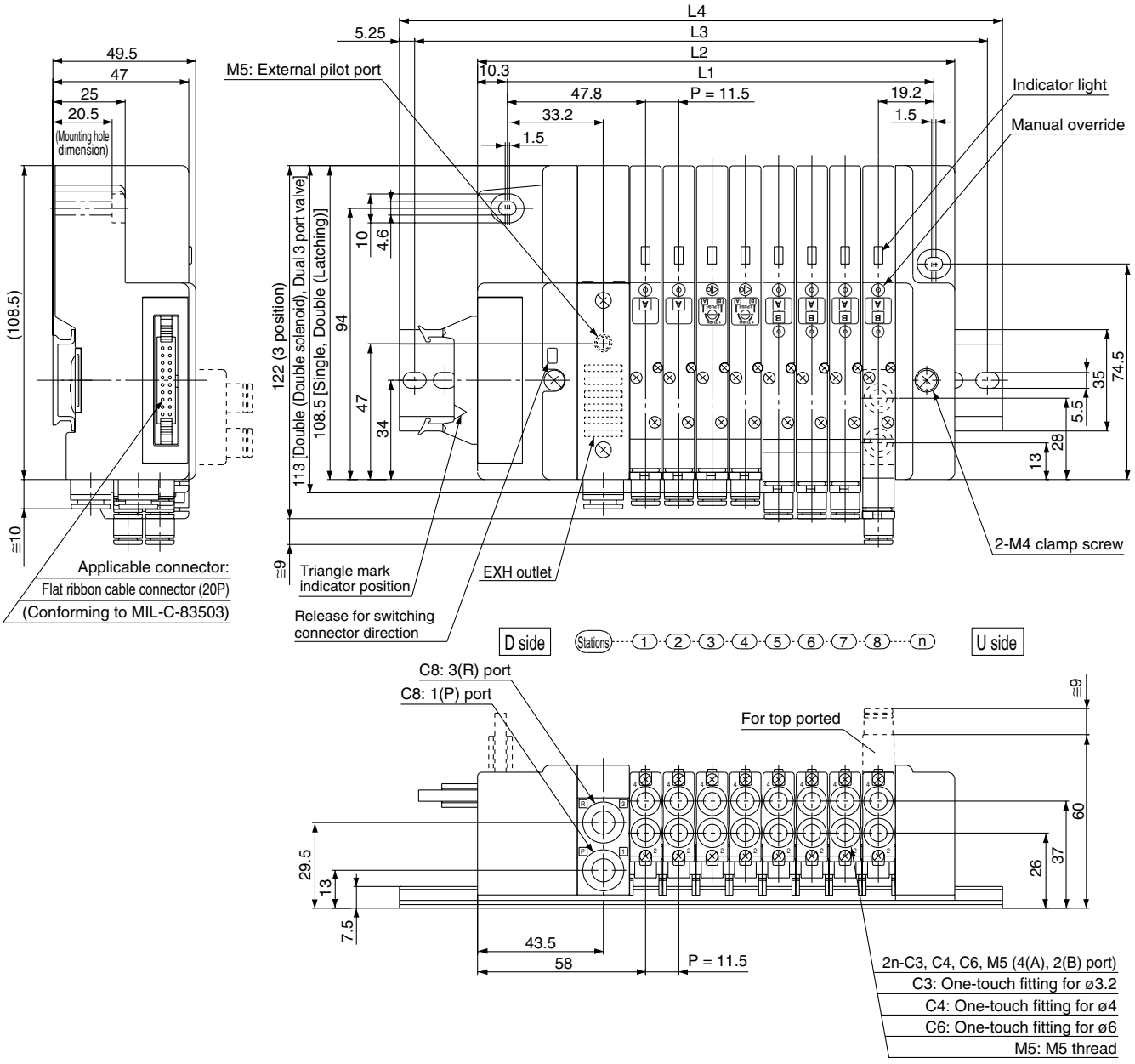
Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-54.

Flat ribbon cable connector





Note) When using the negative common specifications, use valves for negative common.
For details about the PC Wiring System, refer to catalog CAT.ES02-20 separately.

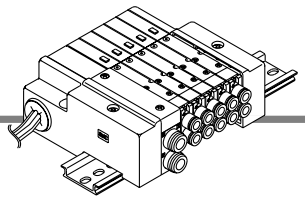


Dimensions

Formula: L1 = 11.5n + 55.5, L2 = 11.5n + 73 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	67	78.5	90	101.5	113	124.5	136	147.5	159	170.5	182	193.5	205	216.5	228	239.5
L2	84.5	96	107.5	119	130.5	142	153.5	165	176.5	188	199.5	211	222.5	234	245.5	257
L3	112.5	125	137.5	150	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5
L4	123	135.5	148	160.5	160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298

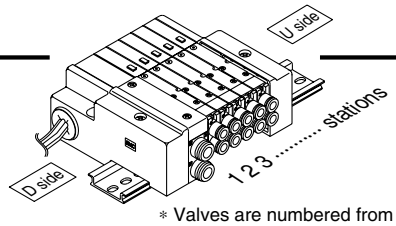
L Kit (Lead wire cable)



● **Direct electrical entry type**

Manifold Specifications

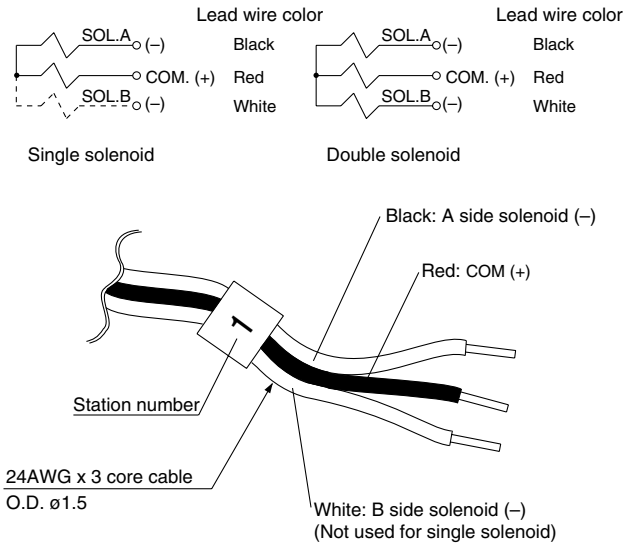
Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	12 stations



∗ Valves are numbered from the D side.

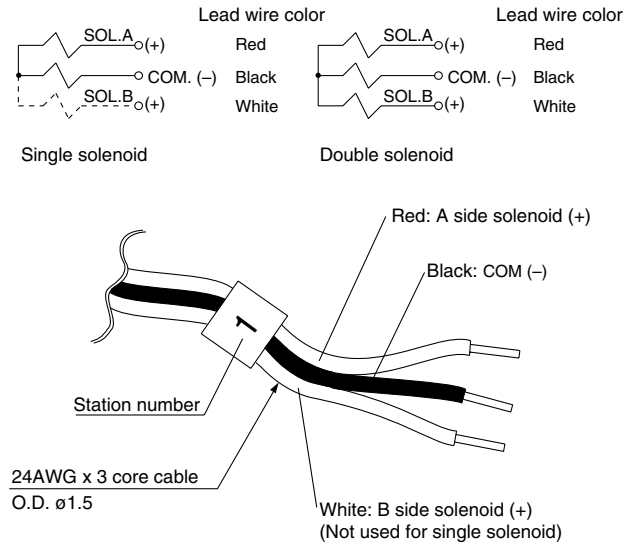
● Wiring Specifications: Positive COM Specifications

Three lead wires are included per station regardless of valves used.
Among the three lead wires, the red wire is for COM.

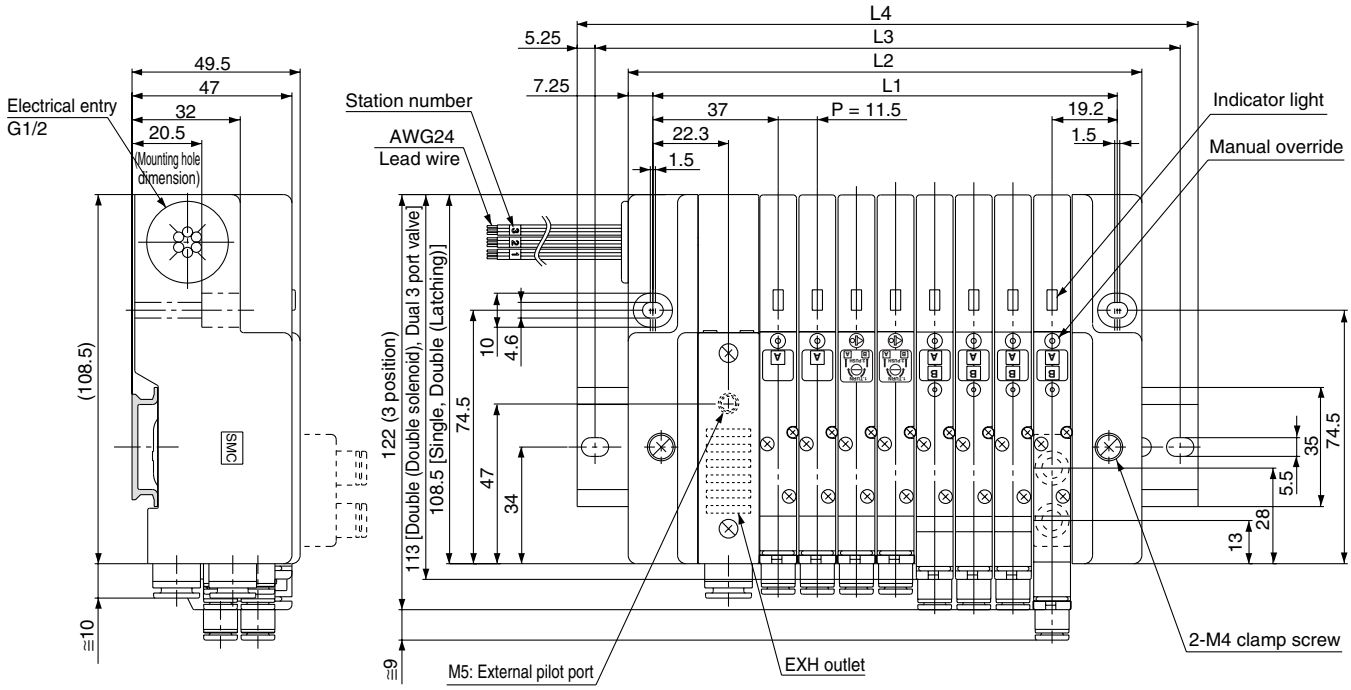


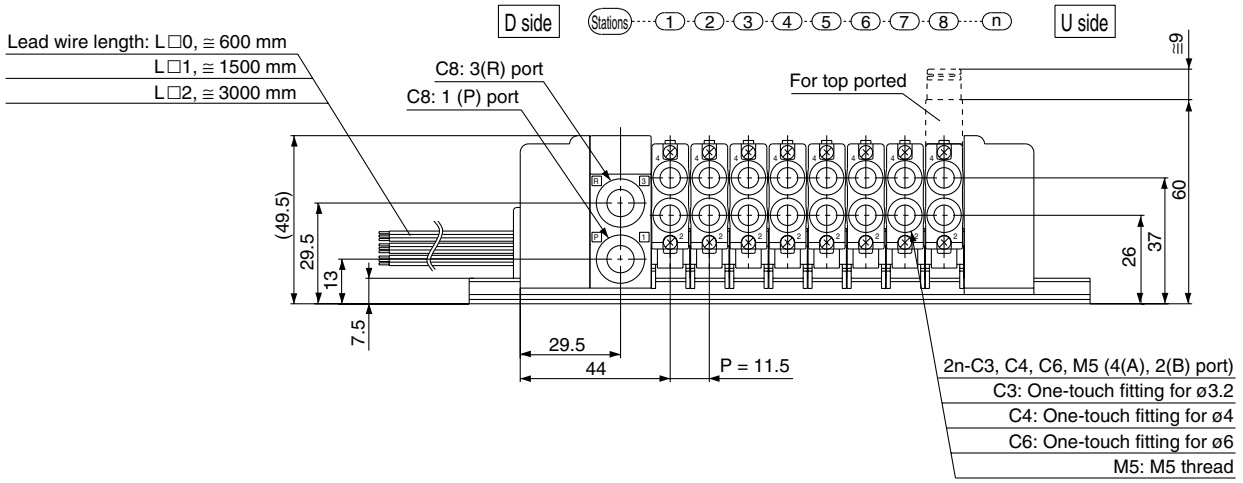
● Wiring Specifications: Negative COM Specifications (Option)

Three lead wires are included per station regardless of valves used.
Among the three lead wires, the black wire is for COM.



Note) When using the negative common specifications, use valves for negative common.



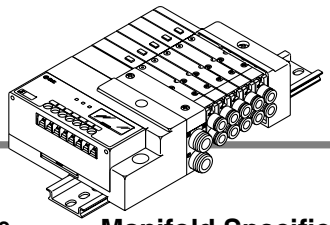


Dimensions

Formula: L1 = 11.5n + 44.5, L2 = 11.5n + 59 n: Stations (Maximum 12 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12
L1	56	67.5	79	90.5	102	113.5	125	136.5	148	159.5	171	182.5
L2	70.5	82	93.5	105	116.5	128	139.5	151	162.5	174	185.5	197
L3	100	112.5	125	125	137.5	150	162.5	175	187.5	200	212.5	225
L4	110.5	123	135.5	135.5	148	160.5	173	185.5	198	210.5	223	235.5

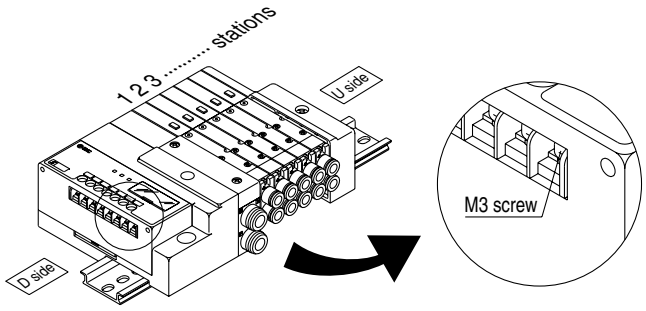
S Kit (Serial transmission unit)



- **The serial transmission system reduces wiring work, while minimizing wiring and saving space.**
- **The maximum number of stations is 8. (16 as an option). Only for type J2 and R2, the maximum stations are 4 (8 as an option).**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	8 stations



- **Stations are counted from station 1 on the D side.**
- **Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.**

Item	Specifications
External power supply	24 VDC, +10%, –5%
Current consumption (Inside unit)	0.1 A or less

● Corresponding SI unit output numbers and solenoid coils

<Wiring example 1>

SI unit output no.	0	1	2	3	4	5	6	7	8	9
	A	B	A	B	A	None	A	None	A	B
SI unit	Double		Double		Single		Single		Single	
Stations	1		2		3		4		5	

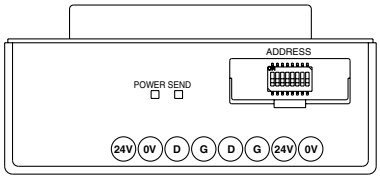
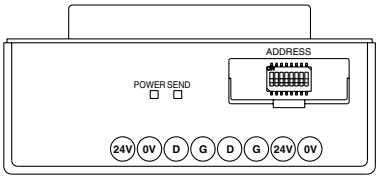
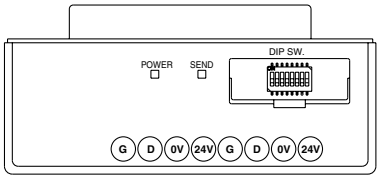
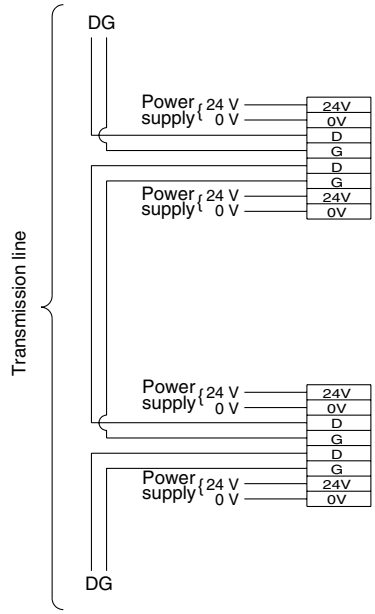
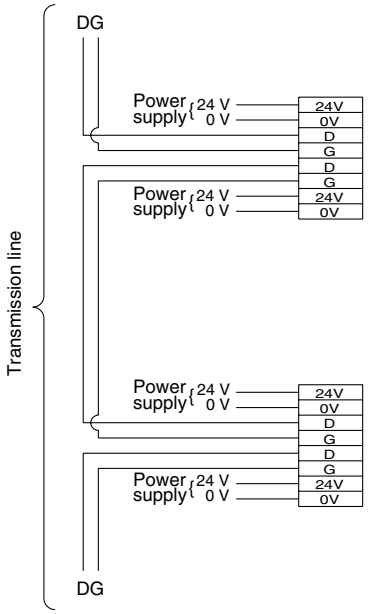
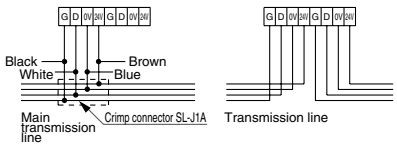
Double wiring (Standard)

<Wiring example 2>

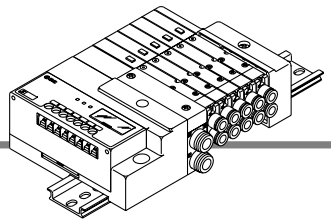
∗ Mixed wiring is available as an option. Specify the wiring specification by means of the manifold specification sheet. Refer to page 2-3-54 for details.

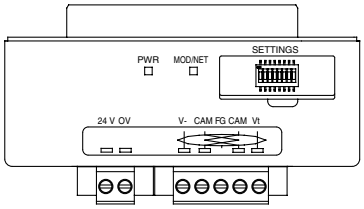
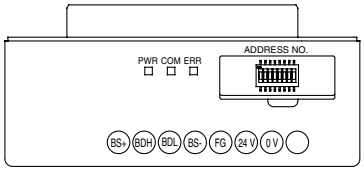
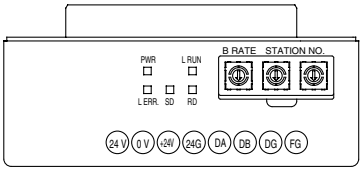
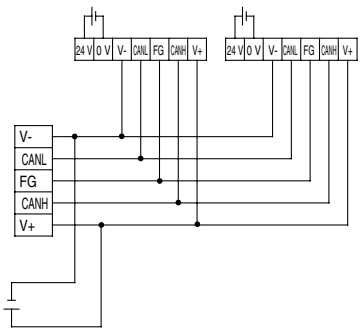
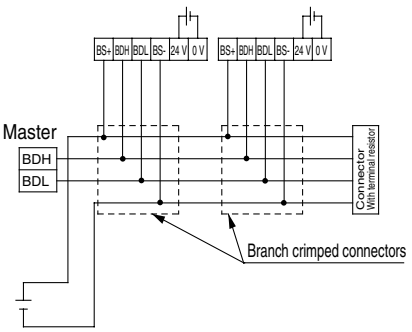
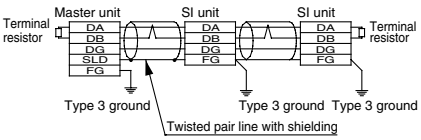
SI unit output no.	0	1	2	3	4	5	6	7
	A	B	A	B	A	A	A	B
SI unit	Double		Double		Single	Single	Double	
Stations	1		2		3	4	5	

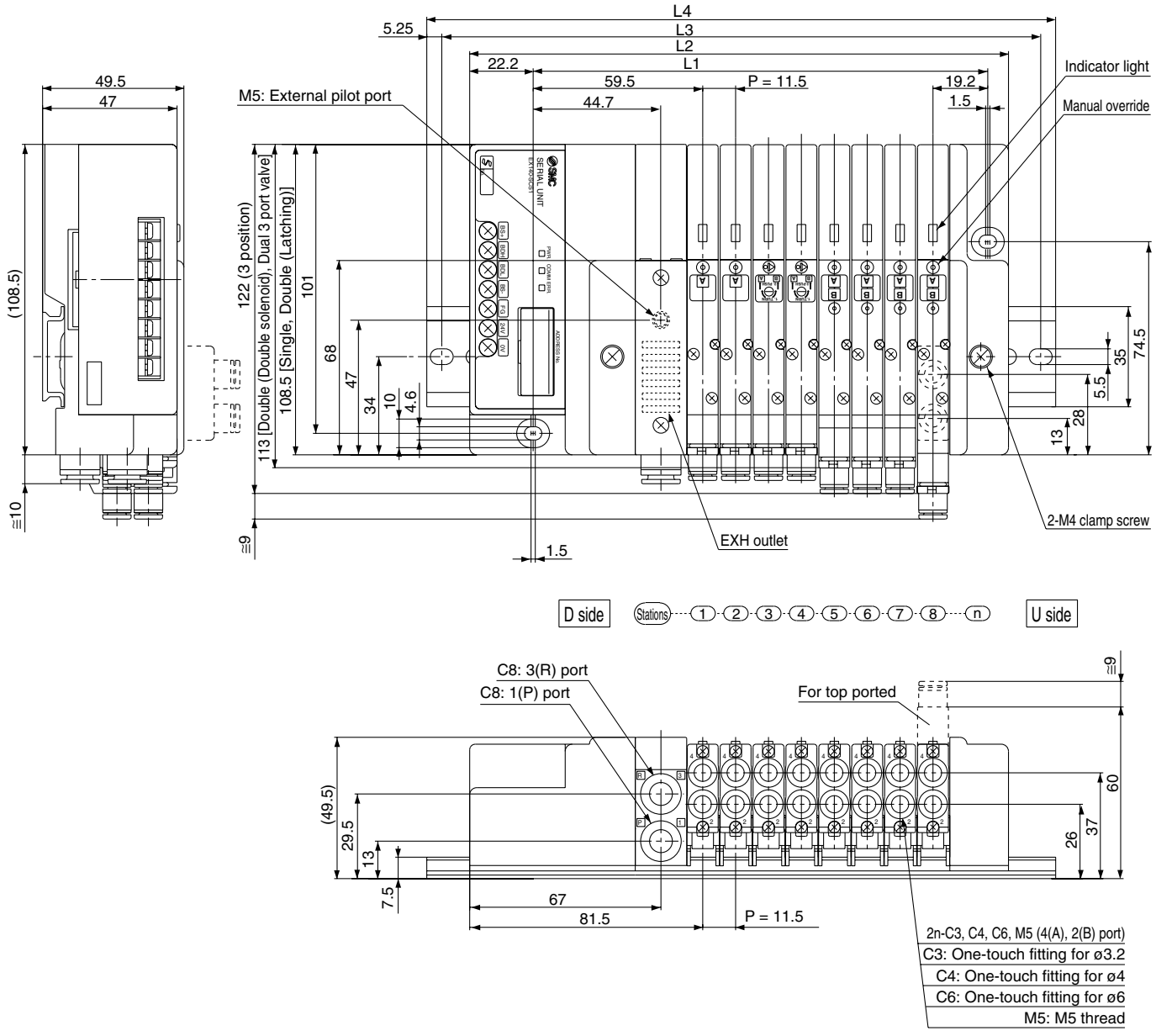
Mixed single and double wiring (Option)

	Type SDF NKE Corporation Uni-wire System	Type SDH NKE Corporation Uni-wire H System	Type SDJ1, SDJ2 SUNX Corporation S-LINK System
Name of terminal block, LED			
	LED: POWER — Light ON with power input (Light ON when normal, flickers when voltage is low) LED: SEND — Transmission indicator Normal: Blinks, Abnormal: Light OFF or ON	LED: POWER — Light ON with power input (Light ON when normal, flickers when voltage is low) LED: SEND — Transmission indicator Normal: Blinks, Abnormal: Light OFF or ON	LED: POWER — Light ON with power input LED: SEND — Transmission indicator Normal: Blinks, Abnormal: Blinks slowly
Cable wiring			a) Type T branching multi-drop wiring (S-LINK System) b) Crossover wiring (Sensor link system)  The above is the example of using dedicated S-LINK flat ribbon cable SL-RCM□00.
Note	• Uni-wire System Send unit: SD-120 • No. of output points, 16 points	• Uni-wire H System Send unit: SD-H2 • No. of output points, 16 points	• S-LINK System S-LINK controller: SL-CU1 • No. of output points, 16 points (Type SDJ1) No. of output points, 8 points (Type SDJ2)

S Kit (Serial transmission unit)



	Type SDQ OMRON Corporation DeviceNet, CompoBus/D	Type SDR1, SDR2 OMRON Corporation CompoBus/S System	Type SDV Mitsubishi Electric Corporation CC-LINK System
Name of terminal block, LED			
	LED / **Description** POWER: Green light ON with circuit power input MOD/NET: Light OFF: When the unit is not online or circuit power is OFF MOD/NET: Green light ON continuously: When the unit is online and in operation MOD/NET: Red light blinks: When a reversible abnormal transmission occurs MOD/NET: Red light ON continuously: When irreversible abnormal transmission occurs or the same line is unable to go online	**LED** / **Description** POWER: Light ON with transmission power input, light Off without it COMM: Light ON with normal transmission, light OFF with abnormal or standby transmission ERR.: Light ON with abnormal transmission, light Off with normal or standby transmission	**LED** / **Description** POWER: Light ON with transmission power input, light Off without it L RUN: Light ON when receiving normal data SD: Light ON when sending data RD: Light ON when receiving data L ERR.: Light ON with transmission error/setting error, light blinks with changes in the station no. or transmission speed setting
Cable wiring			
Note	• DeviceNet • OMRON Corporation CompoBus/D System Master unit: C200HW-DRM21 • No. of output points, 16 points	• CompoBus/S System Master unit: C200HW-SRM21 Master unit: CQM1-SRM21 • No. of output points, 16 points (Type SDR1) No. of output points, 8 points (Type SDR2)	• CC-LINK System Master unit: AJ61BT11 Master unit: A1SJ61BT11 Master unit: AJ61QBT11 Master unit: A1SJ61QBT11 • No. of output points, 16 points



Dimensions

Formula: L1 = 11.5n + 67, L2 = 11.5n + 96.5 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	78.5	90	101.5	113	124.5	136	147.5	159	170.5	182	193.5	205	216.5	228	239.5	251
L2	108	119.5	131	142.5	154	165.5	177	188.5	200	211.5	223	234.5	246	257.5	269	280.5
L3	137.5	150	162.5	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	300
L4	148	160.5	173	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	310.5

Series SQ2000
Plug-in Manifold

How to Order Manifold

SS5Q23 — 08 | FD2 — D | □

Stations

01	1 station
⋮	⋮
16 Note)	16 stations

Note) The maximum number of stations depends on the type of electrical entries.

Manifold mounting

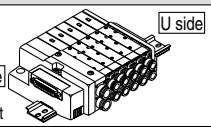
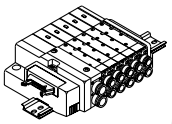
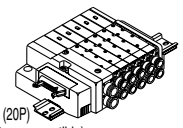
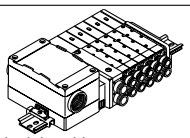
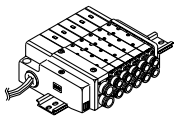
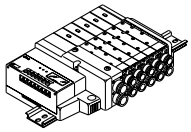
D	DIN rail mounting style
E	Direct mounting style

Option

Nil	None
02 to 24 (1)	DIN rail length specified
B	Back pressure check valve
K (2)	Special wiring specifications (Except double wiring)
N	With name plate (Side ported only)
R	External pilot specifications
S	Built-in silencer, direct exhaust

Note 1) Specify DIN rail length with "D□" at the end. (Enter the number of stations inside □.) Example: -D08
Note 2) Standard wiring specifications are for double wiring. Indicate wiring specifications for single wiring or mixed single and double wiring, or when exceeding the standard maximum number of stations. (Except L kit.)
Note 3) For specifying two or more options, enter them alphabetically. Example: -BKN

Electrical entry

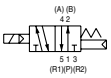
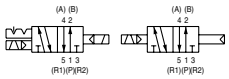
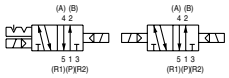
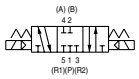
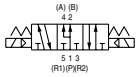
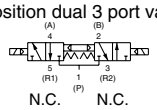
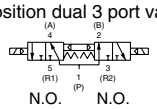
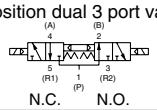
Kit type		Lead wire connector location	Cable specifications	Stations	Max. number of stations for special wiring specifications	Max. number of solenoids (2)
F kit  D-sub Connector kit	**FD0**	D side	D-sub connector (25P) kit, without cable	1 to 12 stations	16 stations	24
	FD1		D-sub connector (25P) kit, with 1.5 m cable			
	FD2		D-sub connector (25P) kit, with 3.0 m cable			
	FD3		D-sub connector (25P) kit, with 5.0 m cable			
P kit  Flat ribbon cable connector kit (26P 20P)	**PD0**	D side (1)	Flat ribbon cable (26P) kit, without cable	1 to 12 stations	16 stations	24
	PD1		Flat ribbon cable (26P) kit, with 1.5 m cable			
	PD2		Flat ribbon cable (26P) kit, with 3.0 m cable			
	PD3		Flat ribbon cable (26P) kit, with 5.0 m cable			
	PDC		Flat ribbon cable (20P) kit, without cable	1 to 9 stations		18
J kit  Flat ribbon cable (20P) (PC Wiring System compatible)	**JD0**	D side	Flat ribbon cable (20P) PC Wiring System compatible	1 to 8 stations	16 stations	16
T kit  Terminal block box kit	**TD0**	D side	Terminal block box kit	1 to 10 stations	16 stations	16
L kit  Lead wire kit	**LD0**	D side	Lead wire kit with 0.6 m cable	1 to 12 stations	—	—
	LU0	U side				
	LD1	D side	Lead wire kit, with 1.5 m cable			
	LU1	U side				
	LD2	D side	Lead wire kit, with 3.0 m cable			
	LU2	U side				
S kit  Serial transmission kit	**SDF**	D side	NKE Corp.: Uni-wire System	1 to 8 stations	16 stations	16
	SDH		NKE Corp.: Uni-wire H System			
	SDJ1		SUNX Corp.: S-LINK System (16 output points)			
	SDJ2		SUNX Corp.: S-LINK System (8 output points)	1 to 4 stations	8 stations	8
	SDQ		DeviceNet, CompoBus/D (OMRON Corp.)	1 to 8 stations	16 stations	16
	SDR1		OMRON Corp.: CompoBus/S System (16 output points)			
	SDR2		OMRON Corp.: CompoBus/S System (8 output points)	1 to 4 stations	8 stations	8
	SDV		Mitsubishi Electric Corp.: CC-LINK System	1 to 8 stations	16 stations	16

Note 1) Separately order the 20P type cable assembly for the P kit.
Note 2) The maximum number of stations should not be more than the maximum number of solenoids. (The number of solenoids are counted as: 1 for single solenoids and 2 for type 3P and 4P double solenoids.)

How to Order Valves

SQ2 [1] 3 [0] [ ] — [5] [ ] — [C6] — [ ] — [ ]

Type of actuation

1	2 position single 
2	2 position double (Latching)  Metal seal / Rubber seal
	2 position double (Double solenoid) (1)  Metal seal / Rubber seal
3	3 position closed center 
4	3 position exhaust center 
5	3 position pressure center 
A (2)	4 position dual 3 port valve  N.C. N.C.
B (2)	4 position dual 3 port valve  N.O. N.O.
C (2)	4 position dual 3 port valve  N.C. N.O.

Note 1) For double solenoid specification, the function symbol below is "D".
Note 2) Only rubber seal types are applicable.

Seal

0	Metal seal
1	Rubber seal

Function

Nil	Standard type (1.0 W DC)
D	2 position double (Double solenoid specifications)
N	Negative common
Y (1)	Low wattage type (0.5 W DC)
R (2)	External pilot specifications

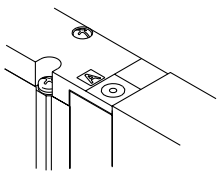
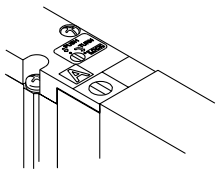
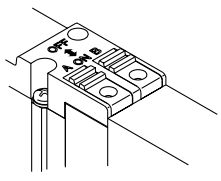
Note 1) Except double (latching) type.
Note 2) Except dual 3 port valves.
Note 3) When two or more symbols are specified, indicate them alphabetically.

Coil voltage

5	24 VDC
6	12 VDC

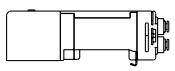
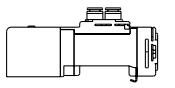
Note) Light/Surge voltage suppressor is built-in.

Manual override

Nil	**B** Note)	**D** Note)
Non-locking push type (Tool required)	Locking type (Tool required)	Slide locking type (Manual type) ∗ Only side ported type applicable
		

Note) Except double (latching) type.

Cylinder port

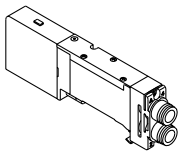
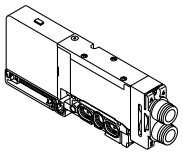
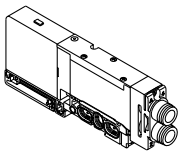
C4	One-touch fitting for ø4	Side ported	
C6	One-touch fitting for ø6		
C8	One-touch fitting for ø8		
L4	One-touch fitting for ø4	Note) Top ported	
L6	One-touch fitting for ø6		
L8	One-touch fitting for ø8		

Note) Can be changed to side ported configuration.

Port plug mounting port

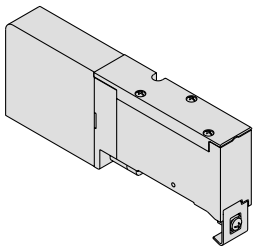
Nil	None
A	Port 4(A)
B	Port 2(B)

With/Without manifold block

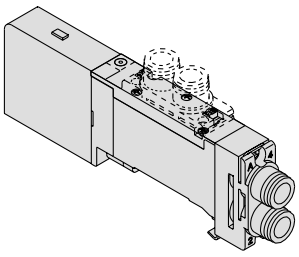
Nil	**M**	**MB**
Without manifold block	With manifold block	With manifold block, built-in back pressure check valve
	 ∗ Lead wire is not included.	 ∗ Lead wire is not included.
• When ordering with manifolds • When only valves are required.	For adding stations	

Manifold Option

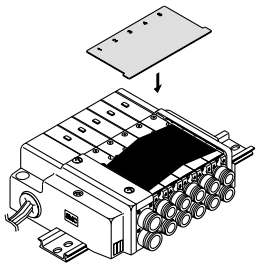
Blanking plate P. 2-3-49
SSQ2000-10A-3



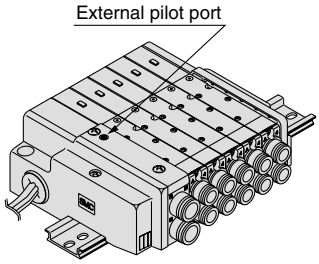
Individual SUP/EXH spacer P. 2-3-50
SSQ2000-PR1-3-$^{C8}_{L8}$



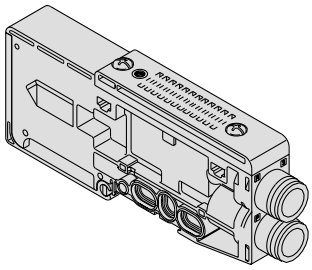
Name plate (-N) P. 2-3-52
SSQ2000-N3-n



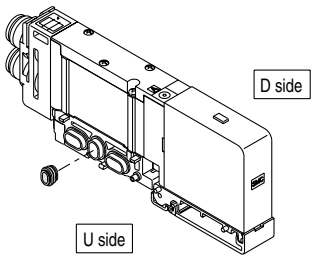
External pilot specifications (-R) P. 2-3-53



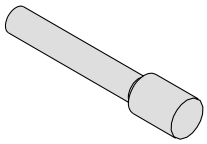
SUP/EXH block P. 2-3-49
SSQ2000-PR-3-C10 (-S)



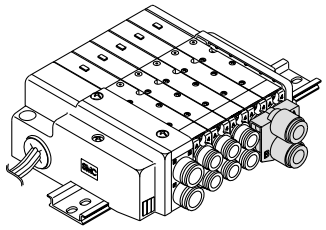
SUP block plate P. 2-3-51
SSQ1000-B-R



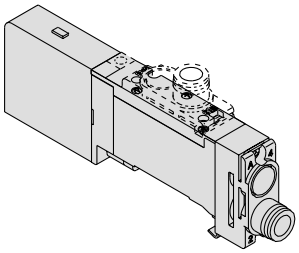
Blanking plug P. 2-3-52
KQ2P-04/06/08/10



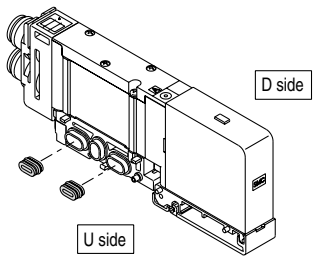
Dual flow fitting P. 2-3-53
SSQ2000-52A-$^{C10}_{N11}$



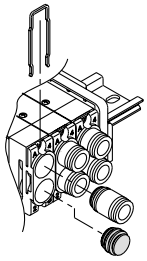
Individual SUP spacer P. 2-3-49
SSQ2000-P-3-$^{C8}_{L8}$



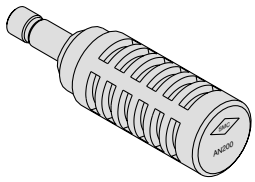
EXH block plate P. 2-3-51
SSQ2000-B-R



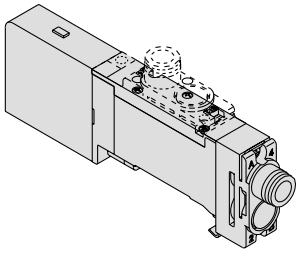
Port plug P. 2-3-52
VVQZ2000-CP



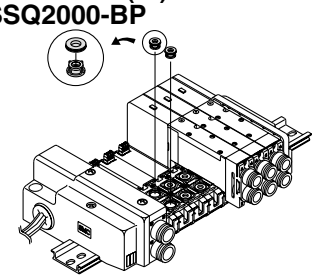
Silencer (For EXH port) P. 2-3-53



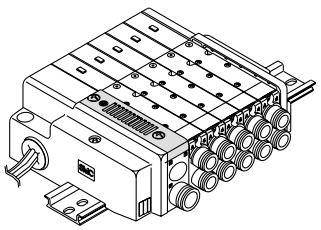
Individual EXH spacer P. 2-3-50
SSQ2000-R-3-$^{C8}_{L8}$



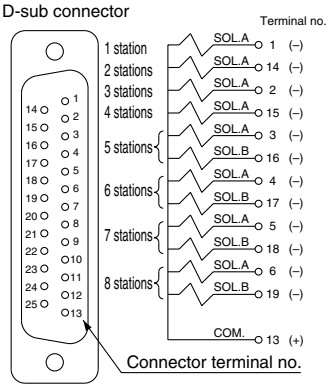
Back pressure check valve (-B) P. 2-3-51
SSQ2000-BP



Built-in silencer (-S) P. 2-3-52



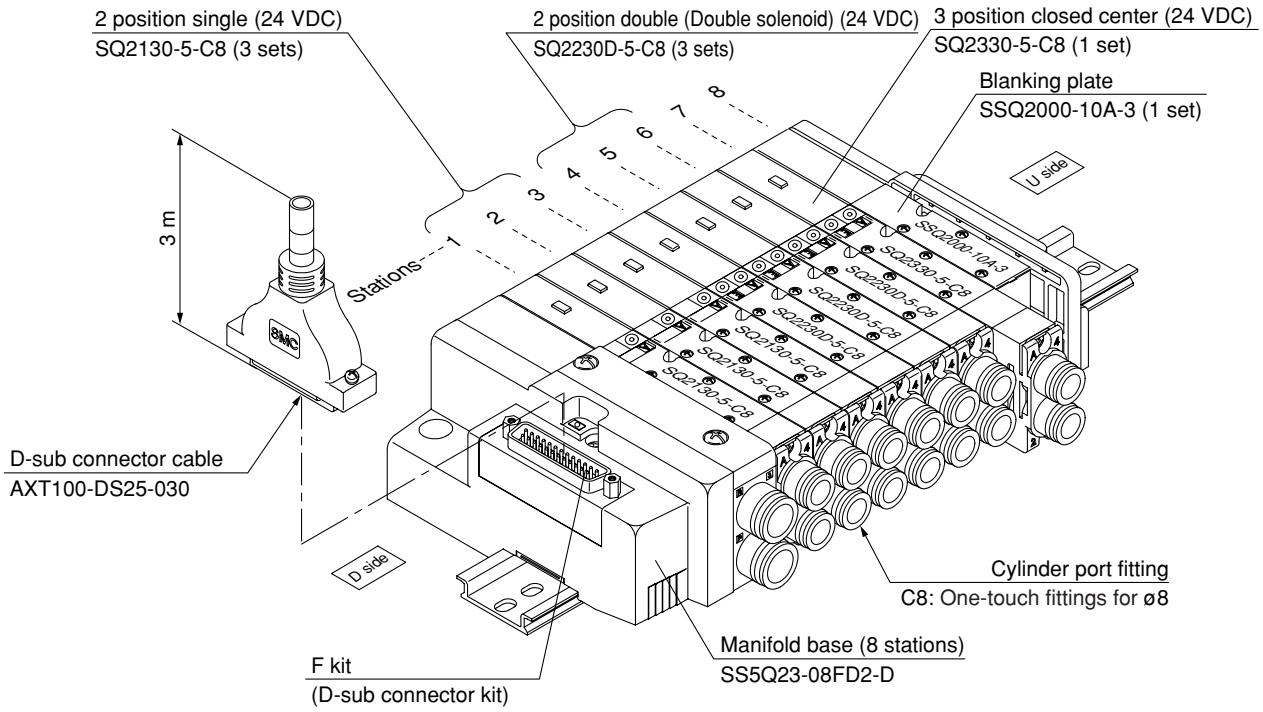
Special wiring specifications (-K) P. 2-3-54



Although the standard products come with double wiring, mixed single and double wiring is available upon request.

How to Order Manifold Assembly (Example)

Example: D-sub connector kit, with cable (3 m)



SS5Q23-08FD2-D ·····	1 set (F kit 8 station manifold base)
∗SQ2130-5-C8 ·····	3 sets (2 position single)
∗SQ2230D-5-C8 ·····	3 sets (2 position double [Double solenoid])
∗SQ2330-5-C8 ·····	1 set (3 position closed center)
∗SSQ2000-10A-3 ·····	1 set (Blanking plate)

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

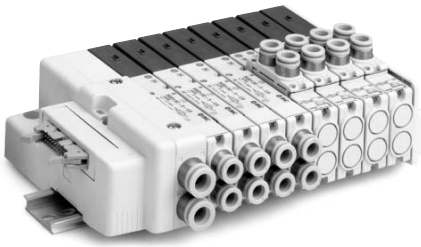
Add the valve and option part numbers in order starting from the first station on the D side.
When entry of part numbers becomes complicated, indicate on the manifold specification sheet.

Valve Specifications

Model

Series		Number of solenoids	Model		Flow characteristics: 1 → 4/2 (P → A/B) C [dm³/(s·bar)]	b	Cv	Flow characteristics: 4/2 → 5/3 (A/B → R1/R2) C [dm³/(s·bar)]	b	Cv	Response time (ms)(2): Standard: 1 W	Response time (ms)(2): Low wattage	Weight (g)
SQ2000	2 position	Single	Metal seal	SQ2130	2.2	0.17	0.51	2.4	0.14	0.57	20 or less	26 or less	145
			Rubber seal	SQ2131	2.3	0.17	0.51	3.1	0.18	0.71	24 or less	31 or less	140
		Double (Latching)	Metal seal	SQ2230	2.2	0.17	0.51	2.4	0.14	0.57	26 or less	—	145
			Rubber seal	SQ2231	2.3	0.17	0.51	3.1	0.18	0.71	31 or less	—	140
		Double (Double solenoid)	Metal seal	SQ2230D	2.2	0.17	0.51	2.4	0.14	0.57	15 or less	20 or less	160
			Rubber seal	SQ2231D	2.3	0.17	0.51	3.1	0.18	0.71	20 or less	26 or less	155
	3 position	Closed center	Metal seal	SQ2330	1.9	0.17	0.46	2.1	0.15	0.47	34 or less	44 or less	180
			Rubber seal	SQ2331	1.9	0.17	0.46	1.8	0.29	0.47	34 or less	44 or less	175
		Exhaust center	Metal seal	SQ2430	1.9	0.17	0.46	2.4	0.14	0.55	34 or less	44 or less	180
			Rubber seal	SQ2431	1.9	0.17	0.46	3.1	0.14	0.65	34 or less	44 or less	175
		Pressure center	Metal seal	SQ2530	2.3	0.17	0.51	2.1	0.18	0.47	34 or less	44 or less	180
			Rubber seal	SQ2531	2.5	0.17	0.56	1.8	0.30	0.47	34 or less	44 or less	175
	4 position	Dual 3 port valve	Rubber seal	SQ2[A/B/C]31	1.5	0.17	0.40	1.5	0.17	0.40	34 or less	44 or less	155

Note 1) Values for the top ported cylinder port size of C8. The side ported type will be about 10% less.
Note 2) Based on JIS B 8375-1981. (Values with a supply pressure of 0.5 MPa and light/surge voltage suppressor. Values fluctuate depending on the pressure and air quality.)



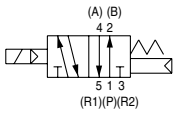
Specifications

Valve specifications	Valve construction		Metal seal	Rubber seal
	Fluid		Air/Inert gas	
	Maximum operating pressure		0.7 MPa	
	Min. operating pressure	Single	0.1 MPa	0.15 MPa
		Double (Latching)	0.18 MPa	0.18 MPa
		Double (Double solenoid)	0.1 MPa	0.1 MPa
		3 position	0.1 MPa	0.2 MPa
		4 position	—	0.15 MPa
	Ambient fluid temperature		–10 to 50°C (1)	
	Lubrication		Not required	
	Pilot valve manual override		Push type (Tool required)/Slide locking type (Tool required)	
	Vibration/Impact resistance (2)		30/150 m/s²	
	Protection structure		Dust tight	
Solenoid specifications	Coil rated voltage		12 VDC, 24 VDC	
	Allowable voltage fluctuation		±10% of rated voltage	
	Coil insulation type		Equivalent to class B	
	Power consumption (Current)	24 VDC	1 W DC (42 mA), 0.5 W DC (21 mA) (3)	
		12 VDC	1 W DC (83 mA), 0.5 W DC (42 mA) (3)	

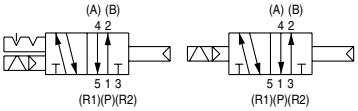
Note 1) Use dry air to prevent condensation when operating at low temperatures.
Note 2) Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period) 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. (Values at the initial period)
Note 3) Values for the low wattage (0.5 W) specifications.

JIS Symbol

2 position single

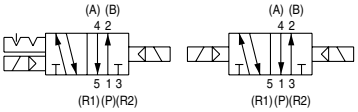


2 position double (Latching)



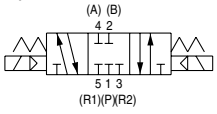
Metal seal Rubber seal

2 position double (Double solenoid)

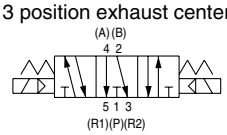


Metal seal Rubber seal

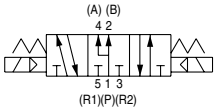
3 position closed center



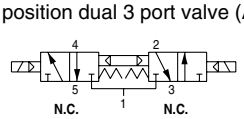
3 position exhaust center



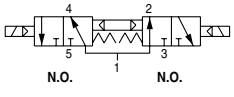
3 position pressure center



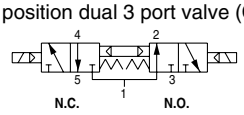
4 position dual 3 port valve (A)



4 position dual 3 port valve (B)



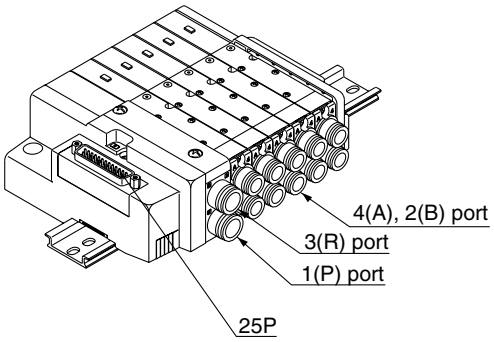
4 position dual 3 port valve (C)



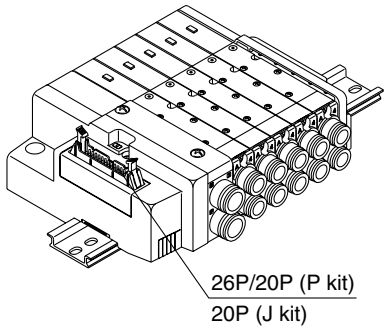
Manifold Specifications

Base model	Porting specifications: Port size (1) 1(P), 3(R)	Porting specifications: Port size (1) 4(A), 2(B) Port location	Porting specifications: Port size (1) 4(A), 2(B) Port size	Applicable solenoid valve	Type of connection		Applicable stations (3)	5 station weight (g) (4)	1 station weight (g) (4)
Series SQ2000 **SS5Q23-□□-□**	C10 (For ø10) Option Built-in silencer, direct exhaust	Side	C4 (For ø4) C6 (For ø6) C8 (For ø8)	SQ2□30 SQ2□31	F kit: D-sub connector		1 to 12 stations	580	35
					P kit: Flat ribbon cable	26P	1 to 12 stations	580	35
						20P	1 to 9 stations		
					J kit: Flat ribbon cable PC Wiring System compatible		1 to 8 stations	580	35
		Top (2)	L4 (For ø4) L6 (For ø6) L8 (For ø8)		T kit: Terminal block		1 to 10 stations	1,165	620
					L kit: Lead wire		1 to 12 stations	620	50
					S kit: Serial transmission		1 to 8 stations	650	35

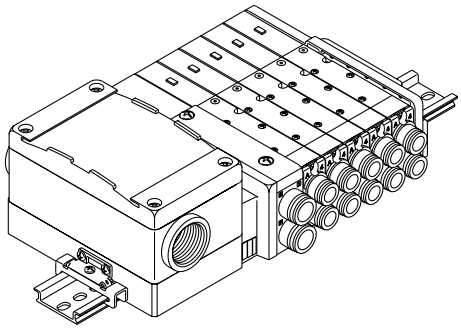
Note 1) One-touch fittings in inch sizes are also available. For details, refer to page 2-3-56.
Note 2) Can be changed to side ported configuration.
Note 3) An optional specification for special wiring is available to increase the maximum number of stations. Refer to page 2-3-54 for details.
Note 4) Except valves. For valve weight, refer to page 2-3-28.



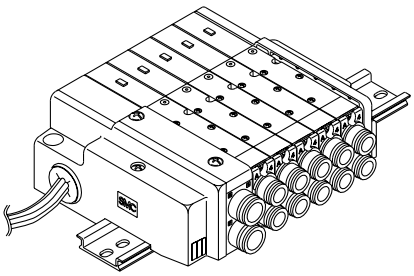
F kit



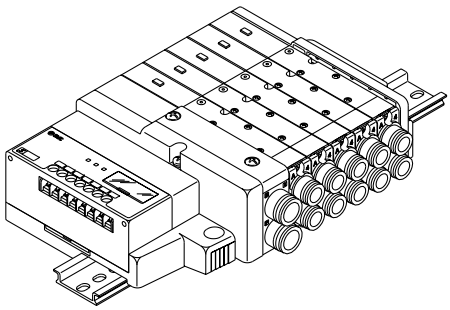
P kit **J kit**



T kit

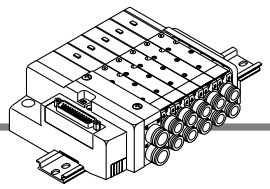


L kit



S kit

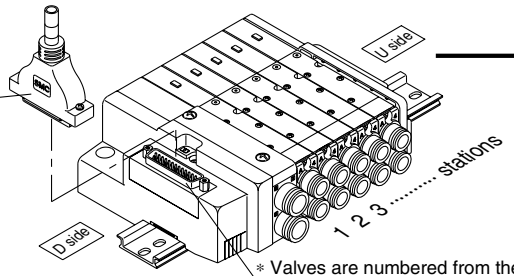
F Kit (D-sub connector kit)



- **Simplification and labor savings for wiring work can be achieved by using a D-sub connector for the electrical connection.**
- **Using connector for flat ribbon cable (25P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	12 stations (16 as an option)



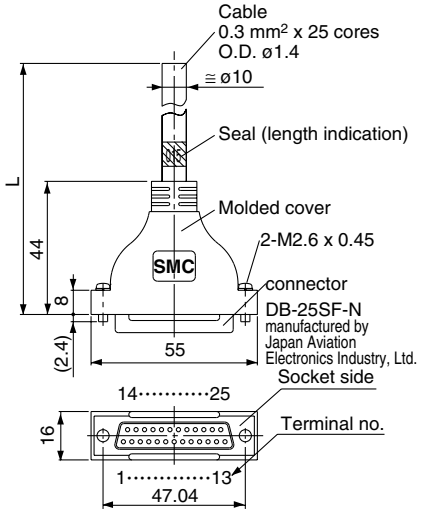
∗ Valves are numbered from the D side.

D-sub Connector (25 pin)

Cable assembly ●

AXT100-DS25-$^{015}_{030}_{050}$

(D-sub connector cable assemblies can be ordered with manifolds. Refer to manifold ordering.)



D-sub Connector Cable Assembly Terminal No.

Terminal number	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 (Option)

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 0.3 mm² x 25 cores
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.

∗ Cannot be used for transfer wiring.

Electric Characteristics

Item	Characteristics
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit VAC, 1 min.	1000
Insulation resistance MΩ/km, 20°C	5 or less

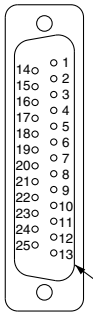
Note) The minimum bending radius for D-sub connector cables is 20 mm.

Connector manufacturers' example

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

Electrical wiring specifications ●

D-sub connector

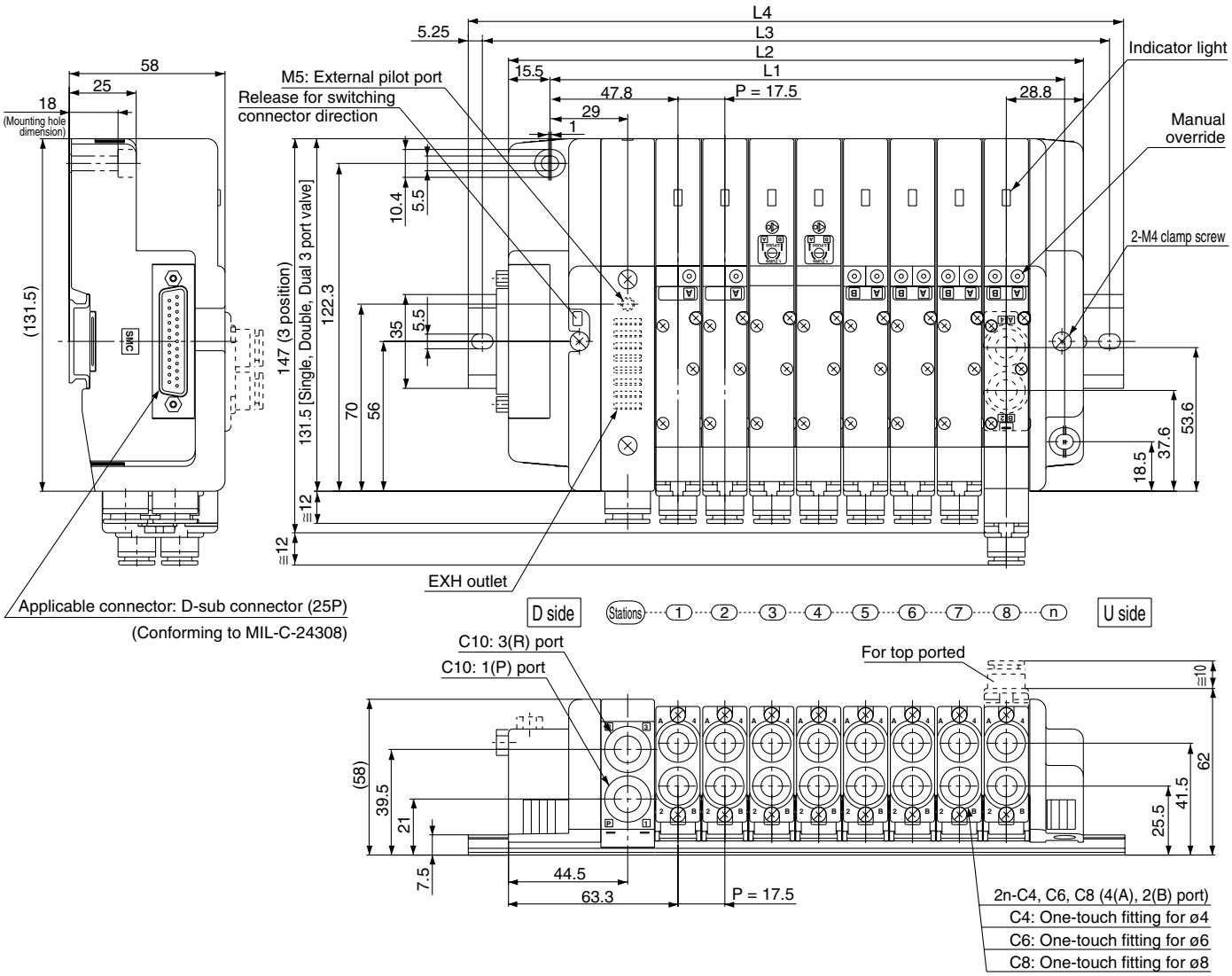


As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types. Mixed single and double wiring is available as an option.
For details, refer to page 2-3-54.

Lead wire colors for D-sub connector assembly (AXT100-DS25-$^{015}_{030}_{050}$)

		Terminal no.	Polarity		Lead wire color	Dot marking
1 station	SOL.A	1	(–)	(+)	Black	None
	SOL.B	14	(–)	(+)	Yellow	Black
2 stations	SOL.A	2	(–)	(+)	Brown	None
	SOL.B	15	(–)	(+)	Pink	Black
3 stations	SOL.A	3	(–)	(+)	Red	None
	SOL.B	16	(–)	(+)	Blue	White
4 stations	SOL.A	4	(–)	(+)	Orange	None
	SOL.B	17	(–)	(+)	Purple	None
5 stations	SOL.A	5	(–)	(+)	Yellow	None
	SOL.B	18	(–)	(+)	Gray	None
6 stations	SOL.A	6	(–)	(+)	Pink	None
	SOL.B	19	(–)	(+)	Orange	Black
7 stations	SOL.A	7	(–)	(+)	Blue	None
	SOL.B	20	(–)	(+)	Red	White
8 stations	SOL.A	8	(–)	(+)	Purple	White
	SOL.B	21	(–)	(+)	Brown	White
9 stations	SOL.A	9	(–)	(+)	Gray	Black
	SOL.B	22	(–)	(+)	Pink	Red
10 stations	SOL.A	10	(–)	(+)	White	Black
	SOL.B	23	(–)	(+)	Gray	Red
11 stations	SOL.A	11	(–)	(+)	White	Red
	SOL.B	24	(–)	(+)	Black	White
12 stations	SOL.A	12	(–)	(+)	Yellow	Red
	SOL.B	25	(–)	(+)	White	None
	COM.	13	(+)	(–) Note)	Orange	Red
			Positive common specifications	Negative common specifications		

Note) When using the negative common specifications, use valves for negative common.

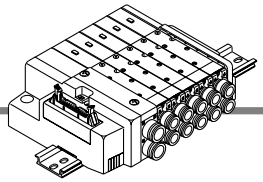


Dimensions

Formula: L1 = 17.5n + 52, L2 = 17.5n + 74.5 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	69.5	87	104.5	122	139.5	157	174.5	192	209.5	227	244.5	262	279.5	297	314.5	332
L2	92	109.5	127	144.5	162	179.5	197	214.5	232	249.5	267	284.5	302	319.5	337	354.5
L3	112.5	137.5	150	175	187.5	200	225	237.5	262.5	275	287.5	312.5	325	350	362.5	375
L4	123	148	160.5	185.5	198	210.5	235.5	248	273	285.5	298	323	335.5	360.5	373	385.5

P Kit (Flat ribbon cable connector)

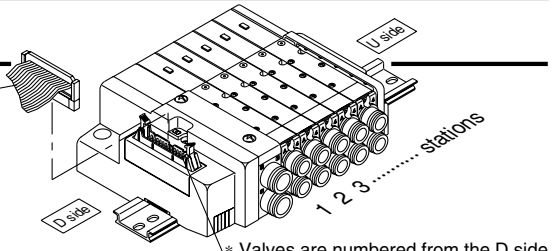


- **Simplification and labor savings for wiring work can be achieved by using a flat ribbon cable for the electrical connection.**
- **Using connector for flat ribbon cable (26P, 20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	12 stations (16 as an option)

Flat Ribbon Cable (26 pins, 20 pins)

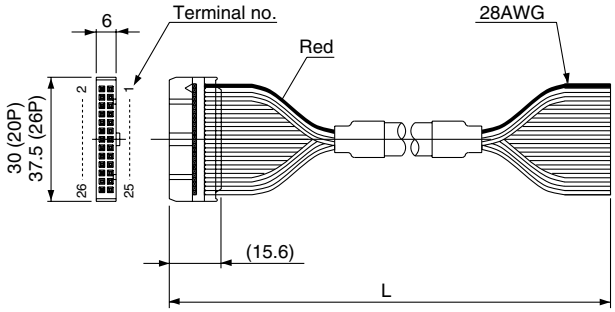


∗ Valves are numbered from the D side.

Cable assembly

AXT100-FC $\frac{20}{26}$ - $\frac{1}{2}$ $\frac{}{3}$

Type 26P flat ribbon cable connector assemblies can be ordered with manifolds . Refer to manifold ordering.



Flat Ribbon Cable Connector Assembly (Option)

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

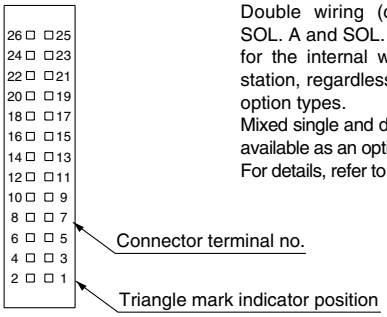
∗ For other commercial connectors, use a 26 pins or 20 pins with strain relief conforming to MIL-C-83503.
∗ Cannot be used for transfer wiring.

Connector manufacturers' example

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

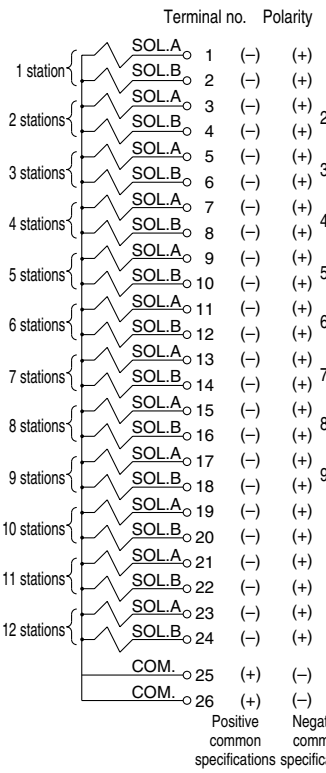
Electrical wiring specifications

Flat ribbon cable connector

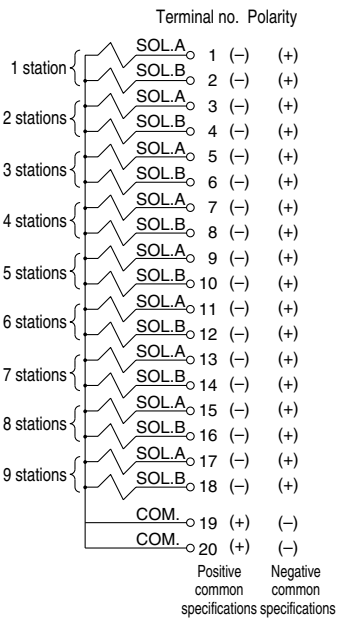


Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-54.

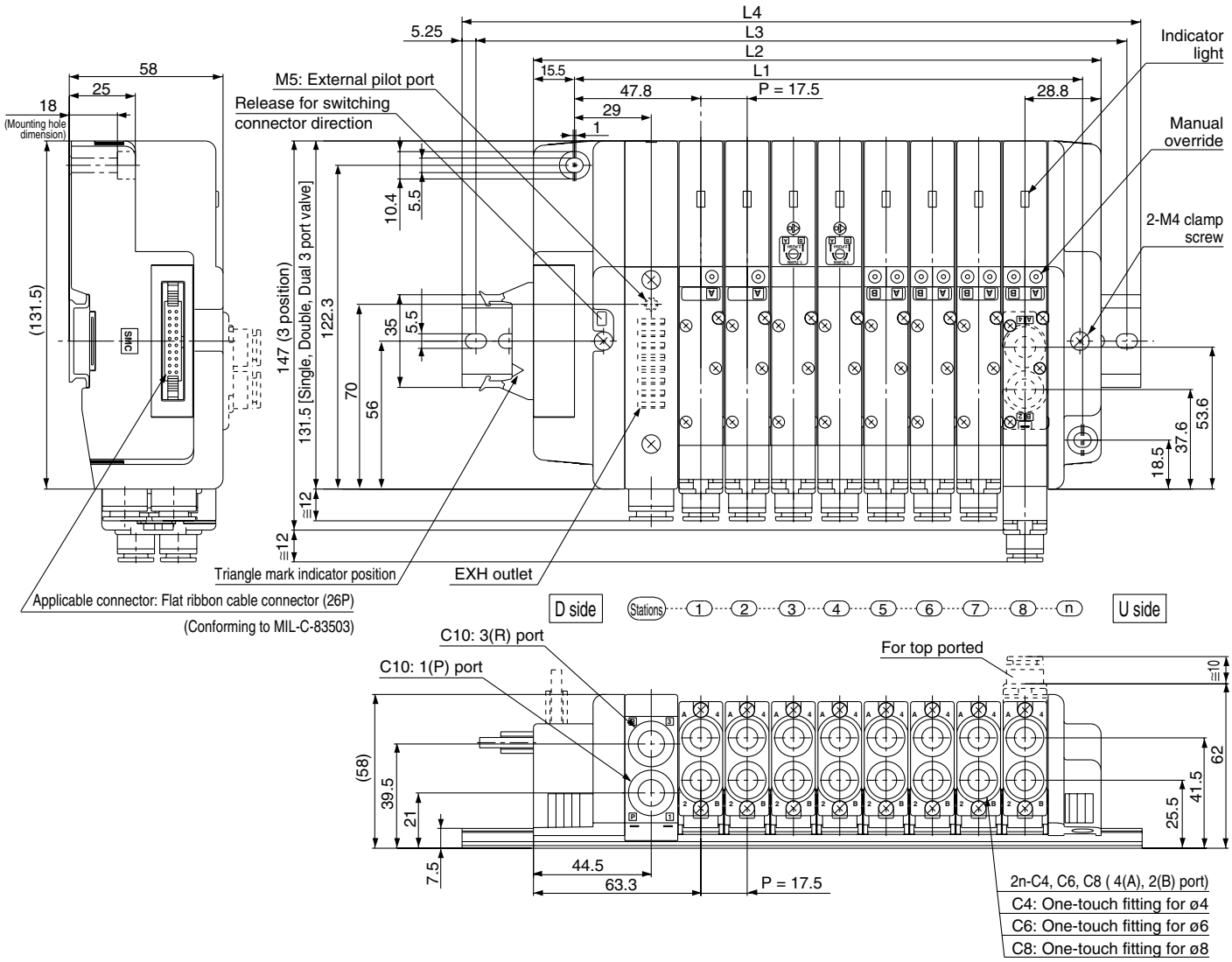
<26P>



<20P>



Note) When using the negative common specifications, use valves for negative common.

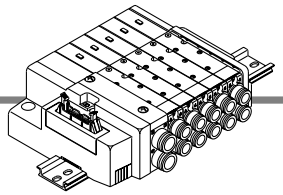


Dimensions

Formula: L1 = 17.5n + 52, L2 = 17.5n + 74.5 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	69.5	87	104.5	122	139.5	157	174.5	192	209.5	227	244.5	262	279.5	297	314.5	332
L2	92	109.5	127	144.5	162	179.5	197	214.5	232	249.5	267	284.5	302	319.5	337	354.5
L3	112.5	137.5	150	175	187.5	200	225	237.5	262.5	275	287.5	312.5	325	350	362.5	375
L4	123	148	160.5	185.5	198	210.5	235.5	248	273	285.5	298	323	335.5	360.5	373	385.5

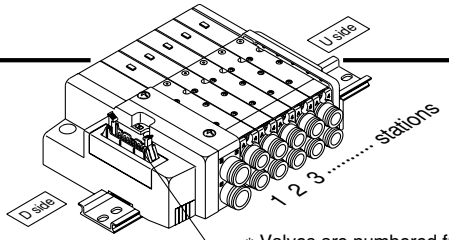
J Kit (PC Wiring System compatible flat ribbon cable kit)



- **PC Wiring System compatible.**
- **Using connector for flat ribbon cable (20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	8 stations (16 as an option)

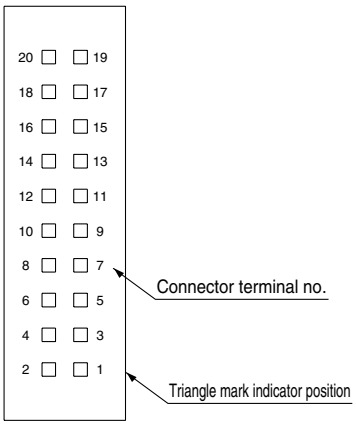


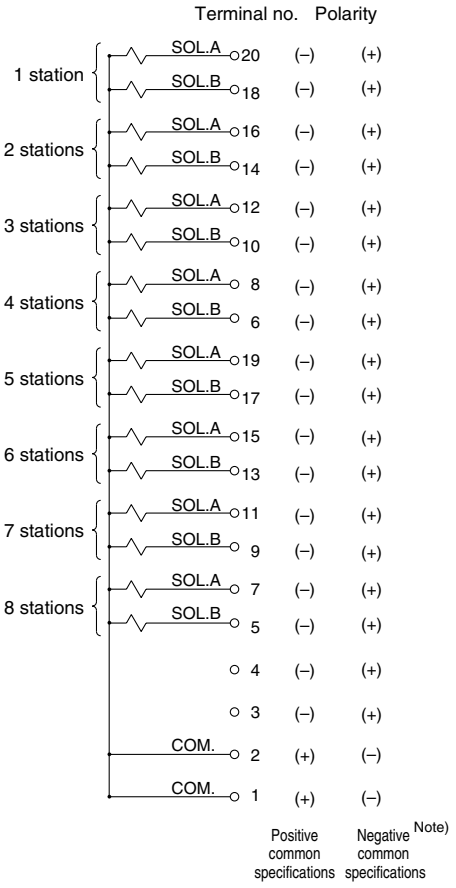
∗ Valves are numbered from the D side.

Electrical wiring specifications

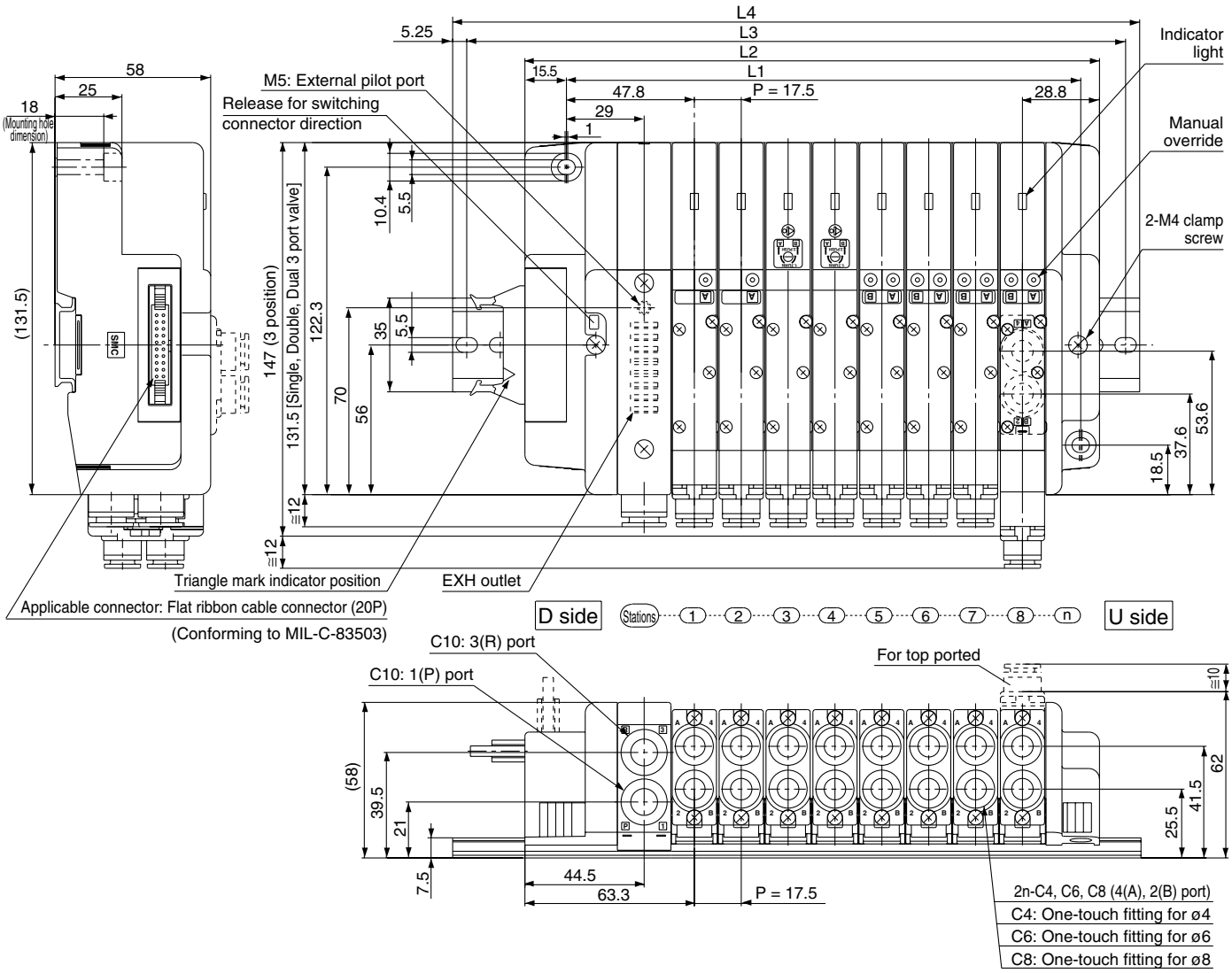
Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-54.

Flat ribbon cable connector





Note) When using the negative common specifications, use valves for negative common.
For details about the PC Wiring System, refer to catalog CAT.ES02-20 separately.

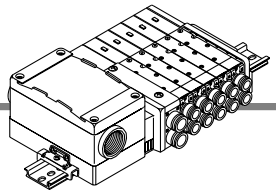


Dimensions

Formula: L1 = 17.5n + 52, L2 = 17.5n + 74.5 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	69.5	87	104.5	122	139.5	157	174.5	192	209.5	227	244.5	262	279.5	297	314.5	332
L2	92	109.5	127	144.5	162	179.5	197	214.5	232	249.5	267	284.5	302	319.5	337	354.5
L3	112.5	137.5	150	175	187.5	200	225	237.5	262.5	275	287.5	312.5	325	350	362.5	375
L4	123	148	160.5	185.5	198	210.5	235.5	248	273	285.5	298	323	335.5	360.5	373	385.5

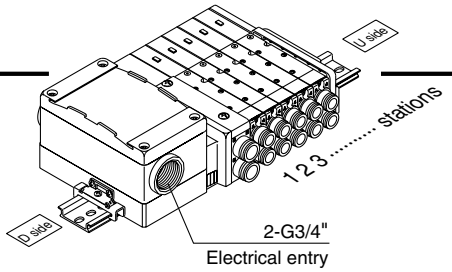
T Kit (Terminal block box kit)



- **A compact terminal block is installed inside the box. G 3/4" female threads prepared for the electrical entry enables a conduit tube bracket to be connected.**
- **The maximum number of stations is 10 (16 option).**

Manifold Specifications

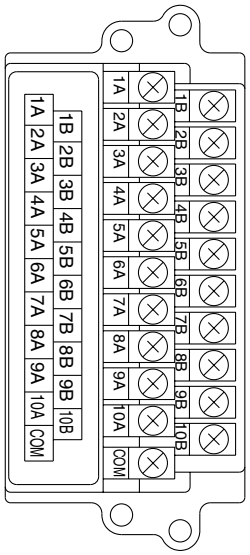
Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	10 stations (16 as an option)

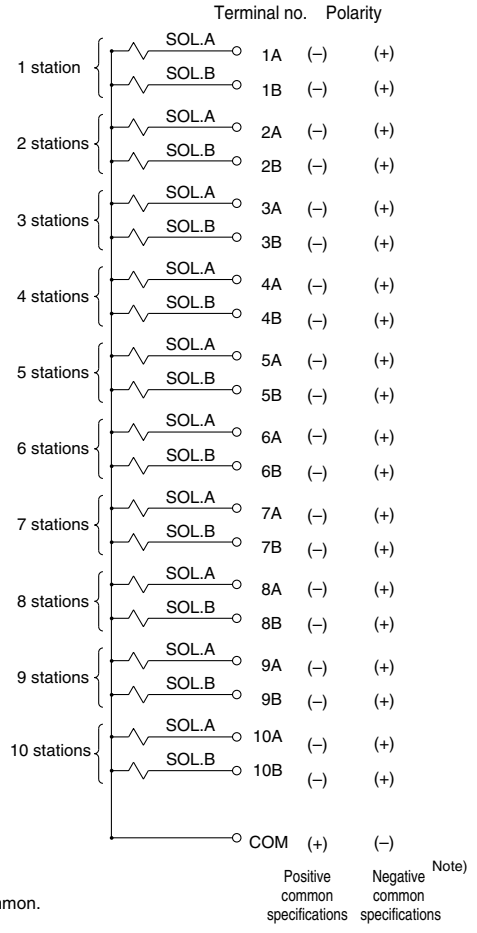


∗ Valves are numbered from the D side.

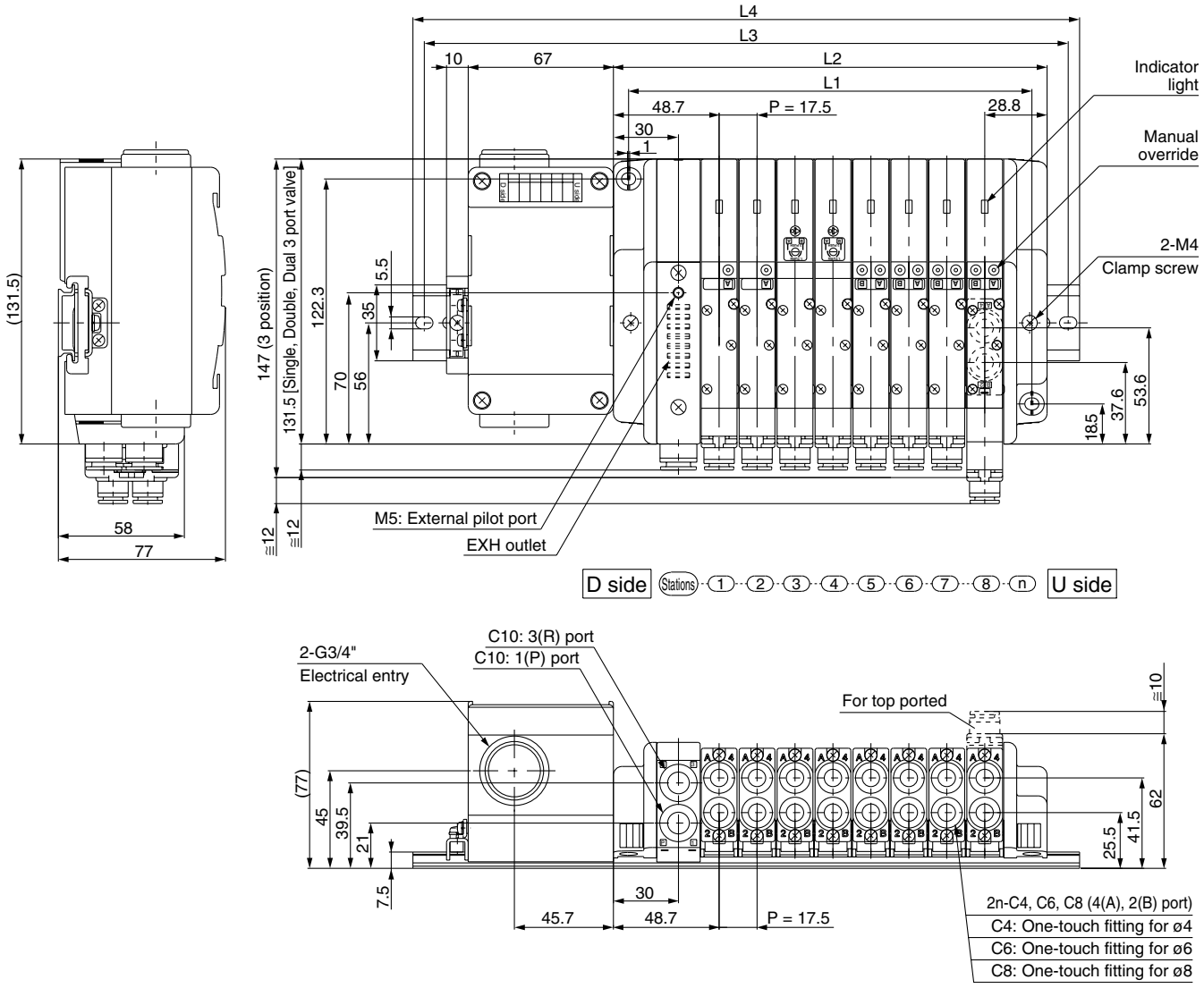
Electrical wiring specifications

As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 10 stations or less, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-54.





Note) When using the negative common specifications, use valves for negative common.

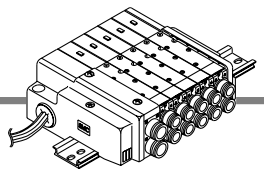


Dimensions

Formula: L1 = 17.5n + 46, L2 = 17.5n + 60 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	63.5	81	98.5	116	133.5	151	168.5	186	203.5	221	238.5	256	273.5	291	308.5	326
L2	77.5	95	112.5	130	147.5	165	182.5	200	217.5	235	252.5	270	287.5	305	322.5	340
L3	175	200	212.5	237.5	250	262.5	287.5	300	325	337.5	350	375	387.5	412.5	425	437.5
L4	185.5	210.5	223	248	260.5	273	298	310.5	335.5	348	360.5	385.5	398	423	435.5	448

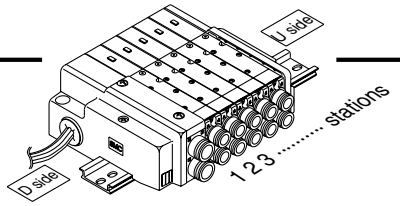
L Kit (Lead wire cable)



Direct electrical entry type

Manifold Specifications

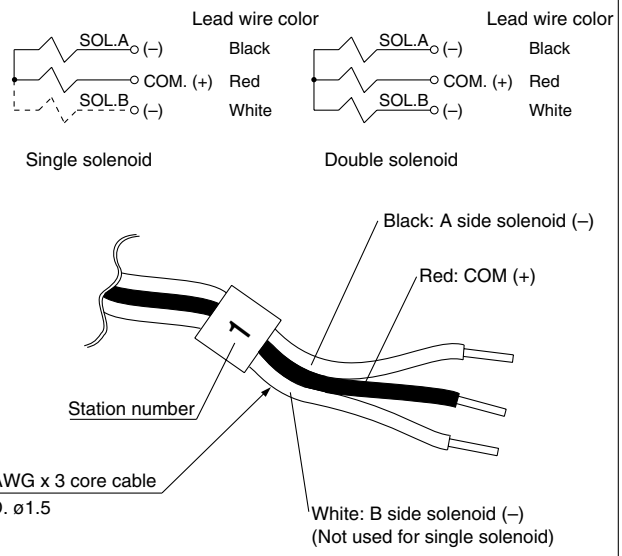
Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	12 stations



∗ Valves are numbered from the D side.

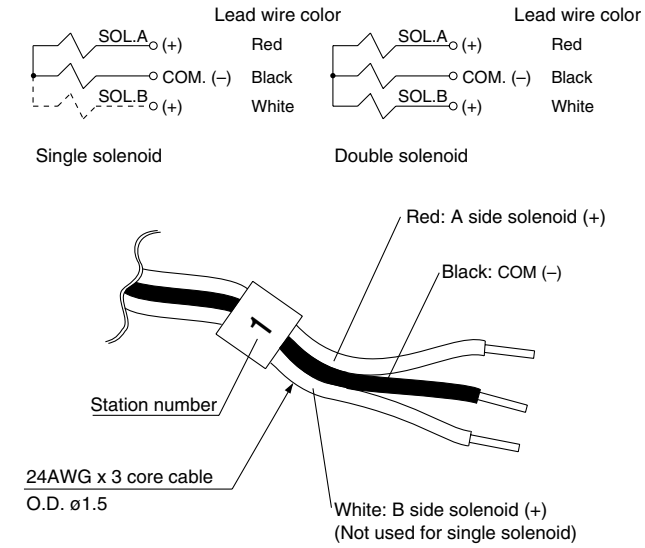
● Wiring Specifications: Positive COM Specifications

Three lead wires are included per station regardless of valves used.
Among the three lead wires, the red wire is for COM.

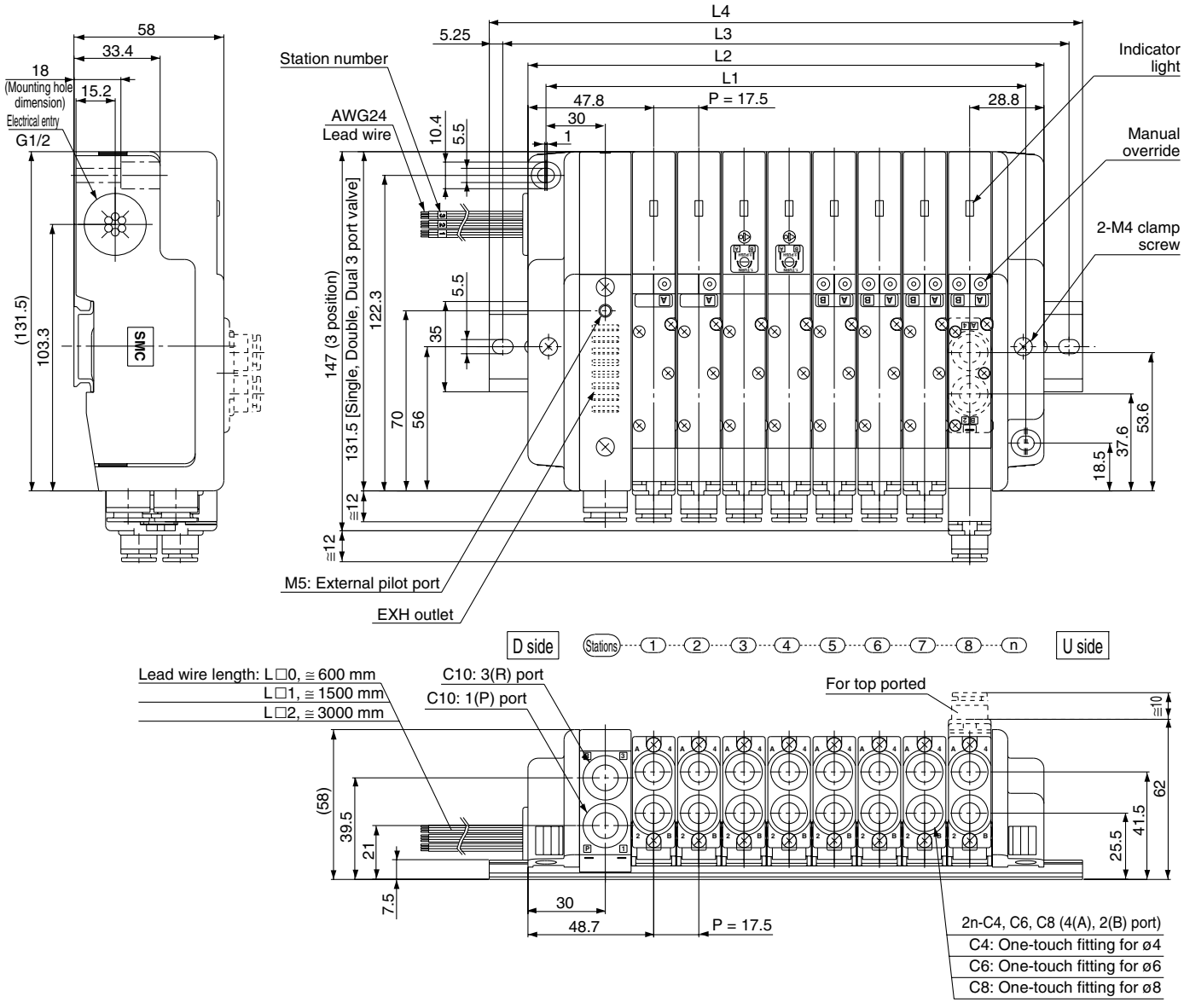


● Wiring Specifications: Negative COM Specifications (Option)

Three lead wires are included per station regardless of valves used.
Among the three lead wires, the black wire is for COM.



Note) When using the negative common specifications, use valves for negative common.

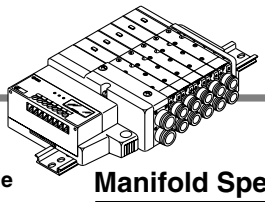


Dimensions

Formula: L1 = 17.5n + 46, L2 = 17.5n + 60 n: Stations (Maximum 12 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12
L1	63.5	81	98.5	116	133.5	151	168.5	186	203.5	221	238.5	256
L2	77.5	95	112.5	130	147.5	165	182.5	200	217.5	235	252.5	270
L3	100	125	137.5	150	175	187.5	212.5	225	237.5	262.5	275	300
L4	110.5	135.5	148	160.5	185.5	198	223	235.5	248	273	285.5	310.5

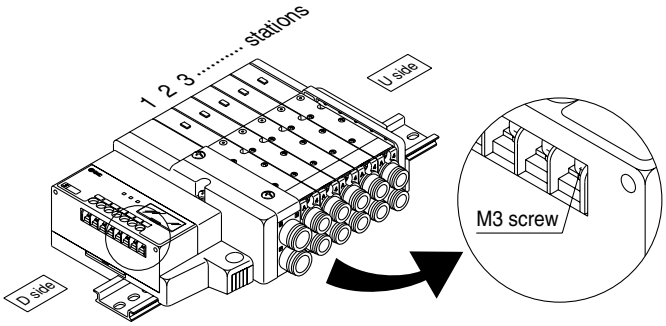
S Kit (Serial transmission unit)



- **The serial transmission system reduces wiring work, while minimizing wiring and saving space.**
- **The maximum number of stations is 8. (16 as an option). Only for type J2 and R2, the maximum stations are 4 (8 as an option).**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	8 stations



- **Stations are counted from station 1 on the D side.**
- **Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.**
  Mixed single and double wiring is available as an option.

Item	Specifications
External power supply	24 VDC, +10%, –5%
Current consumption (Inside unit)	0.1 A or less

● Corresponding SI unit output numbers and solenoid coils

<Wiring example 1>

SI unit output no.	0	1	2	3	4	5	6	7	8	9
	A	B	A	B	A	None	A	None	A	B
SI unit	Double		Double		Single		Single		Single	
Stations	1		2		3		4		5	

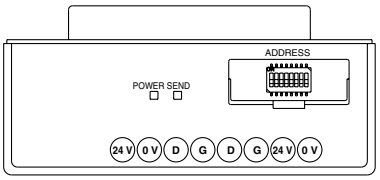
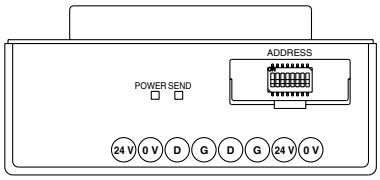
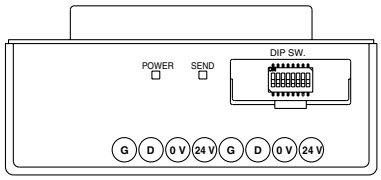
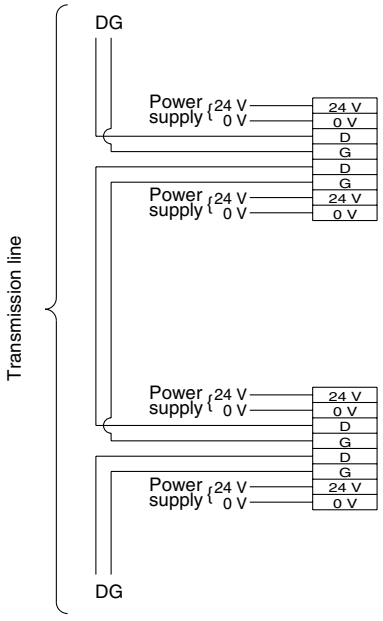
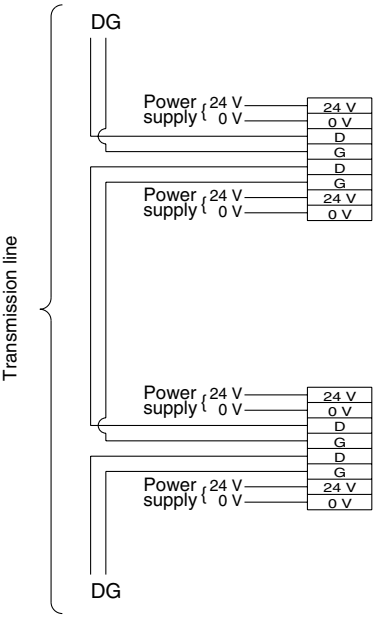
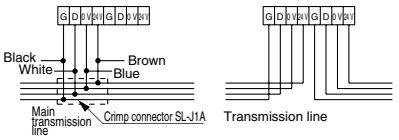
Double wiring (Standard)

<Wiring example 2>

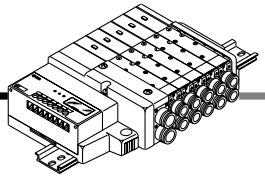
∗ Mixed wiring is available as an option. Specify the wiring specification by means of the manifold specification sheet. Refer to page 2-3-54 for details.

SI unit output no.	0	1	2	3	4	5	6	7
	A	B	A	B	A	A	A	B
SI unit	Double		Double		Single	Single	Double	
Stations	1		2		3	4	5	

Mixed single and double wiring (Option)

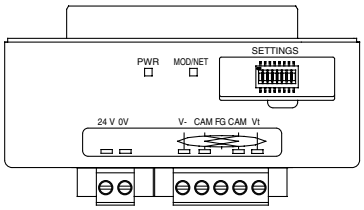
	Type SDF NKE Corporation Uni-wire System	Type SDH NKE Corporation Uni-wire H System	Type SDJ1, SDJ2 SUNX Corporation S-LINK System
Name of terminal block, LED			
	LED / Description POWER: Light ON with power input (Light ON when normal, flickers when voltage is low) SEND: Transmission indicator Normal: Blinks, Abnormal: Light OFF or ON	LED / Description POWER: Light ON with power input (Light ON when normal, flickers when voltage is low) SEND: Transmission indicator Normal: Blinks, Abnormal: Light OFF or ON	LED / Description POWER: Light ON with power input SEND: Transmission indicator Normal: Blinks, Abnormal: Blinks slowly
Cable wiring			a) Type T branching multi-drop wiring (S-LINK System) b) Crossover wiring (Sensor link system)  The above is the example of using dedicated S-LINK flat ribbon cable SL-RCM□00.
Note	• Uni-wire System Send unit: SD-120 • No. of output points, 16 points	• Uni-wire H System Send unit: SD-H2 • No. of output points, 16 points	• S-LINK System S-LINK controller: SL-CU1 • No. of output points, 16 points (Type SDJ1) No. of output points, 8 points (Type SDJ2)

S Kit (Serial transmission unit)



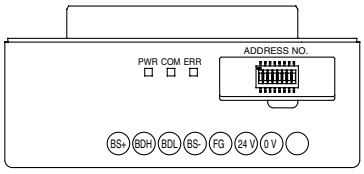
Name of terminal block, LED

Type SDQ — OMRON Corporation — DeviceNet, CompoBus/D



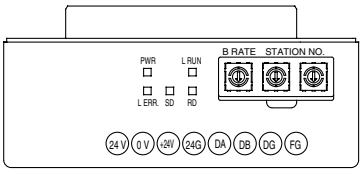
LED	Description
POWER	Green light ON with circuit power input
MOD/ NET	Light OFF: When the unit is not online or circuit power is OFF
	Green light ON continuously: When the unit is online and in operation
	Red light blinks: When a reversible abnormal transmission occurs
	Red light ON continuously: When irreversible abnormal transmission occurs or the same line is unable to go online

Type SDR1, SDR2 — OMRON Corporation — CompoBus/S System



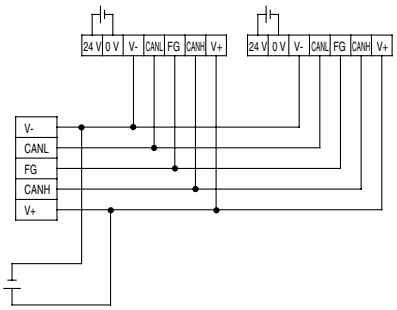
LED	Description
POWER	Light ON with transmission power input, light Off without it
COMM	Light ON with normal transmission, light OFF with abnormal or standby transmission
ERR.	Light ON with abnormal transmission, light Off with normal or standby transmission

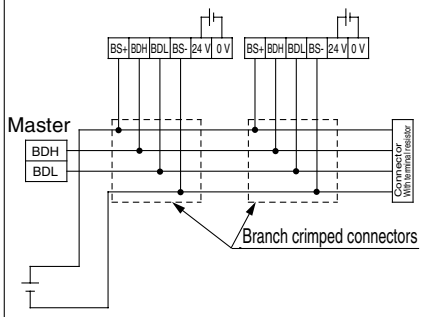
Type SDV — Mitsubishi Electric Corporation — CC-LINK System

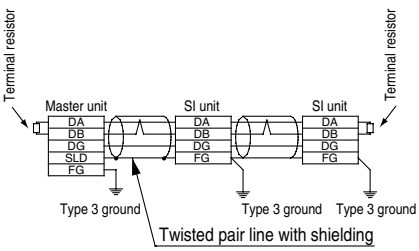


LED	Description
POWER	Light ON with transmission power input, light Off without it
L RUN	Light ON when receiving normal data
SD	Light ON when sending data
RD	Light ON when receiving data
L ERR.	Light ON with transmission error/setting error, light blinks with changes in the station no. or transmission speed setting

Cable wiring





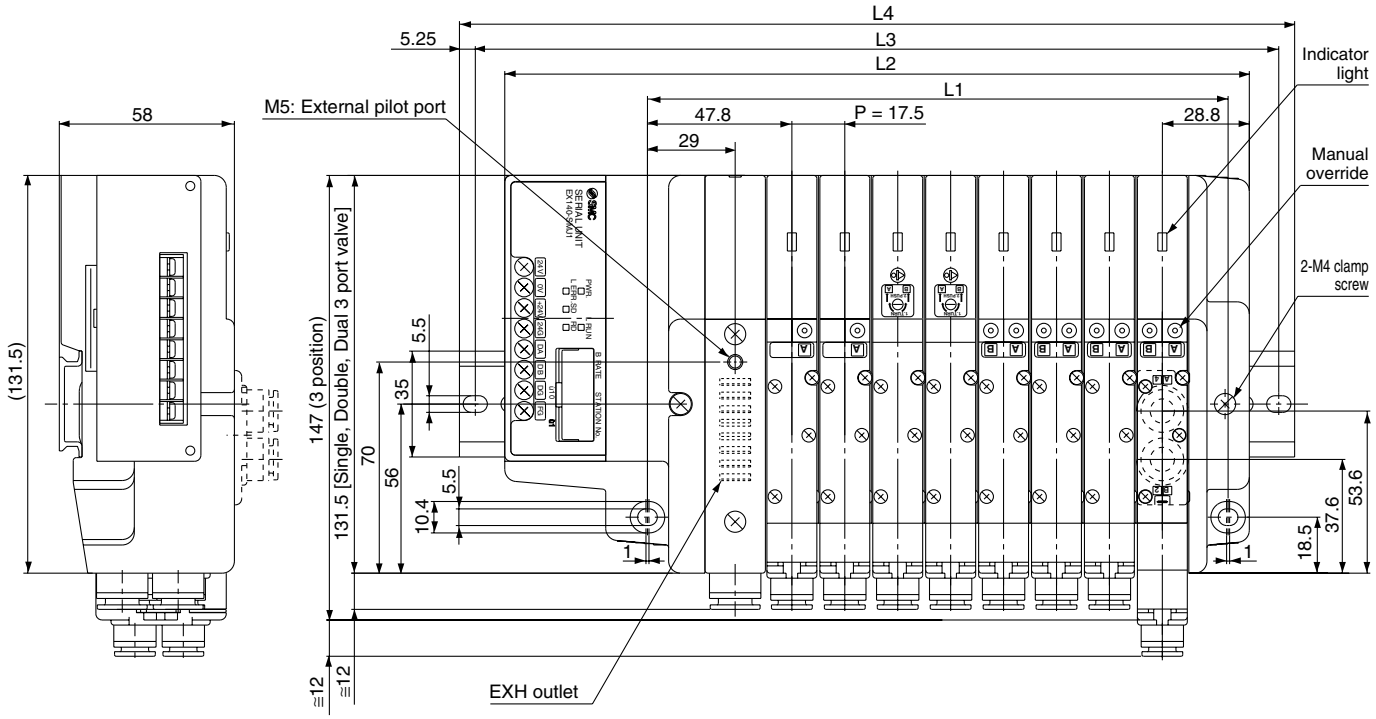


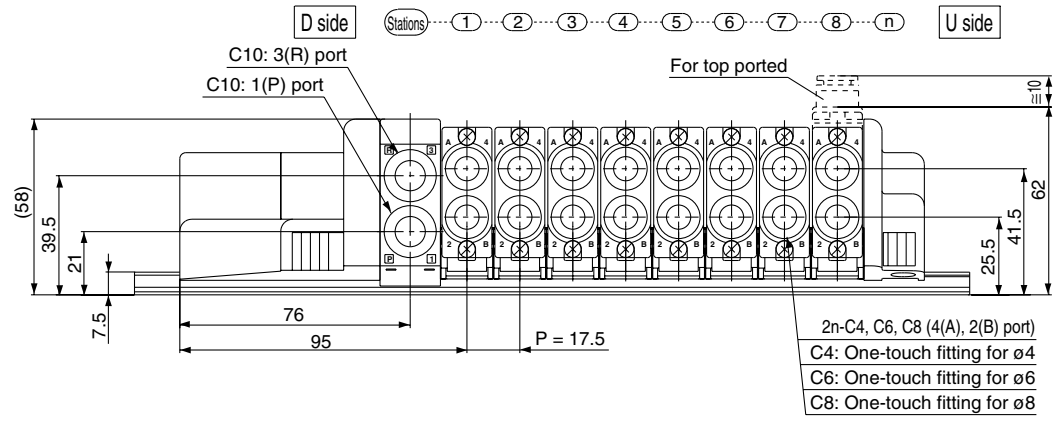
Note

- DeviceNet
- OMRON Corporation CompoBus/D System
  Master unit: C200HW-DRM21
- No. of output points, 16 points

- CompoBus/S System
  Master unit: C200HW-SRM21
  Master unit: CQM1-SRM21
- No. of output points, 16 points (Type SDR1)
  No. of output points, 8 points (Type SDR2)

- CC-LINK System
  Master unit: AJ61BT11
  Master unit: A1SJ61BT11
  Master unit: AJ61QBT11
  Master unit: A1SJ61QBT11
- No. of output points, 16 points





Dimensions

Formula: L1 = 17.5n + 52, L2 = 17.5n + 106 n: Stations (Maximum 16 stations)

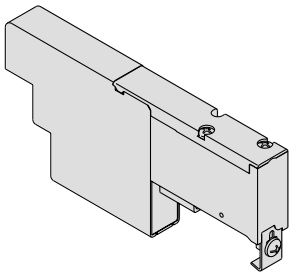
L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	69.5	87	104.5	122	139.5	157	174.5	192	209.5	227	244.5	262	279.5	297	314.5	332
L2	123.5	141	158.5	176	193.5	211	228.5	246	263.5	281	298.5	316	333.5	351	368.5	386
L3	150	162.5	187.5	200	225	237.5	250	275	287.5	312.5	325	337.5	362.5	375	400	412.5
L4	160.5	173	198	210.5	235.5	248	260.5	285.5	298	323	335.5	348	373	385.5	410.5	423

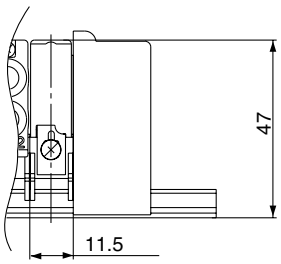
Manifold Option Parts for SQ1000

Blanking plate

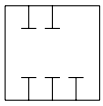
SSQ1000-10A-3

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.





JIS Symbol



SUP/EXH block

SSQ1000-PR-3-C8-□

•Option

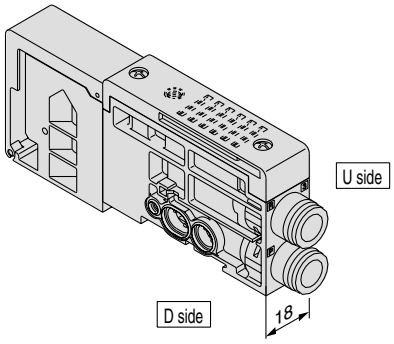
Nil	Standard
R	External pilot specifications
S	Built-in silencer

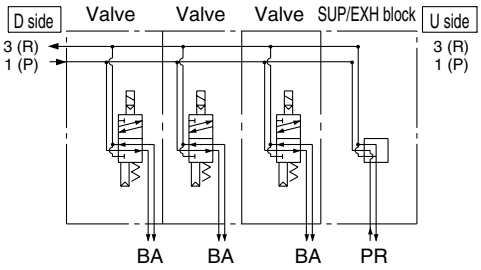
Note) When specifying both options, indicate "RS".
∗ Specify the spacer mounting position on the manifold specification sheet.

Description/Model \ Stations	1	2	3	4	5
Valve: Single	●	●	●		
Valve: ⋮					
Option: SUP/EXH block SSQ1000-PR-3-C8-□				●	

For standard type manifolds, the SUP/EXH block is mounted on the D side.
It is added to the manifold to increase SUP/EXH capacity.

∗ The number of SUP/EXH blocks that can be added is limited to two sets, one between manifold stations and another on the U side of the manifold due to the length of the internal lead wire.
∗ SUP/EXH blocks are not included in the number of manifold stations.





Individual SUP spacer

SSQ1000-P-3-C6

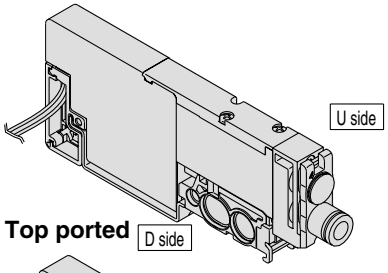
•Port location

C6	Side ported
L6	Top ported

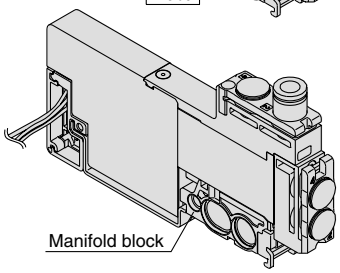
This is used as a supply port for different pressures when using different pressures in the same manifold (for one station). Both sides of the station which is used with supply pressure from the individual SUP spacer are shut off.
(Refer to application example.)

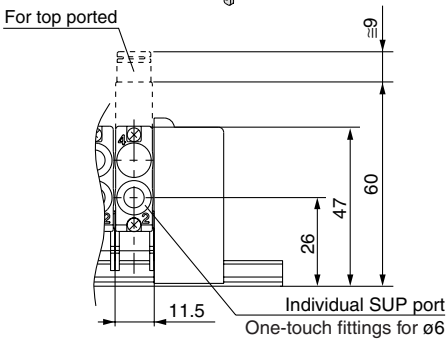
∗ Specify the spacer mounting position and SUP passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.
(Two pieces of SUP block plate that shut off the supply pressure are included with the individual SUP spacer, therefore, it is not necessary to order them separately.)
∗ Electrical wiring is also connected to the manifold station with the individual EXH spacer.
∗ By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual SUP spacer to the individual EXH spacer).
∗ The number of spacers is not limited when ordered with the manifold. However, when adding individual SUP spacers later, it is limited to two units, and another on the U side due to the length of the internal lead wire.
∗ Part number with manifold block:
SSQ1000-P-3-C6/L6 - M

Side ported

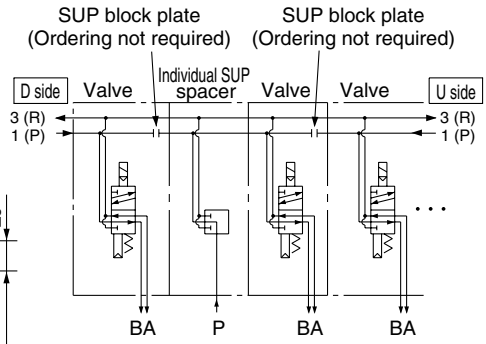


Top ported





Description/Model \ Stations	1	2	3	4	5
Valve: Single	●		●	●	
Valve: ⋮					
Option: Individual SUP spacer SSQ1000-P-3-C6/L6		●			
Option: SUP shut off position: Specify 2 positions.	●		●		



Individual EXH spacer

SSQ1000-R-3- C6

Port location

C6	Side ported
L6	Top ported

This is used to exhaust an individual valve when the exhaust from a valve interferes with other stations in the circuit (used for one station).

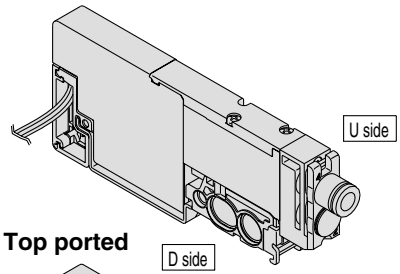
Both sides of the station which is to be individually exhausted are shut off.

(Refer to application example.)

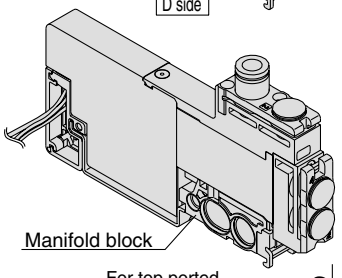
* Specify the spacer mounting position and EXH passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.

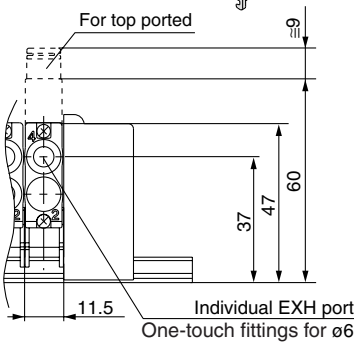
  (Two pieces of EXH block plate that shut off the exhaust are included with the individual EXH spacer, therefore, it is not necessary to order them separately.)
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual EXH spacer to the individual SUP spacer).
* The number of spacers is not limited when ordered with the manifold. However, when adding individual EXH spacers later, it is limited to two units, one between manifold stations and another on the U side due to the length of the internal lead wire.
* Model no. with manifold block:
  SSQ1000-R-3-$\frac{C6}{L6}$- M ≡

Side ported

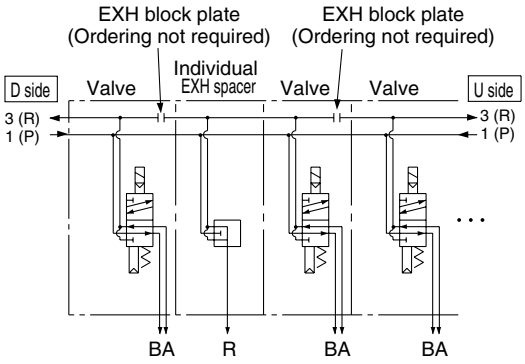


Top ported





Description/Model	Stations	1	2	3	4	5
Valve	Single	●		●	●	
	⋮					
Option	Individual EXH spacer SSQ1000-R-3-$\frac{C6}{L6}$		●			
	EXH shut off position: Specify 2 positions.	●		●		



Individual SUP/EXH spacer

SSQ1000-PR1-3- C6

Port location

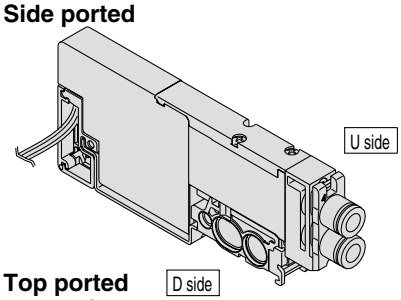
C6	Side ported
L6	Top ported

This has both functions of the individual SUP and EXH spacers above. (Refer to application example.)

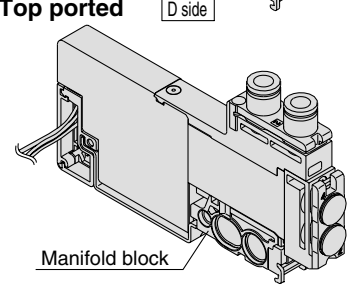
* Specify the spacer mounting position and SUP and EXH passage shut off positions on the manifold specification sheet. Two shut off positions each for SUP and EXH are required per unit.

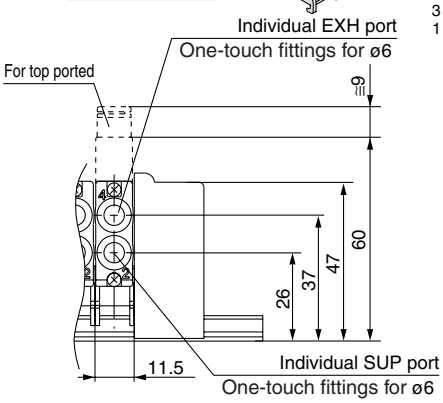
  (Two pieces each of block plate that shut off the SUP and EXH passages are included with the individual SUP/EXH spacer.)
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later.
* The number of spacers is not limited when ordered with the manifold. However, when adding individual SUP/EXH spacers later, it is limited to two units, one between manifold stations and another on the U side due to the length of the internal lead wire.
* Model no. with manifold block:
  SSQ1000-PR1-3-$\frac{C6}{L6}$- M ≡

Side ported

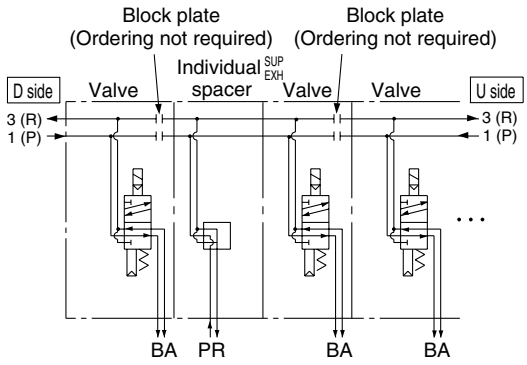


Top ported





Description/Model	Stations	1	2	3	4	5
Valve	Single	●		●	●	
	⋮					
Option	Individual SUP/EXH spacer SSQ1000-PR1-3-$\frac{C6}{L6}$		●			
	SUP shut off position: Specify 2 positions.	●		●		
	EXH shut off position: Specify 2 positions.	●		●		



Manifold Option Parts for SQ1000

SUP block plate

SSQ1000-B-P

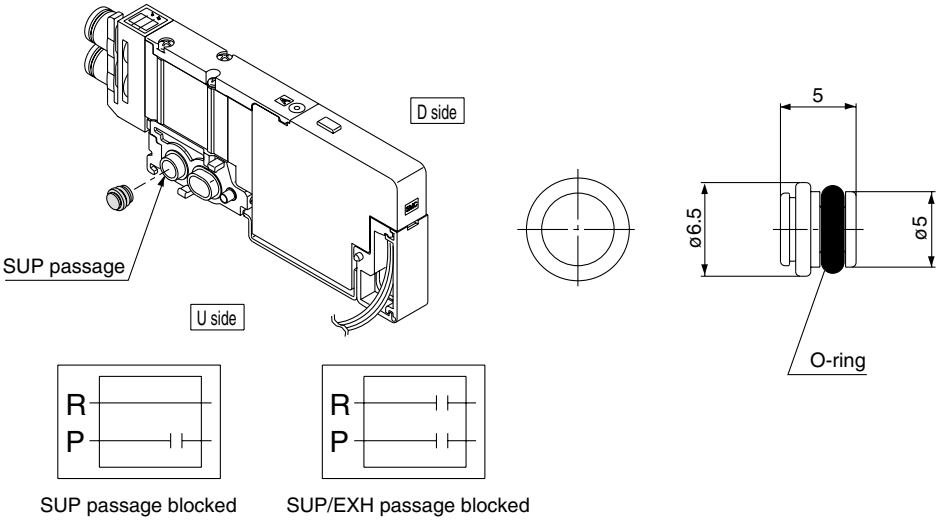
When supplying two different pressures, high and low, to one manifold, this is used between stations with different pressures. Also, it is used with an individual SUP spacer to shut off the air supply.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When a SUP passage is shut off with a SUP block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when SUP block plates are ordered with manifolds.



SUP passage blocked SUP/EXH passage blocked

EXH block plate

SSQ1000-B-R

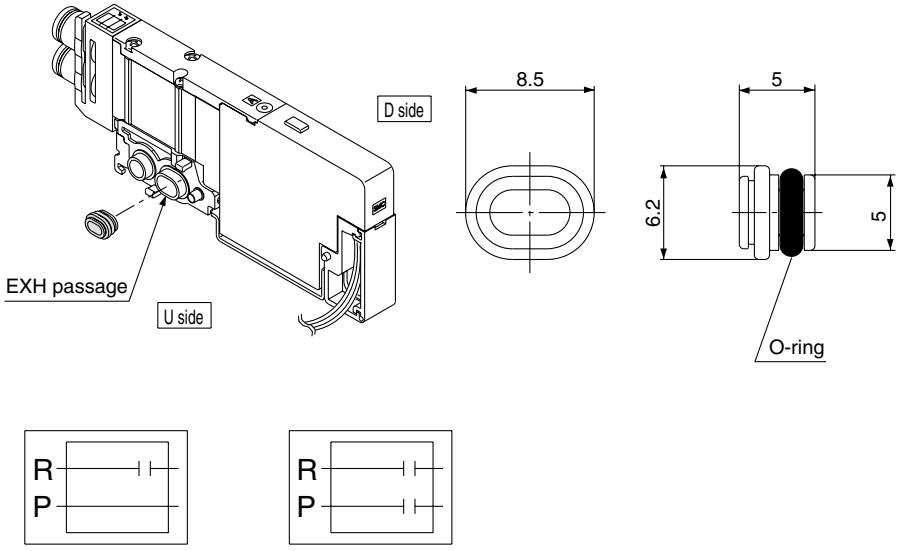
When the exhaust from a valve interferes with other stations in the circuit, this is used between stations to separate exhausts. Also, it is used with an individual EXH spacer to shut off the exhaust of individual valves.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When an EXH passage is shut off with an EXH block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when EXH block plates are ordered with manifolds.



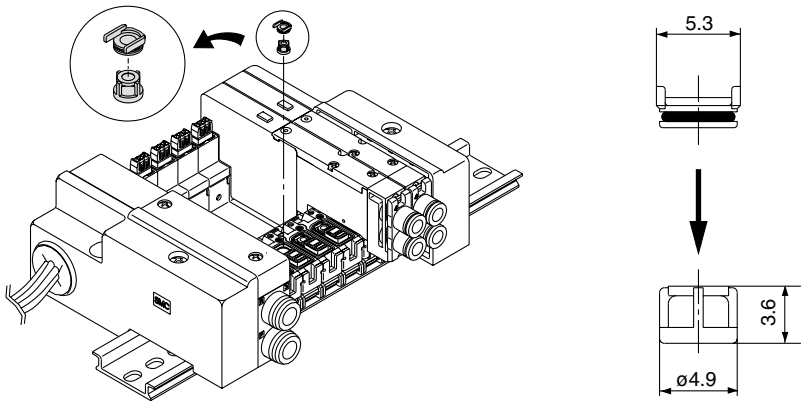
EXH passage blocked SUP/EXH passage blocked

Back pressure check valve [-B]

SSQ1000-BP

This prevents cylinder malfunction caused by the exhaust from other valves. It is inserted into the R (EXH) port of the valve that is affected. It is especially effective when using single acting cylinders or exhaust center type solenoid valves.

* When installing back pressure check valves only on the stations required, enter the part number and specify the mounting stations on a manifold specification sheet.
* When installing back pressure check valves on all of the stations, indicate "-B" at the end of the manifold part number.



⚠ Caution

1. Although the back pressure check valve is an assembly part with a check valve mechanism, a small amount of air leakage is allowed. Therefore, take care not to restrict the exhaust air from the exhaust port.
2. The effective area of valves is about 20% less when the back pressure check valve is installed.
3. Since 4 port specification valves (5 (R1) and 3 (R2) are common) are used, back pressure cannot be prevented with dual 3 port valves.

Name plate [-N]

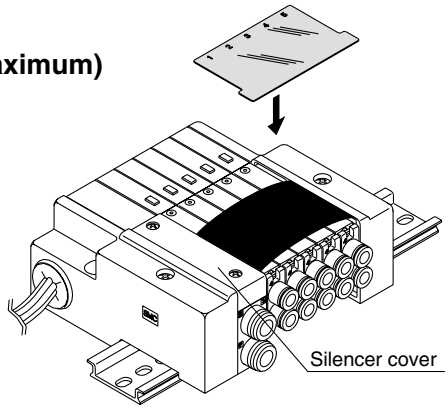
SSQ1000-N3- Stations (1 to maximum)

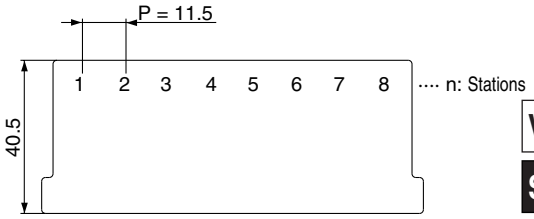
This is a clear resin plate for applying solenoid valve function description labels, etc.

To install, bend the plate slightly as shown and insert into the slots on the end plate side.

Also, the plate is difficult to bend for manifolds with only a few stations, therefore, remove the silencer cover to install it.

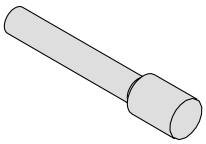
* When ordering with manifolds, add "-N" at the end of the manifold number.





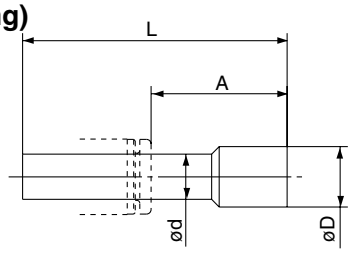
Blanking plug (For One-touch fitting)

KQ2P- **23** **04** **06** **08**



This is inserted into cylinder ports and SUP and EXH ports that are not used.

Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size ød	Model	A	L	D
3.2	**KQ2P-23**	16	31.5	3.2
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10

Port plug

VVQZ100-CP

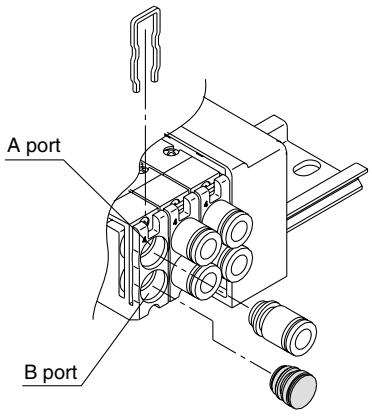
This is used to close the cylinder ports when changing a 5 port valve to a 3 port valve.

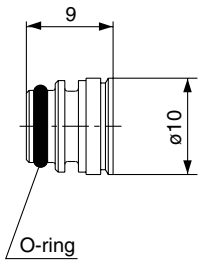
* Add "A" or "B" at the end of the valve part number when ordering with valves.

Example) SQ1131-5-C6-A (N.O. specifications)
- 4 (A) port plug

Example) SQ1131-5-C6-B (N.C. specifications)
- 2 (B) port plug

Example) SQ1131-5-C6-B-M
(B port plug with manifold block)



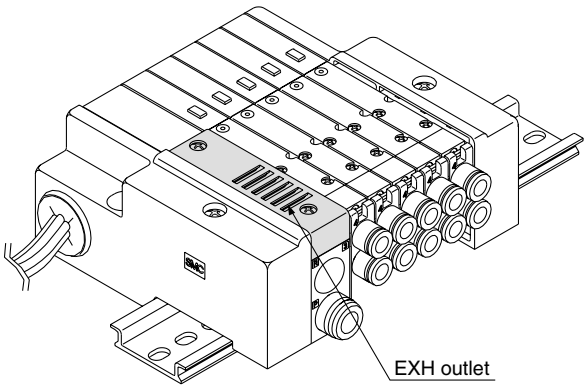


Direct EXH outlet, built-in silencer [-S]

The EXH outlet is placed on the top side of the manifold end plate. The built-in silencer provides highly effective noise reduction.
(Noise reduction of 30 dB)

Note) Note that when excessive drainage occurs in the air supply, the drainage will be released along with the exhaust.

* Add "S" at the end of the manifold part number when ordering with manifolds.
* For precautions on handling and how to replace elements, refer to page 2-3-5.



Manifold Option Parts for SQ1000

External pilot specifications [-R]

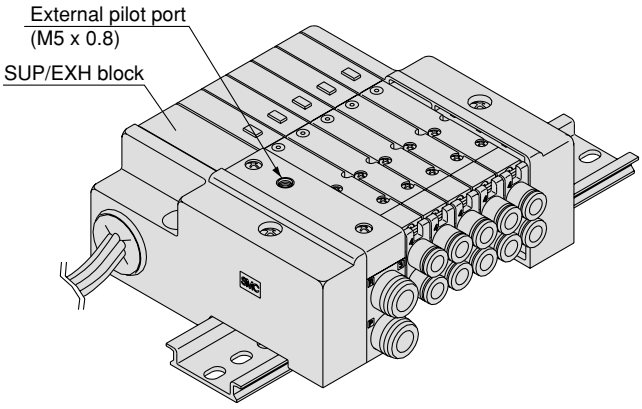
This can be used when the air pressure is 0.1 to 0.2 MPa lower than the minimum operating pressure of the solenoid valves or used for vacuum specifications.

Add “R” to the part numbers of manifolds and valves to indicate the external pilot specification.

An M5 port will be installed on the top side of the manifold’s SUP/EXH block.

● How to order valves (Example)
SQ1130 R -5-C6
• External pilot specifications

● How to order manifold (Example)
∗ Indicate “R” for an option.
SS5Q13-08FD1-DR
• External pilot specifications



Note 1) Not applicable for 4 position dual 3 port valves.
Note 2) Indicate “RY” for low wattage types.
Note 3) Valves with the external pilot specifications have a pilot EXH with individual exhaust specifications and EXH can be pressurized. However, the pressuresupplied from EXH should be 0.4 MPa or lower.

Dual flow fitting

SSQ1000-52A-C8
•**Port size**

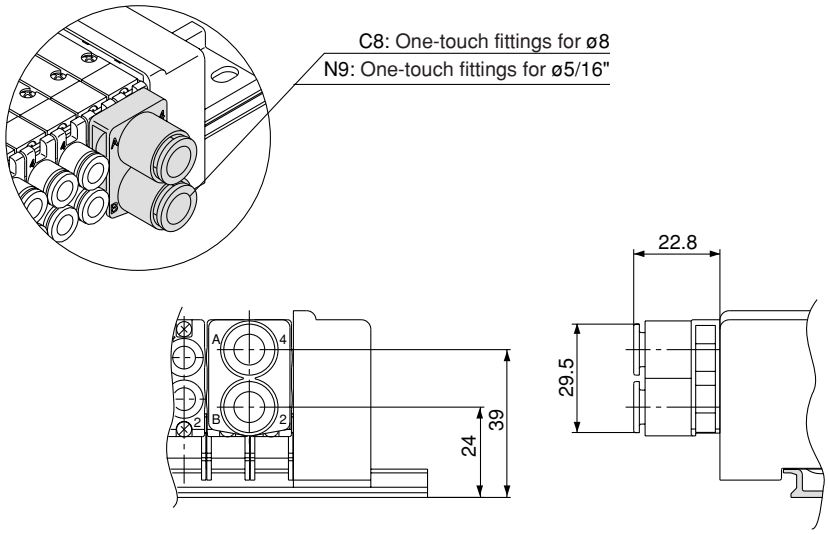
C8	ø8
N9	ø5/16"

To drive a large bore cylinder, two valve stations are operated simultaneously to double the air flow.

This fitting is used on the cylinder ports in this situation. Available sizes are ø8 and ø5/16" One-touch fittings.

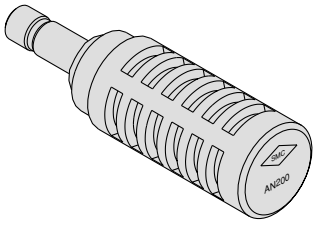
∗ When ordering with valves, specify the valve part number without One-touch fitting and list without One-touch fitting and list the dual flow fitting part number.

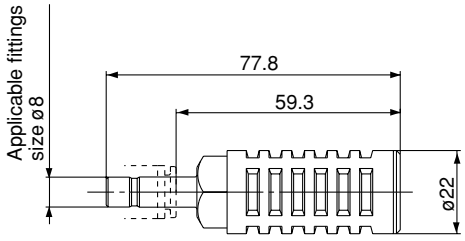
Example) Valve part number (without One-touch fitting)
SQ1131-5-C0 ····· 2 sets
∗SSQ1000-52A-C8/N9 ····· 1 set



Silencer (For EXH port)

This is inserted into the centralized type EXH port (One-touch fitting).





Specifications

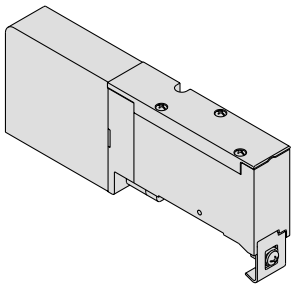
Series	Model	Effective area mm² (Cv factor)	Noise reduction (dB)
SQ1000	AN200-KM8	20 (1.1)	30

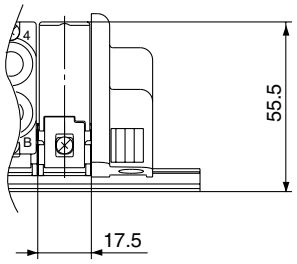
Manifold Option Parts for SQ2000

Blanking plate

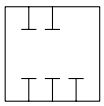
SSQ2000-10A-3

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.





JIS Symbol



SUP/EXH block

SSQ2000-PR-3-C10-□

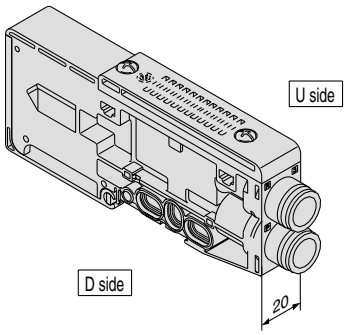
Option

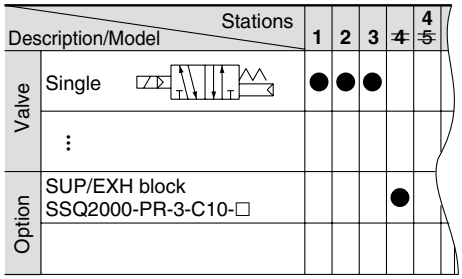
Nil	Standard
R	External pilot specifications
S	Built-in silencer

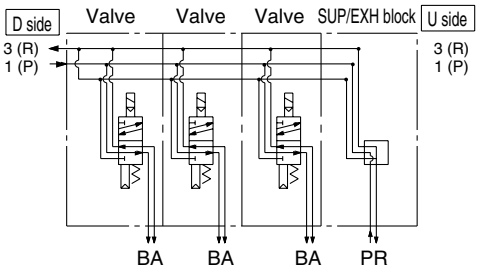
Note) When specifying both options, indicate "RS".
* Specify the spacer mounting position on the manifold specification sheet.

For standard type manifolds, the SUP/EXH block is mounted on the D side.
It is added to the manifold to increase SUP/EXH capacity.

* The number of SUP/EXH blocks that can be added is limited to two sets, one between manifold stations and another on the U side of the manifold due to the length of the internal lead wire.
* SUP/EXH blocks are not included in the number of manifold stations.







Individual SUP spacer

SSQ2000-P-3-C8

Port location

C8	Side ported
L8	Top ported

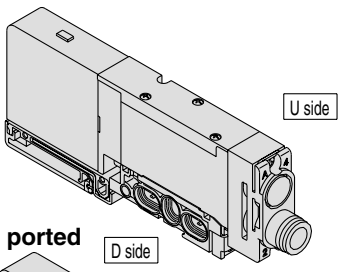
This is used as a supply port for different pressures when using different pressures in the same manifold (for one station).

Both sides of the station which is used with supply pressure from the individual SUP spacer are shut off. (Refer to application example.)

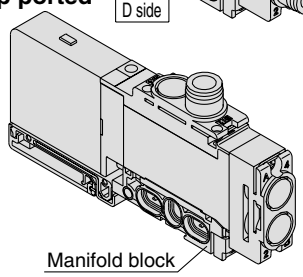
* Specify the spacer mounting position and SUP passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.

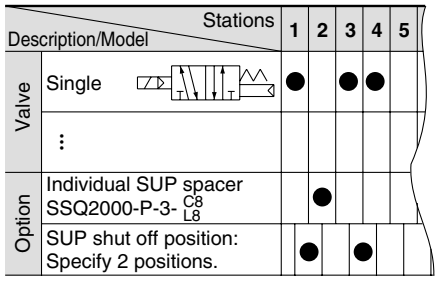
  (Two pieces of SUP block plate that shut off the supply pressure are included with the individual SUP spacer, therefore, it is not necessary to order them separately.)
* Electrical wiring is also connected to the manifold station with the individual SUP spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual SUP spacer to the individual EXH spacer).
* The number of spacers is not limited when ordered with the manifold. However, when adding individual SUP spacers later, it is limited to two units, and another on the U side due to the length of the internal lead wire.
* Model no. with manifold block:
  SSQ2000-P-3-$\frac{C8}{L8}$-$\frac{}{M}$

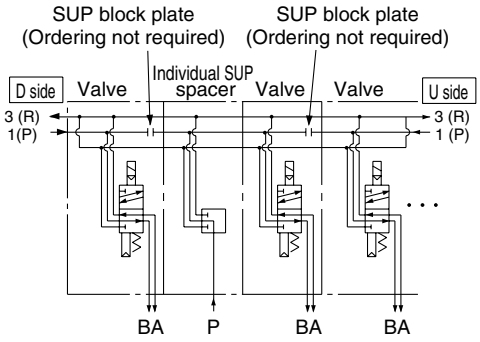
Side ported

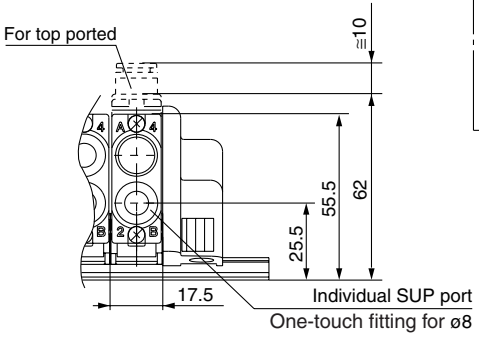


Top ported









Manifold Option Parts for SQ2000

Individual EXH spacer

SSQ2000-R-3-C8

•**Port location**

C8	Side ported
L8	Top ported

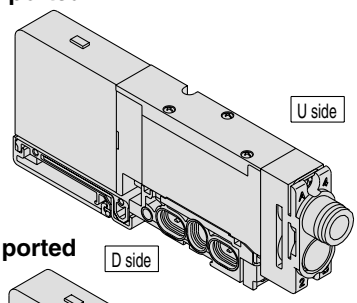
This is used to exhaust an individual valve when the exhaust from a valve interferes with other stations in the circuit (used for one station).

Both sides of the station which is to be individually exhausted are shut off. (Refer to application example.)

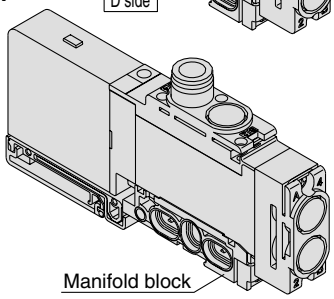
* Specify the spacer mounting position and EXH passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.

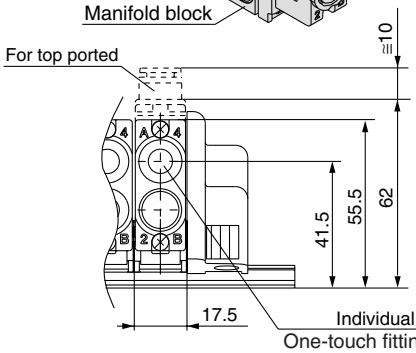
  (Four pieces of EXH block plate that shut off the exhaust are included with the individual EXH spacer, therefore, it is not necessary to order them separately.)
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual EXH spacer to the individual SUP spacer).
* The number of spacers is not limited when ordered with the manifold. However, when adding individual EXH spacers later, it is limited to two units, one between manifold stations and another on the U side due to the length of the internal lead wire.
* Model no. with manifold block:
  SSQ2000-R-3-$\frac{C8}{L8}$ - $\frac{M}{=}$

Side ported

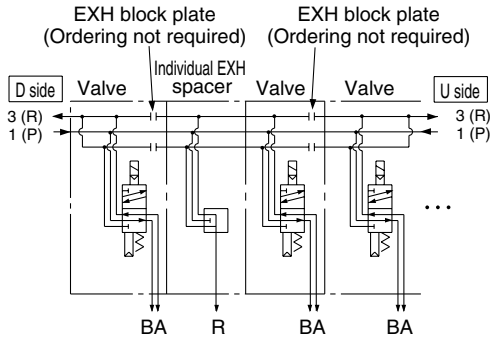


Top ported





Description/Model	Stations 1	2	3	4	5
Valve: Single	●		●	●	
Valve: ⋮					
Option: Individual EXH spacer SSQ2000-R-3-$\frac{C8}{L8}$		●			
Option: EXH shut off position: Specify 2 positions.	●		●		



Individual SUP/EXH spacer

SSQ2000-PR1-3-C8

•**Port location**

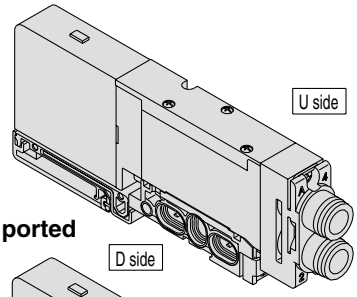
C8	Side ported
L8	Top ported

This has both functions of the individual SUP and EXH spacers above. (Refer to application example.)

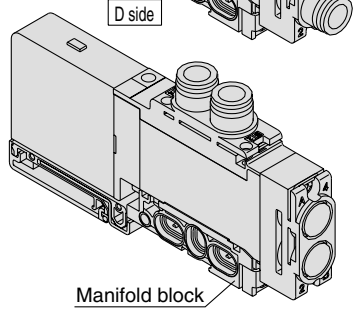
* Specify the spacer mounting position and SUP and EXH passage shut off positions on the manifold specification sheet. Two shut off positions each for SUP and EXH are required per unit.

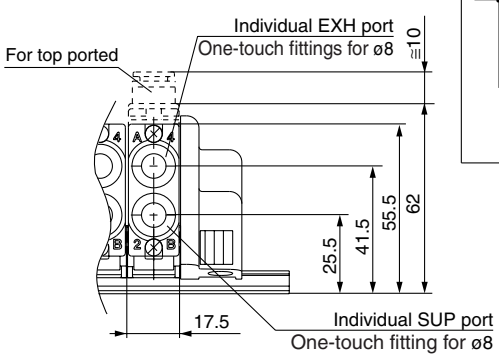
  [Block plates that shut off the SUP and EXH passages are included with the individual SUP/EXH spacer (2 pcs. of SUP block plate and 4 pcs. of EXH block plate).]
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later.
* The number of spacers is not limited when ordered with the manifold. However, when adding individual SUP/EXH spacers later, it is limited to two units, one between manifold stations on the U side due to the length of the internal lead wire.
* Model no. with manifold block:
  SSQ2000-PR1-3-$\frac{C8}{L8}$ - $\frac{M}{=}$

Side ported

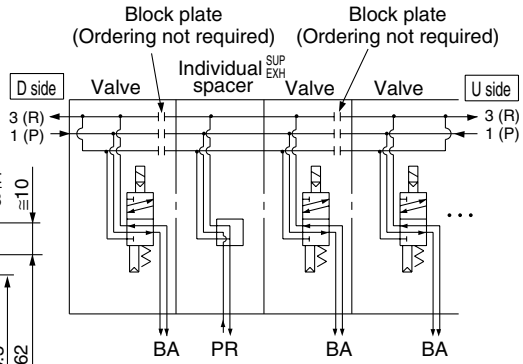


Top ported





Description/Model	Stations 1	2	3	4	5
Valve: Single	●		●	●	
Valve: ⋮					
Option: Individual SUP/EXH spacer SSQ2000-PR1-3-$\frac{C8}{L8}$		●			
Option: SUP shut off position: Specify 2 positions.	●		●		
Option: EXH shut off position: Specify 2 positions.	●		●		



SUP block plate

SSQ1000-B-R

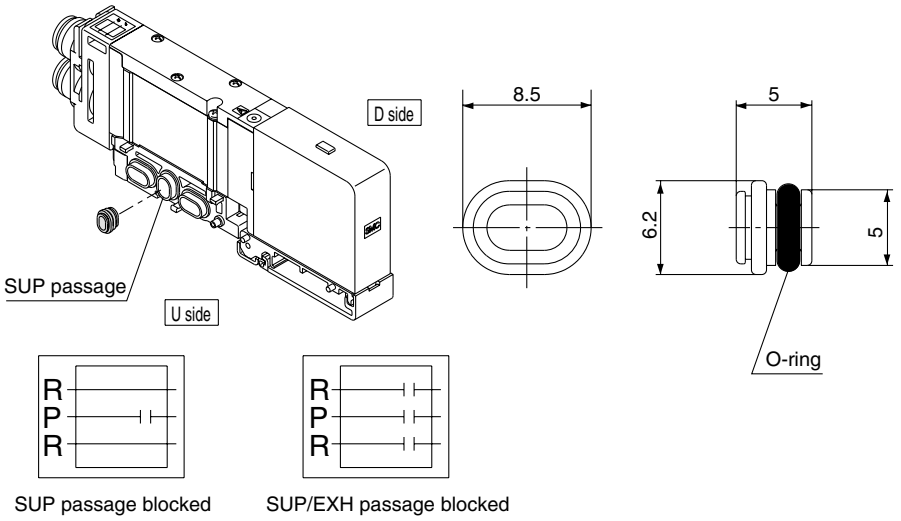
When supplying two different pressures, high and low, to one manifold, this is used between stations with different pressures. Also, it is used with an individual SUP spacer to shut off the air supply.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When a SUP passage is shut off with a SUP block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when SUP block plates are ordered with manifolds.



SUP passage blocked　　SUP/EXH passage blocked

EXH block plate

SSQ2000-B-R

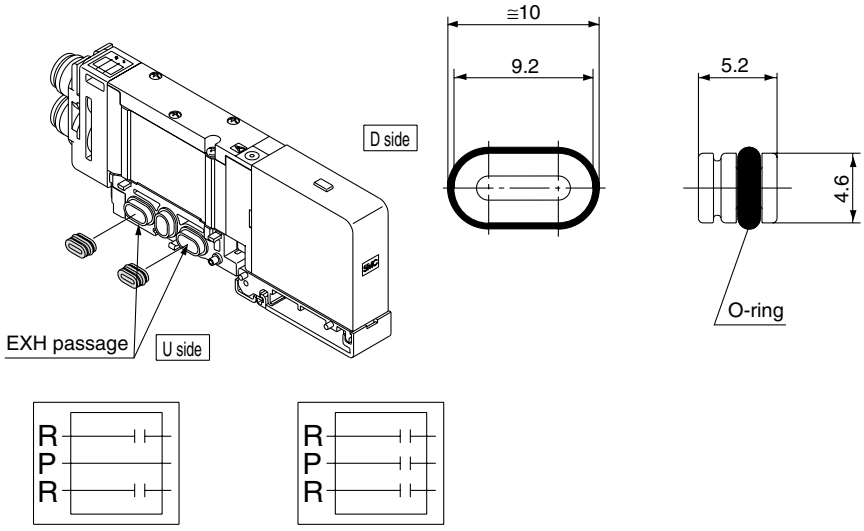
When the exhaust from a valve interferes with other stations in the circuit, this is used between stations to separate exhausts. Also, it is used with an individual EXH spacer to shut off the exhaust of individual valves.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When an EXH passage is shut off with an EXH block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when EXH block plates are ordered with manifolds.



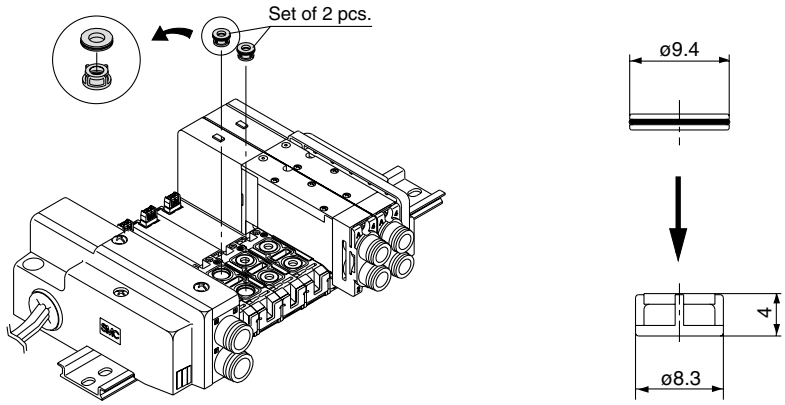
EXH passage blocked　　SUP/EXH passage blocked

Back pressure check valve [-B]

SSQ2000-BP

This prevents cylinder malfunction caused by the exhaust from other valves. It is inserted into the R (EXH) port of the valve that is affected. It is especially effective when using single acting cylinders or exhaust center type solenoid valves.

* When installing back pressure check valves only on the stations required, enter the part number and specify the mounting stations on a manifold specification sheet.
* When installing back pressure check valves on all of the stations, indicate "-B" at the end of the manifold part number.



⚠ Caution

1. Although the back pressure check valve is an assembly part with a check valve mechanism, a small amount of air leakage is allowed. Therefore, take care not to restrict the exhaust air from the exhaust port.

2. The effective area of valves is about 20% less when the back pressure check valve is installed.

Manifold Option Parts for SQ2000

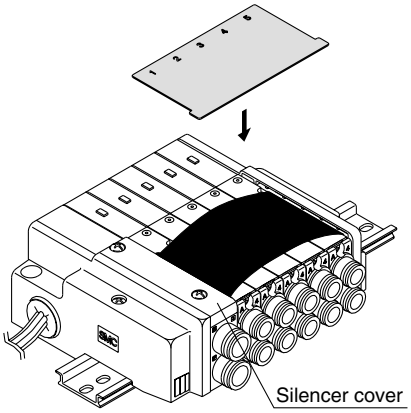
Name plate [-N]

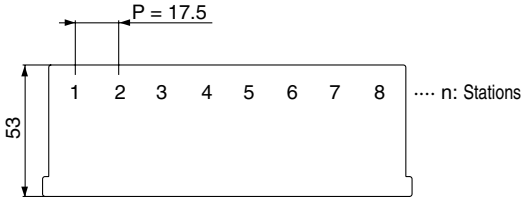
SSQ2000-N3- Stations (1 to maximum)

This is a clear resin plate for applying solenoid valve function description labels, etc.

To install, bend the plate slightly as shown and insert into the slots on the end plate side. Also, the plate is difficult to bend for manifolds with only a few stations, therefore, remove the silencer cover to install it.

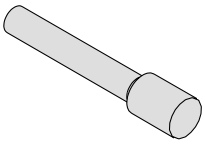
* When ordering with manifolds, add "-N" at the end of the manifold number.





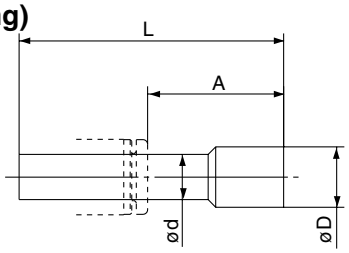
Blanking plug (For One-touch fitting)

KQ2P- 04 06 08 10



This is inserted into cylinder ports and SUP and EXH ports that are not used.

Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size ød	Model	A	L	D
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10
10	**KQ2P-10**	22	43	12

Port plug

VVQZ2000-CP

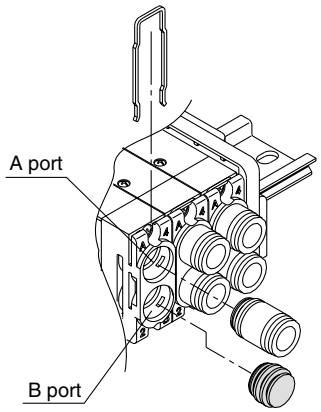
This is used to close the cylinder ports when changing a 5 port valve to a 3 port valve.

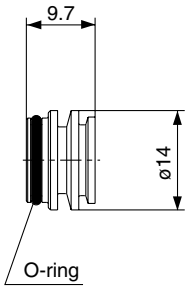
* Add "A" or "B" at the end of the valve part number when ordering with valves.

Example) SQ2131-5-C8-A (N.O. specifications)
- 4 (A) port plug

Example) SQ2131-5-C8-B (N.C. specifications)
- 2 (B) port plug

Example) SQ2131-5-C8-B-M
(B port plug with manifold block)



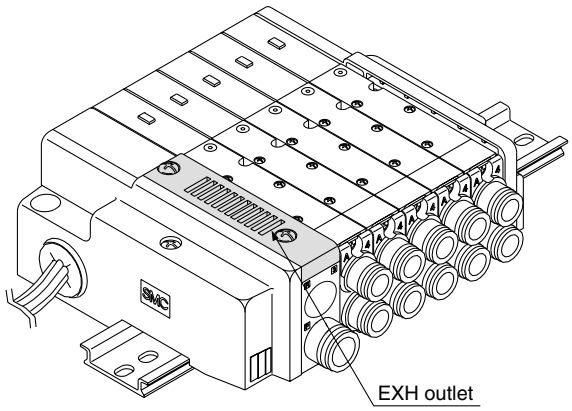


Direct EXH outlet, built-in silencer [-S]

The EXH outlet is placed on the top side of the manifold end plate. The built-in silencer provides highly effective noise reduction. (Noise reduction of 30 dB)

Note) Note that when excessive drainage occurs in the air supply, the drainage will be released along with the exhaust.

* Add "-S" at the end of the manifold part number when ordering with manifolds.
* For precautions on handling and how to replace elements, refer to page 2-3-5.



External pilot specifications [-R]

This can be used when the air pressure is 0.1 to 0.2 MPa lower than the minimum operating pressure of the solenoid valves or used for vacuum specifications.

Add "R" to the part numbers of manifolds and valves to indicate the external pilot specifications.

An M5 port will be installed on the top side of the manifold's SUP/EXH block.

● How to order valves (Example)

SQ2130 R -5-C6

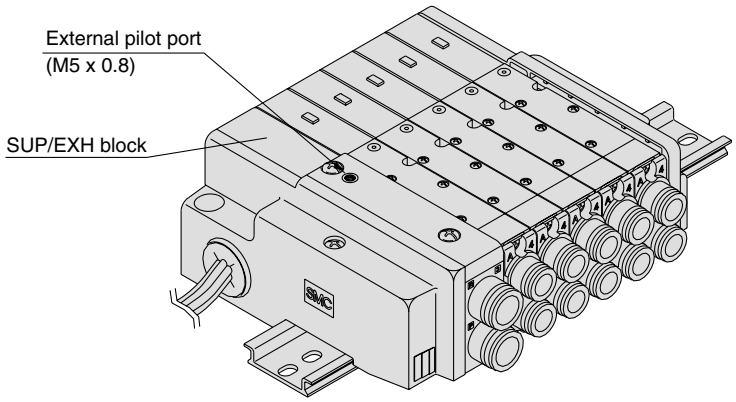
• External pilot specifications

● How to order manifold (Example)

∗ Indicate "R" for an option.

SS5Q23-08FD1-DR

• External pilot specifications



Note 1) Not applicable for dual 3 port valves.
Note 2) Indicate "RY" for low wattage types.
Note 3) Valves with the external pilot specifications have a pilot EXH with individual exhaust specifications and EXH can be pressurized. However, the pressure supplied from EXH should be 0.4 MPa or lower.

Dual flow fitting

SSQ2000-52A- C10

•Port size

C10	ø10
N11	ø3/8"

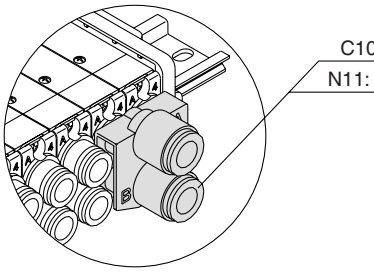
To drive a large bore cylinder, two valve stations are operated simultaneously to double the air flow. This fitting is used on the cylinder ports in this situation. Available sizes are ø10 and ø3/8" One-touch fittings.

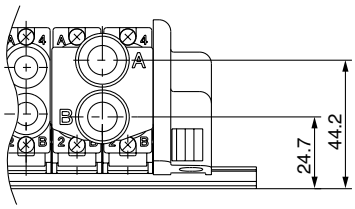
∗ When ordering with valves, specify the valve part number without One-touch fitting and list without One-touch fitting and list the dual flow fitting part number.

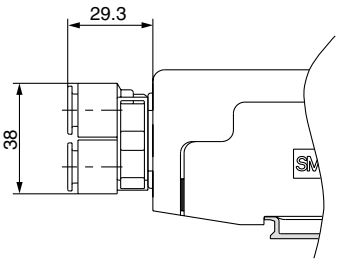
Example) Valve part number (without One-touch fitting)

SQ2131-5 - C0 ····· 2 sets

∗ SSQ2000- 52A - C10/N11 ····· 1 set

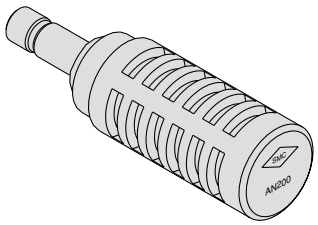


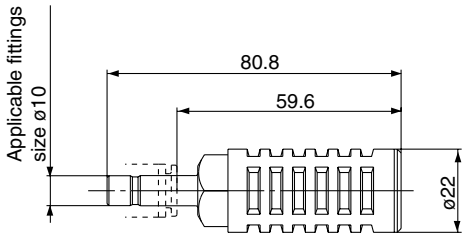




Silencer (For EXH port)

This is inserted into the centralized type EXH port (One-touch fitting).





Specifications

Series	Model	Effective area (mm²) (Cv factor)	Noise reduction (dB)
SQ2000	AN200-KM10	26 (1.4)	30

Manifold Option Parts for SQ1000/SQ2000

Special Wiring Specifications

In the internal wiring of F kit, P kit, J kit, T kit and S kit, double wiring (connected to SOL. A and SOL. B) is adopted for each station regardless of the valve and option types. Mixed single and double wiring is available as an option.

1. How to Order

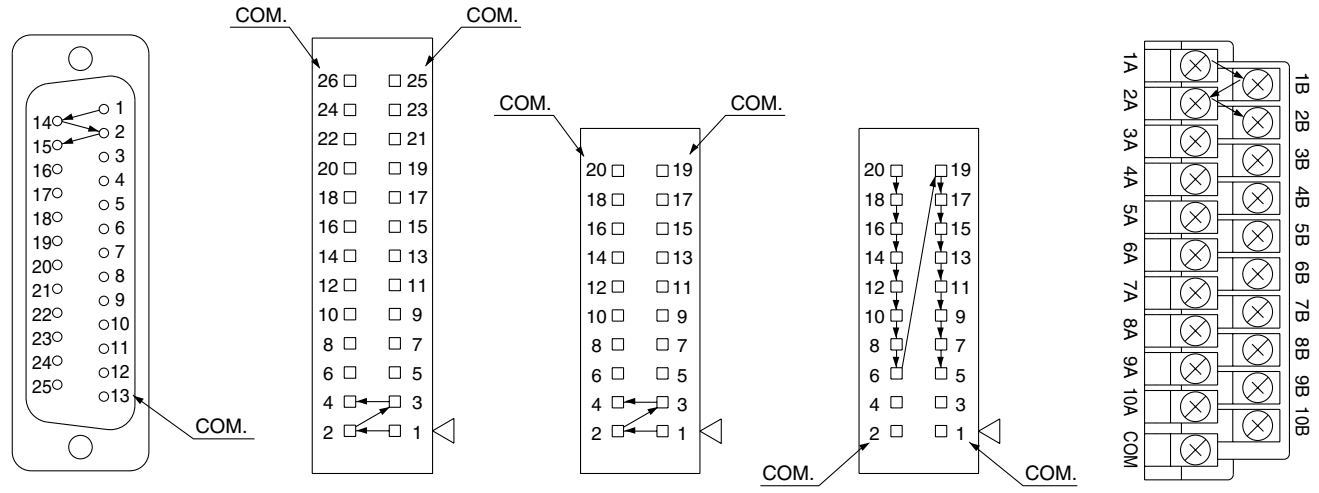
Indicate option symbol " **-K** " in the manifold part number and be sure to specify station positions for single or double wiring on the manifold specification sheet. Also, specify wiring for spare connectors.
(Up to two spare connectors are included depending on the remaining number of connector pins. When the wiring for the spare connectors is not specified, they will be wired according to "Spare Connector Wiring" on page 2-3-57.)

Example) **SS5Q13 - 09 FD0 - DKS**

• Others, option symbols: to be indicated alphabetically.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.



F kit
D-sub connector
(For 25P)

P Kit
Flat ribbon cable connector
(For 26P)

P Kit
Flat ribbon cable connector
(For 20P)

J kit
Flat ribbon cable connector (20P)
PC Wiring System compatible

T kit
Terminal block
(SQ2000 only)

For S kit (serial transmission kit), refer to pages 2-3-20 and 2-3-40.

3. Maximum stations

The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. Determine the number of stations so that the total number of solenoids is no more than the maximum points in the table below.

Kit	F kit (D-sub connector)	P kit (Flat ribbon cable connector)		J kit Flat ribbon cable PC Wiring System compatible	T kit (Terminal block) SQ2000 only*	S kit (Serial)
Type	FD□ 25P	PD□ 26P	PDC 20P	JD0 20P	TD0	SD□
Max. points	24 points	24 points	18 points	16 points	20 points	16 points

Note) Maximum stations ···· SQ1000: 24 stations
SQ2000: 16 stations

Special DIN Rail Length (DIN rail mounting (-D) only)

The standard DIN rail provided is approximately 30 mm longer than the overall length of the manifold with a specified number of stations.
The following options are also available.

● DIN rail length longer than the standard type (for stations to be added later, etc.)

In the manifold part number, specify "-D" for the manifold mounting symbol and add the number of required stations after the symbol.

Example) **SS5Q13-08FD0-D09BNK**

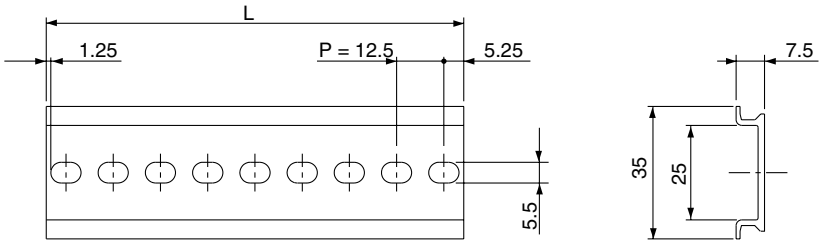
- 8 station manifold
- Option symbols (alphabetically)
- DIN rail for 9 stations

● Ordering DIN rail only

DIN rail part number

AXT100-DR- n

Note) For "n", enter a number from the "No." line in the table below.
For L dimension, refer to the dimensions of each kit.



L Dimension

L = 12.5 x n + 10.5

No.	1	2	3	4	5	6	7	8	9	10
L dimension	23	35.5	48	60.5	73	85.5	98	110.5	123	135.5

No.	11	12	13	14	15	16	17	18	19	20
L dimension	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5

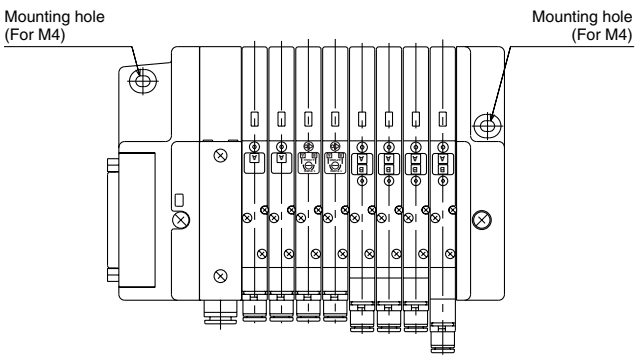
No.	21	22	23	24	25	26	27	28	29	30
L dimension	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5

No.	31	32	33	34	35	36	37	38	39	40
L dimension	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

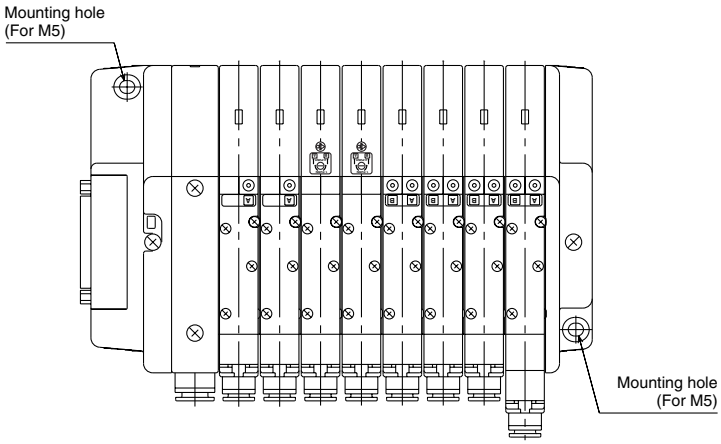
Direct Mounting Style (-E)

Manifold is mounted by using mounting holes of both sides of the manifold.
DIN rail is not sticking out of the edge of end plate.

SQ1000



SQ2000



Manifold Option for SQ1000/SQ2000

Negative Common Specifications

The following valve part numbers are for negative common specifications. Manifold part numbers are the same as the standard except L kit.
Also, negative COM specifications are not available for the S kit.

● How to order negative COM valves (Example)

SQ1130 N -5-C6

N: Negative common specifications

● How to order negative COM manifold (Example)

SS5Q13 - 08 LD1 N - D N

- 08: Stations
- LD1: Kit type
- N: **Negative common specifications**
- D: DIN rail mounting style
- N: Option

Inch-size One-touch Fittings

For One-touch fittings in inch sizes, use the following part numbers. Also, the color of the release button is orange.

● How to order valves (Example)

SQ1130- 5 - □ N7

Port location •

Nil	Side ported
L	Top ported

• **Cylinder port**

Symbol		N1	N3	N7	N9
Applicable tubing O.D. (Inch)		ø1/8"	ø5/32"	ø1/4"	ø5/16"
4(A), 2(B) port	**SQ1000**	●	●	●	—
	SQ2000	—	●	●	●

● How to order manifold (Example)

Add "00T" at the end of the part number.

SS5Q13- 08 FD0 - DN - 00T

00T: 1 (P), 3 (R) port in inch size
- SQ1000: ø5/16" (N9)
- SQ2000: ø3/8" (N11)

How to Add Manifold Stations for SQ1000/SQ2000

1. Using Spare Connector to Add Stations

As shown in the table below, wiring specifications for spare connectors are based on to the remaining number of connector pins (remaining number of pins against the maximum number of solenoids for each kit.)
The following steps are for using spare connectors to add stations.

Spare Connector Wiring

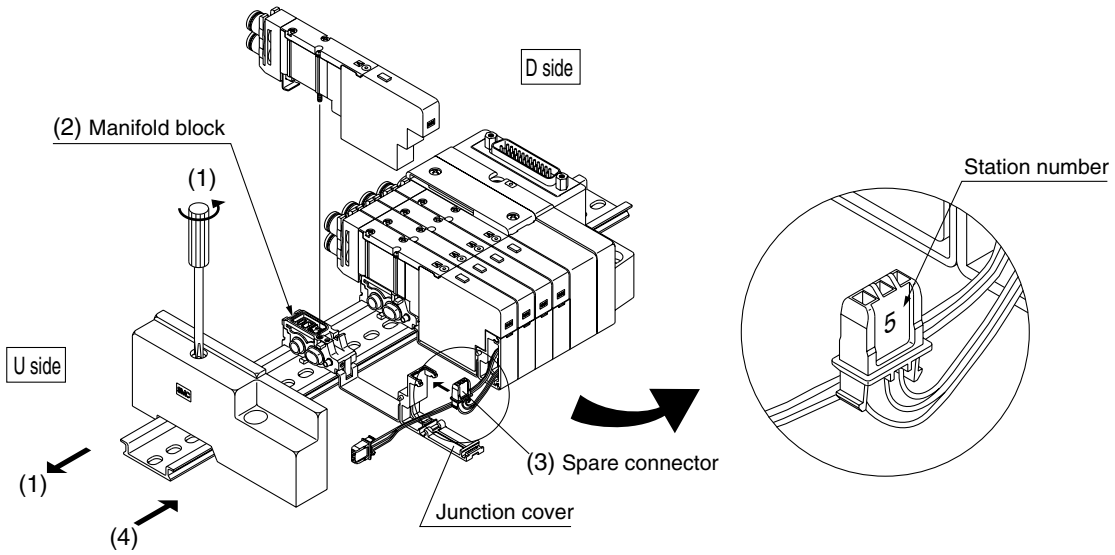
Remaining connector pins	4 pins or more	3 pins	2 pins	1 pin	0 pin
Spare connector wiring	2 for double wiring	1 for double wiring (on the low no. station side) 1 for single wiring	1 for double wiring	1 for single wiring	None

What to order

• Valves with manifold block (refer to pages 2-3-7 and 2-3-25) or the manifold blocks (Refer to page 2-3-58)>

Steps for adding stations

(1) Loosen the clamp screw on the U side end plate and open the manifold.
↓
(2) Mount the manifold block to be added.
↓
(3) Open the junction cover and attach the spare connector. Match the station position of the added station and the spare connector station number.
↓
(4) Press on the end plate to eliminate any space between the manifold blocks and tighten the clamp screw.
(Proper tightening torque: 0.8 to 1.0 N·m)
Note 1) Order a manifold block with lead wire for the L kit because a spare connector is not included with the kit. (Refer to page 2-3-58.)
Note 2) Do not let the lead wires get caught between manifolds, or when closing the junction cover.



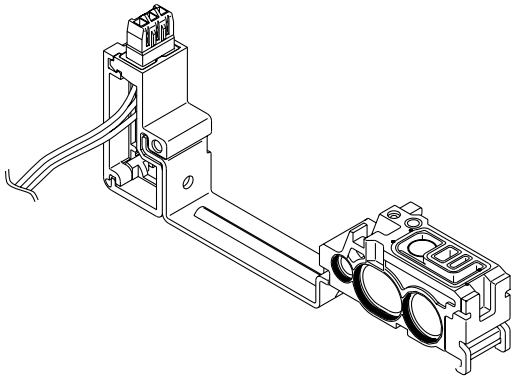
How to Add Manifold Stations for SQ1000/SQ2000

2. Adding Stations Without Required Spare Connectors

Spare connectors for 2 stations are initially included. However, to add 3 or more stations, order manifold blocks with lead wire in the tables below.

How to Order Manifold Blocks with Lead Wire

SQ1000



SSQ1000 — 1A — 3 — FS 03 — ☐

Lead wire type

F0	Without lead wire (for using spare connectors to add stations)
FS	F kit (D-sub connector kit) Single wiring
FW	F kit (D-sub connector kit) Double wiring
PS	P, J kit (Flat ribbon cable kit) Single wiring
PW	P, J kit (Flat ribbon cable kit) Double wiring
L0	L kit (Lead wire kit) Lead wire length 0.6 m
L1	L kit (Lead wire kit) Lead wire length 1.5 m
L2	L kit (Lead wire kit) Lead wire length 3.0 m
SS	S kit (Serial transmission kit) Single wiring
SW	S kit (Serial transmission kit) Double wiring

Applicable stations

01	1 station
⋮	⋮
24	24 station

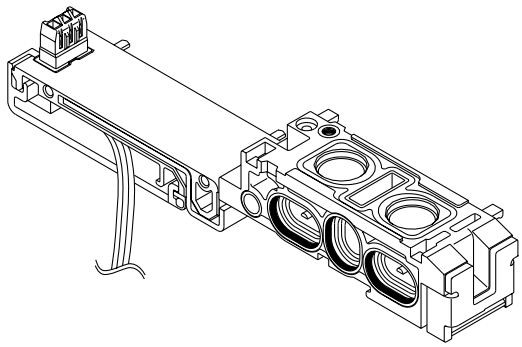
Note 1) No symbol required for "F0".
Note 2) S kit is from 01 to 16

Option

Nil	None
B	Back pressure check valve
R	External pilot specifications

Note) Enter "-BR" for both options.

SQ2000



SSQ2000 — 1A — 3 — FS 03 — ☐

Lead wire type

F0	Without lead wire (for using spare connectors to add stations)
FS	F kit (D-sub connector kit) Single wiring
FW	F kit (D-sub connector kit) Double wiring
PS	P, J kit (Flat ribbon cable kit) Single wiring
PW	P, J kit (Flat ribbon cable kit) Double wiring
TS	T kit (Terminal block kit) Single wiring
TW	T kit (Terminal block kit) Double wiring
L0	L kit (Lead wire kit) Lead wire length 0.6 m
L1	L kit (Lead wire kit) Lead wire length 1.5 m
L2	L kit (Lead wire kit) Lead wire length 3.0 m
SS	S kit (Serial transmission kit) Single wiring
SW	S kit (Serial transmission kit) Double wiring

Applicable stations

01	1 station
⋮	⋮
16	16 stations

Note) No symbol required for "F0".

Option

Nil	None
B	Back pressure check valve
R	External pilot specifications

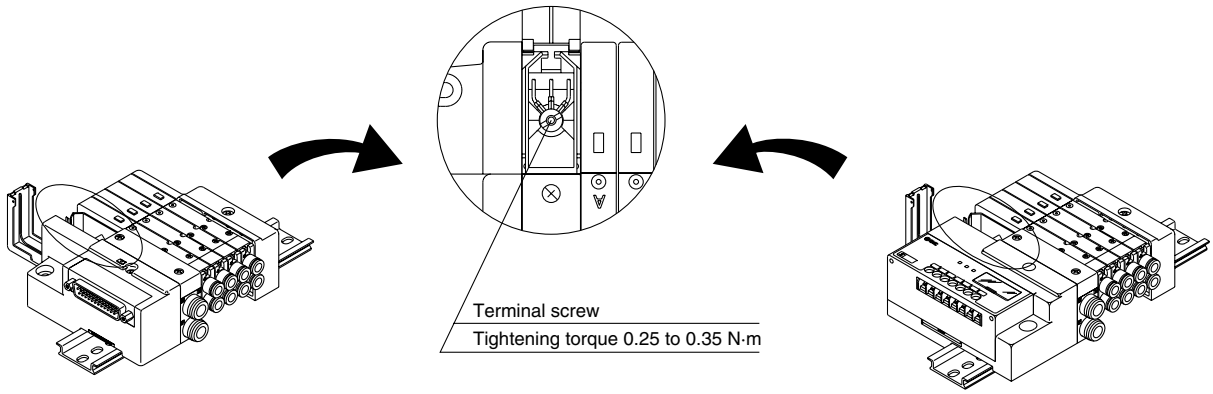
Note) Enter "-BR" for both options.

3. Connection Method (Refer to page 2-3-57 regarding the steps for adding stations to a manifold block.)

Connect the round terminal of the red lead wire to the common terminal inside the junction cover.

(1) Connecting common terminals

Connect lead wire assemblies included with manifold blocks as follows.

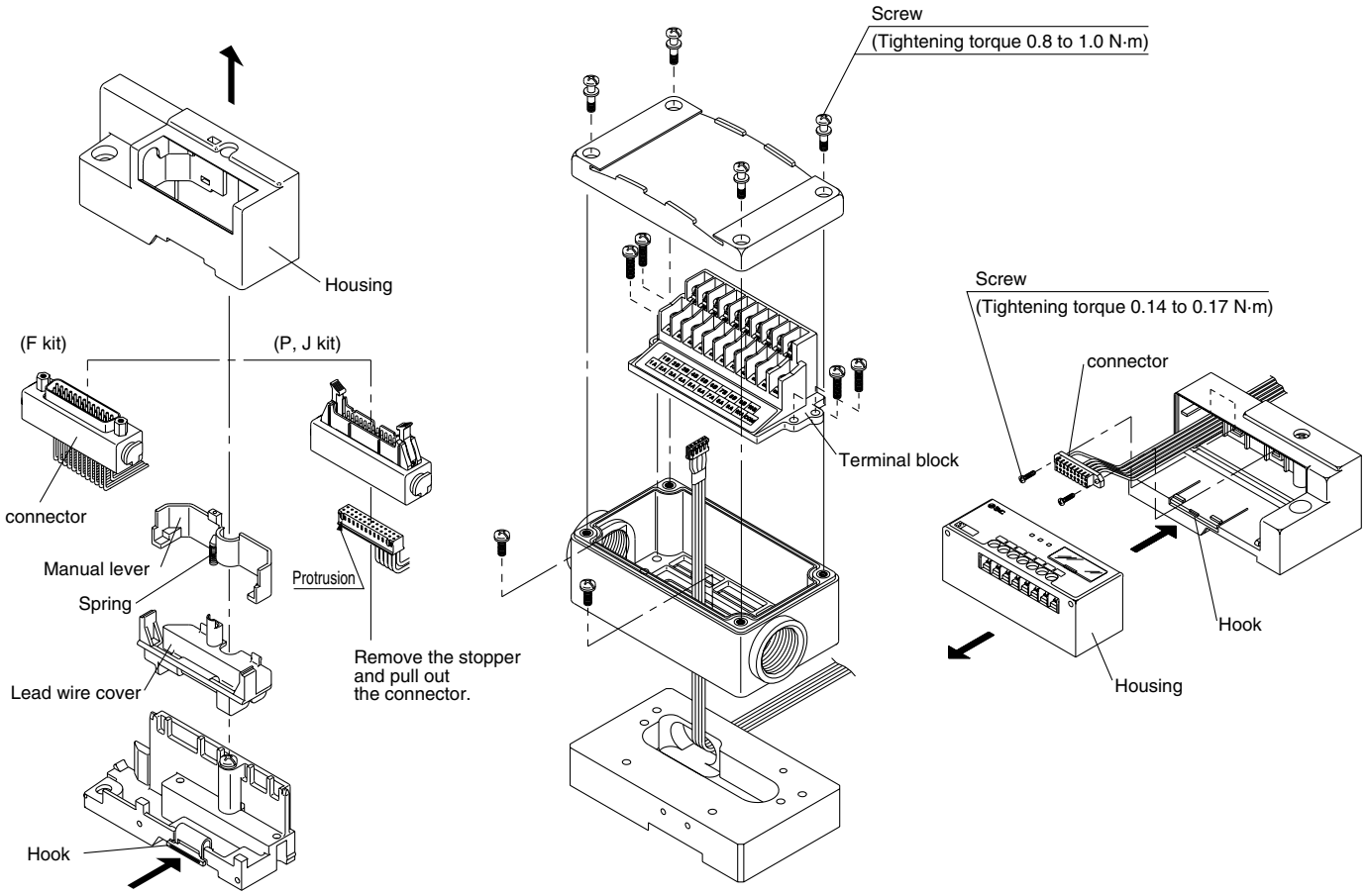


F, P, J kit **T, S kit**

(2) Pulling out connector

Pull out the connector to connect the lead wire.

- For F, P, and J kits, pull out and remove the housing while pressing down hard on the hook with a flat head screwdriver, etc. Remove the manual lever and lead wire cover, and pull out the connector.
- For T kits, remove the screws and pull out the terminal block.
- For S kits, remove the screws and pull out the connector.



F, P, J kit **T kit** **S kit**

How to Add Manifold Stations for SQ1000/SQ2000

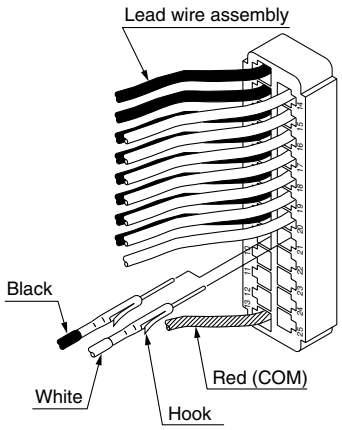
(3) Connect the black and white lead wire pins to the positions shown below in accordance with each kit.

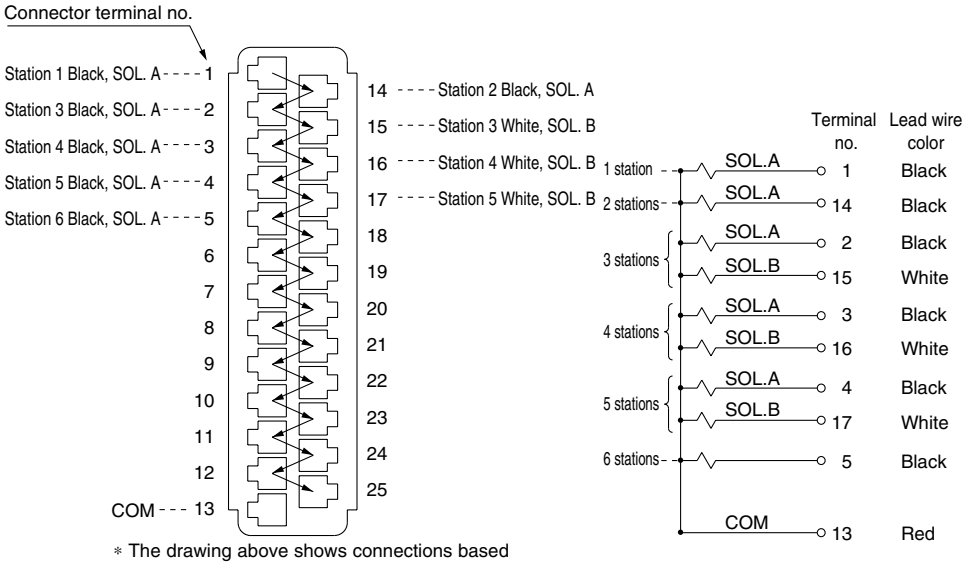
⚠ **Caution** **1.** After inserting the pin, confirm that the pin hook is locked by lightly pulling the lead wire.

2. Do not pull the lead wire forcefully when connecting. Also, take care that lead wires do not get caught between manifolds or when closing the junction cover.

Wiring (F kit: D-sub connector kit)

Procedure) Based on the manifold specifications, station 1 of SOL.A (black wire) will be terminal number 1 of the D-sub connector, and for station 2 and thereafter, connect black wires, then white wires in the order as shown below by the arrows.





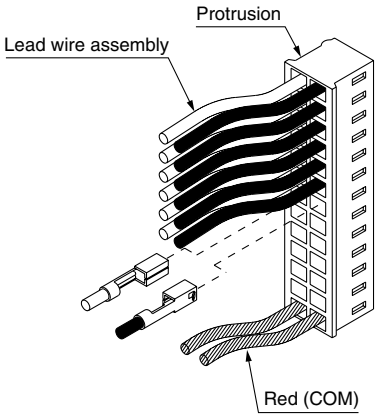
Manifold Specifications' Example

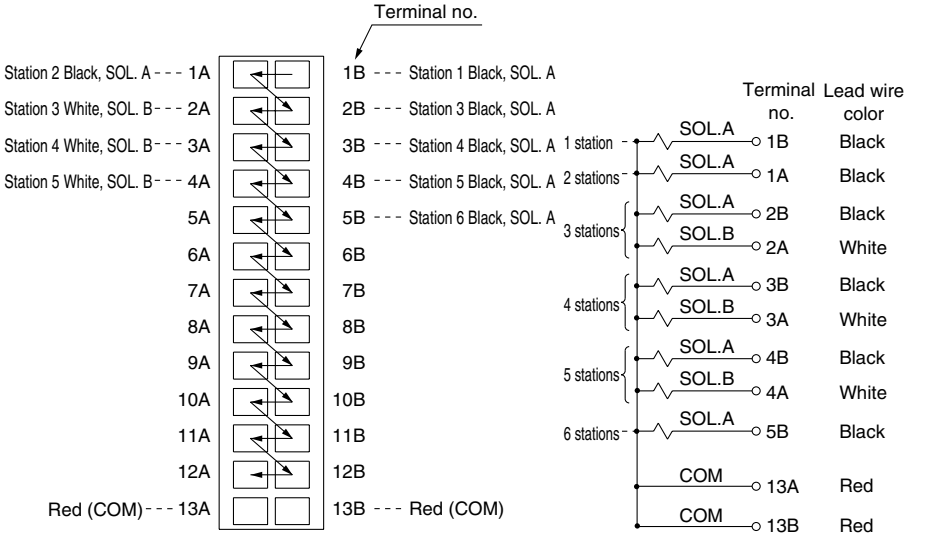
Stations	1	2	3	4	5	6
Single wiring	○	○				○
Double wiring			○	○	○	

∗ The drawing above shows connections based on the manifold specifications' example in the table to the left.

Wiring (P kit: Flat ribbon cable kit)

Procedure) Based on the manifold specifications, station 1 of SOL.A (black wire) will be terminal number 1 of the D-sub connector, and for station 2 and thereafter, connect black wires, then white wires in the order as shown below by the arrows.





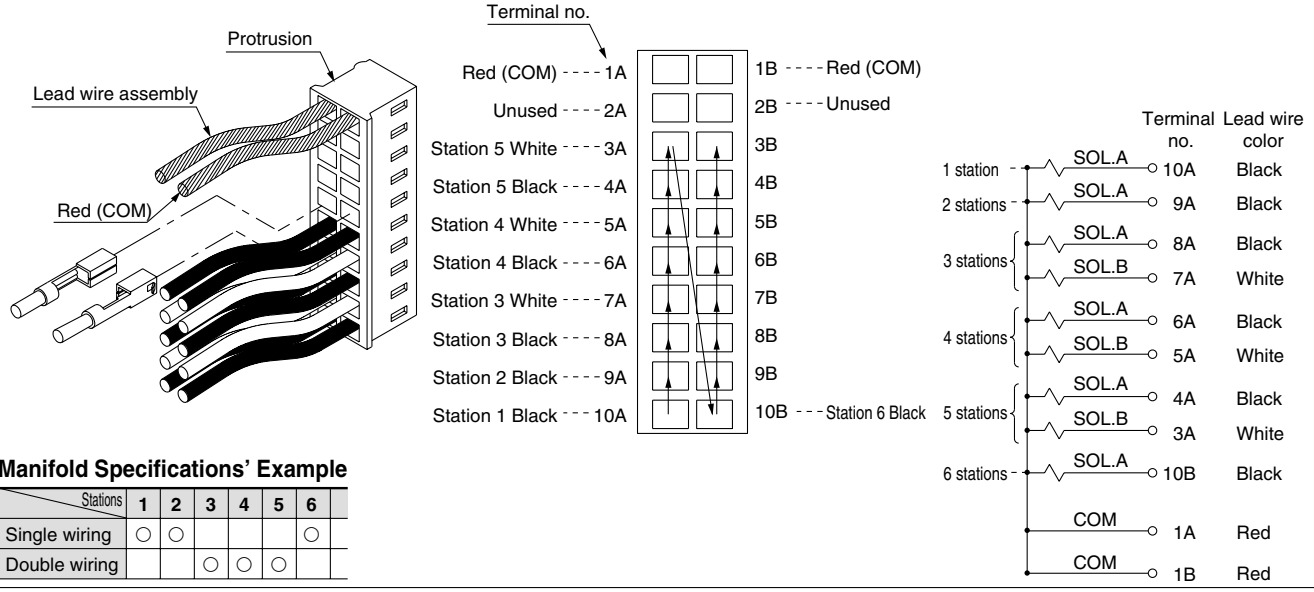
Manifold Specifications' Example

Stations	1	2	3	4	5	6
Single wiring	○	○				○
Double wiring			○	○	○	

∗ The drawing above shows connections for type 26P flat ribbon cable connector based on the manifold specifications' example in the table to the left. For type 20P, the connection will be the same as above except that COM changes to 10A and 10B.

Wiring (J kit: Flat ribbon cable kit, PC Wiring System compatible)

Procedure) Based on the manifold specifications, station 1 of SOL.A (black wire) will be terminal number 10A of the flat ribbon cable connector, and for station 2 and thereafter, connect black wires, then white wires in the order as shown below by the arrows.

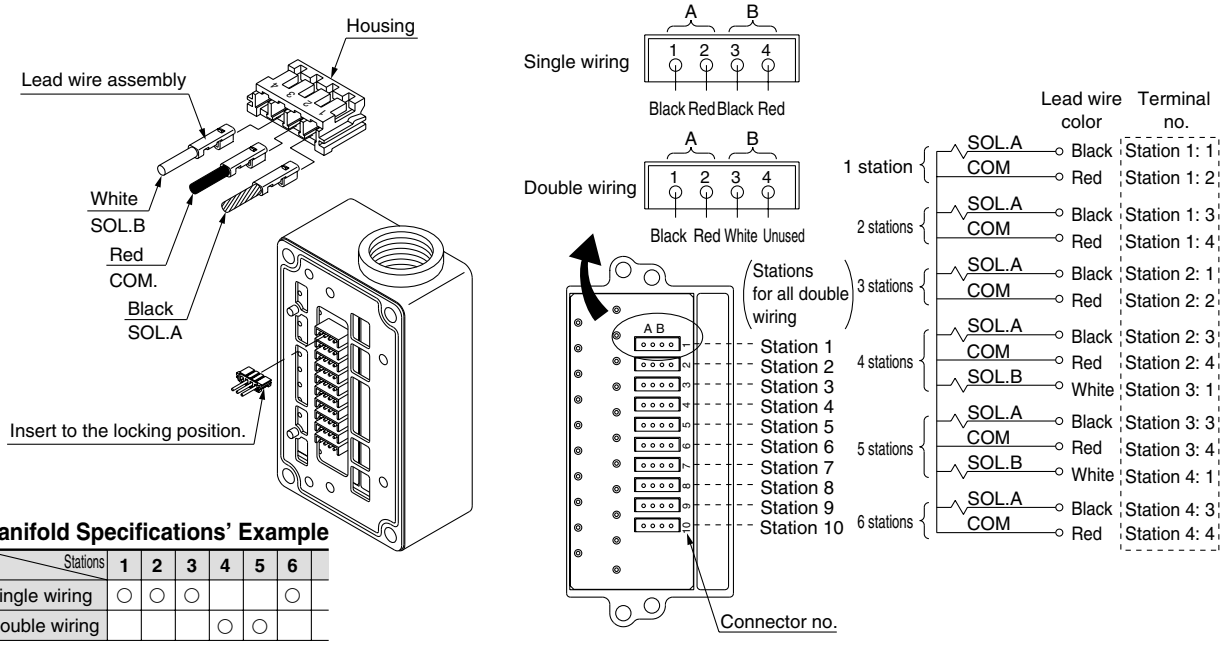


Manifold Specifications' Example

Stations	1	2	3	4	5	6
Single wiring	○	○				○
Double wiring			○	○	○	

Wiring (T kit: Terminal block kit)

Procedure) Based on the manifold specifications, connect to the housing according to the wiring example below.



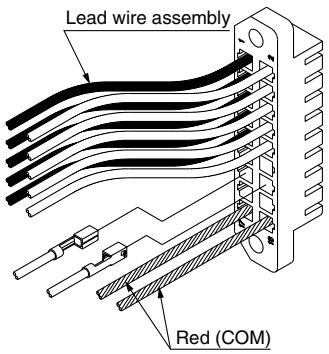
Manifold Specifications' Example

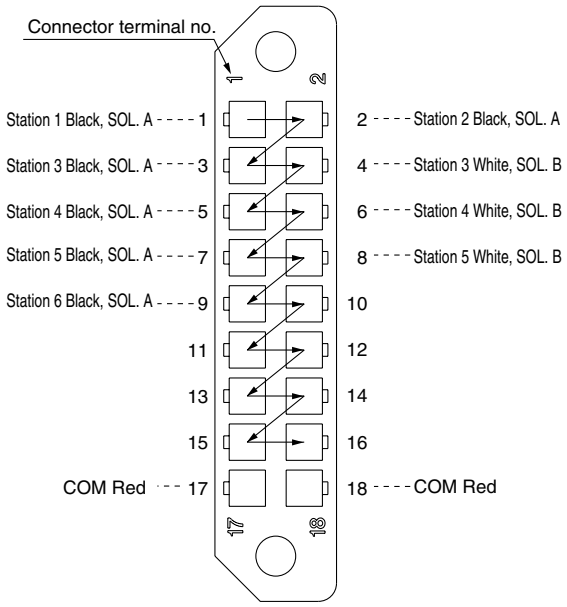
Stations	1	2	3	4	5	6
Single wiring	○	○	○			○
Double wiring				○	○	

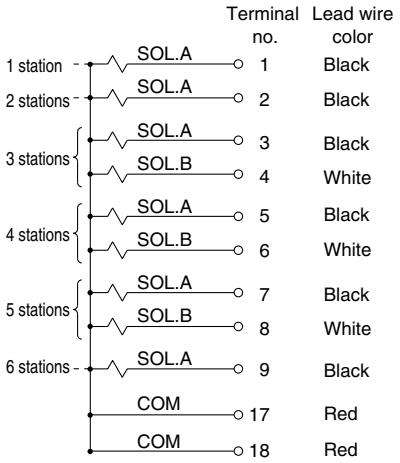
How to Add Manifold Stations for SQ1000/SQ2000

Wiring (S kit: Serial transmission kit)

Procedure) Based on the manifold specifications, station 1 of SOL.A (black wire) will be terminal number 1 of the serial connector, and for station 2 and thereafter, connect black wires, then white wires in the order as shown below by the arrows.







Manifold Specifications' Example

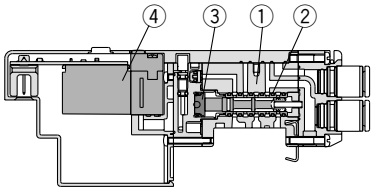
Stations	1	2	3	4	5	6
Single wiring	○	○				○
Double wiring			○	○	○	

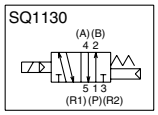
∗ The drawing above shows connections based on the manifold specifications' example in the table to the left.

Construction: Series SQ1000 Plug-in Type Main Parts and Pilot Valve Assembly

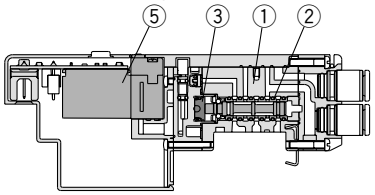
Metal seal type

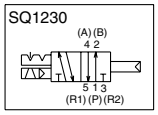
Single: SQ1130



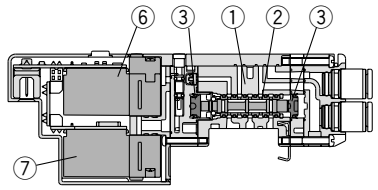


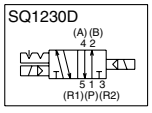
Double (Latching): SQ1230



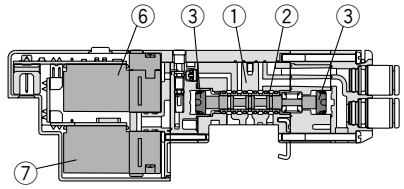


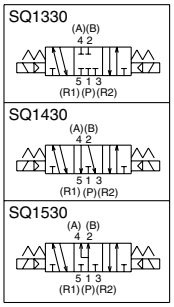
Double (Double solenoid): SQ1230D





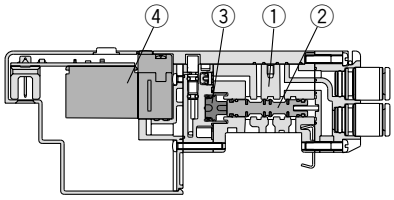
3 position: SQ1$^{3}_{4}_{5}$30

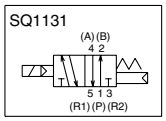




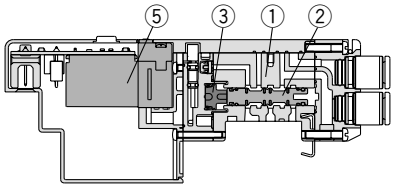
Rubber seal type

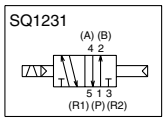
Single: SQ1131



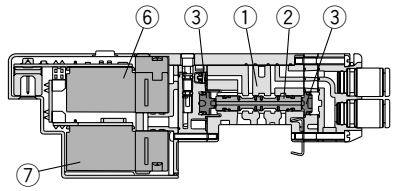


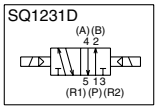
Double (Latching): SQ1231



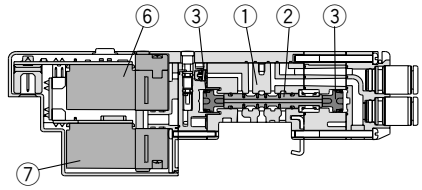


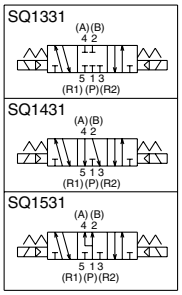
Double (Double solenoid): SQ1231D



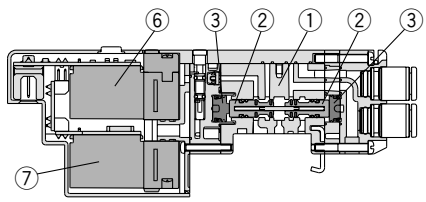


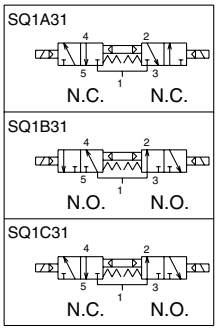
3 position: SQ1$^{3}_{4}_{5}$31





Dual 3 port valve: SQ1$^{A}_{B}_{C}$31





Component Parts

No.	Description	Material
①	Body	Zinc die-casted
②	Spool/Sleeve	Stainless steel (Metal seal)
	Spool	Aluminum (Rubber seal)
③	Piston	Resin

Pilot Valve Assembly Note)

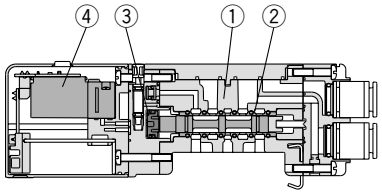
No.	Model	SQ1□3□
④	For single	VQ110S $^{(K)}_{(Y)}$ - $^{5}_{6}$ (N)J11(B)
⑤	For double (Latching)	VQ110SL- $^{5}_{6}$ J12 Negative COM: VQ110SN-$^{5}_{6}$J12
⑥	For double (Double solenoid) on A side	VQ110S $^{(K)}_{(Y)}$- $^{5}_{6}$ (N)J13(B)
	For 3P, Dual 3 port on A side	
⑦	For double (Double solenoid) on B side	VQ111S $^{(K)}_{(Y)}$- $^{5}_{6}$ (N)J14
	For 3P, Dual 3 port on B side	

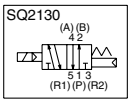
Note) Nil: Standard
B : Locking type manual override
N : Negative COM specifications
Y : Low wattage specifications

Construction: Series SQ2000 Plug-in Type Main Parts and Pilot Valve Assembly

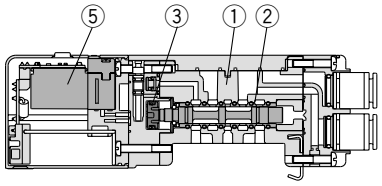
Metal seal type

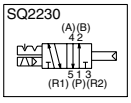
Single: SQ2130



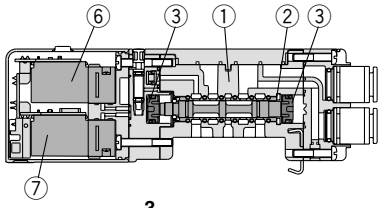


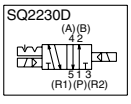
Double (Latching): SQ2230



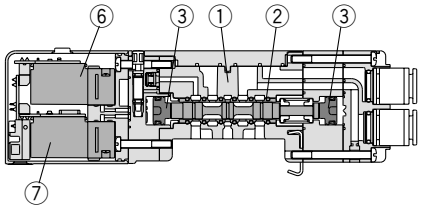


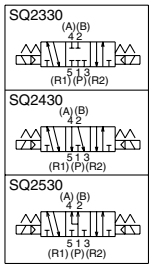
Double (Double solenoid): SQ2230D





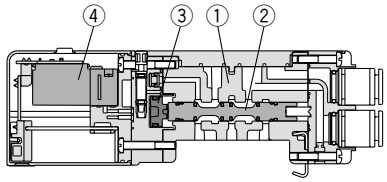
3 position: SQ2$^{3}_{4}_{5}$30

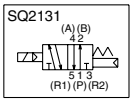




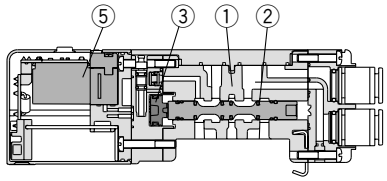
Rubber seal type

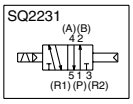
Single: SQ2131



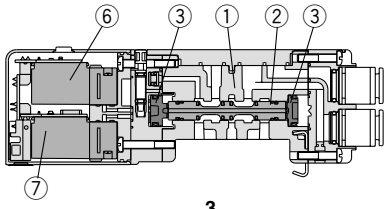


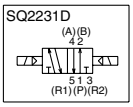
Double (Latching): SQ2231



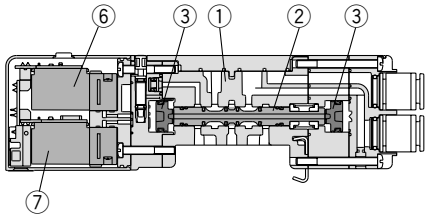


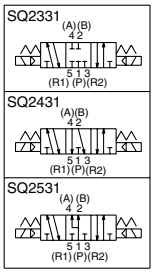
Double (Double solenoid): SQ2231D



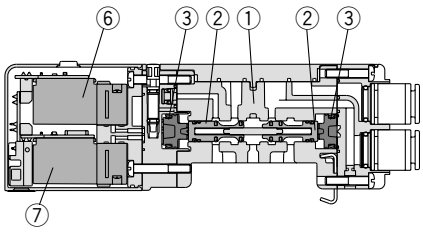


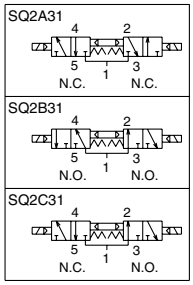
3 position: SQ2$^{3}_{4}_{5}$31





Dual 3 port valve: SQ2$^{A}_{B}_{C}$31





Component Parts

No.	Description	Material
①	Body	Aluminum die-casted
②	Spool/Sleeve	Stainless steel (Metal seal)
	Spool	Aluminum (Rubber seal)
③	Piston	Resin

Pilot Valve assembly Note)

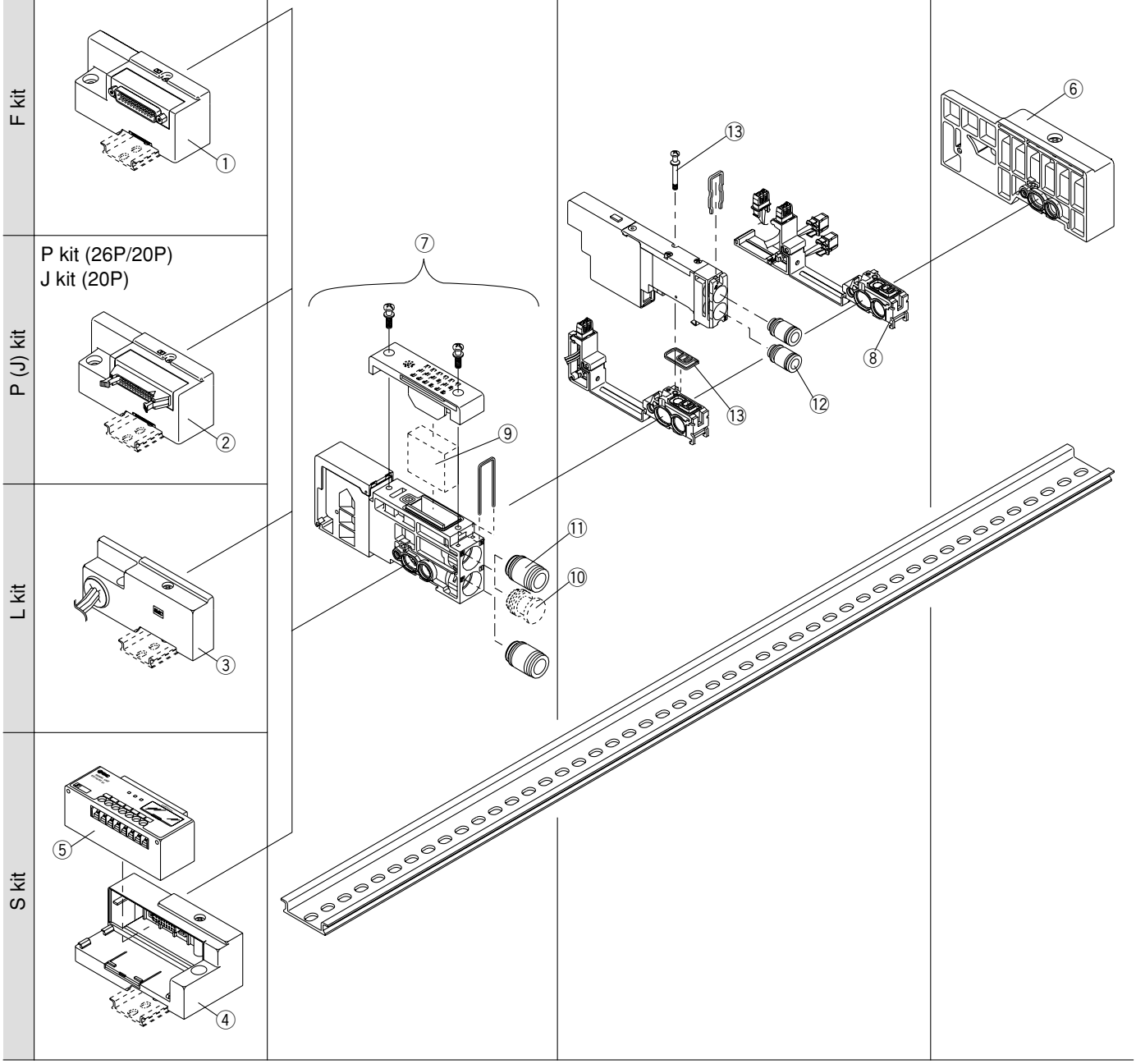
No.	Model	SQ2 □ 3 □
④	For single	VQ111S(Y)-$^{5}_{6}$(N)J31
⑤	For double (Latching)	VQ110SL-$^{5}_{6}$J32 Negative COM: VQ110SN-$^{5}_{6}$J32
⑥	For double (Double solenoid) on A side	VQ111S(Y)-$^{5}_{6}$(N)J23
	For 3P, Dual 3 port on A side	
⑦	For double (Double solenoid) on B side	VQ111S(Y)-$^{5}_{6}$(N)J34
	For 3P, Dual 3 port on B side	

Note) Nil: Standard
N : Negative COM specifications
Y : Low wattage specifications

Exploded View of Manifold: SQ1000 (Plug-in Type Manifold) SS5Q13

(F, P, J, L, S kit)

	D side end plate assembly	SUP/EXH block assembly	Valve and manifold block assembly	U side end plate assembly
F kit				
P (J) kit	P kit (26P/20P) J kit (20P)			
L kit				
S kit				



Manifold Spare Parts

Refer to pages 2-3-58 to 62 of “How to Add Manifold Stations” regarding the mounting of each spare parts.

<① ② ③ ④ D side end plate assembly>

SSQ1000 − 3A − 3 □ □ □ □

Manifold mounting

Nil	DIN rail mount style
E	Direct mount style

Electrical entry

F	F kit	①
P	P kit (26P)	②
PC	P kit (20P)	
J	J kit (20P)	
Nil	L kit	③
S	S kit	④

Wiring specifications

O	Without lead wire
S	Single wiring
W	Double wiring

Stations

01	For 1 station
⋮	⋮
24	For 24 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

<⑤ SI unit>

Manifold	No.	Description
SDF kit	EX140-SUW1	NKE Corp.: Uni-wire System (16 output points)
SDH kit	EX140-SUH1	NKE Corp.: Uni-wire H System (16 output points)
SDJ1 kit	EX140-SSL1	SUNX Corp.: S-LINK System (16 output points)
SDJ2 kit	EX140-SSL2	SUNX Corp.: S-LINK System (8 output points)
SDQ kit	EX140-SDN1	DeviceNet, CompoBus/D (OMRON Corp.) (16 output points)
SDR1 kit	EX140-SCS1	OMRON Corp.: CompoBus/S System (16 output points)
SDR2 kit	EX140-SCS2	OMRON Corp.: CompoBus/S System (8 output points)
SDV kit	EX140-SMJ1	Mitsubishi Electric Corp.: CC-LINK System (16 output points)

<⑥ U side end plate assembly>

(For F, P, J, S kit)

SSQ1000 − 2A − 3 □ − 1

(For L kit)

SSQ1000 − 2A − 3 □ − 2

Manifold mounting

Nil	DIN rail mount style
E	Direct mount style

<⑦ SUP/EXH block assembly>

SSQ1000 − PR − 3 − C8 □

Port size

C8	One-touch fitting for ø8
N9	One-touch fitting for ø5/16"

Option

Nil	Common exhaust type
R	External pilot
S	Built-in silencer, direct exhaust

Note) Enter “-RS” for both options.

<⑧ Manifold block assembly>

SSQ1000 − 1A − 3 − F0 01 □ Including gaskets ⑬

Lead wire type

F0	Without lead wire
FS	F kit: D-sub connector kit Single wiring
FW	F kit: D-sub connector kit Double wiring
PS	P kit: Flat ribbon cable kit Single wiring
	J kit: PC Wiring System compatible Single wiring
PW	P kit: Flat ribbon cable kit Double wiring
	J kit: PC Wiring System compatible Double wiring
L0	L kit: Lead wire kit Lead wire length 0.6 m
L1	L kit: Lead wire kit Lead wire length 1.5 m
L2	L kit: Lead wire kit Lead wire length 3 m
SS	S kit: Serial transmission kit Single wiring
SW	S kit: Serial transmission kit Double wiring

Option

Nil	None
B	Back pressure check valve
R	External pilot specifications

Note) Enter ”-BR“ for both options.

Applicable stations (For F, P, J, S kit)

01	Station 1
⋮	⋮
24	Station 24

Note 1) No symbol required for “F0”.
Note 2) Specify from “01” to “16” for S kit.

<⑨ Element>

SSQ1000 − SE

Note) Part number for a 10 piece set of element.
For replacement procedures, refer to page 2-3-5.

<⑩ Port plug>

VVQZ2000 − CP

<⑪ Fitting assembly>

(For P, R port)

VVQ1000 − 51A − C8

Port size

C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16"

Note) Purchasing order is available in units of 10 pieces

<⑫ Fitting assembly>

(For cylinder port)

VVQ1000 − 50A − C3

Port size

C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
M5	M5 thread
N1	One-touch fitting for ø1/8"
N3	One-touch fitting for ø5/32"
N7	One-touch fitting for ø1/4"

Note) Purchasing order is available in units of 10 pieces

<⑬ Gasket and screw assembly>

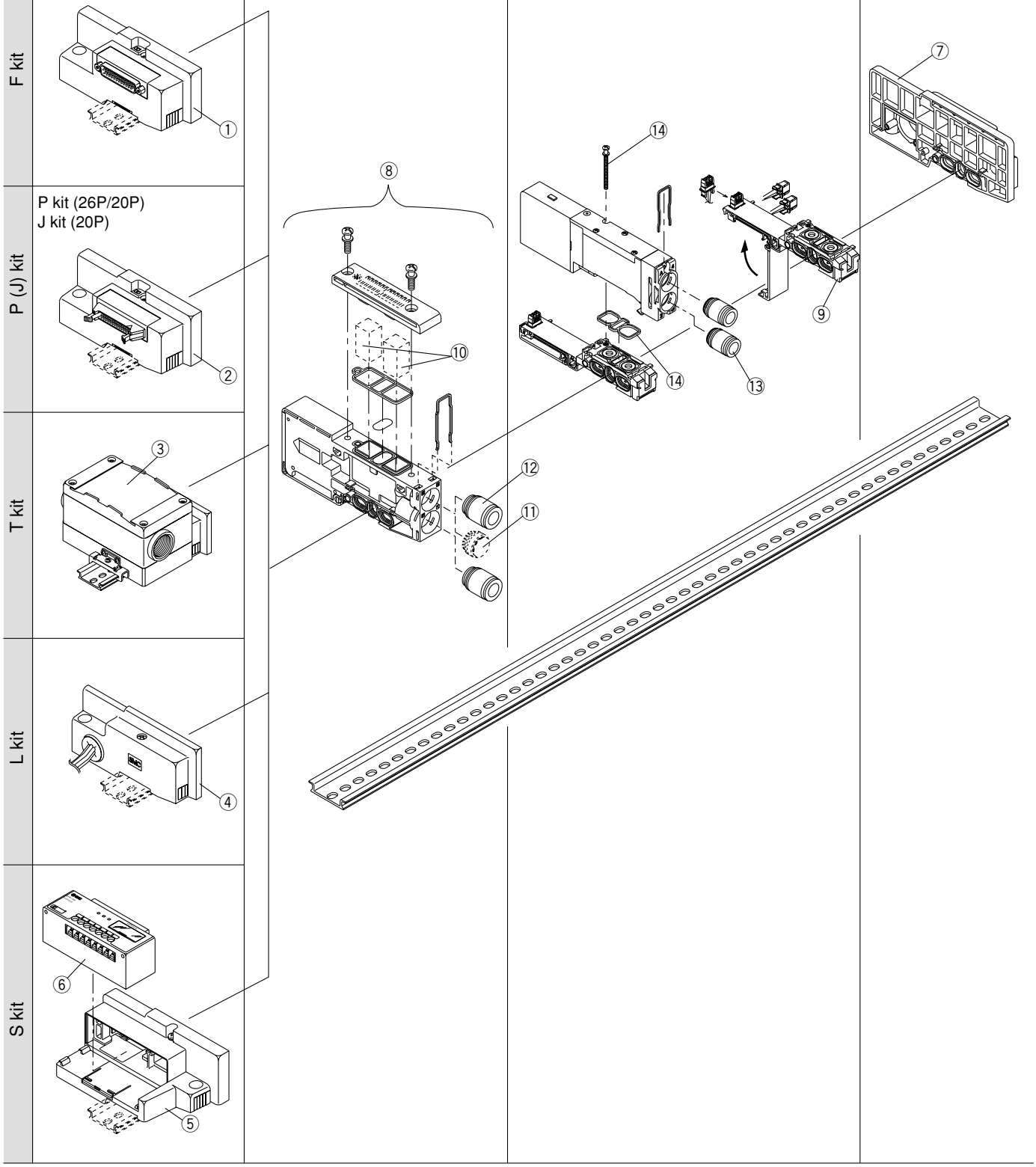
SQ1000 − GS

Note) Part number for 10 pieces each of gaskets and screws.

Exploded View of Manifold: SQ2000 (Plug-in Type Manifold) SS5Q23

(F, P, J, T, L, S kit)

	D side end plate assembly	SUP/EXH block assembly	Valve and manifold block assembly	U side end plate assembly
F kit				
P (J) kit	P kit (26P/20P) J kit (20P)			
T kit				
L kit				
S kit				



Manifold Spare Parts

Refer to pages 2-3-58 to 62 of “How to Add Manifold Stations” regarding the mounting of each spare parts.

<① ② ③ ④ ⑤ D side end plate assemblies>

SSQ2000 − 3A − 3 □ □ □ □

Manifold mounting

Nil	DIN rail mount style
E	Direct mount style

Electrical entry

F	F kit	①
P	P kit (26P)	②
PC	P kit (20P)	
J	J kit (20P)	
Nil	L kit	③
S	S kit	④

Wiring specifications

O	Without lead wire
S	Single wiring
W	Double wiring

Stations

01	For 1 station
⋮	⋮
16	For 16 stations

Note) The maximum number of stations will be different depending on the wiring

<⑥ SI unit>

Manifold	No.	Description
SDF kit	EX140-SUW1	NKE Corp.: Uni-wire System (16 output points)
SDH kit	EX140-SUH1	NKE Corp.: Uni-wire H System (16 output points)
SDJ1 kit	EX140-SSL1	SUNX Corp.: S-LINK System (16 output points)
SDJ2 kit	EX140-SSL2	SUNX Corp.: S-LINK System (8 output points)
SDQ kit	EX140-SDN1	DeviceNet, CompoBus/D (OMRON Corp.) (16 output points)
SDR1 kit	EX140-SCS1	OMRON Corp.: CompoBus/System (16 output points)
SDR2 kit	EX140-SCS2	OMRON Corp.: CompoBus/System (8 output points)
SDV kit	EX140-SMJ1	Mitsubishi Electric Corp.: CC-LINK System (16 output points)

<⑦ U side end plate assembly>

(For F, P, J, T, S kit)

SSQ2000 − 2A − 3 □ − 1

(For L kit)

SSQ2000 − 2A − 3 □ − 2

Manifold mounting

Nil	DIN rail mount style
E	Direct mount style

<⑧ SUP/EXH block assembly>

SSQ2000 − PR − 3 − C8 □

Port size

C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"

Option

Nil	Common exhaust type
R	External pilot
S	Built-in silencer, direct exhaust

Note) Enter “-RS” for both options.

<⑨ Manifold block assembly>

SSQ2000 − 1A − 3 − F0 01 □ Including gaskets ⑬

Lead wire type

F0	Without lead wire
FS	F kit: D-sub connector kit Single wiring
FW	F kit: D-sub connector kit Double wiring
PS	P kit: Flat ribbon cable kit Single wiring
	J kit: PC Wiring System compatible Single wiring
PW	P kit: Flat ribbon cable kit Double wiring
	J kit: PC Wiring System compatible Double wiring
TS	T kit: Terminal block kit Single wiring
TW	T kit: Terminal block kit Double wiring
L0	L kit: Lead wire kit Lead wire length 0.6 m
L1	L kit: Lead wire kit Lead wire length 1.5 m
L2	L kit: Lead wire kit Lead wire length 3 m
SS	S kit: Serial transmission kit Single wiring
SW	S kit: Serial transmission kit Double wiring

Option

Nil	None
B	Back pressure check valve
R	External pilot specifications

Note) Enter ”-BR“ for both options.

Applicable stations

01	Station 1
⋮	⋮
16	Station 16

Note 1) No symbol required for “F0”.

<⑩ Element>

SSQ2000 − SE

Note) Part number for a 10 piece set of element.
For replacement procedure, refer to page 2-3-5.

<⑪ Port plug>

VVQZ3000 − CP

<⑫ Fitting assembly>

(For P, R port)

VVQ2000 − 51A − C8

Port size

C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"

Note) Purchasing order is available in units of 10 pieces

<⑬ Fitting assembly>

(For cylinder port)

VVQ1000 − 51A − C4

Port size

C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
N3	One-touch fitting for ø5/32"
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16“
01	Rc 1/8 thread

Note) Purchasing order is available in units of 10 pieces

<⑭ Gasket and screw assembly>

SQ2000 − GS

Note) Part number for 10 pieces each of gaskets and screws.

Series SQ1000
Plug Lead Unit

How to Order Manifold

SS5Q14 — 08 | FD2 — D | □

Stations

01	1 station
⋮	⋮
24 Note)	24 stations

Note) The maximum number of stations depends on the type of electrical entries.

Option

Nil	None
02 to 24 (1)	DIN rail length specified
B	Back pressure check valve
K (2)	Special wiring specifications (Except double wiring)
N	With name plate (Side ported only)
R	External pilot specifications
S	Built-in silencer, direct exhaust

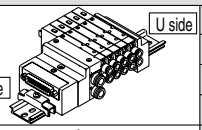
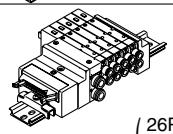
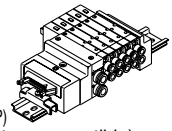
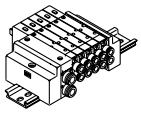
Note 1) For specifying DIN rail length, indicate "D□". (Enter the number of stations inside □.) Example: -D08
Note 2) Standard wiring specification are for double wiring. Indicate wiring specifications for single wiring or mixed single and double wiring, or when exceeding the standard maximum number of stations. (Except C kit)
Note 3) For specifying two or more options, enter them alphabetically. Example: -BKN

Manifold mounting

D	DIN rail mount style
E Note)	Direct mount style

Note) C kit of SQ2000 only.

Electrical entry

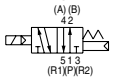
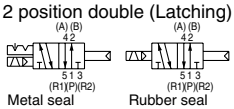
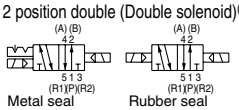
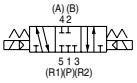
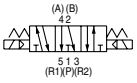
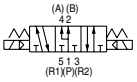
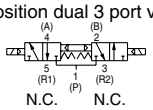
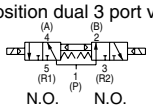
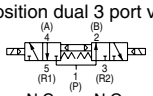
Kit type		Lead wire connector location	Cable specifications	Station	Max. number of stations for special wiring specifications	Max. number of solenoids (2)
F kit D-sub Connector kit 	FD0	D side	D-sub connector (25P) kit, without cable	1 to 12 stations	24 stations	24
	FD1		D-sub connector (25P) kit, with 1.5 m cable			
	FD2		D-sub connector (25P) kit, with 3.0 m cable			
	FD3		D-sub connector (25P) kit, with 5.0 m cable			
P kit Flat ribbon cable connector kit (26P, 20P) 	PD0	D side (1)	Flat ribbon cable (26P) kit, without cable	1 to 12 stations	24 stations	24
	PD1		Flat ribbon cable (26P) kit, with 1.5 m cable			
	PD2		Flat ribbon cable (26P) kit, with 3.0 m cable			
	PD3		Flat ribbon cable (26P) kit, with 5.0 m cable			
	PDC		Flat ribbon cable (20P) kit, without cable	1 to 9 stations	18 stations	18
J kit Flat ribbon cable (20P) (PC Wiring System compatible) 	JD0	D side	Flat ribbon cable (20P) PC Wiring System compatible	1 to 8 stations	16 stations	16
C kit Connector kit 	C	—	Connector kit	1 to 24 stations	—	—

Note 1) Separately order the 20P type cable assembly for the P kit.
Note 2) The maximum number of stations should not be more than the maximum number of solenoids. (The number of solenoids are counted as: 1 for single solenoids and 2 for type 3P and 4P double solenoids.)

How to Order Valves

SQ1 [1] 4 [0] [ ] — [5] [L] [ ] — [C6] [ ] [ ]

Type of actuation

1	2 position single 
2	2 position double (Latching)  Metal seal / Rubber seal
	2 position double (Double solenoid)(1)  Metal seal / Rubber seal
3	3 position closed center 
4	3 position exhaust center 
5	3 position pressure center 
(2) A	4 position dual 3 port valve  N.C. N.C.
(2) B	4 position dual 3 port valve  N.O. N.O.
(2) C	4 position dual 3 port valve  N.C. N.O.

Note 1) For double solenoid specifications, the function symbol below is "D".
Note 2) Only rubber seal types are applicable.

Seal

0	Metal seal
1	Rubber seal

Function

Nil	Standard type (1.0 W DC)
D	2 position double (Double solenoid specifications)
K (1)	High pressure type (1.0 MPa, 1.0 W DC) [Applicable to metal seal only]
N	Negative COM
Y (1)	Low wattage type (0.5 W DC)
R (2)	External pilot specifications

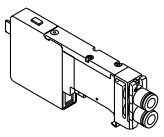
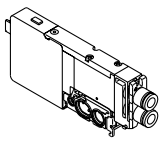
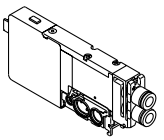
Note 1) Except double (latching) type.
Note 2) Except dual 3 port valves.
Note 3) When two or more symbols are specified, indicate them alphabetically.

Coil voltage

5	24 VDC
6	12 VDC

Note) Light/Surge voltage suppressor is built-in.

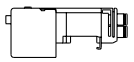
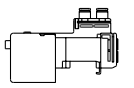
With/Without manifold block

Nil	M	MB
Without manifold block	With manifold block	With manifold block, built-in back pressure check valve
		
	* Lead wire is not included.	* Lead wire is not included.
• When ordering with manifolds • When only valves are required.	For adding stations	

Port plug mounting port

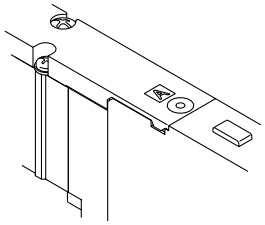
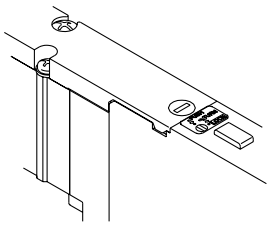
Nil	None
A	Port 4(A)
B	Port 2(B)

Cylinder port

C3	One-touch fitting for ø3.2	Side ported	
C4	One-touch fitting for ø4		
C6	One-touch fitting for ø6		
M5	M5 thread		
L3	One-touch fitting for ø3.2	Top ported Note)	
L4	One-touch fitting for ø4		
L6	One-touch fitting for ø6		
L5	M5 thread		

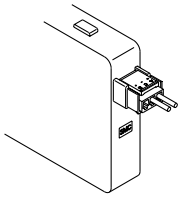
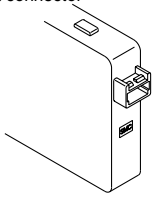
Note) Can be changed to side ported configuration.

Manual override

Nil	B Note)
Non-locking push type (Tool required)	Locking type (Tool required)
	

Note) Except double (latching) type.

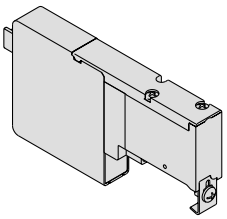
Electrical entry

L	LO
Plug connector type With 300 mm lead wire 	Plug connector type without connector 
	Note) For F, P, J kit manifolds

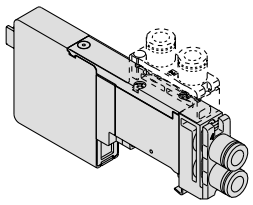
Note) Indicate "LO" when ordering centralized wiring type manifolds, F, P, and J kits, since the lead wire will be attached to the manifold side.

Manifold Option

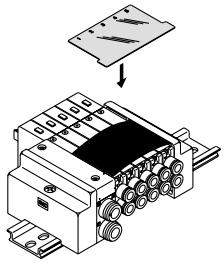
Blanking plate P. 2-3-98
SSQ1000-10A-4



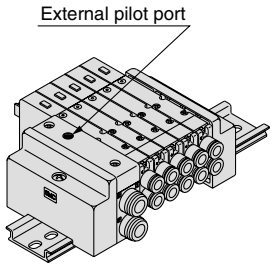
Individual SUP/EXH spacer P. 2-3-99
SSQ1000-PR1-4-$^{C6}_{L6}$



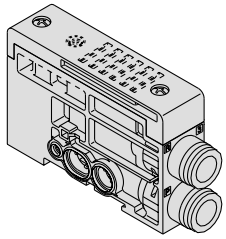
Name plate (-N) P. 2-3-101
SSQ1000-N3-n



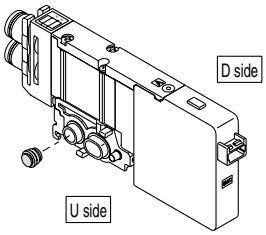
External pilot specifications (-R) P. 2-3-102



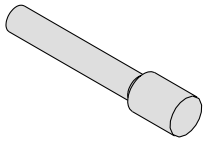
SUP/EXH block P. 2-3-98
SSQ1000-PR-4-C8 (-S)



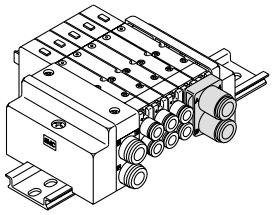
SUP block plate P. 2-3-100
SSQ1000-B-P



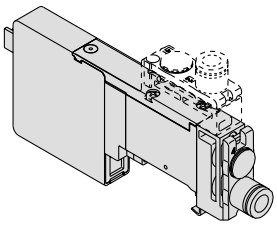
Blanking plug P. 2-3-101
KQ2P-23/04/06/08



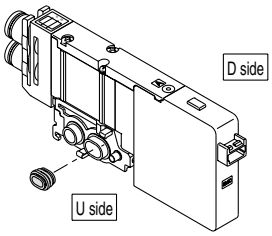
Dual flow fitting P. 2-3-102
SSQ1000-52A-$^{C8}_{N9}$



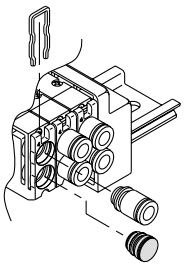
Individual SUP spacer P. 2-3-98
SSQ1000-P-4-$^{C6}_{L6}$



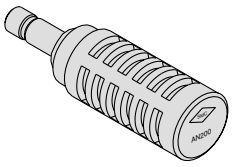
EXH block plate P. 2-3-100
SSQ1000-B-R



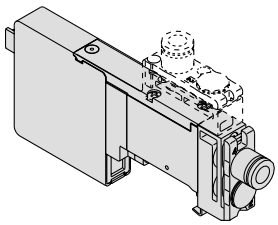
Port plug P. 2-3-101
VVQZ100-CP



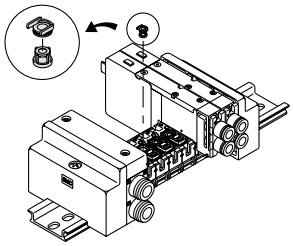
Silencer (For EXH port) P. 2-3-102



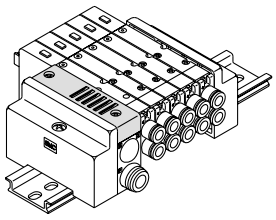
Individual EXH spacer P. 2-3-99
SSQ1000-R-4-$^{C6}_{L6}$



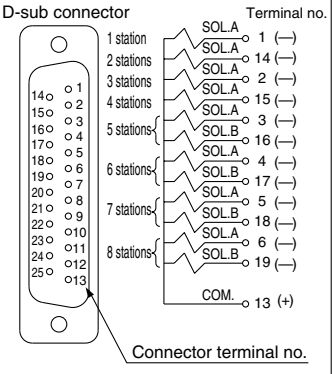
Back pressure check valve (-B) P. 2-3-100
SSQ1000-BP



Built-in silencer (-S) P. 2-3-101



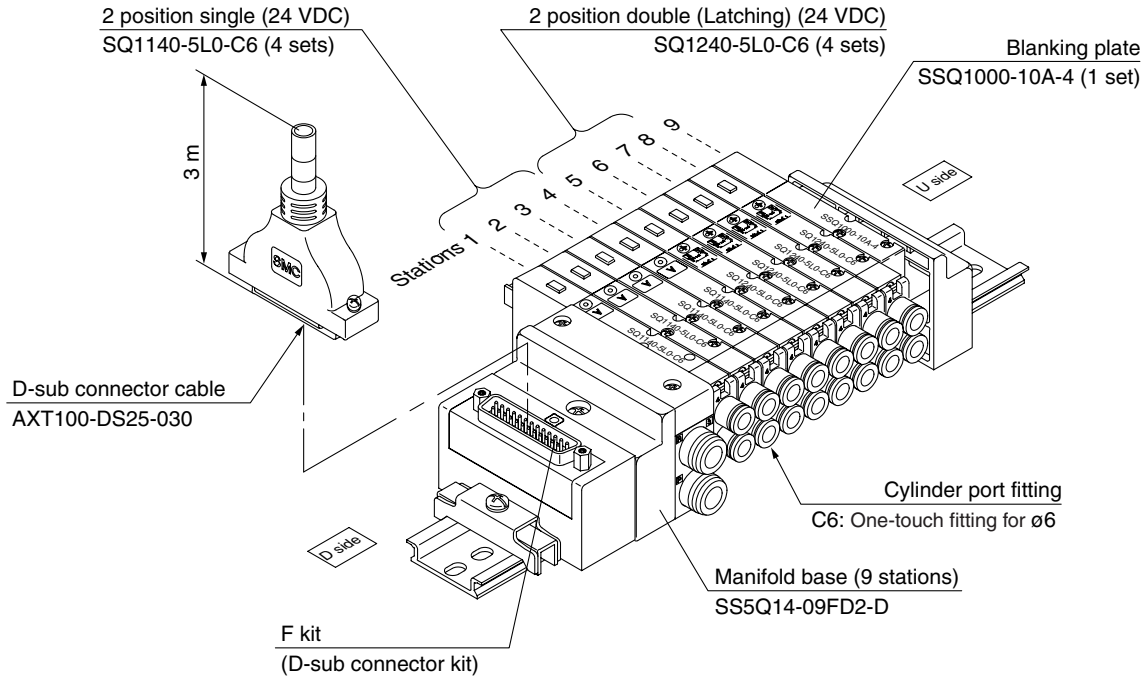
Special wiring specifications (-K) P. 2-3-108



Although the standard products come with double wiring, mixed single and double wiring is available upon request.

How to Order Manifold Assembly (Example)

Example: D-sub connector kit, with cable (3 m)



S S5Q14-09FD2-D ····· 1 set (F kit 9 station manifold base)
∗ SQ1140-5L0-C6 ····· 4 sets (2 position single)
∗ SQ1240-5L0-C6 ····· 4 sets (2 position double [latching])
∗ SSQ1000-10A-4 ····· 1 set (Blanking plate)

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

Add the valve and option part numbers in order starting from the first station on the D side.
When entry of part numbers becomes complicated, indicate on the manifold specification sheet.

Valve Specifications

Model

Series		Number of solenoids	Model		Flow oharacteristics						Response time (ms)(2)		Weight (g)
					1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R1/R2)			Standard: 1 W	Low wattage	
					C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv			
SQ1000	2 position	Single	Metal seal	SQ1140	0.62	0.10	0.14	0.63	0.11	0.14	12 or less	15 or less	80
			Rubber seal	SQ1141	0.79	0.20	0.19	0.80	0.20	0.19	15 or less	20 or less	80
		Double (Latching)	Metal seal	SQ1240	0.62	0.10	0.14	0.63	0.11	0.14	15 or less	—	80
			Rubber seal	SQ1241	0.79	0.20	0.19	0.80	0.20	0.19	20 or less	—	80
		Double (Double solenoid)	Metal seal	SQ1240D	0.62	0.10	0.14	0.63	0.11	0.14	10 or less	13 or less	95
			Rubber seal	SQ1241D	0.79	0.20	0.19	0.80	0.20	0.19	15 or less	20 or less	95
	3 position	Closed center	Metal seal	SQ1340	0.58	0.12	0.14	0.63	0.11	0.14	20 or less	26 or less	100
			Rubber seal	SQ1341	0.64	0.20	0.15	0.58	0.26	0.16	25 or less	33 or less	100
		Exhaust center	Metal seal	SQ1440	0.58	0.12	0.14	0.60	0.14	0.14	20 or less	26 or less	100
			Rubber seal	SQ1441	0.64	0.20	0.15	0.80	0.20	0.19	25 or less	33 or less	100
		Pressure center	Metal seal	SQ1540	0.62	0.12	0.14	0.63	0.14	0.14	20 or less	26 or less	100
			Rubber seal	SQ1541	0.79	0.21	0.19	0.59	0.20	0.14	25 or less	33 or less	100
	4 position	Dual 3 port valve	Rubber seal	SQ1$^{A}_{C}$^{B}41	0.59	0.28	0.15	0.59	0.28	0.15	25 or less	33 or less	95

Note 1) Values for the cylinder port size of C6.
Note 2) Based on JIS B 8375-1981. (Values with a supply pressure of 0.5 MPa and light/surge voltage suppressor. Values fluctuate depending on the pressure and air quality.)

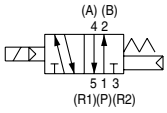
Specifications

			Metal seal	Rubber seal
Valve specifications	Valve construction			
	Fluid		Air/Inert gas	
	Maximum operating pressure		0.7 MPa (High pressure type: 1.0 MPa)(3)	
	Min. operating pressure	Single	0.1 MPa	0.15 MPa
		Double (Latching)	0.18 MPa	0.18 MPa
		Double (Double solenoid)	0.1 MPa	0.1 MPa
		3 position	0.1 MPa	0.2 MPa
		4 position	—	0.15 MPa
	Ambient and fluid temperature		–10 to 50°C (1)	
	Lubrication		Not required	
	Pilot valve manual override		Push type/Locking type (Tool required)	
	Vibration/Impact resistance (2)		30/150 m/s²	
	Protection structure		Dust tight	
Solenoid specifications	Coil rated voltage		12 VDC, 24 VDC	
	Allowable voltage fluctuation		±10% of rated voltage	
	Coil insulation type		Equivalent to class B	
	Power consumption (Current)	24 VDC	1 W DC (42 mA), 0.5 W DC (21 mA) (4)	
		12 VDC	1 W DC (83 mA), 0.5 W DC (42 mA) (4)	

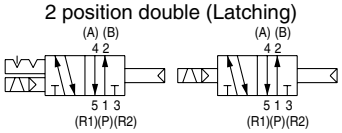
Note 1) Use dry air to prevent condensation when operating at low temperatures.
Note 2) Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)
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. (Values at the initial period)
Note 3) Metal seal type only. [Except double (latching) type.]
Note 4) Values for the low wattage (0.5 W) specification.

JIS Symbol

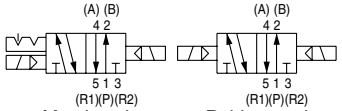
2 position single



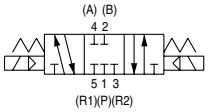
2 position double (Latching)



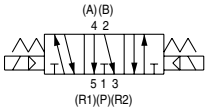
2 position double (Double solenoid)



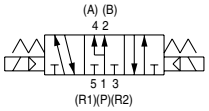
3 position closed center



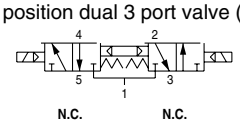
3 position exhaust center



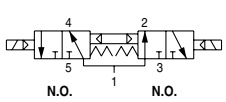
3 position pressure center



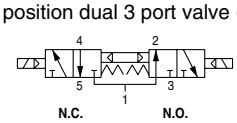
4 position dual 3 port valve (A)



4 position dual 3 port valve (B)



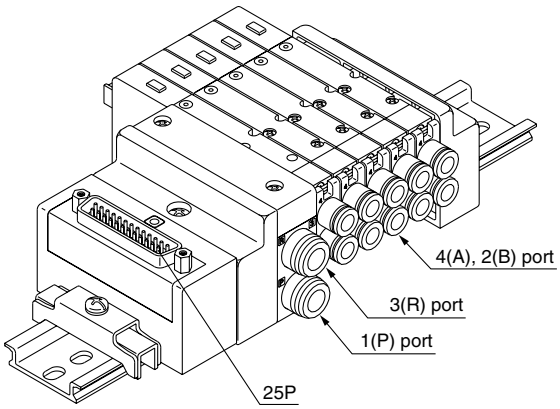
4 position dual 3 port valve (C)



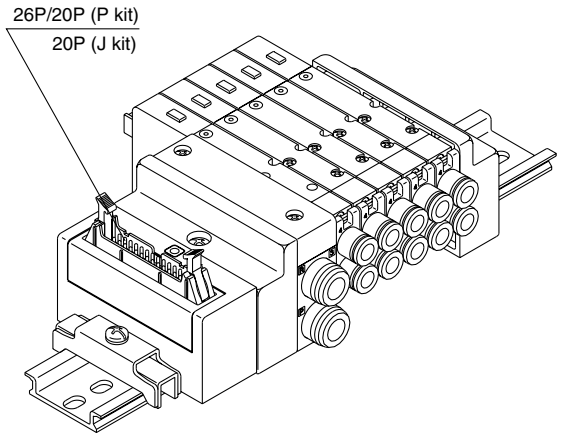
Manifold Specifications

Base model	Porting specifications: Port size (1) 1(P), 3(R)	Porting specifications: Port size (1) 4(A), 2(B) Port location	Porting specifications: Port size (1) 4(A), 2(B) Port size	Applicable solenoid valve	Type of connection		(3) Applicable stations	(4) 5 station weight (g)	(4) 1 station weight (g)
SS5Q14-□□-□	C8 (For ø8) Option Built-in silencer, direct exhaust	Side	C3 (For ø3.2) C4 (For ø4) C6 (For ø6) M5 (M5 thread)	SQ1□40 SQ1□41	F kit: D-sub connector		1 to 12 stations	420	20
					P kit: Flat ribbon cable	26P	1 to 12 stations	420	20
						20P	1 to 9 stations		
		Top (2)	L3 (For ø3.2) L4 (For ø4) L6 (For ø6) L5 (M5 thread)		J kit: Flat ribbon cable PC Wiring System compatible		1 to 8 stations	420	20
					C kit: Connector kit		1 to 12 stations	460	35

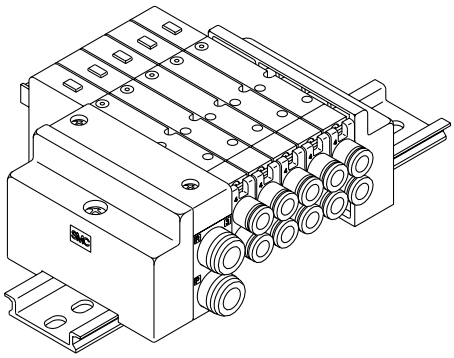
Note 1) One-touch fittings in inch sizes are also available. For details, refer to page 2-3-110.
Note 2) Can be changed to side ported configuration.
Note 3) An optional specification for special wiring is available to increase the maximum number of stations. Refer to page 2-3-108 for details.
Note 4) Except valves. For valve weight, refer to page 2-3-104.



F kit

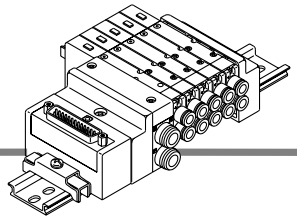


P kit **J kit**



C kit

F Kit (D-sub connector kit)



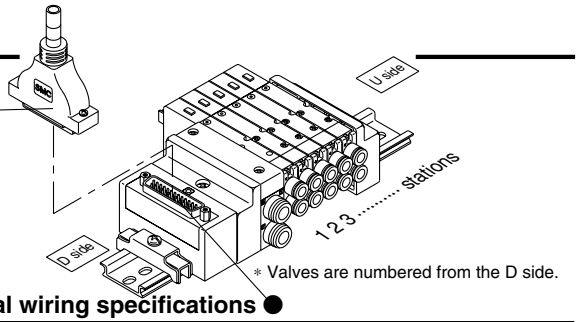
- **Simplification and labor savings for wiring work can be achieved by using a D-sub connector for the electrical connection.**
- **Using connector for flat ribbon cable (25P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P) , 3(R)	4(A) , 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	12 stations (24 as an option)

D-sub connector (25 pins)

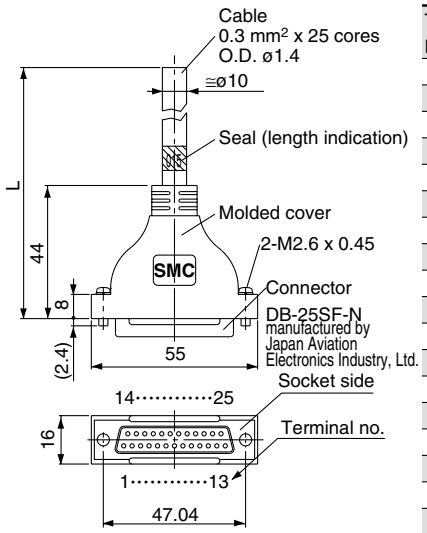
Cable assembly ●



∗ Valves are numbered from the D side.

AXT100-DS25-$^{015}_{030}$ $^{}_{050}$

(D-sub connector cable assemblies can be ordered with manifolds. Refer to manifold ordering.)



D-sub Connector Cable Assembly Terminal No.

Terminal Number	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 (Option)

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 0.3 mm² x 25 cores
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.

∗ Cannot be used for transfer wiring.

Electric characteristics

Item	Characteristics
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit VAC, 1 min.	1000
Insulation resistance MΩ/km, 20°C	5 or less

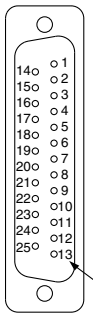
Note) The minimum bending radius for D-sub connector cables is 20 mm.

Connector manufacturers' example

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

Electrical wiring specifications ●

D-sub connector

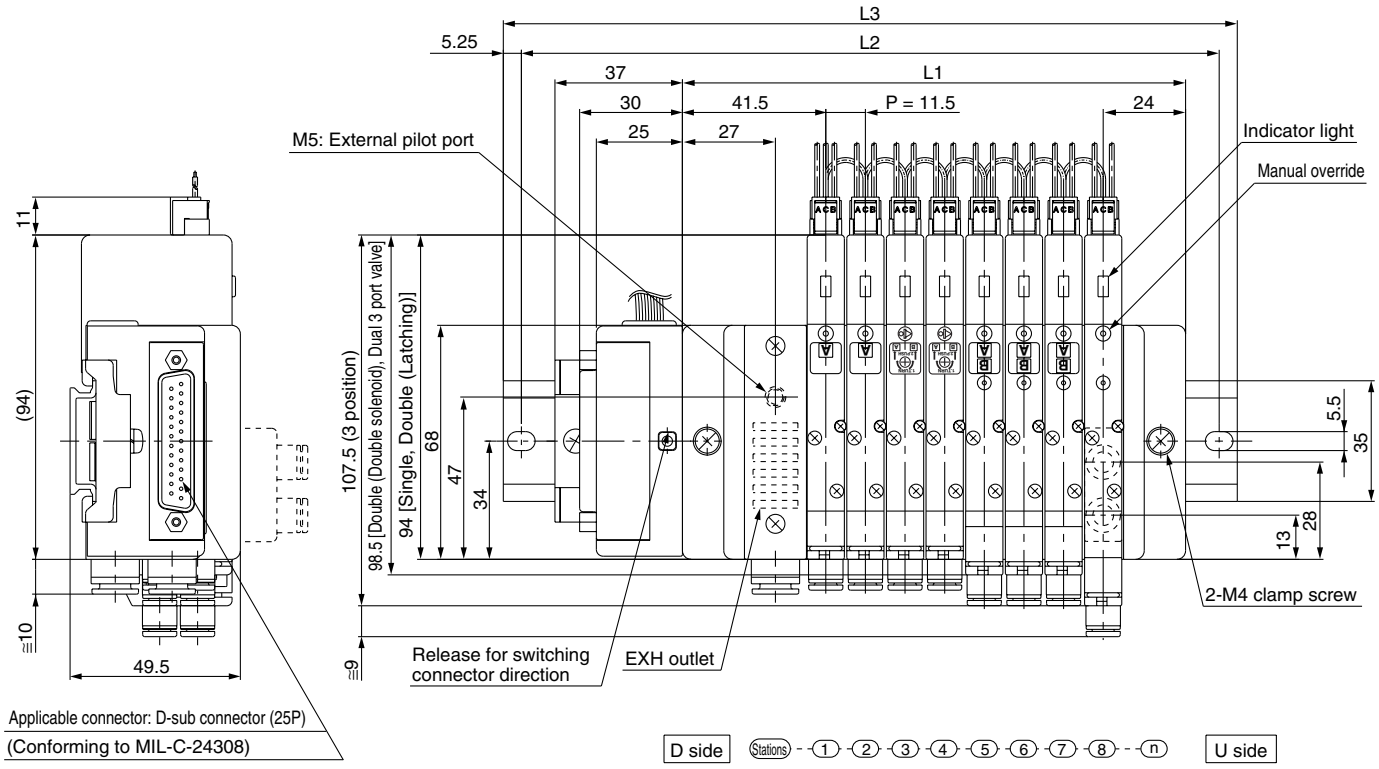


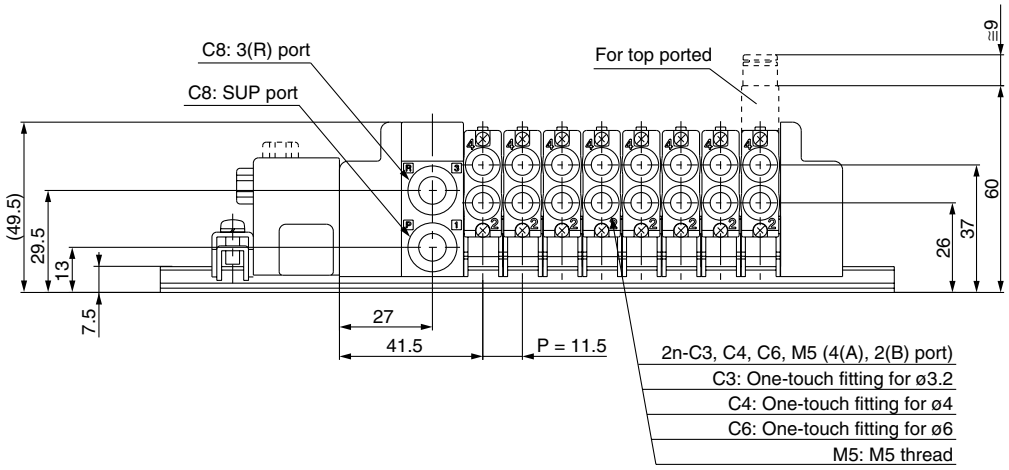
As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-108.

Lead wire colors for D-sub connector assembly
AXT100-DS25-$^{015}_{030}$ $^{}_{050}$

		Terminal no.	Polarity		Lead wire color	Dot marking
1 station	SOL.A	1	(−)	(+)	Black	None
	SOL.B	14	(−)	(+)	Yellow	Black
2 stations	SOL.A	2	(−)	(+)	Brown	None
	SOL.B	15	(−)	(+)	Pink	Black
3 stations	SOL.A	3	(−)	(+)	Red	None
	SOL.B	16	(−)	(+)	Blue	White
4 stations	SOL.A	4	(−)	(+)	Orange	None
	SOL.B	17	(−)	(+)	Purple	None
5 stations	SOL.A	5	(−)	(+)	Yellow	None
	SOL.B	18	(−)	(+)	Gray	None
6 stations	SOL.A	6	(−)	(+)	Pink	None
	SOL.B	19	(−)	(+)	Orange	Black
7 stations	SOL.A	7	(−)	(+)	Blue	None
	SOL.B	20	(−)	(+)	Red	White
8 stations	SOL.A	8	(−)	(+)	Purple	White
	SOL.B	21	(−)	(+)	Brown	White
9 stations	SOL.A	9	(−)	(+)	Gray	Black
	SOL.B	22	(−)	(+)	Pink	Red
10 stations	SOL.A	10	(−)	(+)	White	Black
	SOL.B	23	(−)	(+)	Gray	Red
11 stations	SOL.A	11	(−)	(+)	White	Red
	SOL.B	24	(−)	(+)	Black	White
12 stations	SOL.A	12	(−)	(+)	Yellow	Red
	SOL.B	25	(−)	(+)	White	None
	COM.	13	(+)	(−)	Orange	Red
			Positive common specifications	Negative common specifications Note)		

Note) When using the negative common specifications, use valves for negative common.



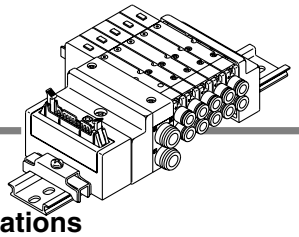


Dimensions

Formula: L1 = 11.5n + 54 n: Stations (Maximum 24 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	65.5	77	88.5	100	111.5	123	134.5	146	157.5	169	180.5	192	203.5	215	226.5	238	249.5	261	272.5	284	295.5	307	318.5	330
L2	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	375	387.5
L3	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5	385.5	398

P Kit (Flat ribbon cable connector)

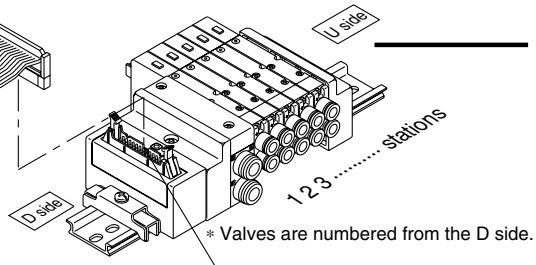


- **Simplification and labor savings for wiring work can be achieved by using a MIL type for the electrical connection.**
- **Using connector for flat ribbon cable (26P, 20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	12 stations (24 as an option)

Flat ribbon cable (26 pins, 20 pins)

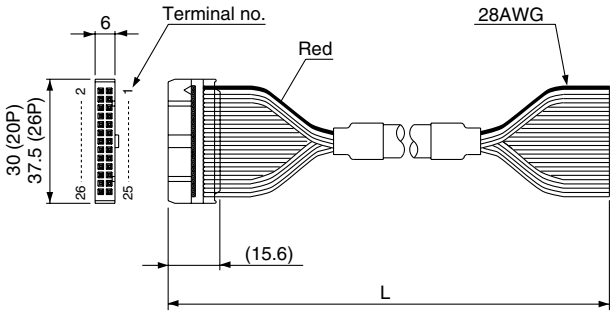


∗ Valves are numbered from the D side.

Cable assembly

AXT100-FC $\frac{20}{26}$ - $\frac{1}{2}$ $\frac{}{3}$

(Type 26P flat ribbon cable connector assemblies can be ordered with manifolds. Refer to manifold ordering.)



Flat Ribbon Cable Connector Assembly (Option)

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

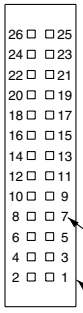
∗ For other commercial connectors, use a 26 pins or 20 pins with strain relief conforming to MIL-C-83503.
∗ Cannot be used for transfer wiring.

Connector manufacturers' example

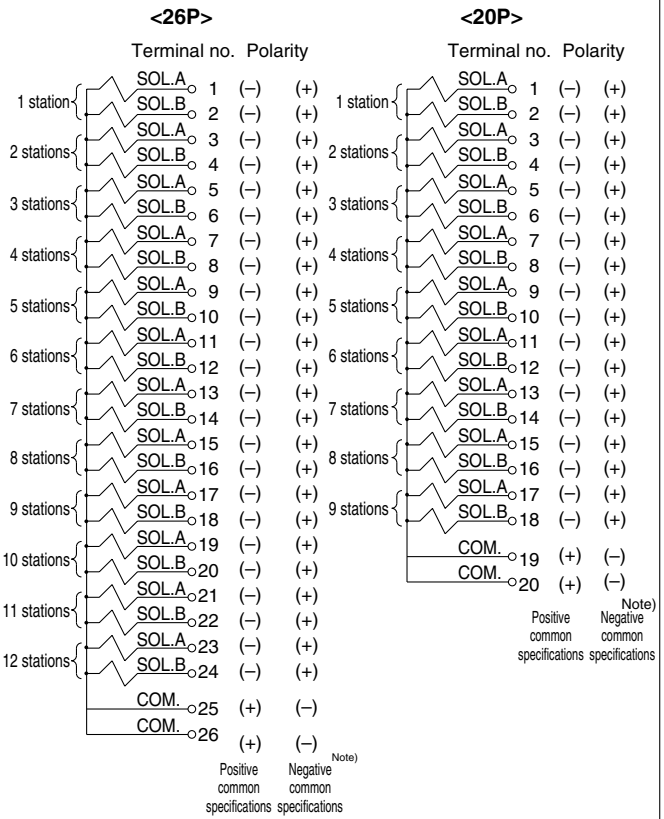
- Hirose Electric Co., Ltd.
- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.
- Oki Electric Cable Co,. Ltd.

Electrical wiring specifications

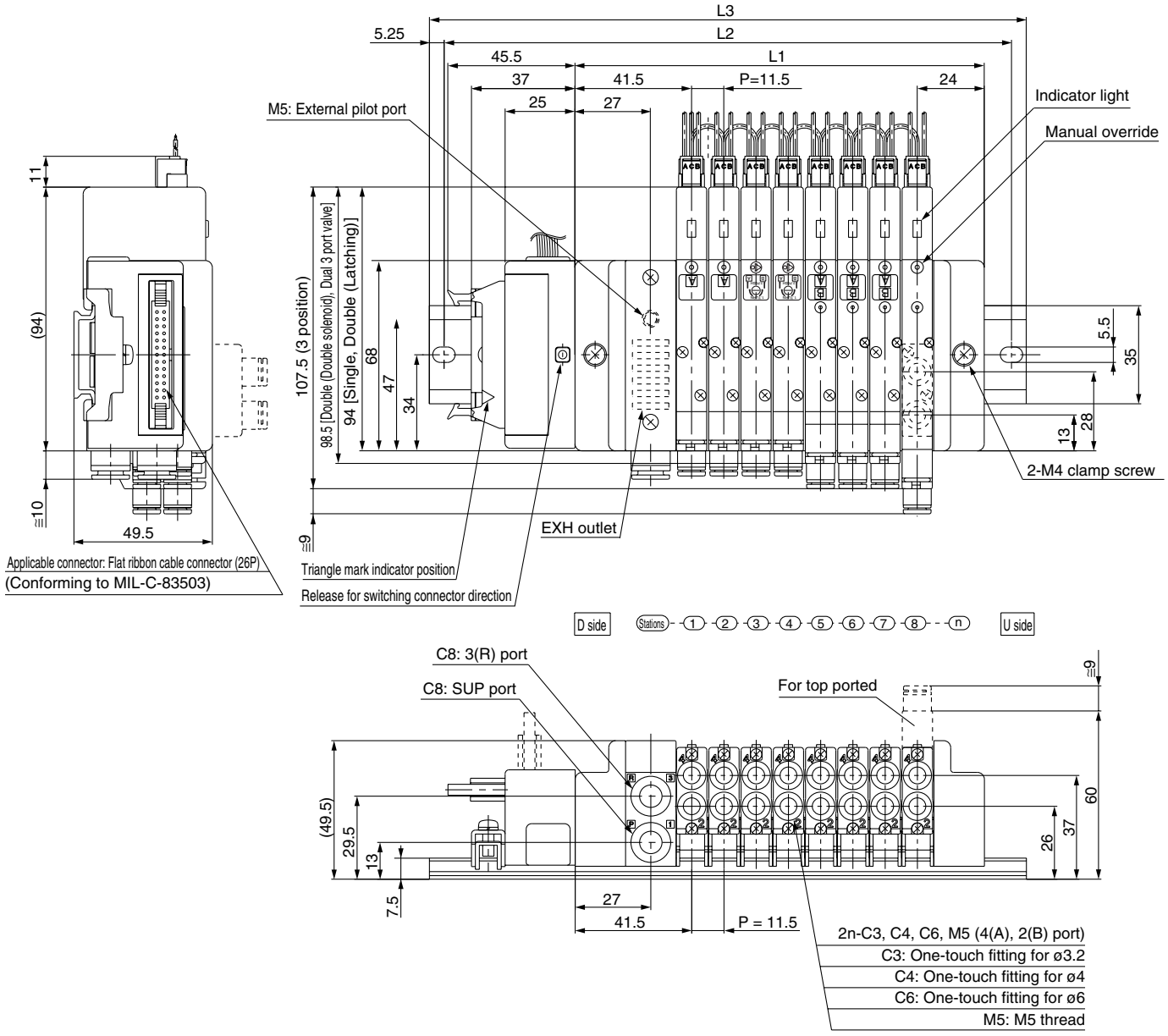
Flat ribbon cable connector



Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-108.



Note) When using the negative common specifications, use valves for negative common.

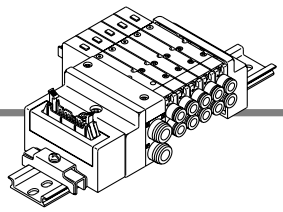


Dimensions

Formula: L1 = 11.5n + 54 n: Stations (Maximum 24 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	65.5	77	88.5	100	111.5	123	134.5	146	157.5	169	180.5	192	203.5	215	226.5	238	249.5	261	272.5	284	295.5	307	318.5	330
L2	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	375	387.5
L3	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5	385.5	398

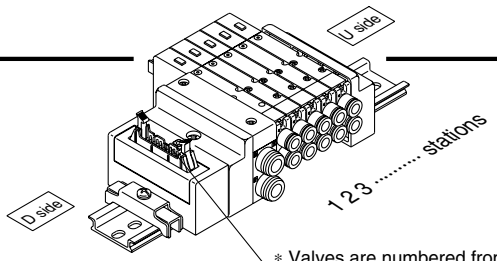
J Kit (PC wiring system compatible flat ribbon cable kit)



- **PC Wiring System compatible.**
- **Using connector for flat ribbon cable (20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	8 stations (16 as an option)

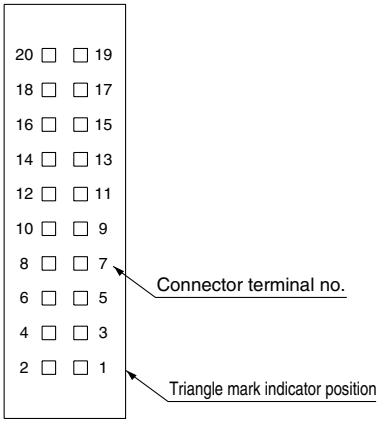


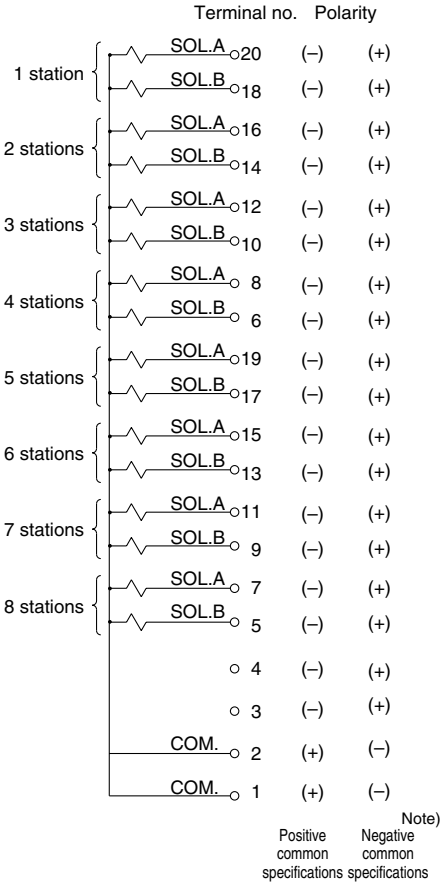
∗ Valves are numbered from the D side.

Electrical wiring specifications ●

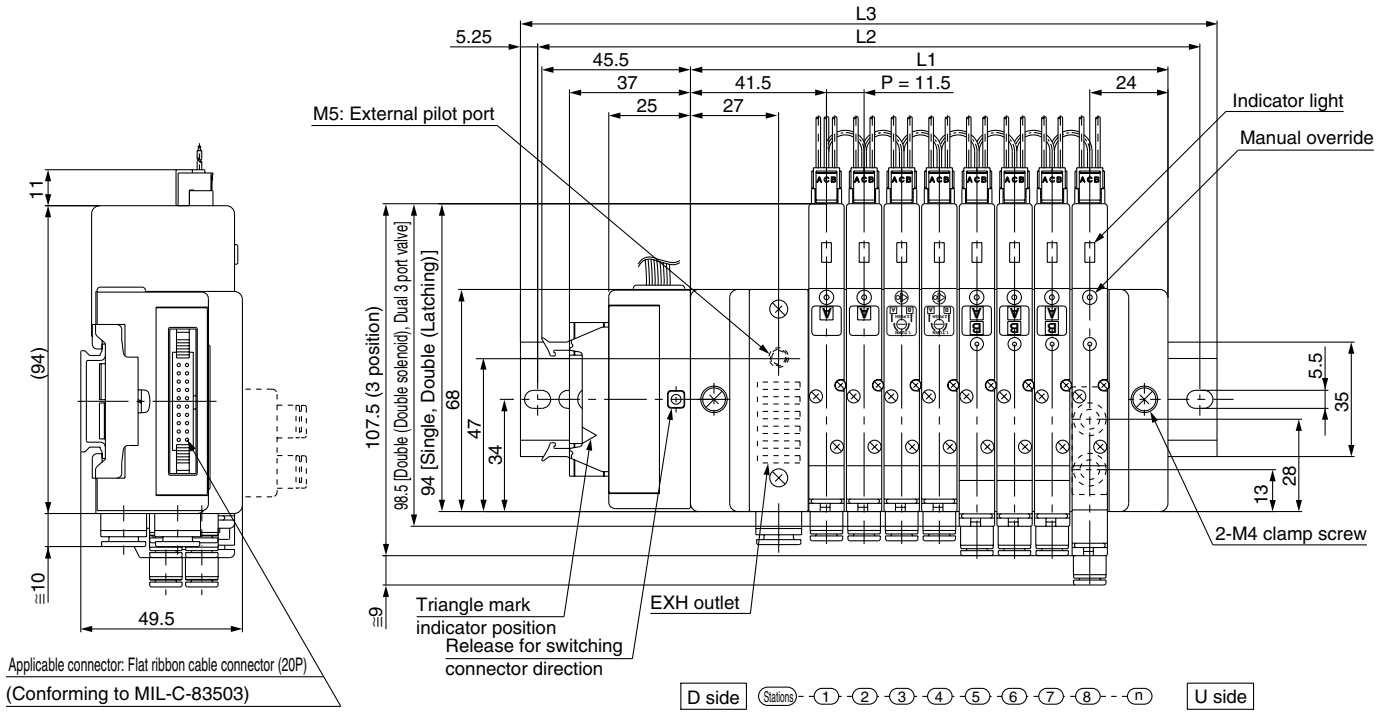
Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-108.

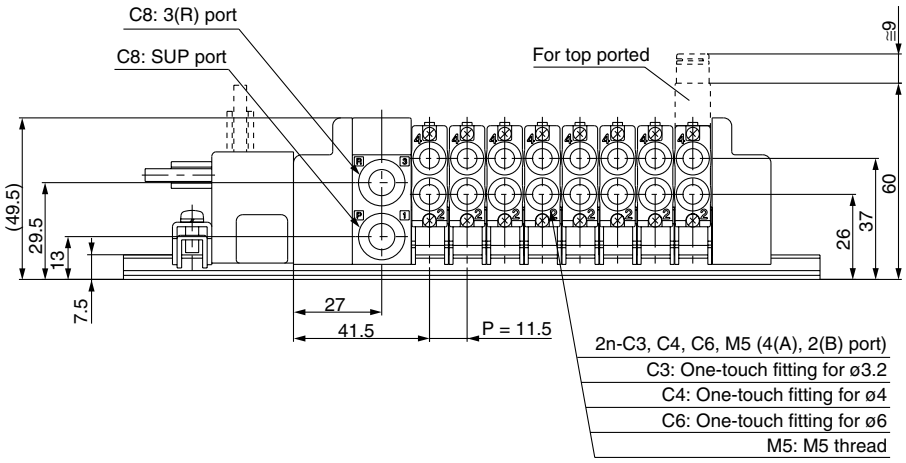
Flat ribbon cable connector





Note) When using the negative common specifications, use valves for negative common.
For details about the PC Wiring System, refer to catalog CAT.ES02-20 separately.



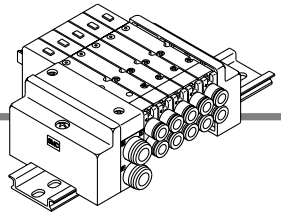


Dimensions

Formula: L1 = 11.5n + 54 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	65.5	77	88.5	100	111.5	123	134.5	146	157.5	169	180.5	192	203.5	215	226.5	238
L2	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300
L3	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5

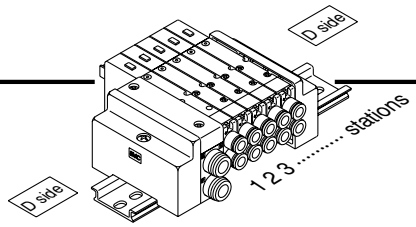
C Kit (Connector)



● **Standard with lead wires connected to each valve individually.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ1000	Side, Top	C8	C3, C4, C6, M5	24 stations

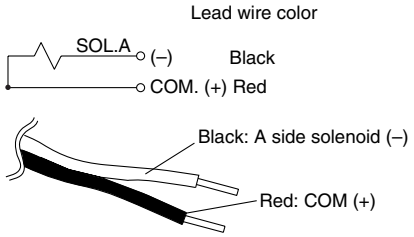


∗ Valves are numbered from the D side.

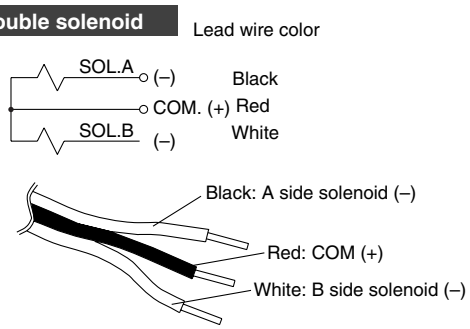
● Wiring Specifications: Positive COM Specifications

Since lead wires are connected to the valves as shown below, connect each wire to the power supply.

Single solenoid



Double solenoid



● Plug connector lead wire length
The lead wire length of the valves with lead wire is 300 mm. When ordering a lead wire length of 600 mm or longer, list the part numbers for the valve without connector and the connector assembly.
Example) For lead wire length of 1000 mm: SQ1140-5LO-C6····3 pcs.
AXT661-14AL-10····3 pcs.

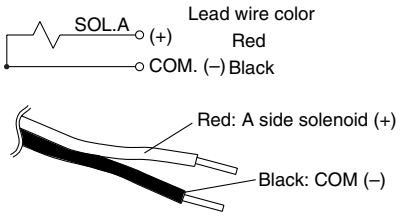
Connector Assembly Part No.

Lead wire length	Single solenoid	Double solenoid
Socket only (3 pcs.)	AXT661-12AL	
300 mm	AXT661-14AL	AXT661-13AL
600 mm	AXT661-14AL-6	AXT661-13AL-6
1000 mm	AXT661-14AL-10	AXT661-13AL-10
2000 mm	AXT661-14AL-20	AXT661-13AL-20
3000 mm	AXT661-14AL-30	AXT661-13AL-30

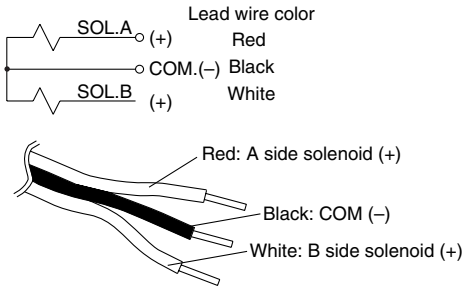
● Wiring Specifications: Negative COM Specifications (Option)

Since lead wires are connected to the valves as shown below, connect each wire to the power supply.

Single solenoid



Double solenoid

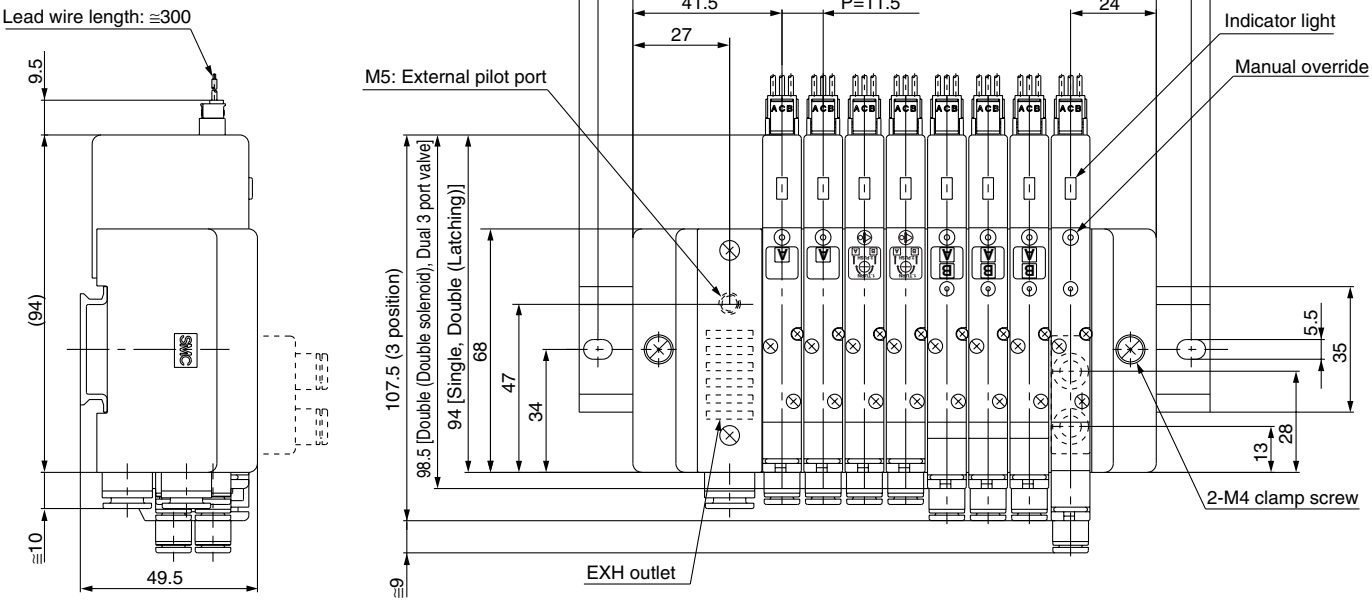


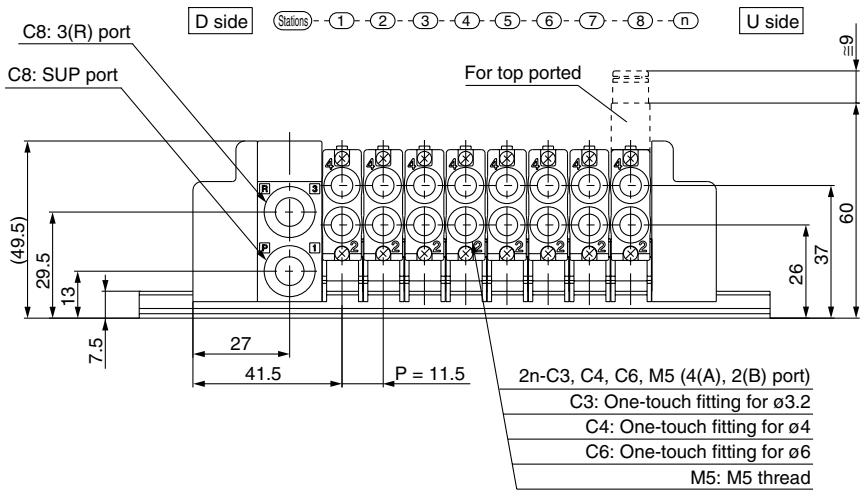
● Plug connector lead wire length
The lead wire length of the valves with lead wire is 300 mm. When ordering a lead wire length of 600 mm or longer, list the part numbers for the valve without connector and the connector assembly.
Example) For lead wire length of 1000 mm: SQ1140-5LO-C6·····3 pcs.
AXT661-14ANL-10····3 pcs.

Connector Assembly Part no.

Lead wire length	Single solenoid	Double solenoid
Socket only (3 pcs.)	AXT661-12AL	
300 mm	AXT661-14ANL	AXT661-13ANL
600 mm	AXT661-14ANL-6	AXT661-13ANL-6
1000 mm	AXT661-14ANL-10	AXT661-13ANL-10
2000 mm	AXT661-14ANL-20	AXT661-13ANL-20
3000 mm	AXT661-14ANL-30	AXT661-13ANL-30

Note) When using the negative common specifications, use valves for negative common.





Dimensions

Formula: L1 = 11.5n + 54 n: Stations (Maximum 24 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	65.5	77	88.5	100	111.5	123	134.5	146	157.5	169	180.5	192	203.5	215	226.5	238	249.5	261	272.5	284	295.5	307	318.5	330
L2	87.5	100	112.5	125	137.5	150	162.5	175	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	350
L3	98	110.5	123	135.5	148	160.5	173	185.5	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5	360.5

Series ***SQ2000***

Plug Lead Unit

How to Order Manifold

SS5Q24 — 08 | FD2 — D | ☐

Stations

01	1 station
⋮	⋮
16[Note]	16 stations

Note) The maximum number of stations depends on the type of electrical entries.

Option

Nil	None
02 to 24[(1)]	DIN rail length specified
B	Back pressure check valve
K[(2)]	Special wiring specifications (Except double wiring)
N	With name plate (Side ported only)
R	External pilot specifications
S	Built-in silencer, direct exhaust

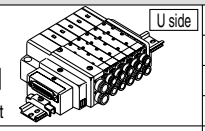
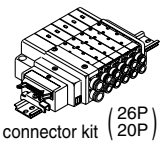
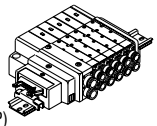
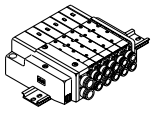
Note 1) Specify DIN rail length with "D☐" at the end. (Enter the number of stations inside ☐.)
Example: -D08
Note 2) Standard wiring specifications are for double wiring. Indicate wiring specifications for single wiring or mixed single and double wiring, or when exceeding the standard number of stations. (Except C kit)
Note 3) When two or more symbols are specified, indicate them alphabetically. Example: -BKN

Manifold mounting

D	DIN rail mounting style
E[Note]	Direct mounting style

Note) Type E is only available with a C kit.

Electrical entry

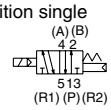
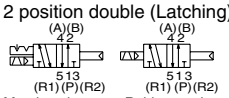
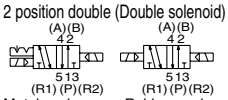
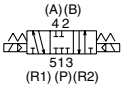
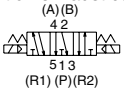
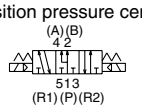
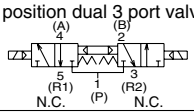
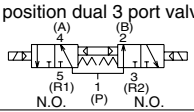
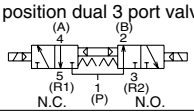
Kit type		Lead wire connector location	Cable specifications	Stations	Max. number of stations for special wiring specifications	Max. number of solenoids[(2)]
F kit  U side, D side D-sub connector kit	**FD0**	D side	D-sub connector (25P) kit, without cable	1 to 12 stations	16 stations	24
	FD1		D-sub connector (25P) kit, with 1.5 m cable			
	FD2		D-sub connector (25P) kit, with 3.0 m cable			
	FD3		D-sub connector (25P) kit, with 5.0 m cable			
P kit  Flat ribbon cable connector kit (26P, 20P)	**PD0**	D side[(1)]	Flat ribbon cable (26P) kit, without cable	1 to 12 stations	16 stations	24
	PD1		Flat ribbon cable (26P) kit, with 1.5 m cable			
	PD2		Flat ribbon cable (26P) kit, with 3.0 m cable			
	PD3		Flat ribbon cable (26P) kit, with 5.0 m cable			
	PDC		Flat ribbon cable (20P) kit, without cable	1 to 9 stations		18
J kit  Flat ribbon cable (20P) (PC Wiring System compatible)	**JD0**	D side	Flat ribbon cable (20P) PC Wiring System compatible	1 to 8 stations	16 stations	16
C kit  Connector kit	**C**	—	Connector kit	1 to 16 stations	—	—

Note 1) Separately order the 20P type cable assembly for the P kit.
Note 2) The maximum number of stations should not be more than the maximum number of solenoids. (The number of solenoids are counted as: 1 for single solenoids and 2 for type 3P and 4P double solenoids.)

How to Order Valves

SQ2 [1] 4 [0] [ ] — [5] [L] [ ] — [C6] [ ] [ ]

Type of actuation

1	2 position single 
2	2 position double (Latching)  Metal seal Rubber seal
	2 position double (Double solenoid) (1)  Metal seal Rubber seal
3	3 position closed center 
4	3 position exhaust center 
5	3 position pressure center 
A (2)	4 position dual 3 port valve  N.C. (P) N.C.
B (2)	4 position dual 3 port valve  N.O. (P) N.O.
C (2)	4 position dual 3 port valve  N.C. (P) N.O.

Note 1) For double solenoid specifications, the function symbol below is "D".
Note 2) Only rubber seal types are applicable.

Seal

0	Metal seal
1	Rubber seal

Function

Nil	Standard type (1.0 W DC)
D	2 position double (Double solenoid specifications)
N	Negative common
Y(1)	Low wattage type (0.5 W DC)
R(2)	External pilot specifications

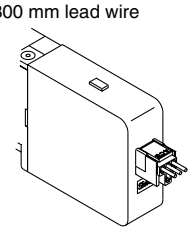
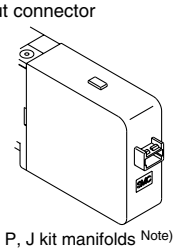
Note 1) Except double (latching) type.
Note 2) Except dual 3 port valves.
Note 3) When two or more symbols are specified, indicate them alphabetically.

Coil voltage

5	24 VDC
6	12 VDC

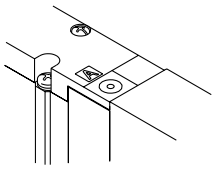
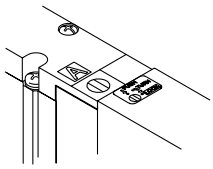
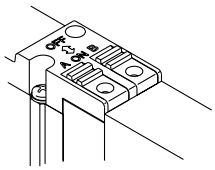
Note) Light/Surge voltage suppressor is built-in.

Electrical entry

L	LO
Plug connector type With 300 mm lead wire	Plug connector type without connector
	 For F, P, J kit manifolds Note)

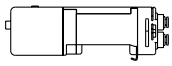
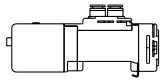
Note) Indicate "LO" when ordering centralized wiring type manifolds, F, P, and J kits, since the lead wire will be attached to the manifold side.

Manual override

Nil	B Note)	D Note)
Non-locking push type (Tool required)	Locking type (Tool required)	Slide locking type (Manual type) * Only side ported type applicable
		

Note) Except double (latching) type.

Cylinder port

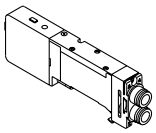
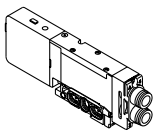
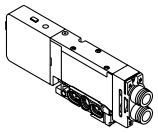
C4	One-touch fitting for ø4	Side ported	
C6	One-touch fitting for ø6		
C8	One-touch fitting for ø8		
L4	One-touch fitting for ø4	Note) Top ported	
L6	One-touch fitting for ø6		
L8	One-touch fitting for ø8		

Note) Can be changed to side ported configuration.

Port plug mounting port

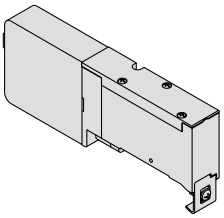
Nil	None
A	Port 4(A)
B	Port 2(B)

With/Without manifold block

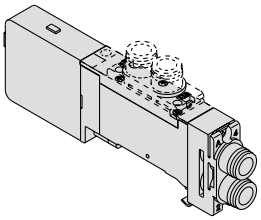
Nil	M	MB
Without manifold block	With manifold block	With manifold block, built-in back pressure check valve
	 * Lead wire is not included.	 * Lead wire is not included.
• When ordering with manifolds • When only valves are required.	For adding stations	

Manifold Option

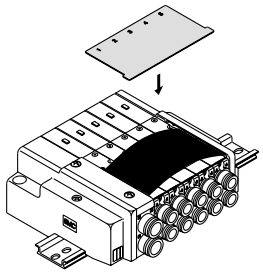
Blanking plate P. 2-3-103
SSQ2000-10A-4



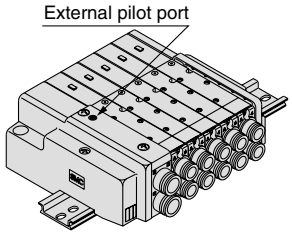
Individual SUP/EXH spacer P. 2-3-104
SSQ2000-PR1-4-$^{C8}_{L8}$



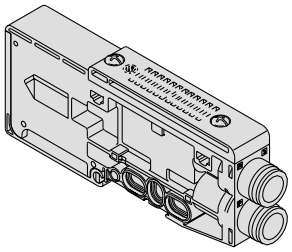
Name plate (-N) P. 2-3-106
SSQ2000-N3-n



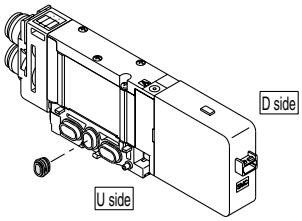
External pilot specifications (-R) P. 2-3-107



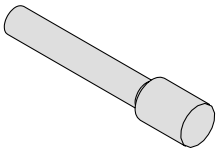
SUP/EXH block P. 2-3-103
SSQ2000-PR-3-C10(-S)



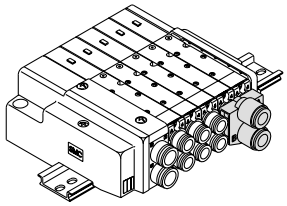
SUP block plate P. 2-3-105
SSQ2000-B-R



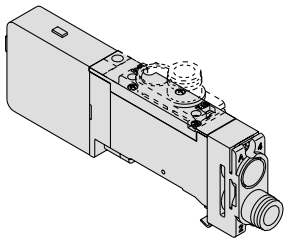
Blanking plug P. 2-3-106
KQ2P-04/06/08/10



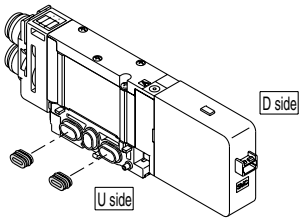
Dual flow fitting P. 2-3-107
SSQ2000-52A-$^{C10}_{N11}$



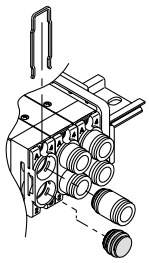
Individual SUP spacer P. 2-3-103
SSQ2000-P-4-$^{C8}_{L8}$



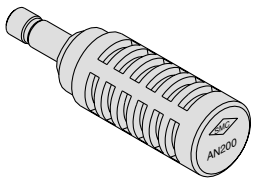
EXH block plate P. 2-3-105
SSQ2000-B-R



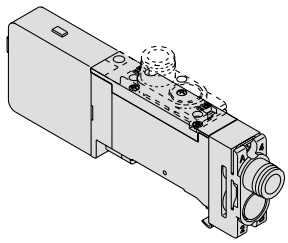
Port plug P. 2-3-106
VVQZ2000-CP



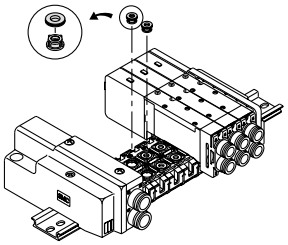
Silencer (For EXH port) P. 2-3-107



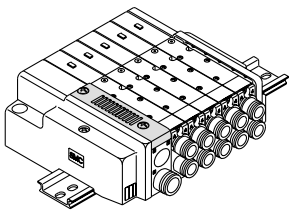
Individual EXH spacer P. 2-3-104
SSQ2000-R-4-$^{C8}_{L8}$



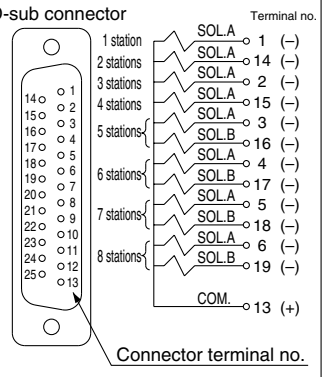
Back pressure check valve (-B) P. 2-3-105
SSQ2000-BP



Built-in silencer (-S) P. 2-3-106



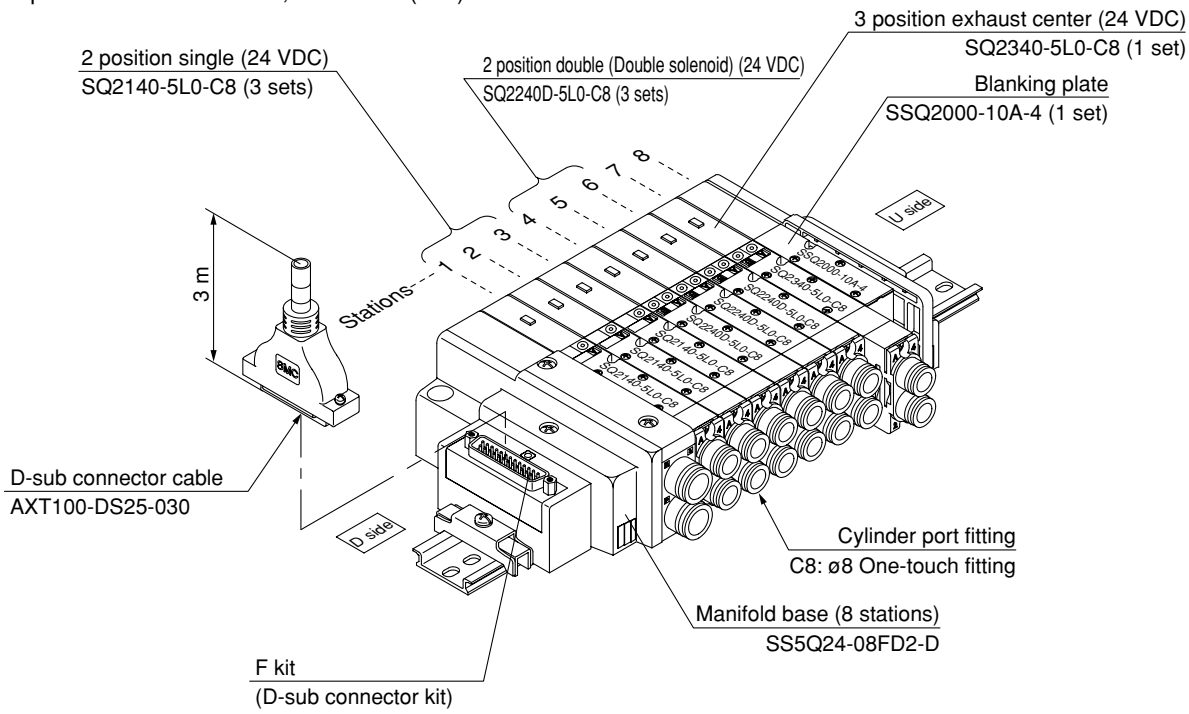
Special wiring specifications (-K) P. 2-3-108



Although the standard products come with double wiring, mixed single and double wiring is available upon request.

How to Order Manifold Assembly (Example)

Example: D-sub connector kit, with cable (3 m)



SS5Q24-08FD2-D ····· 1 set (F kit 8 station manifold base)
∗SQ2140-5L0-C8 ····· 3 sets (2 position single)
∗SQ2240D-5L0-C8 ····· 3 sets (2 position double [double solenoid])
∗SQ2340-5L0-C8 ····· 1 set (3 position exhaust center)
∗SSQ2000-10A-4 ····· 1 set (Blanking plate)

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

Add the valve and option part numbers in order starting from the first station on the D side.
When entry of part numbers becomes complicated, indicate on the manifold specification sheet.

Valve Specifications

Model

Series		Number of solenoids	Model		Flow characteristics: 1 → 4/2 (P → A/B) C [dm³/(s·bar)]	b	Cv	Flow characteristics: 4/2 → 5/3 (A/B → R1/R2) C [dm³/(s·bar)]	b	Cv	Response time (ms)(2) Standard: 1 W	Low wattage	Weight (g)
SQ2000	2 position	Single	Metal seal	SQ2140	2.2	0.17	0.51	2.4	0.14	0.57	20 or less	26 or less	145
			Rubber seal	SQ2141	2.3	0.17	0.51	3.1	0.18	0.71	24 or less	31 or less	140
		Double (Latching)	Metal seal	SQ2240	2.2	0.17	0.51	2.4	0.14	0.57	26 or less	—	145
			Rubber seal	SQ2241	2.3	0.17	0.51	3.1	0.18	0.71	31 or less	—	140
		Double (Double solenoid)	Metal seal	SQ2240D	2.2	0.17	0.51	2.4	0.14	0.57	15 or less	20 or less	160
			Rubber seal	SQ2241D	2.3	0.17	0.51	3.1	0.18	0.71	20 or less	26 or less	155
	3 position	Closed center	Metal seal	SQ2340	1.9	0.17	0.46	2.1	0.15	0.47	34 or less	44 or less	180
			Rubber seal	SQ2341	1.9	0.17	0.46	1.8	0.29	0.45	34 or less	44 or less	175
		Exhaust center	Metal seal	SQ2440	1.9	0.17	0.46	2.4	0.14	0.55	34 or less	44 or less	180
			Rubber seal	SQ2441	1.9	0.17	0.46	3.1	0.14	0.58	34 or less	44 or less	175
		Pressure center	Metal seal	SQ2540	2.3	0.17	0.51	2.1	0.18	0.47	34 or less	44 or less	180
			Rubber seal	SQ2541	2.5	0.17	0.56	1.8	0.30	0.47	34 or less	44 or less	175
	4 position	Dual 3 port valve	Rubber seal	SQ2$^{A}_{B}_{C}$41	1.5	0.17	0.40	1.5	0.17	0.40	34 or less	44 or less	155

Note 1) Values for the top ported cylinder port size of C8. The side ported type will be about 10% less.
Note 2) Based on JIS B 8375-1981. (Values with a supply pressure of 0.5 MPa and light/surge voltage suppressor. Values fluctuate depending on the pressure and air quality.)

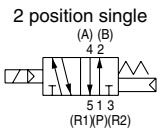
Specifications

			Metal seal	Rubber seal
Valve specifications	Valve construction			
	Fluid		Air/Inert gas	
	Maximum operating pressure		0.7 MPa	
	Min. operating pressure	Single	0.1 MPa	0.15 MPa
		Double (Latching)	0.18 MPa	0.18 MPa
		Double (Double solenoid)	0.1 MPa	0.1 MPa
		3 position	0.1 MPa	0.2 MPa
		4 position	—	0.15 MPa
	Ambient and fluid temperature		–10 to 50°C (1)	
	Lubrication		Not required	
	Pilot valve manual override		Push type (Tool required)/Locking type (Tool required) Slide locking type (Manual type)	
	Vibration/Impact resistance (2)		30/150 m/s²	
	Protection structure		Dust tight	
Solenoid specifications	Coil rated voltage		12 VDC, 24 VDC	
	Allowable voltage fluctuation		±10% of rated voltage	
	Coil insulation type		Equivalent to class B	
	Power consumption (Current)	24 VDC	1 W DC (42 mA), 0.5 W DC (21 mA) (3)	
		12 VDC	1 W DC (83 mA), 0.5 W DC (42 mA) (3)	

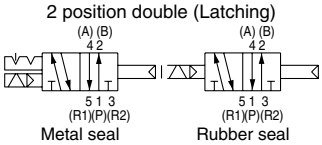
Note 1) Use dry air to prevent condensation when operating at low temperatures.
Note 2) Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)
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. (Values at the initial period)
Note 3) Values for the low wattage (0.5 W) specifications.

JIS Symbol

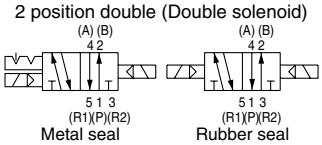
2 position single



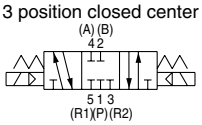
2 position double (Latching)



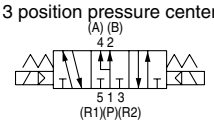
2 position double (Double solenoid)



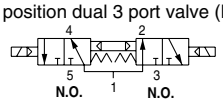
3 position closed center



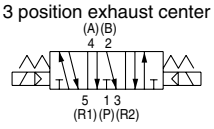
3 position pressure center



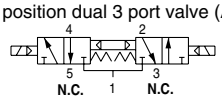
4 position dual 3 port valve (B)



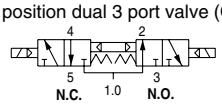
3 position exhaust center



4 position dual 3 port valve (A)



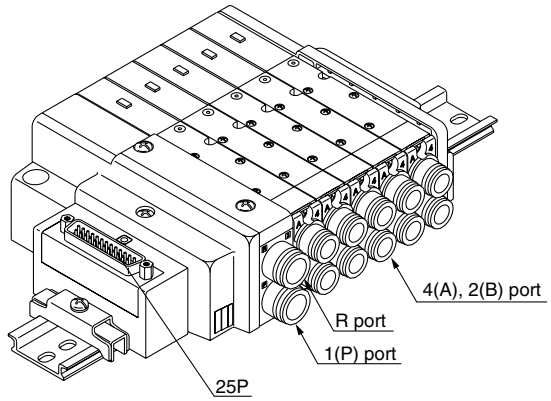
4 position dual 3 port valve (C)



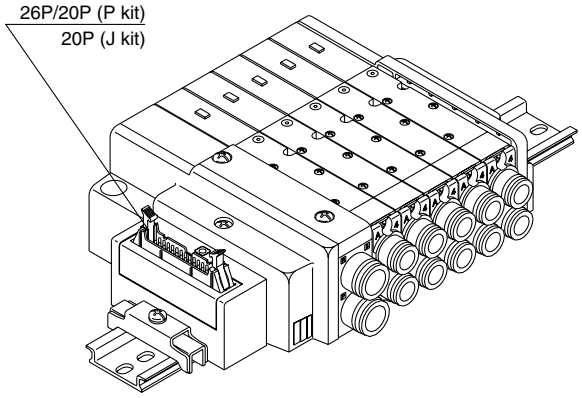
Manifold Specifications

Base model	Porting specifications: Port size (1) 1(P), 3(R)	Porting specifications: Port size (1) 4(A), 2(B) Port location	Porting specifications: Port size (1) 4(A), 2(B) Port size	Applicable solenoid valve	Type of connection		(3) Applicable stations	(4) 5 station weight (g)	(4) 1 station weight (g)
SS5Q24-□□-□	C10 (For ø10) Option: Built-in silencer, direct exhaust	Side	C4 (For ø4) C6 (For ø6) C8 (For ø8)	SQ2□40 SQ2□41	F kit: D-sub connector		1 to 12 stations	580	35
					P kit: Flat ribbon cable	26P	1 to 12 stations	580	35
						20P	1 to 9 stations		
		Top (2)	L4 (For ø4) L6 (For ø6) L8 (For ø8)		J kit: Flat ribbon cable PC Wiring System compatible		1 to 8 stations	580	35
					C kit: Connector kit		1 to 12 stations	620	50

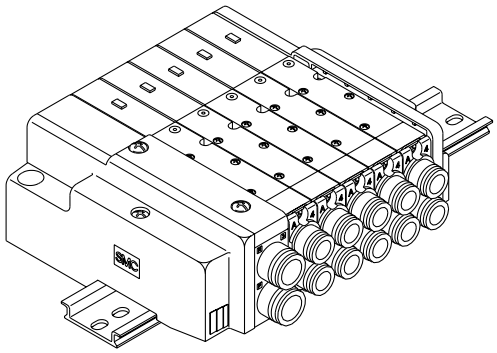
Note 1) One-touch fittings in inch sizes are also available. For details, refer to page 2-3-110.
Note 2) Can be changed to side ported configuration.
Note 3) An optional specification for special wiring is available to increase the maximum number of stations. Refer to page 2-3-108 for details.
Note 4) Except valves. For valve weight, refer to page 2-3-88.



F kit

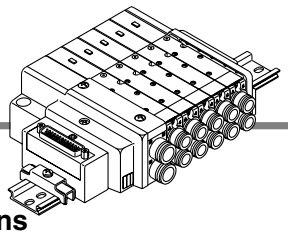


P kit **J kit**



C kit

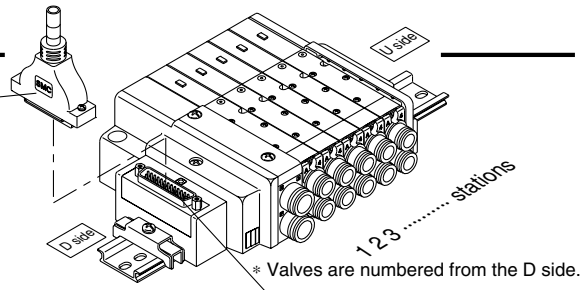
F Kit (D-sub Connector kit)



- **Simplification and labor savings for wiring work can be achieved by using a D-sub connector for the electrical connection.**
- **Using connector for flat ribbon cable (25P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	12 stations (16 as an option)



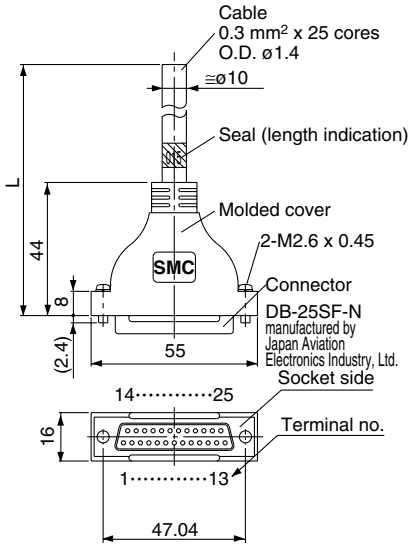
∗ Valves are numbered from the D side.

D-sub Connector (25 pins)

Cable assembly ●

AXT100-DS25-$^{015}_{030}_{050}$

(D-sub connector cable assemblies can be ordered with manifolds.)



D-sub Connector Cable Assembly Terminal No.

Terminal number	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 (Option)

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 0.3 mm² x 25 cores
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.

∗ Cannot be used for transfer wiring.

Electric Characteristics

Item	Characteristics
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit VAC, 1 min.	1000
Insulation resistance MΩ/km, 20°C	5 or less

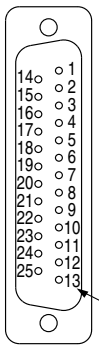
Note) The minimum bending radius for D-sub connector cables is 20 mm.

Connector manufacturers' example

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

Electrical wiring specifications ●

D-sub connector

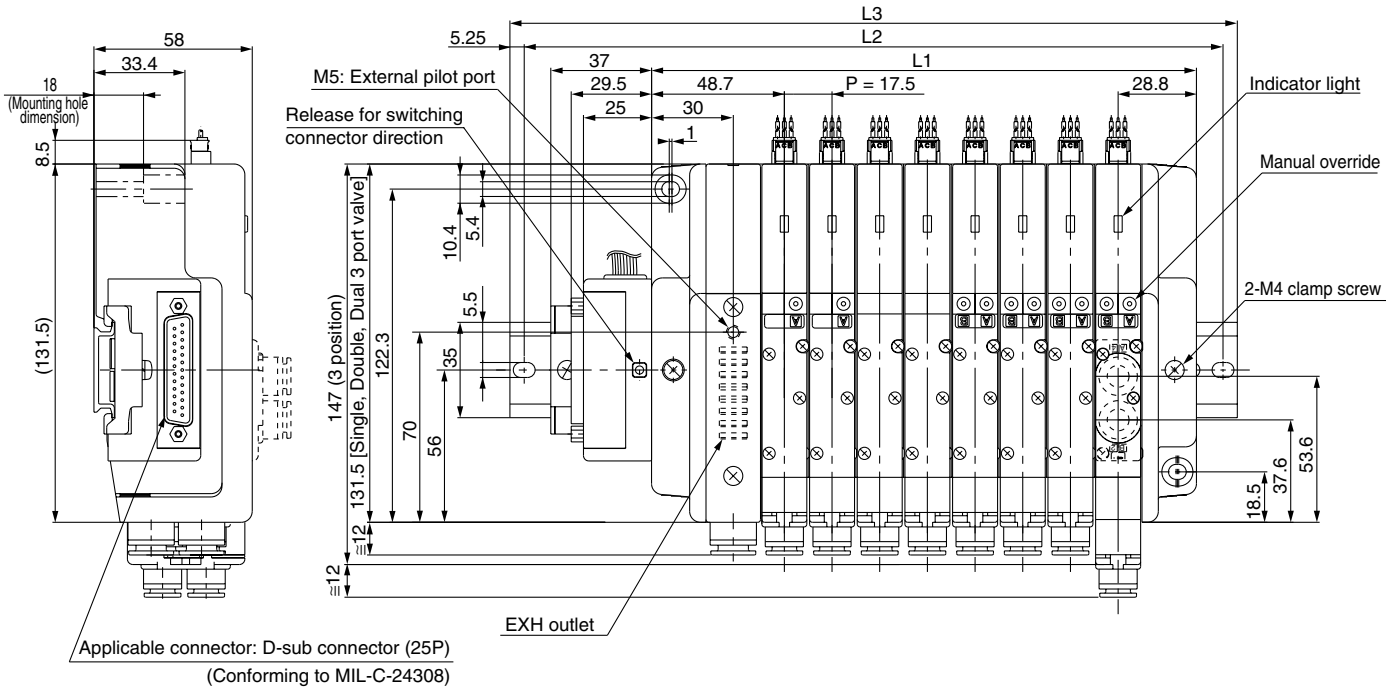


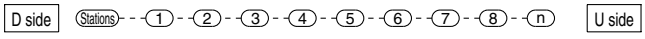
As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types. Mixed single and double wiring is available as an option.
For details, refer to page 2-3-108.

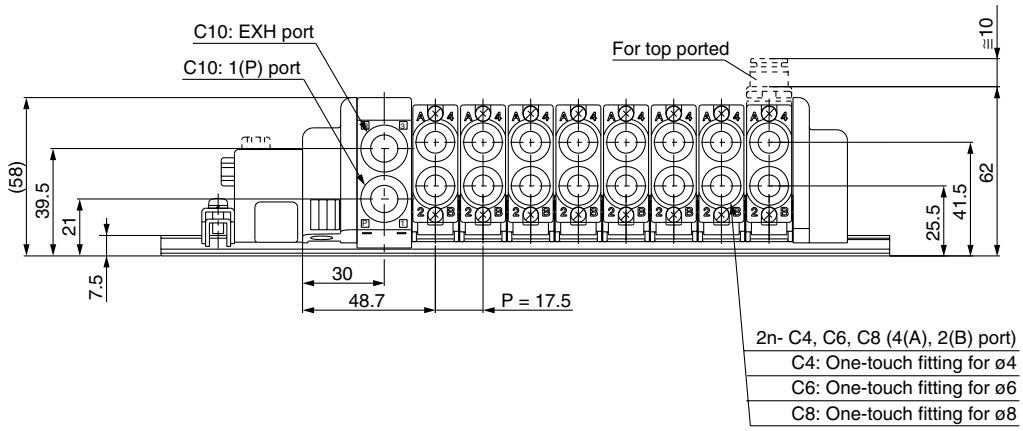
Lead wire colors for D-sub connector assembly AXT100-DS25-$^{015}_{030}_{050}$

		Terminal no.	Polarity		Lead wire color	Dot marking
			Positive common specifications	Negative common specifications Note)		
1 station	SOL.A	1	(–)	(+)	Black	None
	SOL.B	14	(–)	(+)	Yellow	Black
2 stations	SOL.A	2	(–)	(+)	Brown	None
	SOL.B	15	(–)	(+)	Pink	Black
3 stations	SOL.A	3	(–)	(+)	Red	None
	SOL.B	16	(–)	(+)	Blue	White
4 stations	SOL.A	4	(–)	(+)	Orange	None
	SOL.B	17	(–)	(+)	Purple	None
5 stations	SOL.A	5	(–)	(+)	Yellow	None
	SOL.B	18	(–)	(+)	Gray	None
6 stations	SOL.A	6	(–)	(+)	Pink	None
	SOL.B	19	(–)	(+)	Orange	Black
7 stations	SOL.A	7	(–)	(+)	Blue	None
	SOL.B	20	(–)	(+)	Red	White
8 stations	SOL.A	8	(–)	(+)	Purple	White
	SOL.B	21	(–)	(+)	Brown	White
9 stations	SOL.A	9	(–)	(+)	Gray	Black
	SOL.B	22	(–)	(+)	Pink	Red
10 stations	SOL.A	10	(–)	(+)	White	Black
	SOL.B	23	(–)	(+)	Gray	Red
11 stations	SOL.A	11	(–)	(+)	White	Red
	SOL.B	24	(–)	(+)	Black	White
12 stations	SOL.A	12	(–)	(+)	Yellow	Red
	SOL.B	25	(–)	(+)	White	None
	COM.	13	(+)	(–)	Orange	Red

Note) When using the negative common specifications, use valves for negative common.





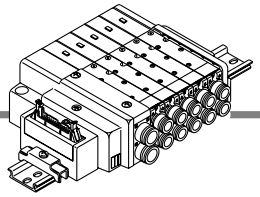


Dimensions

Formula: L1 = 17.5n + 60 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	77.5	95	112.5	130	147.5	165	182.5	200	217.5	235	252.5	270	287.5	305	322.5	340
L2	137.5	162.5	175	187.5	212.5	225	250	262.5	275	300	312.5	337.5	350	362.5	387.5	400
L3	148	173	185.5	198	223	235.5	260.5	273	285.5	310.5	323	348	360.5	373	398	410.5

P Kit (Flat ribbon cable connector)

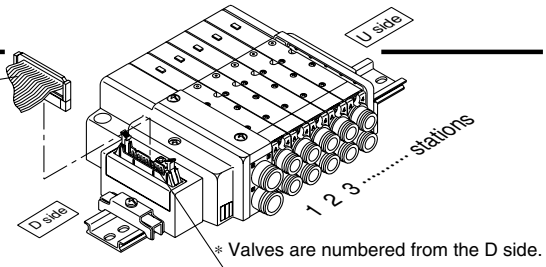


- **Simplification and labor savings for wiring work can be achieved by using a MIL type for the electrical connection.**
- **Using connector for flat ribbon cable (26P, 20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	12 stations (16 as an option)

Flat Ribbon Cable (26 pins, 20 pins)

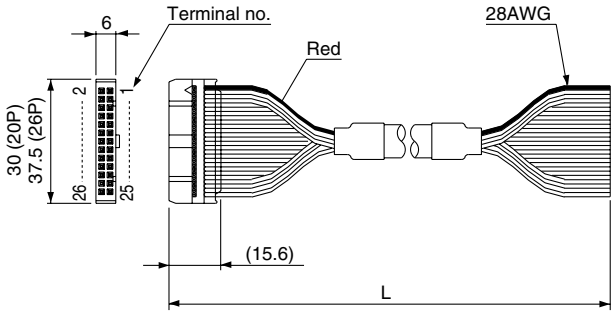


∗ Valves are numbered from the D side.

Cable assembly ●

AXT100-FC $\begin{matrix}20\\26\end{matrix}$ - $\begin{matrix}1\\2\\3\end{matrix}$

(Type 26P flat ribbon cable connector assemblies can be ordered with manifolds. Refer to manifold ordering.)



Flat Ribbon Cable Connector Assembly (Option)

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

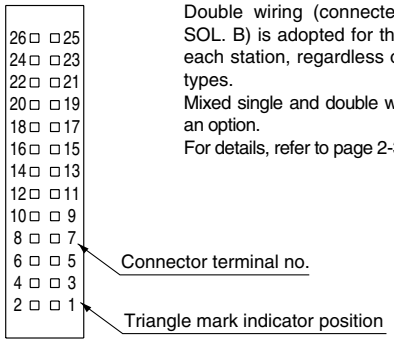
∗ For other commercial connectors, use a 26 pins or 20 pins with strain relief conforming to MIL-C-83503.
∗ Cannot be used for transfer wiring.

Connector manufacturers' example

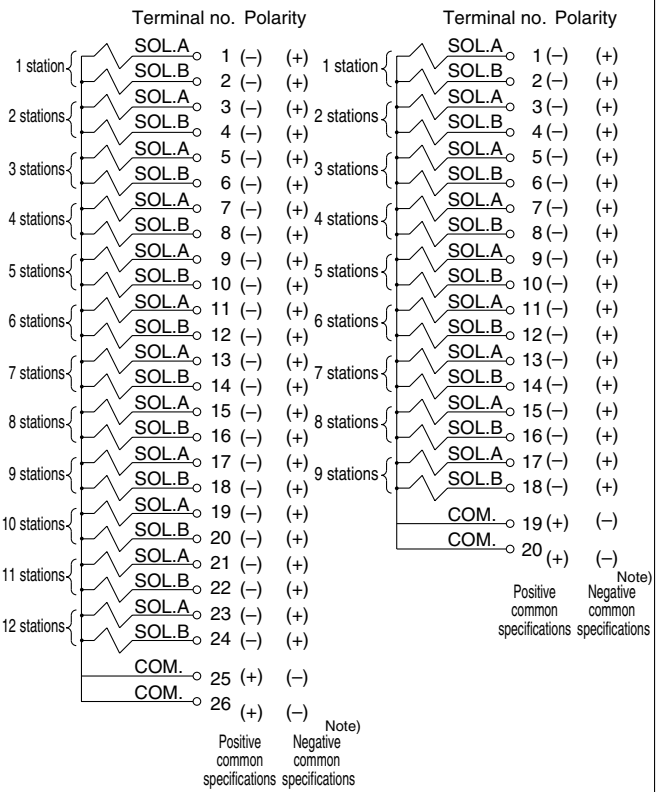
- Hirose Electric Co., Ltd.
- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.
- Oki Electric Cable Co,. Ltd.

Electrical wiring specifications ●

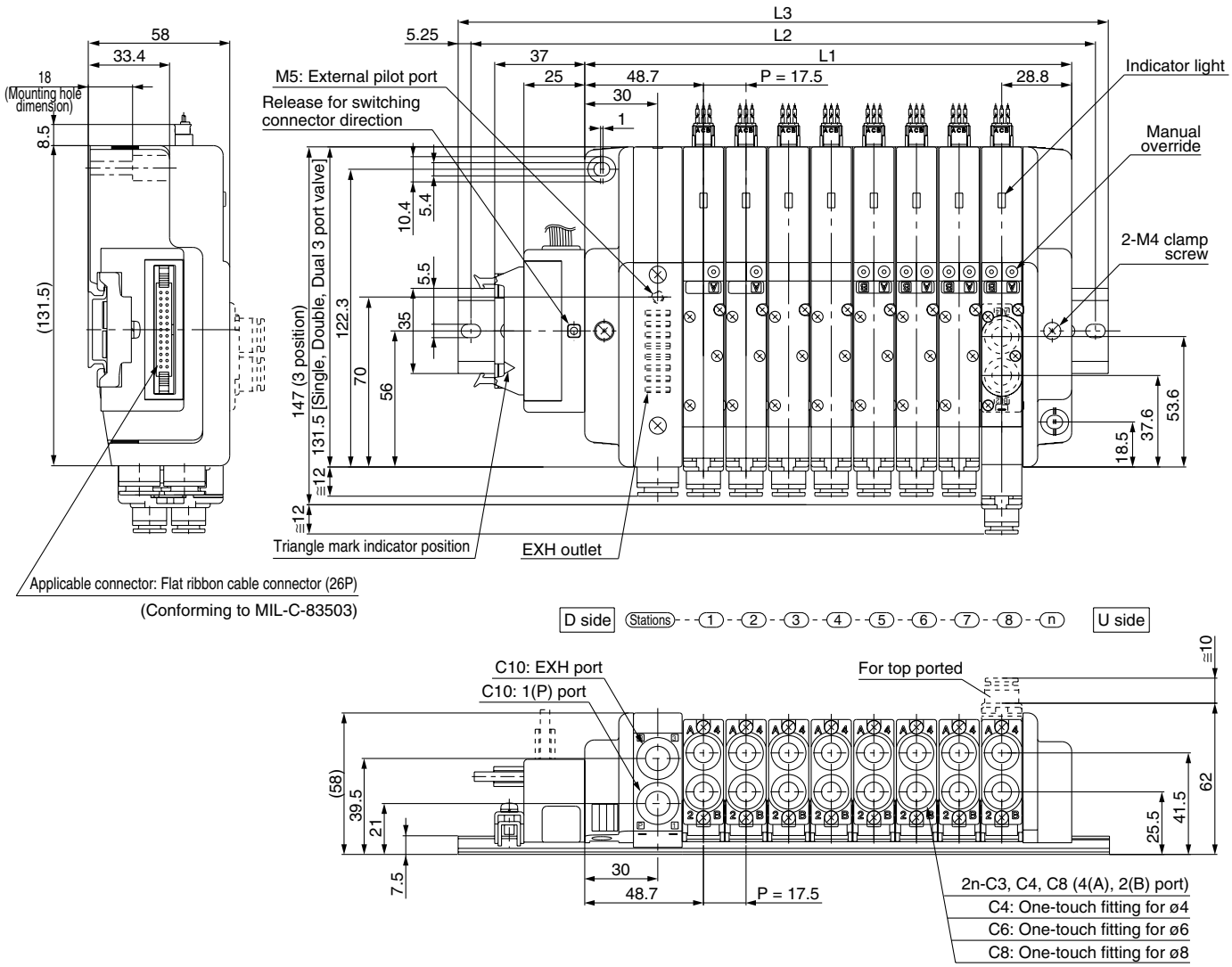
Flat ribbon cable connector



Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-108.



Note) When using the negative common specifications, use valves for negative common.

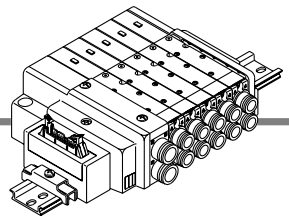


Dimensions

Formula: L1 = 17.5n + 60 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	77.5	95	112.5	130	147.5	165	182.5	200	217.5	235	252.5	270	287.5	305	322.5	340
L2	137.5	162.5	175	187.5	212.5	225	250	262.5	275	300	312.5	337.5	350	362.5	387.5	400
L3	148	173	185.5	198	223	235.5	260.5	273	285.5	310.5	323	348	360.5	373	398	410.5

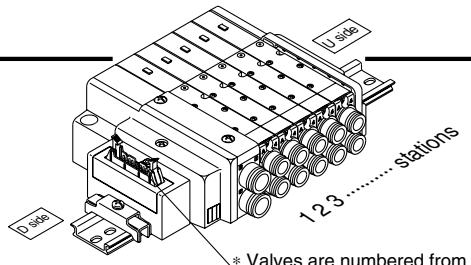
J Kit (PC wiring system compatible flat ribbon cable Kit)



- **PC Wiring System compatible.**
- **Using connector for flat ribbon cable (20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.**
- **Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.**

Manifold specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	8 stations (16 as an option)

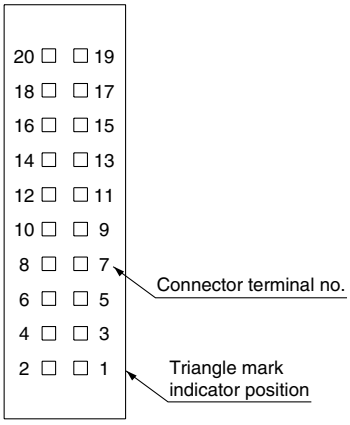


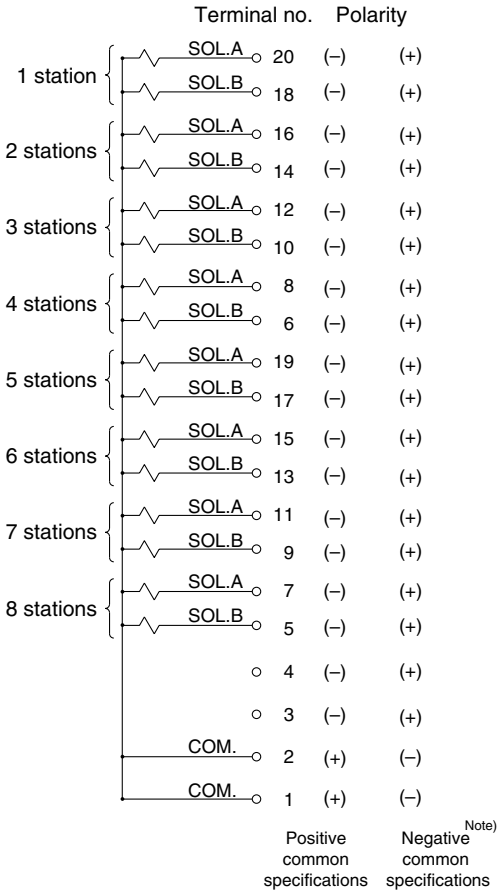
∗ Valves are numbered from the D side.

Electrical wiring specifications ●

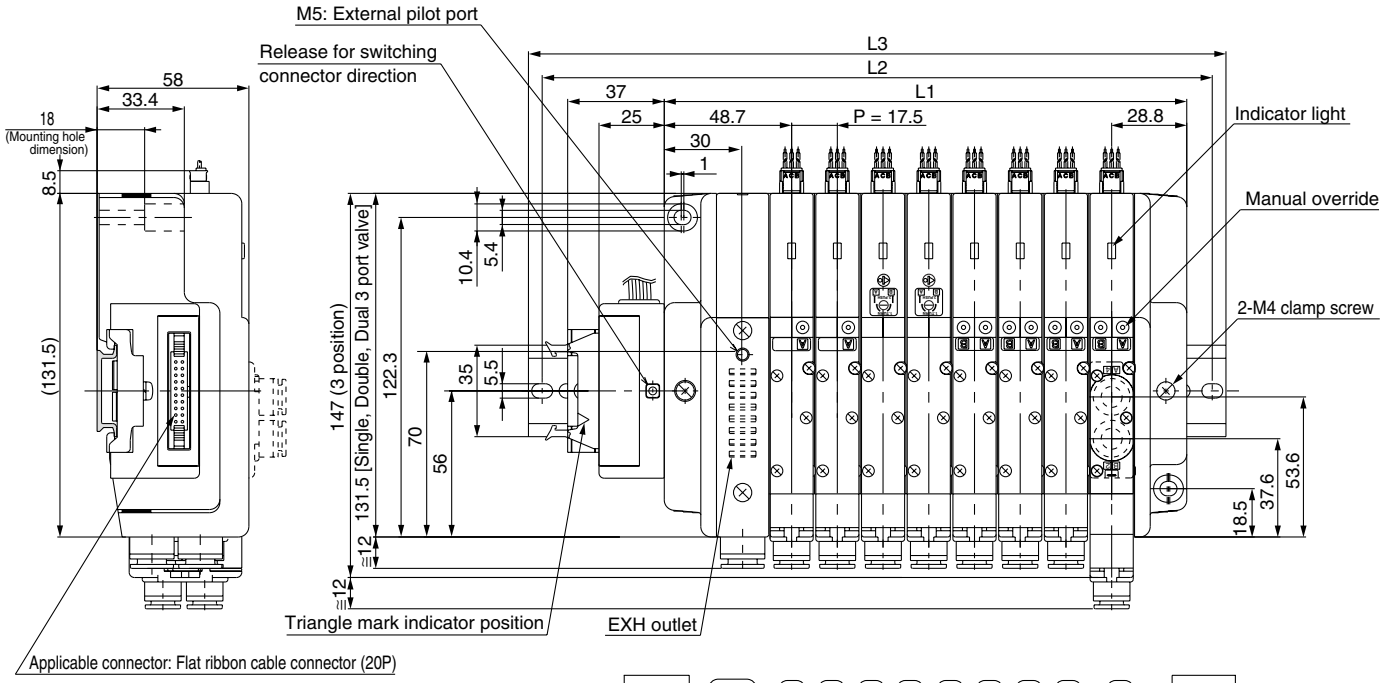
Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.
Mixed single and double wiring is available as an option.
For details, refer to page 2-3-108.

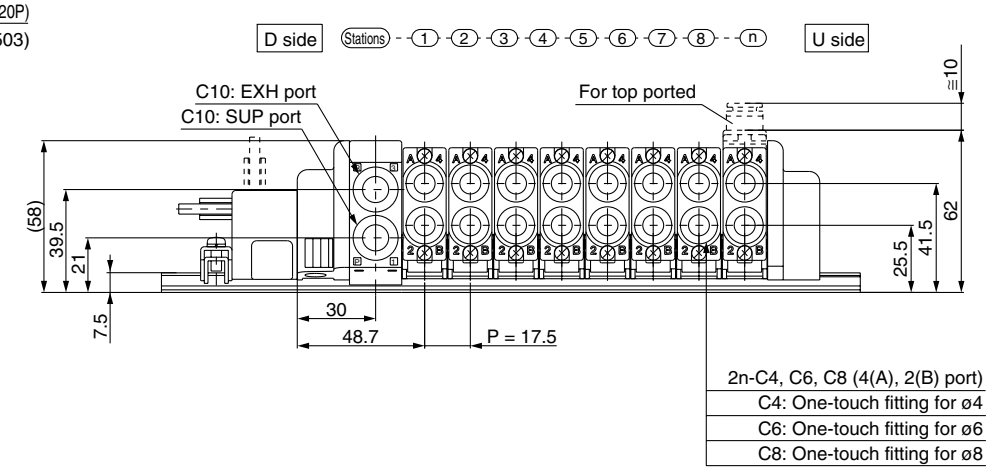
Flat ribbon cable connector





Note) When using the negative common specifications, use valves for negative common.
For details about the PC Wiring System, refer to catalog CAT.ES02-20 separately.



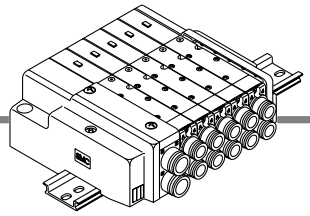


Dimensions

Formula: L1 = 17.5n + 60 n: Stations (Maximum 16 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	77.5	95	112.5	130	147.5	165	182.5	200	217.5	235	252.5	270	287.5	305	322.5	340
L2	137.5	162.5	175	187.5	212.5	225	250	262.5	275	300	312.5	337.5	350	362.5	387.5	400
L3	148	173	185.5	198	223	235.5	260.5	273	285.5	310.5	323	348	360.5	373	398	410.5

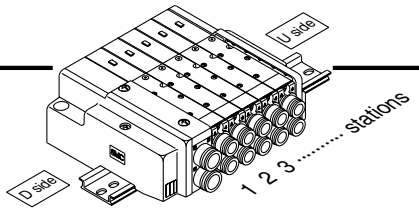
C Kit (Connector)



● **Standard with lead wires connected to each valve individually.**

Manifold Specifications

Series	Porting specifications			Maximum number of stations
	Port location	Port size		
		1(P), 3(R)	4(A), 2(B)	
SQ2000	Side, Top	C10	C4, C6, C8	16 stations

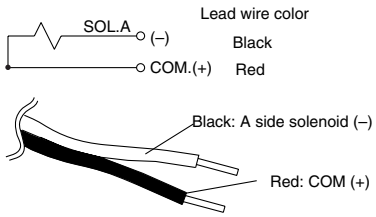


∗ Valves are numbered from the D side.

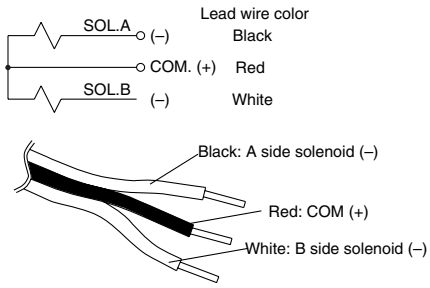
● Wiring Specifications: Positive COM Specifications

Since lead wires are connected to the valves as shown below, connect each wire to the power supply.

Single solenoid



Double solenoid



● Plug connector lead wire length

The lead wire length of the valves with lead wire is 300 mm. When ordering a lead wire length of 600 mm or longer, list the part numbers for the valve without connector and the connector assembly.

Example) For lead wire length of 1000 mm: SQ1140-5LO-C6····3 pcs.
AXT661-14AL-10····3 pcs.

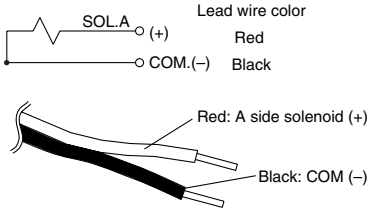
Connector Assembly Part No.

Lead wire length	Single solenoid	Double solenoid
Socket only (3 pcs.)	AXT661-12AL	
300 mm	AXT661-14AL	AXT661-13AL
600 mm	AXT661-14AL-6	AXT661-13AL-6
1000 mm	AXT661-14AL-10	AXT661-13AL-10
2000 mm	AXT661-14AL-20	AXT661-13AL-20
3000 mm	AXT661-14AL-30	AXT661-13AL-30

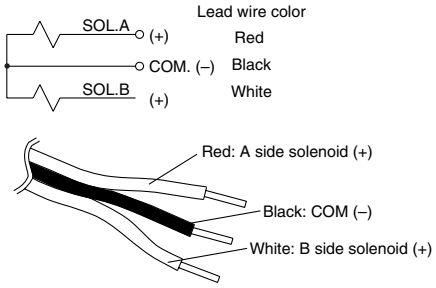
● Wiring Specifications: Negative COM Specifications (Option)

Since lead wires are connected to the valves as shown below, connect each wire to the power supply.

Single solenoid



Double solenoid



● Plug connector lead wire length

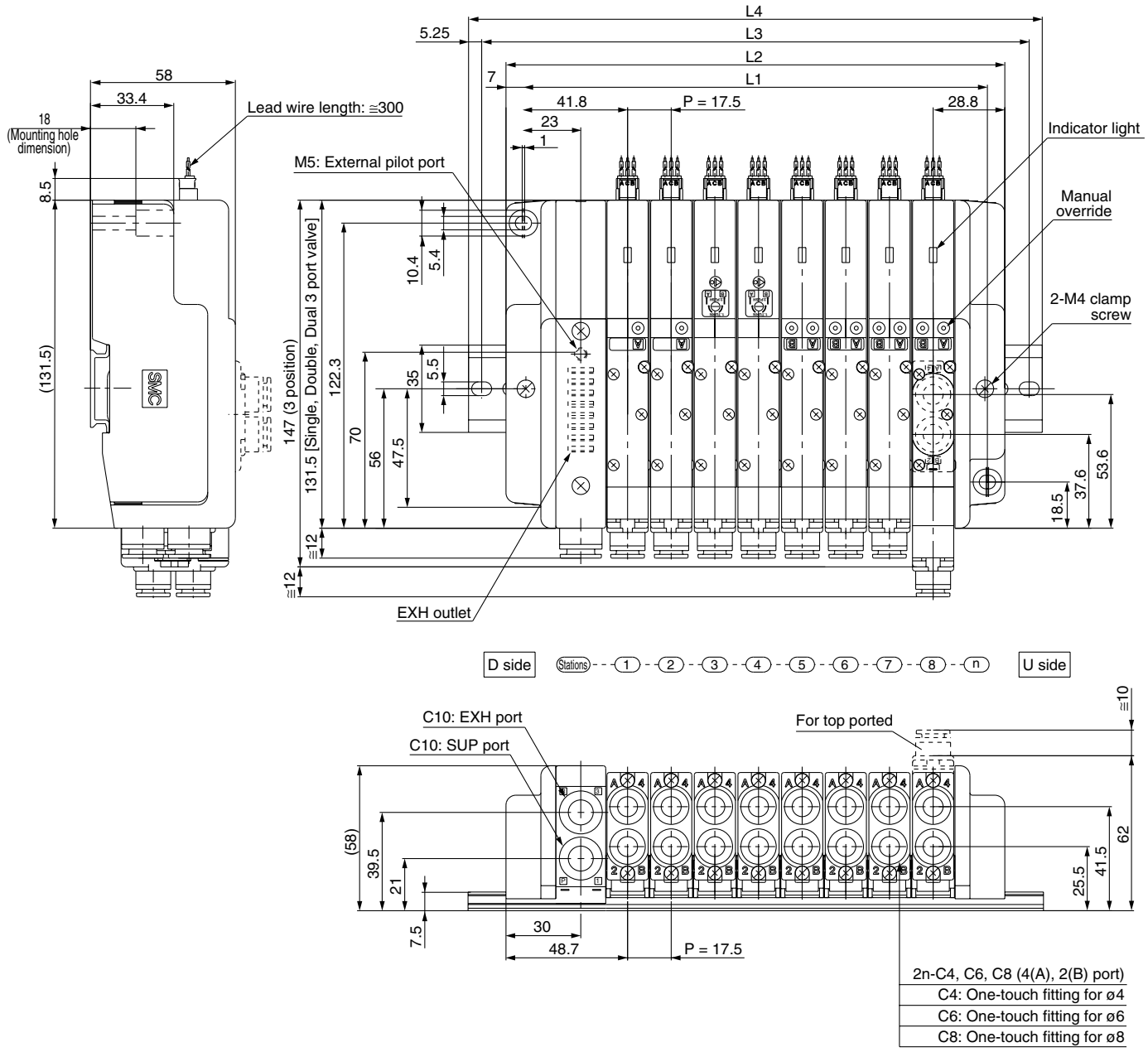
The lead wire length of the valves with lead wire is 300 mm. When ordering a lead wire length of 600 mm or longer, list the part numbers for the valve without connector and the connector assembly.

Example) For lead wire length of 1000 mm: SQ1140-5LO-C6····3 pcs.
AXT661-14ANL-10····3 pcs.

Connector Assembly Part no.

Lead wire length	Single solenoid	Double solenoid
Socket only (3 pcs.)	AXT661-12AL	
300 mm	AXT661-14ANL	AXT661-13ANL
600 mm	AXT661-14ANL-6	AXT661-13ANL-6
1000 mm	AXT661-14ANL-10	AXT661-13ANL-10
2000 mm	AXT661-14ANL-20	AXT661-13ANL-20
3000 mm	AXT661-14ANL-30	AXT661-13ANL-30

Note) When using the negative common specifications, use valves for negative common.



Dimensions

Formula: L1 = 17.5n + 46, L2 = 17.5n + 60 n: Stations (Maximum 16 stations)

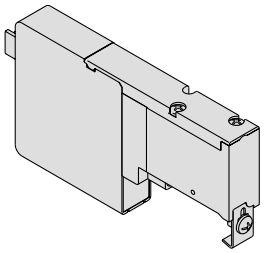
L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	63.5	81	98.5	116	133.5	151	168.5	186	203.5	221	238.5	256	273.5	291	308.5	326
L2	77.5	95	112.5	130	147.5	165	182.5	200	217.5	235	252.5	270	287.5	305	322.5	340
L3	100	125	137.5	150	175	187.5	212.5	225	237.5	262.5	275	300	312.5	325	350	362.5
L4	110.5	135.5	148	160.5	185.5	198	223	235.5	248	273	285.5	310.5	323	335.5	360.5	373

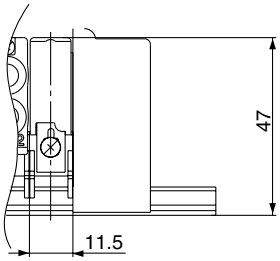
Manifold Option Parts for SQ1000

Blanking plate

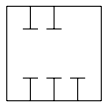
SSQ1000-10A-4

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.





JIS Symbol



SUP/EXH block

SSQ1000-PR-4-C8-□

Option

Nil	Standard
R	External pilot specifications
S	Built-in silencer

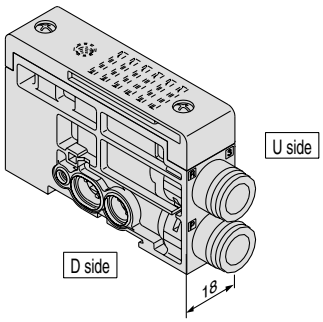
Note) When specifying both options, indicate "-RS".

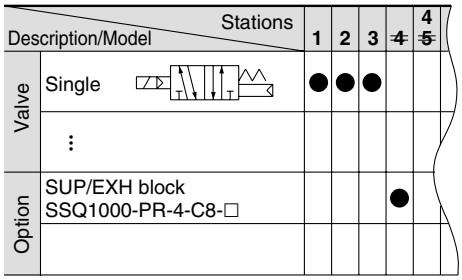
* Specify the spacer mounting position on the manifold specification sheet.

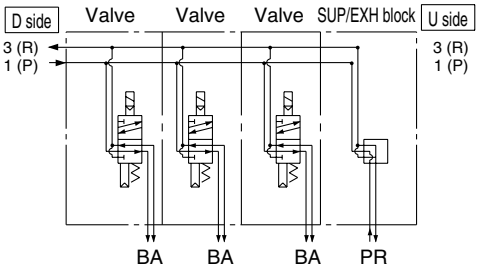
For standard type manifolds, the SUP/EXH block is mounted on the D side.

It is added to the manifold to increase SUP/EXH capacity.

* The number of SUP/EXH blocks that can be added is limited to two sets, one between manifold stations and another on the U side of the manifold, due to the length of the lead wire.
* SUP/EXH blocks are not included in the number of manifold stations.







Individual SUP spacer

SSQ1000-P-4-C6

Port location

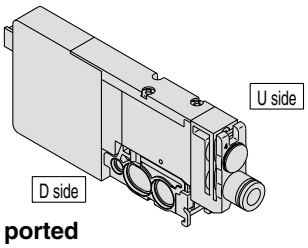
C6	Side ported
L6	Top ported

This is used as a supply port for different pressures when using different pressures in the same manifold (for one station). Both sides of the station which is used with supply pressure from the individual SUP spacer are shut off. (Refer to application example.)

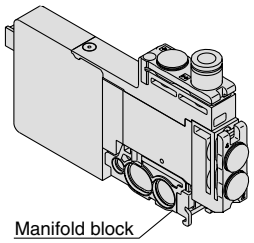
* Specify the spacer mounting position and SUP passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.

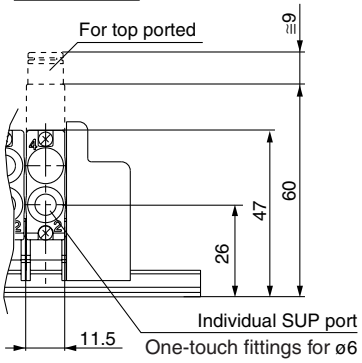
  (Two pieces of SUP block plate that shut off the supply pressure are included with the individual SUP spacer, therefore, it is not necessary to order them separately.)
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual SUP spacer to the individual EXH spacer).
* The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.
* Model no with manifold block:
  SSQ1000-P-4-$\frac{C6}{L6}$-M≡

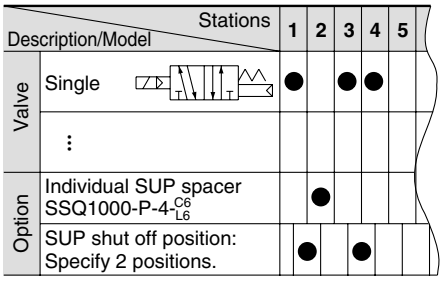
Side ported

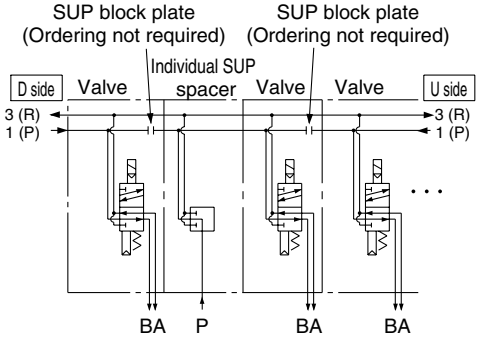


Top ported









Individual EXH spacer

SSQ1000-R-4- C6

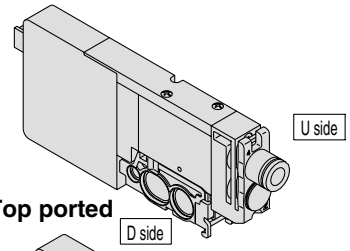
Port location

C6	Side ported
L6	Top ported

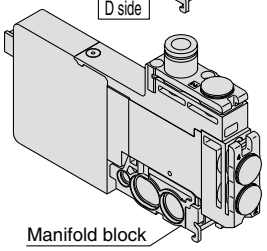
This is used to exhaust an individual valve when the exhaust from a valve interferes with other stations in the circuit (used for one station). Both sides of the station which is to be individually exhausted are shut off. (Refer to application example.)

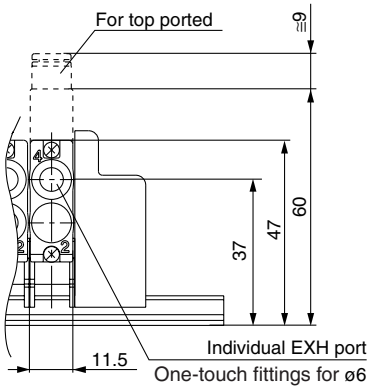
* Specify the spacer mounting position and EXH passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.
  (Two pieces of EXH block plate that shut off the exhaust are included with the individual EXH spacer, therefore, it is not necessary to order them separately.)
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual EXH spacer to the individual SUP spacer).
* The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.
* Model no. with manifold block:
  SSQ1000-R-4-$^{C6}_{L6}$-M

Side ported

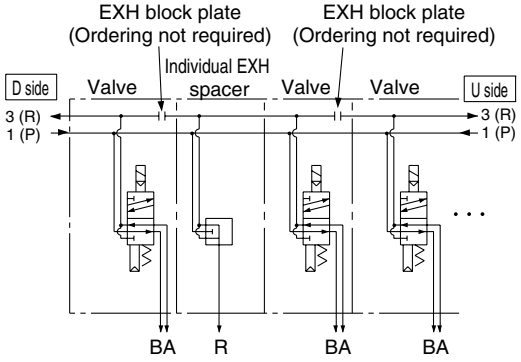


Top ported





Description/Model	Stations	1	2	3	4	5
Valve	Single	●		●	●	
	⋮					
Option	Individual EXH spacer SSQ1000-R-4-$^{C6}_{L6}$		●			
	EXH shut off position: Specify 2 positions.	●		●		



Individual SUP/EXH spacer

SSQ1000-PR1-4- C6

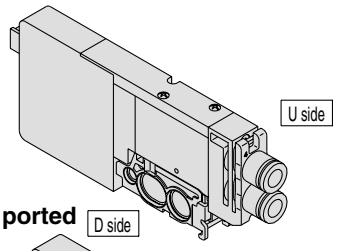
Port location

C6	Side ported
L6	Top ported

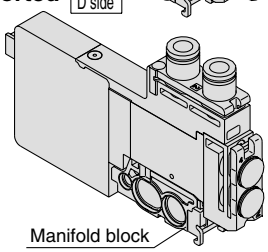
This has both functions of the individual SUP and EXH spacers above.
(Refer to application example.)

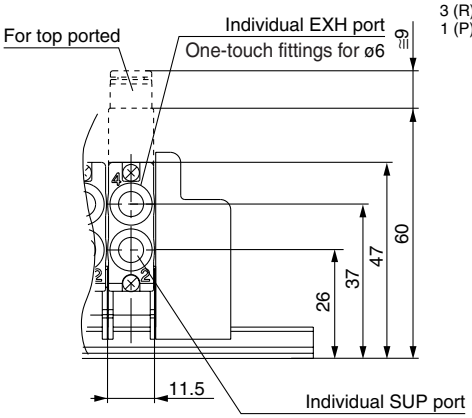
* Specify the spacer mounting position and SUP and EXH passage shut off positions on the manifold specification sheet. Two shut off positions each for SUP and EXH are required per unit.
  (Two pieces each of block plate that shut off the SUP and EXH passages are included with the individual SUP/EXH spacer.)
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later.
* The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.
* Model no. with manifold block:
  SSQ1000-PR1-4-$^{C6}_{L6}$-M

Side ported

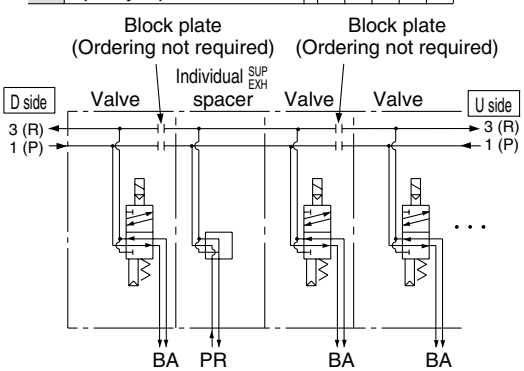


Top ported





Description/Model	Stations	1	2	3	4	5
Valve	Single	●		●	●	
	⋮					
Option	Individual SUP/EXH spacer SSQ1000-PR1-4-$^{C6}_{L6}$		●			
	SUP shut off position: Specify 2 positions.	●		●		
	EXH shut off position: Specify 2 positions.	●		●		



Manifold Option Parts for SQ1000

SUP block plate

SSQ1000-B-P

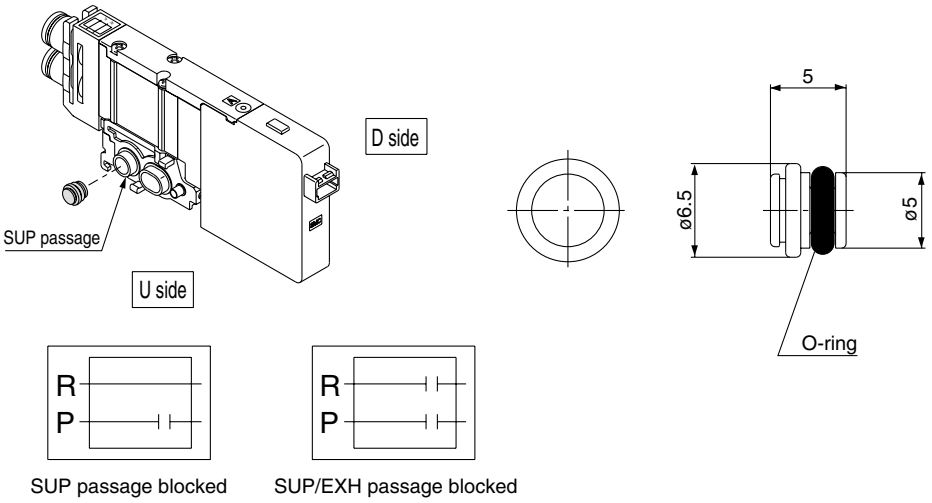
When supplying two different pressures, high and low, to one manifold, this is used between stations with different pressures. Also, it is used with an individual SUP spacer to shut off the air supply.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When a SUP passage is shut off with a SUP block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when SUP block plates are ordered with manifolds.



SUP passage blocked SUP/EXH passage blocked

EXH block plate

SSQ1000-B-R

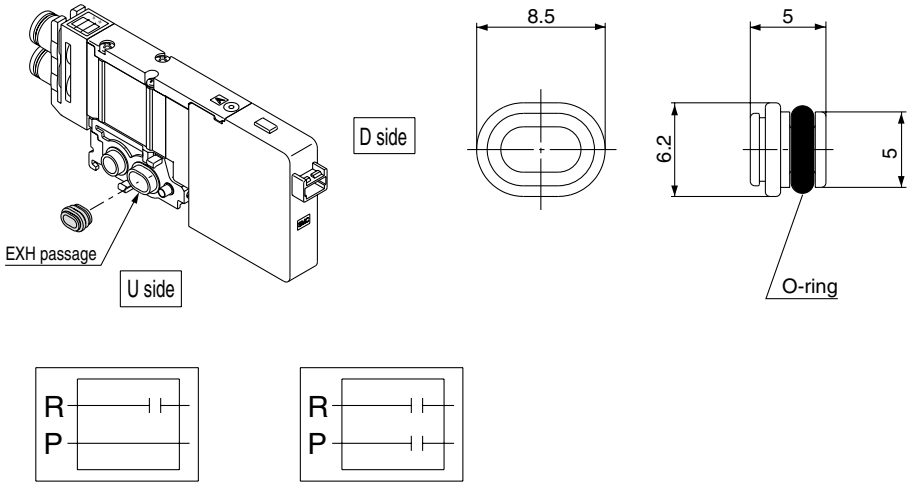
When the exhaust from a valve interferes with other stations in the circuit, this is used between stations to separate exhausts. Also, it is used with an individual EXH spacer to shut off the exhaust of individual valves.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When an EXH passage is shut off with an EXH block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when EXH block plates are ordered with manifolds.



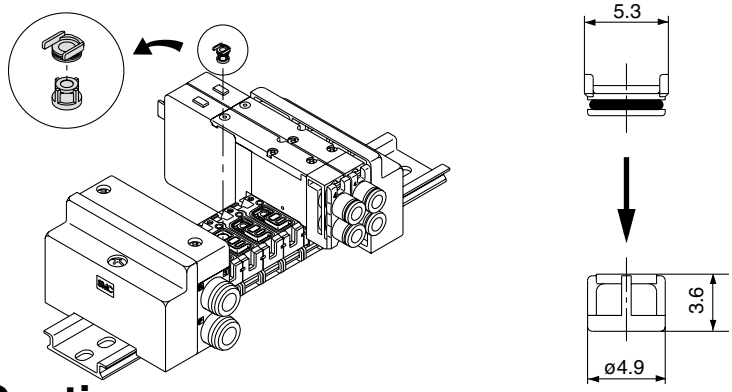
EXH passage blocked SUP/EXH passage blocked

Back pressure check valve [-B]

SSQ1000-BP

This prevents cylinder malfunction caused by the exhaust from other valves.It is inserted into the R (EXH) port of the valve that is affected. It is especially effective when using single acting cylinders or exhaust center type solenoid valves.

* When installing back pressure check valves only on the stations required, enter the part number and specify the station positions on a manifold specification sheet.
* When installing back pressure check valves on all of the stations, indicate "-B" at the end of the manifold part number.



⚠ Caution

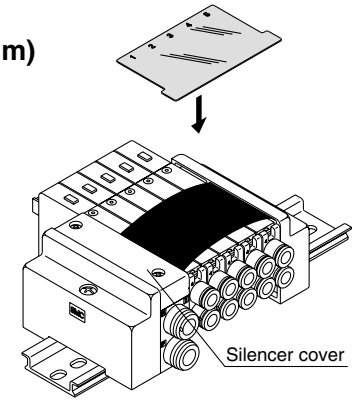
1. Although the back pressure check valve is an assembly part with a check valve mechanism, a small amount of air leakage is allowed. Therefore, take care not to restrict the exhaust air from the exhaust port.
2. The effective area of valves is about 20% less when the back pressure check valve is installed.
3. Since 4 port specification valves (5 (R1) and 3 (R2) are common) are used, back pressure cannot be prevented with dual 3 port valves.

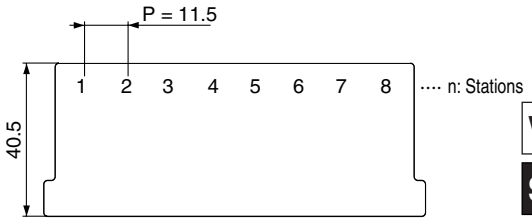
Name plate [-N]

SSQ1000-N3-Stations (1 to maximum)

This is a clear resin plate for applying solenoid valve function description labels, etc. To install, bend the plate slightly as shown and insert into the slots on the end plate side. Also, the plate is difficult to bend for manifolds with only a few stations, therefore, remove the silencer cover to install it.

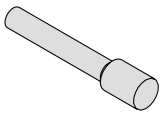
* When ordering with manifolds, add "-N" at the end of the manifold number.





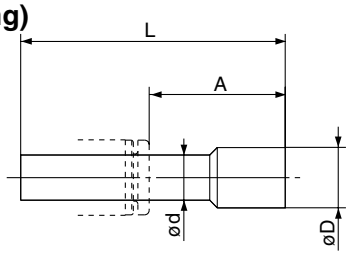
Blanking plug (For One-touch fitting)

KQ2P- **23** **04** **06** **08**



This is inserted into cylinder ports and SUP and EXH ports that are not used.

Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size (ød)	Model	A	L	D
3.2	**KQ2P-23**	16	31.5	3.2
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10

Port plug

VVQZ100-CP

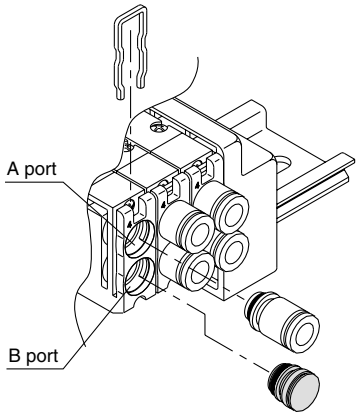
This is used to close the cylinder ports when changing a 5 port valve to a 3 port valve.

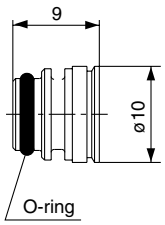
* Add "A" or "B" at the end of the valve part number when ordering with valves.

Example) SQ1141-5L-C6-A (N.O. specifications)
- 4 (A) port plug

Example) SQ1141-5L-C6-B (N.C. specifications)
- 2 (B) port plug

Example) SQ1141-5L-C6-B-M
(B port plug with manifold block)



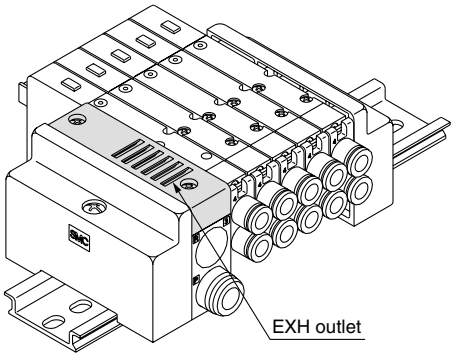


Direct EXH outlet, built-in silencer [-S]

The EXH outlet is placed on the top side of the manifold end plate. The built-in silencer provides highly effective noise reduction. (Noise reduction of 30 dB)

Note) Note that when excessive drainage occurs in the air supply, the drainage will be released along with the exhaust.

* Add "-S" at the end of the manifold part number when ordering with manifolds.
* For precautions on handling and how to replace elements, refer to page 2-3-5.



Manifold Option Parts for SQ1000

External pilot specifications [-R]

This can be used when the air pressure is 0.1 to 0.2 MPa lower than the minimum operating pressure of the solenoid valves or used for vacuum specifications.

Add "R" to the part numbers of manifolds and valves to indicate the external pilot specification.

An M5 port will be installed on the top side of the manifold's SUP/EXH block.

● How to order valves (Example)

SQ1140 R -5L-C6

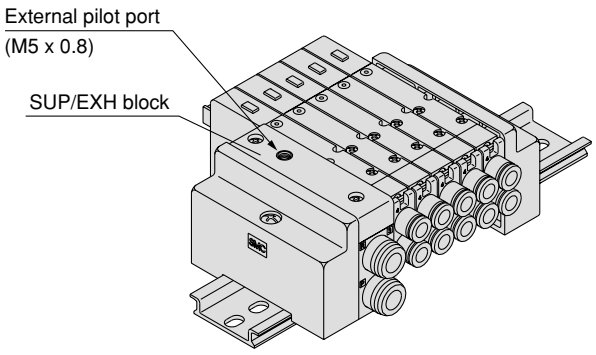
External pilot specifications

● How to order manifold (Example)

∗ Indicate "R" for an option.

SS5Q14-08FD1-DR

External pilot specifications



Note 1) Not applicable for dual 3 port valves.
Note 2) Indicate "RY" for low wattage types.
Note 3) Valves with the external pilot specifications have a pilot EXH with individual exhaust specifications and EXH can be pressurized. However, the pressure supplied from EXH should be 0.4 MPa or lower.

Dual flow fitting

SSQ1000-52A-C8

Port size

C8	ø8
N9	ø5/16"

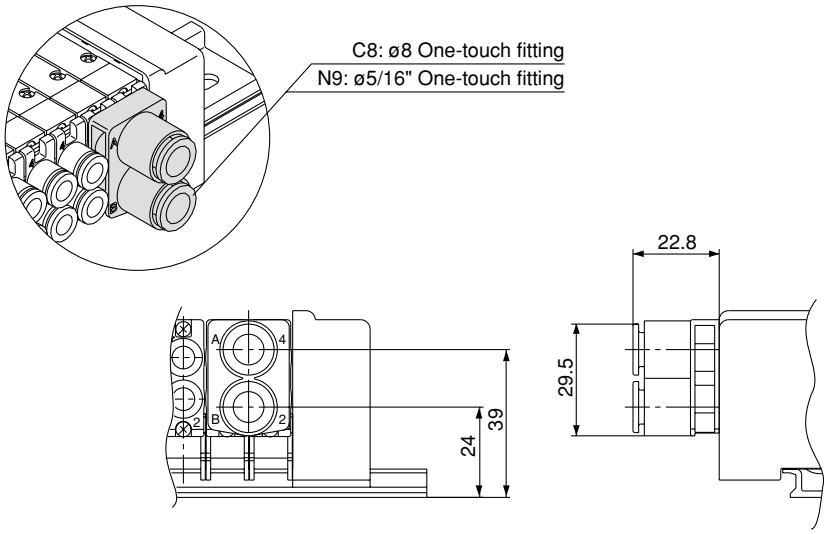
To drive a large bore cylinder, two valve stations are operated simultaneously to double the air flow. This fitting is used on the cylinder ports in this situation. Available sizes are ø8 and ø5/16" One-touch fitting.

∗ When ordering with valves, specify the valve part number without One-touch fitting and list the dual flow fitting part number.

Example) Valve part number (without One-touch fitting part number)

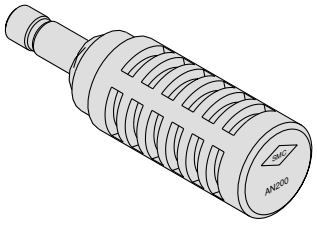
SQ1141-5L-C0 ····· 2 sets

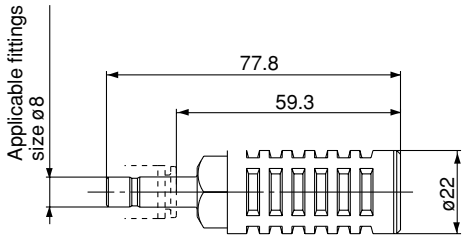
∗ SSQ1000-52A-C8/N9 ····· 1 set



Silencer (For EXH port)

This is inserted into the centralized type EXH port (One-touch fitting).





Specifications

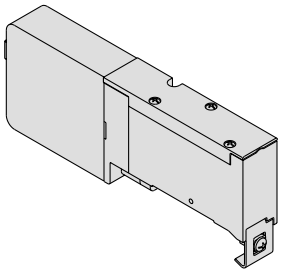
Series	Model	Effective area (mm²) (Cv factor)	Noise reduction (dB)
SQ1000	AN200-KM8	20 (1.1)	30

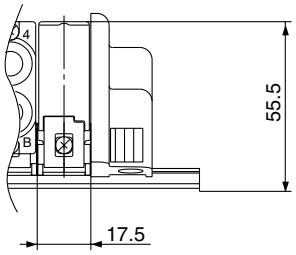
Manifold Option Parts for SQ2000

Blanking plate

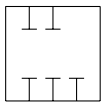
SSQ2000-10A-4

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.





JIS Symbol



SUP/EXH block

SSQ2000-PR-3-C10-□

Option

Nil	Standard
R	External pilot specifications
S	Built-in silencer

Note) When specifying both options, indicate "RS".

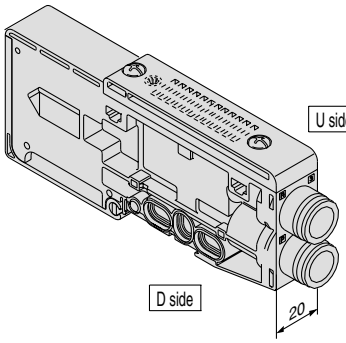
∗ Specify the spacer mounting position on the manifold

For standard type manifolds, the SUP/EXH block is mounted on the D side.

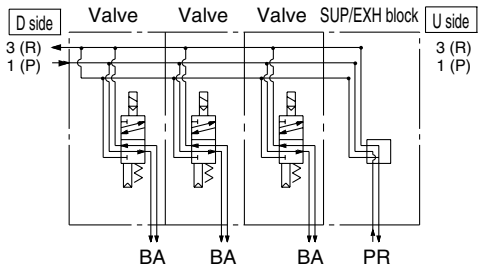
It is added to the manifold to increase SUP/EXH capacity.

∗ The number of SUP/EXH blocks that can be added is limited to two sets, one between manifold stations and another on the U side of manifold, due to the length of the lead wire.

∗ SUP/EXH blocks are not included in the number of manifold stations.



Description/Model	Stations	1	2	3	~~4~~	~~5~~
Valve	Single	●	●	●		
	⋮					
Option	SUP/EXH block SSQ2000-PR-3-C10-□				●	



Individual SUP spacer

SSQ2000-P-4-C8

Port location

C8	Side ported
L8	Top ported

This is used as a supply port for different pressures when using different pressures in the same manifold (for one station).

Both sides of the station which is used with supply pressure from the individual SUP spacer are shut off. (Refer to application example.)

∗ Specify the spacer mounting position and SUP passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.

(Two pieces of SUP block plate that shut off the supply pressure are included with the individual SUP spacer, therefore, it is not necessary to order them separately.)

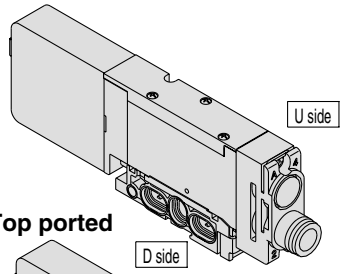
∗ Electrical wiring is also connected to the manifold station with the individual EXH spacer.

∗ By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual SUP spacer to the individual EXH spacer).

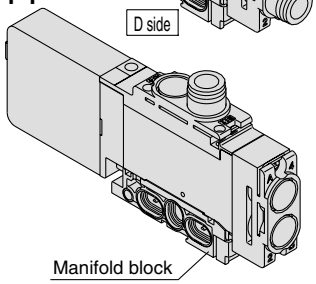
∗ The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.

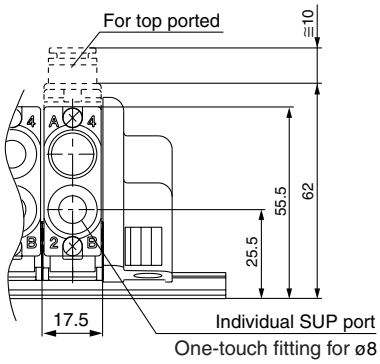
∗ Model no. with manifold block:
SSQ2000-P-4-$\frac{C8}{L8}$-M

Side ported

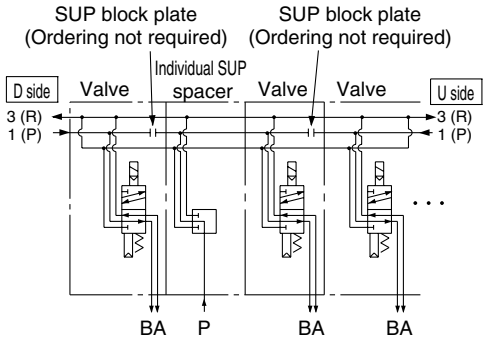


Top ported





Description/Model	Stations	1	2	3	4	5
Valve	Single	●		●	●	
	⋮					
Option	Individual SUP spacer SSQ2000-P-4-$^{C8}_{L8}$		●			
	SUP shut off position: Specify 2 positions.	●		●		



Manifold Option Parts for SQ2000

Individual EXH spacer

SSQ2000-R-4- C8

Port location

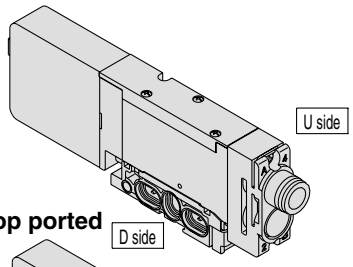
C8	Side ported
L8	Top ported

This is used to exhaust an individual valve when the exhaust from a valve interferes with other stations in the circuit (used for one station). Both sides of the station which is to be individually exhausted are shut off. (Refer to application example.)

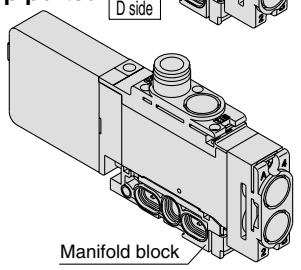
* Specify the spacer mounting position and EXH passage shut off positionson the manifold specification sheet. Two shut off positions are required per unit.

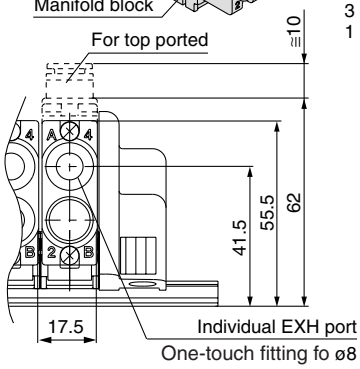
  (Four pieces of EXH block plate that shut off the exhaust are included the exhaust are included with the individual EXH spacer, therefore, it is not necessary to order them separately.)
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual EXH spacer to the individual SUP spacer)
* The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.
* Model no. with manifold block:
  SSQ2000-R-4- $\frac{C8}{L8}$ -M

Side ported

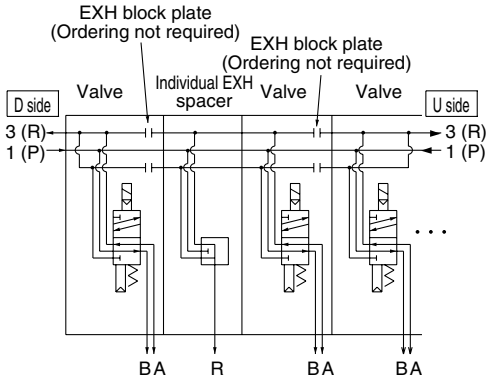


Top ported





Description/Model		Stations 1	2	3	4	5
Valve	Single	●		●	●	
	⋮					
Option	Individual EXH spacer SSQ2000-R-4- $\frac{C8}{L8}$		●			
	EXH shut off position: Specify 2 positions.	●		●		



Individual SUP/EXH spacer

SSQ2000-PR1-4- C8

Port location

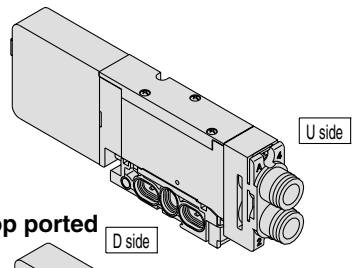
C8	Side ported
L8	Top ported

This has both functions of the individual SUP and EXH spacers above. (Refer to application example.)

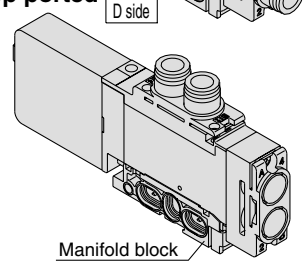
* Specify the spacer mounting position and SUP and EXH passage shut off positions on the manifold specification sheet. Two shut off positions each for SUP and EXH are required per unit.

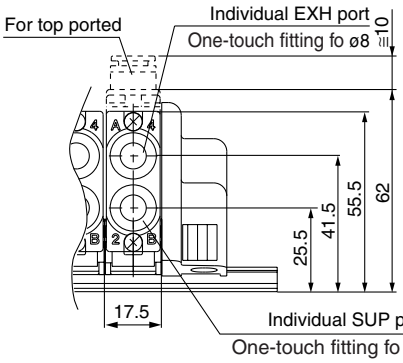
  [Block plates that shut off the SUP and EXH passages are included with the individual SUP/EXH spacer (2 pcs. of SUP block plate and 4 pcs. of EXH block plate).]
* Electrical wiring is also connected to the manifold station with the individual EXH spacer.
* By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later.
* The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.
* Model no. with manifold block:
  SSQ2000-PR1-4- $\frac{C8}{L8}$ -M

Side ported

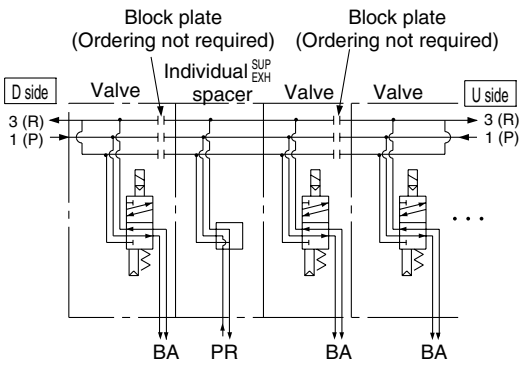


Top ported





Description/Model		Stations 1	2	3	4	5
Valve	Single	●		●	●	
	⋮					
Option	Individual SUP/EXH spacer SSQ2000-PR1-4- $\frac{C8}{L8}$		●			
	SUP shut off position: Specify 2 positions.	●		●		
	EXH shut off position: Specify 2 positions.	●		●		



SUP block plate

SSQ1000-B-R

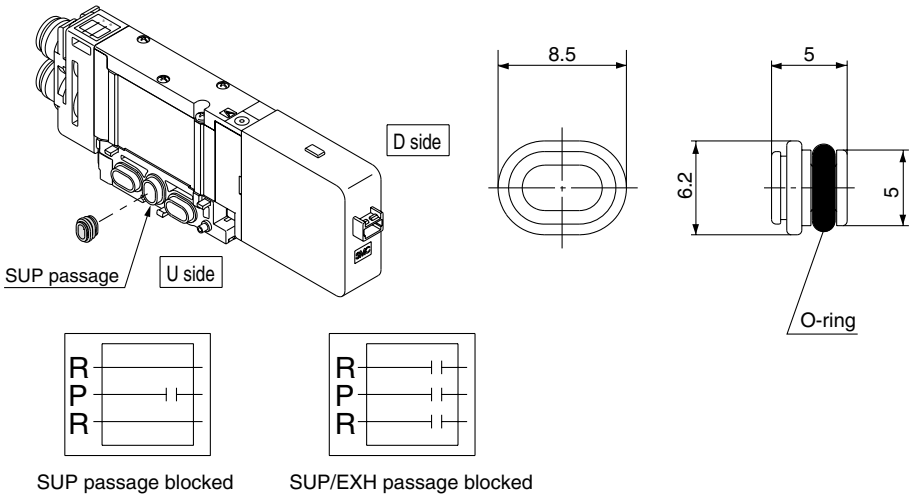
When supplying two different pressures, high and low, to one manifold, this is used between stations with different pressures. Also, it is used with an individual SUP spacer to shut off the air supply.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When a SUP passage is shut off with a SUP block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when SUP block plates are ordered with manifolds.



SUP passage blocked SUP/EXH passage blocked

EXH block plate

SSQ2000-B-R

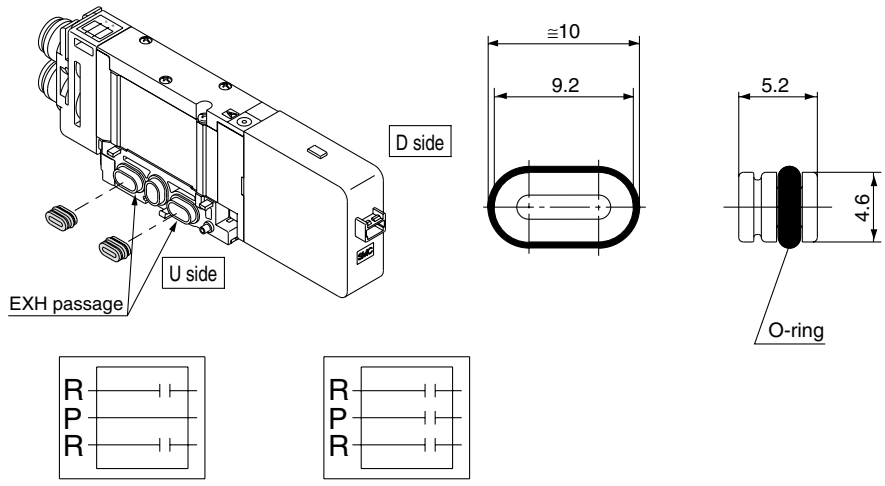
When the exhaust from a valve interferes with other stations in the circuit, this is used between stations to separate exhausts. Also, it is used with an individual EXH spacer to shut off the exhaust of individual valves.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When an EXH passage is shut off with an EXH block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when EXH block plates are ordered with manifolds.



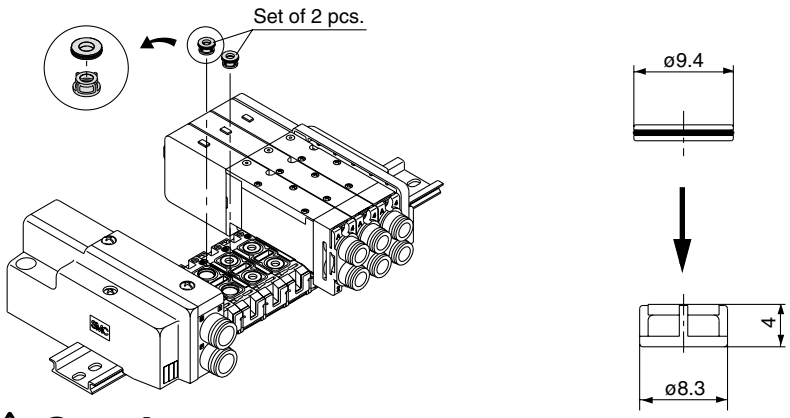
EXH passage blocked SUP/EXH passage blocked

Back pressure check valve [-B]

SSQ2000-BP

This prevents cylinder malfunction caused by the exhaust from other valves. It is inserted into the R (EXH) port of the valve that is affected. It is especially effective when using single acting cylinders or exhaust center type solenoid valves.

* When installing back pressure check valves only on the stations required, enter the part number and specify the station positions on a manifold specification sheet.
* When installing back pressure check valves on all of the stations, indicate "-B" at the end of the manifold part number.



⚠ Caution

1. Although the back pressure check valve is an assembly part with a check valve mechanism, a small amount of air leakage is allowed. Therefore, take care not to restrict the exhaust air from the exhaust port.
2. The effective area of valves is about 20% less when the back pressure check valve is installed.

Manifold Option Parts for SQ2000

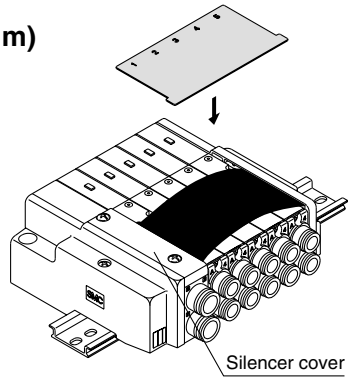
Name plate [-N]

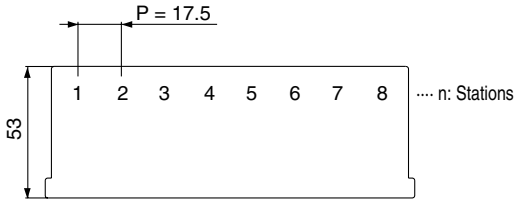
SSQ2000-N3- Stations (1 to maximum)

This is a clear resin plate for applying solenoid valve function description labels, etc.

To install, bend the plate slightly as shown and insert into the slots on the end plate side. Also, the plate is difficult to bend for manifolds with only a few stations, therefore, remove the silencer cover to install it.

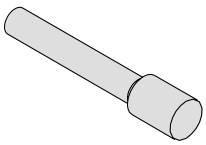
* When ordering with manifolds, add "-N" at the end of the manifold number.

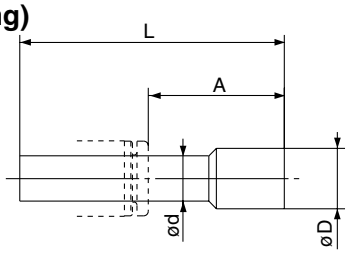




Blanking plug (For One-touch fitting)

KQ2P- 04 06 08 10





This is inserted into cylinder ports and SUP and EXH ports that are not used.

Purchasing order is available in units of 10 pieces.

Dimensions

Applicable fittings size (ød)	Model	A	L	D
4	**KQ2P-04**	16	32	6
6	**KQ2P-06**	18	35	8
8	**KQ2P-08**	20.5	39	10
10	**KQ2P-10**	22	43	12

Port plug

VVQZ2000-CP

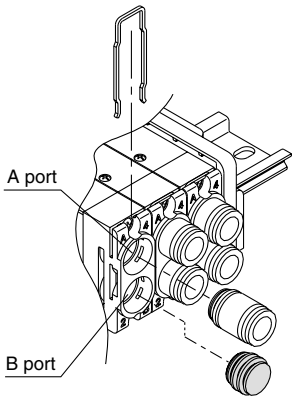
This is used to close the cylinder ports when changing a 5 port valve to a 3 port valve.

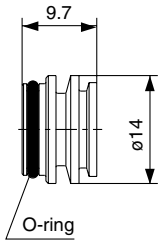
* Add "A" or "B" at the end of the valve part number when ordering with valves.

Example) SQ2141-5L-C8-A (N.O. specifications)
- 4(A) port plug

Example) SQ2141-5L-C8-B (N.C. specifications)
- 2(B) port plug

Example) SQ2141-5L-C8-B-M
(B port plug with manifold block)



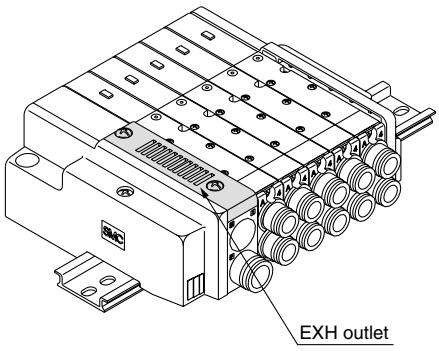


Direct EXH outlet, built-in silencer [-S]

The EXH outlet is placed on the top side of the manifold end plate. The built-in silencer provides highly effective noise reduction.
(Noise reduction of 30 dB)

Note) Note that when excessive drainage occurs in the air supply, the drainage will be released along with the exhaust.

* Add "S" at the end of the manifold part number when ordering with manifolds.
* For precautions on handling and how to replace elements, refer to page 2-3-5.



External pilot specifications [-R]

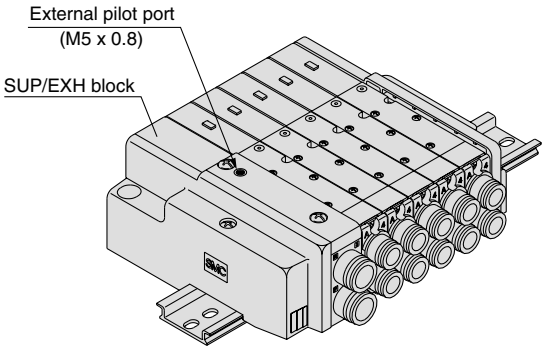
This can be used when the air pressure is 0.1 to 0.2 MPa lower than the minimum operating pressure of the solenoid valves or used for vacuum specifications.

Add "R" to the part numbers of manifolds and valves to indicate the external pilot specifications.

An M5 port will be installed on the top side of the manifold's SUP/EXH block.

● How to order valves (Example)
SQ2140 R -5L-C6
• External pilot specifications

● How to order manifold (Example)
∗ Indicate "R" for an option.
SS5Q24-08FD1-DR
• External pilot specifications



Note 1) Not applicable for dual 3 port valves.
Note 2) Indicate "RY" for low wattage types.
Note 3) Valves with the external pilot specifications have a pilot EXH with individual exhaust specifications and EXH can be pressurized. However, the pressure supplied from EXH should be 0.4 MPa or lower.

Dual flow fitting

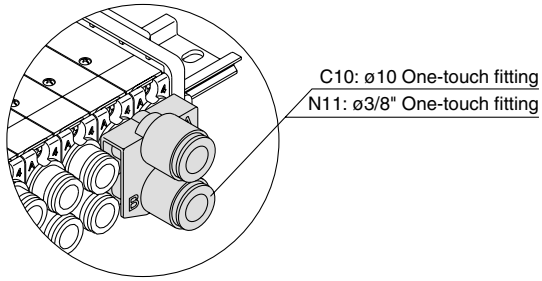
SSQ2000-52A-C10
•**Port size**

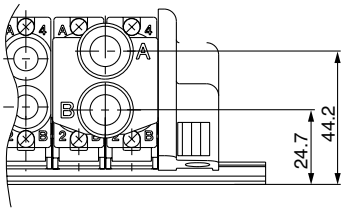
C10	ø10
N11	ø3/8"

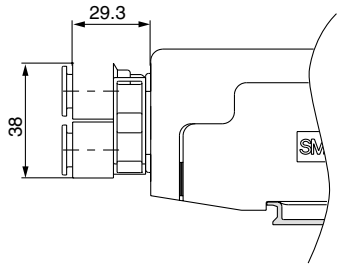
To drive a large bore cylinder, two valve stations are are operated simultaneously to double the air flow.This fitting is used on the cylinder ports in this situation. Available sizes are ø10 and ø3/8" One-touch fittings.

∗ When ordering with valves, specify the valve part number without One-touch fitting and list without One-touch fitting and list the dual flow fitting part number.

Example) Valve part number (without One-touch fitting)
SQ2141-5L-C0 ····· 2 sets
∗SSQ2000-52A-C10/N11 ····· 1 set

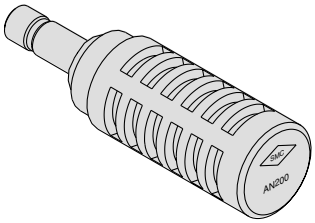


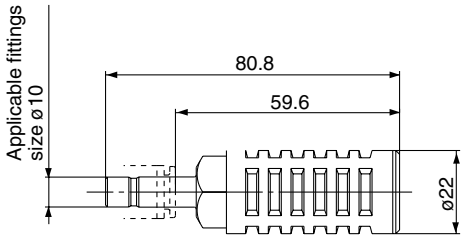




Silencer (For EXH port)

This is inserted into the centralized type EXH port (One-touch fitting).





Specifications

Series	Model	Effective area (mm²) (Cv factor)	Noise reduction (dB)
SQ2000	AN200-KM10	26 (1.4)	30

Manifold Option Parts for SQ1000/SQ2000

Special Wiring Specifications

In the internal wiring of F kit, P kit, and J kit, double wiring (connected to SOL. A and SOL. B) is adopted for each station regardless of the valve and option types. Mixed single and double wiring is available as an option.

1. How to order

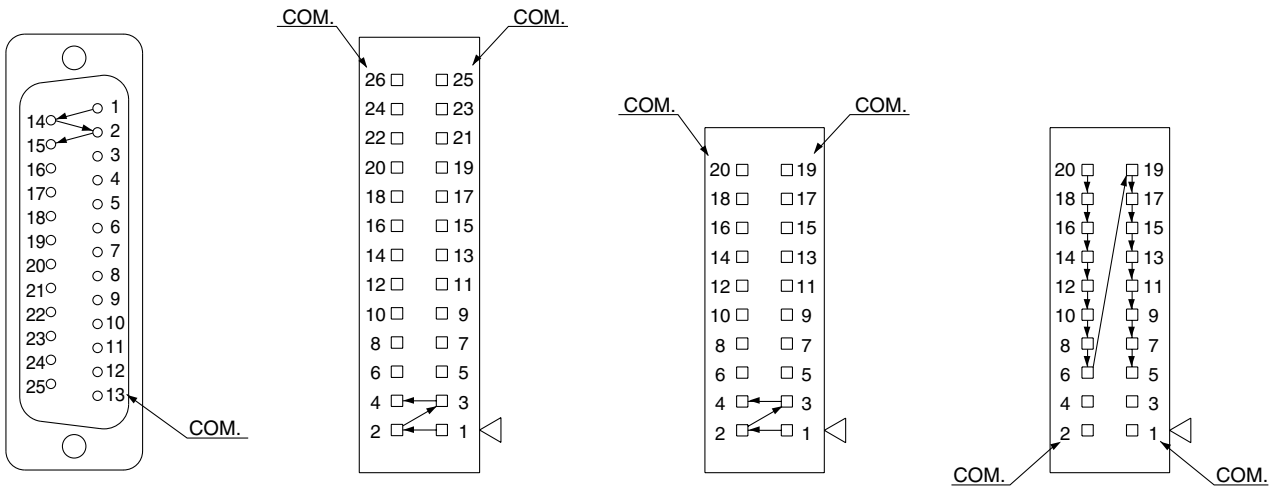
Indicate option symbol " **-K** " in the manifold part number and be sure to specify station positions for single or double wiring on the manifold specification sheet.

Example) **SS5Q14-09FD0-DKS**

•Others, option symbols: to be indicated alphabetically.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.



F kit
D-sub connector
(for 25P)

P kit
Flat ribbon cable connector
(for 26P)

P kit
Flat ribbon cable connector
(for 20P)

J kit
Flat ribbon cable connector (20P)
PC Wiring System compatible

3. Maximum stations

The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. Determine the number of stations so that the total number of solenoids is no more than the maximum points in the table below.

Kit	F kit (D-sub connector)	P kit (Flat ribbon cable connector)		J kit Flat ribbon cable PC Wiring System compatible
Type	FD□ 25P	PD□ 26P	PDC 20P	JD0 20P
Max. points	24 points	24 points	18 points	16 points

Note) Maximum stations ···· SQ1000: 24 stations
SQ2000: 16 stations

Special DIN Rail Length (DIN rail mounting (-D) only)

The standard DIN rail provided is approximately 30 mm longer than the overall length of the manifold with a specified number of stations.
The following options are also available.

● DIN rail length longer than the standard type (for stations to be added later, etc.)

In the manifold part number, specify "-D" for the manifold mounting symbol and add the number of required stations after the symbol.

Example) **SS5Q14- 08FD0 - D09BNK**

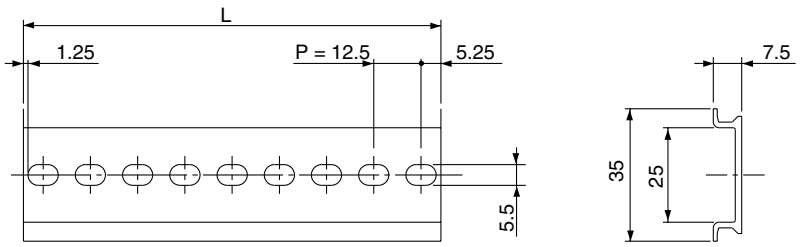
- 8 station manifold
- Option symbols (alphabetically)
- DIN rail for 9 stations

● Ordering DIN rail only

DIN rail part number

AXT100- DR - n

Note) For "n", enter a number from the "No." line in the table below.
For L dimension, refer to the dimensions of each kit.



L Dimension

L = 12.5 x n + 10.5

No.	1	2	3	4	5	6	7	8	9	10
L dimension	23	35.5	48	60.5	73	85.5	98	110.5	123	135.5

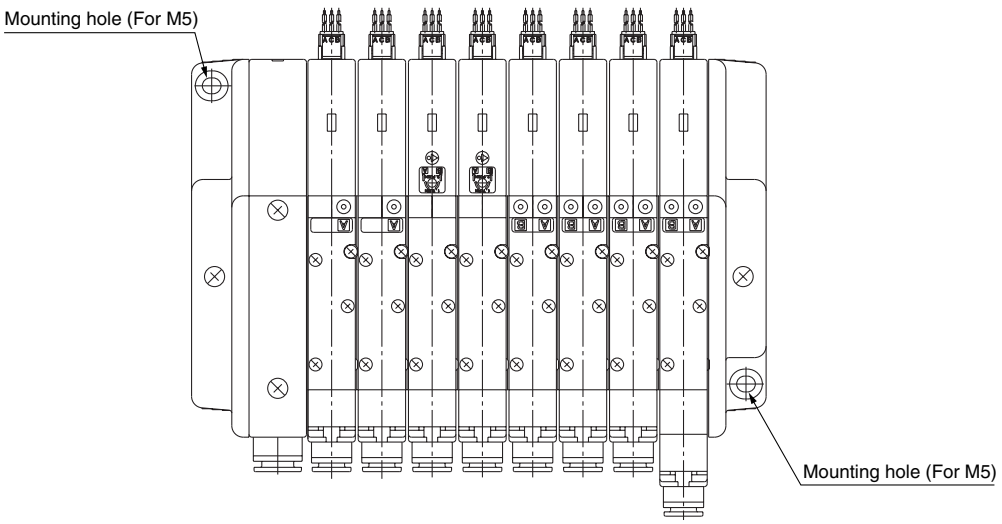
No.	11	12	13	14	15	16	17	18	19	20
L dimension	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5

No.	21	22	23	24	25	26	27	28	29	30
L dimension	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5

No.	31	32	33	34	35	36	37	38	39	40
L dimension	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

Direct Mounting Style (-E) (SQ2000 C kit only)

Manifold is mounted by using mounting holes of both sides of the manifold.
DIN rail is not sticking out of the edge of end plate.



Manifold Option for SQ1000/SQ2000

Negative Common Specifications

The following valve part numbers are for negative COM specifications. Manifold part numbers are the same as standard.

● How to order negative COM valves (Example)

SQ1140 N -5L-C6

• Negative common specifications

Inch-size One-touch Fittings

For One-touch fittings in inch sizes, use the following part numbers. Also, the color of the release button is orange.

● How to order valves (Example)

SQ1140-5L-□ N7

Port location • **• Cylinder port**

Nil	Side ported
L	Top ported

Symbol		N1	N3	N7	N9
Applicable tubing O.D. (Inch)		ø1/8"	ø5/32"	ø1/4"	ø5/16"
4(A), 2(B) port	SQ1000	●	●	●	—
	SQ2000	—	●	●	●

● How to order manifold (Example)

Add “00T” at the end of the part number.

SS5Q14- 08 FD0-DN - 00T

• 1 (P), 3 (R) port in inch size
- SQ1000: ø5/16" (N9)
- SQ2000: ø3/8" (N11)

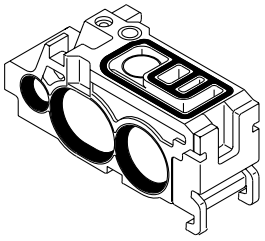
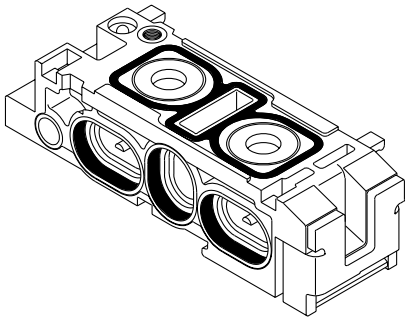
How to Add Manifold Stations for SQ1000/SQ2000

1. How to Add Manifold Stations

What to order

- Valves with manifold block (refer to pages 2-3-71 and 2-3-85) or the manifold blocks shown below. For F kit, P kit, and J kit, also order the lead wire assemblies in the next section.

Manifold Block Part No.

SQ1000	SQ2000
	
SSQ1000—1A—4 □ **Option** **Nil** None **B** Back pressure check valve **R** External pilot specifications Note) Enter "-BR" for both options.	**SSQ2000—1A—4** □ **Option** **Nil** None **B** Back pressure check valve **R** External pilot specifications Note) Enter "-BR" for both options.

How to Add Manifold Stations for SQ1000/SQ2000

For F kit, P kit, J kit

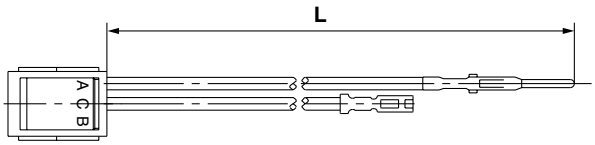
What to order: Lead wire assembly

SQ1000

D-sub connector kit (F kit)

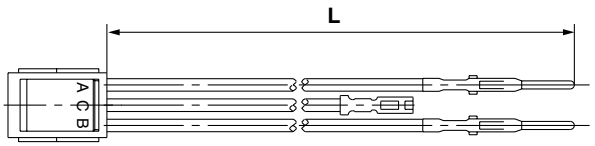
● **For single wiring**

SSQ1000— 40A—F—205



● **For double wiring**

SSQ1000— 41A—F—280

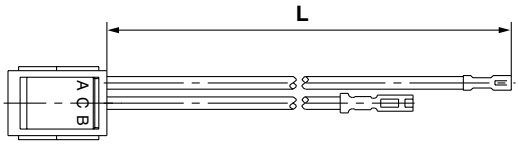


Stations	Symbol (L dimension)	Stations	Symbol (L dimension)
Station 2	**165**	Station 14	**320**
Station 3	**175**	Station 15	**335**
Station 4	**190**	Station 16	**250**
Station 5	**205**	Station 17	**365**
Station 6	**215**	Station 18	**375**
Station 7	**230**	Station 19	**385**
Station 8	**245**	Station 20	**400**
Station 9	**260**	Station 21	**405**
Station 10	**280**	Station 22	**420**
Station 11	**290**	Station 23	**435**
Station 12	**300**	Station 24	**450**
Station 13	**310**		

Flat ribbon cable kit (P kit), PC Wiring System compatible (J kit)

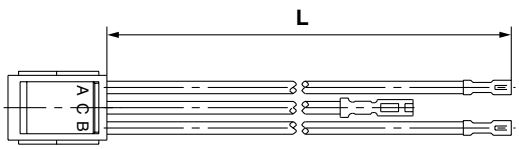
● **For single wiring**

SSQ1000— 40A—P—200



● **For double wiring**

SSQ1000— 41A—P—275



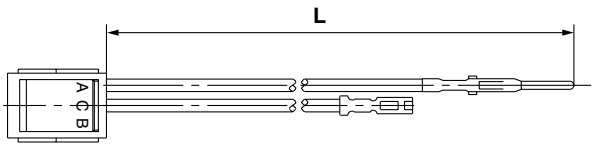
Stations	Symbol (L dimension)	Stations	Symbol (L dimension)
Station 2	**160**	Station 14	**315**
Station 3	**170**	Station 15	**330**
Station 4	**185**	Station 16	**345**
Station 5	**200**	Station 17	**360**
Station 6	**210**	Station 18	**370**
Station 7	**225**	Station 19	**380**
Station 8	**240**	Station 20	**395**
Station 9	**255**	Station 21	**400**
Station 10	**275**	Station 22	**415**
Station 11	**285**	Station 23	**430**
Station 12	**295**	Station 24	**445**
Station 13	**305**		

SQ2000

D-sub connector kit (F kit)

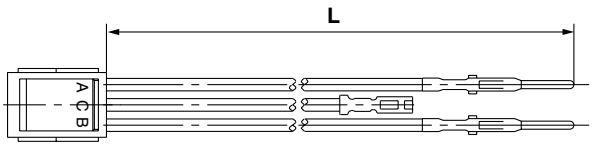
● **For single wiring**

SSQ1000— 40A —F— 250



● **For double wiring**

SSQ1000— 41A —F— 350

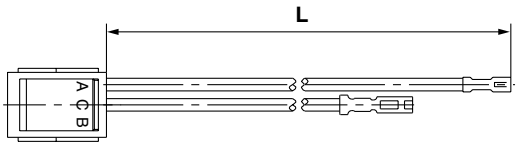


Stations	Symbol (L dimension)	Stations	Symbol (L dimension)
Station 2	**190**	Station 14	**430**
Station 3	**210**	Station 15	**450**
Station 4	**230**	Station 16	**470**
Station 5	**250**	Station 17	**490**
Station 6	**270**	Station 18	**510**
Station 7	**290**	Station 19	**530**
Station 8	**310**	Station 20	**550**
Station 9	**330**	Station 21	**570**
Station 10	**250**	Station 22	**590**
Station 11	**370**	Station 23	**610**
Station 12	**390**	Station 24	**630**
Station 13	**410**		

Flat ribbon cable kit (P kit), PC Wiring System compatible (J kit)

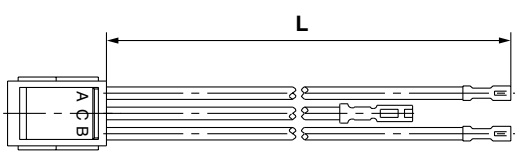
● **For single wiring**

SSQ1000— 40A —P— 250



● **For double wiring**

SSQ1000— 41A —P— 350

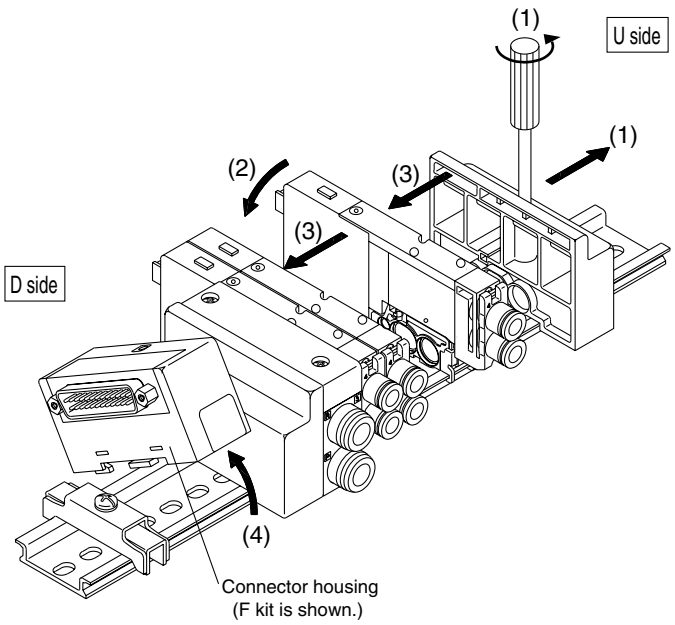


Stations	Symbol (L dimension)	Stations	Symbol (L dimension)
Station 2	**190**	Station 14	**430**
Station 3	**210**	Station 15	**450**
Station 4	**230**	Station 16	**470**
Station 5	**250**	Station 17	**490**
Station 6	**270**	Station 18	**510**
Station 7	**290**	Station 19	**530**
Station 8	**310**	Station 20	**550**
Station 9	**330**	Station 21	**570**
Station 10	**250**	Station 22	**590**
Station 11	**370**	Station 23	**610**
Station 12	**390**	Station 24	**630**
Station 13	**410**		

How to Add Manifold Stations for SQ1000/SQ2000

Steps for adding stations

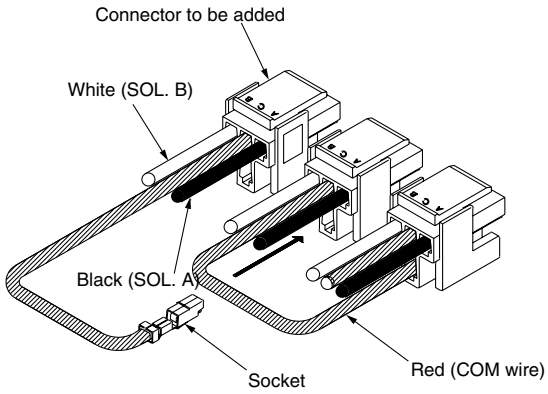
(1) Loosen the clamp screw on the U side end plate and open the manifold.
↓
(2) Mount the manifold block or valve with manifold block to be added.
↓
(3) Press on the end plate to eliminate any space between the manifold blocks and tighten the clamp screw.
↓ (Proper tightening torque: 0.8 to 1.0 N·m)
(4) In the case of F kit, P kit or J kit, remove the connector housing from the DIN rail and connect the wiring.



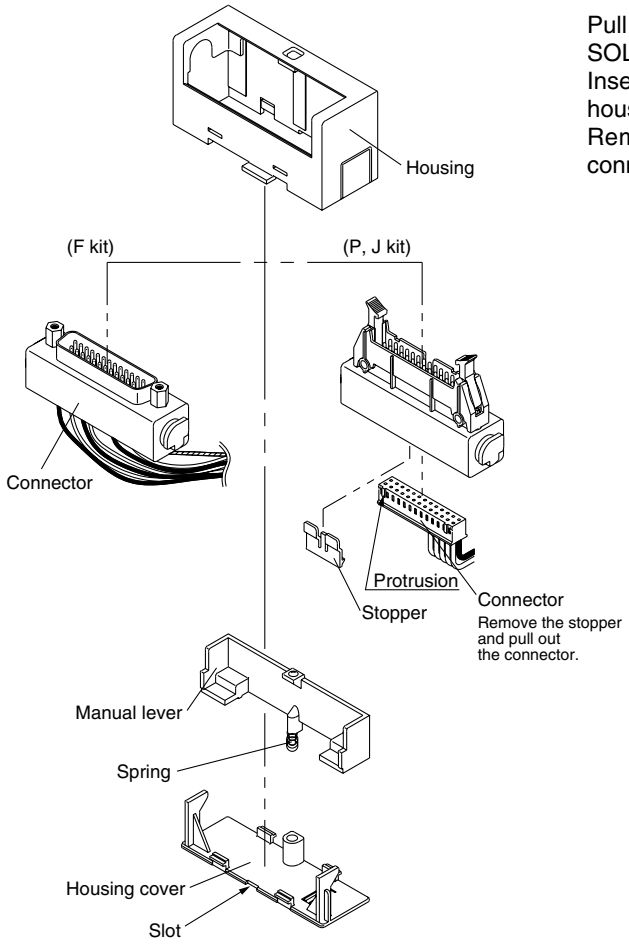
2. Connection Method

(1) Connecting common wire

Insert the red lead wire (common wire) of the connector to be added into the adjacent connector as shown in the drawing below. After inserting,



(2) Pulling out connector



F, P, J kit

Pull out the connector to connect the lead wires for SOL. A and SOL. B.
Insert a flat head screwdriver into the slot of the housing cover and remove it.
Remove the manual lever and pull out the connector.

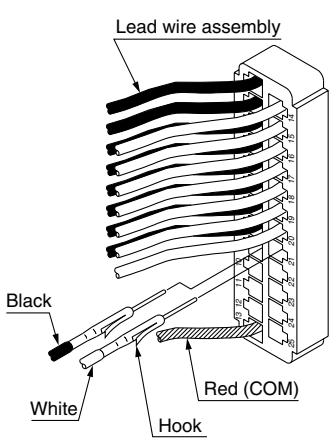
How to Add Manifold Stations for SQ1000/SQ2000

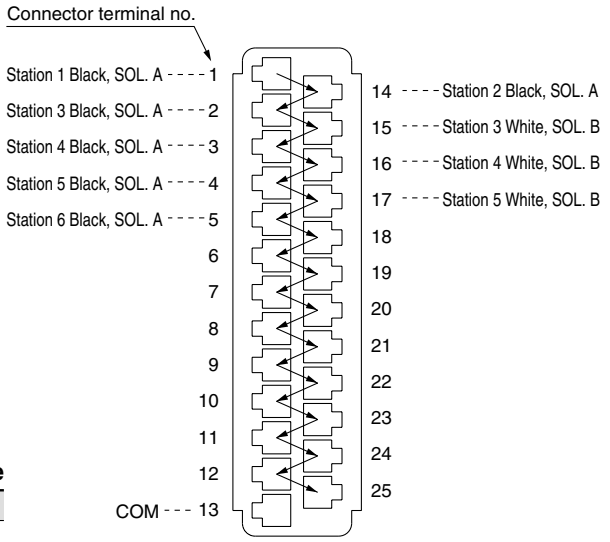
(3) Connector connection/Connect the black and white lead wire pins to the positions shown below in accordance with each kit.

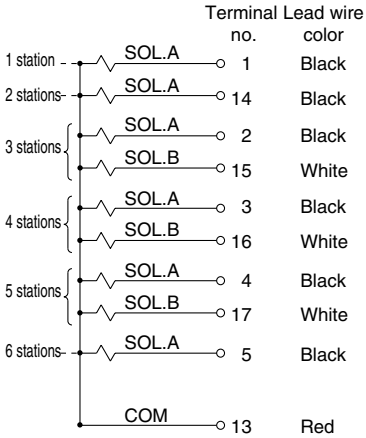
⚠ Caution
1. After inserting the pin, confirm that the pin hook is locked by lightly pulling the lead wire.
2. Do not pull the lead wire forcefully when connecting. Also, take care that lead wires do not get caught between manifolds or when remounting the housing.

Wiring (F kit: D-sub connector kit)

Procedure) Based on the manifold specifications, station 1 of SOL..A (black wire) will be terminal number 1 of the D-sub connector, and for station 2 and thereafter, connect black wires, then white wires in the order as shown below by the arrows.







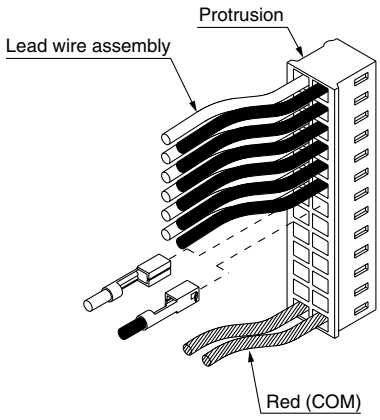
Manifold Specifications' Example

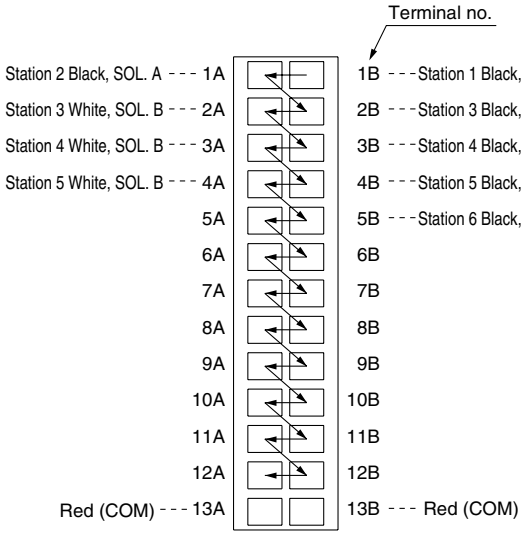
Stations	1	2	3	4	5	6
Single wiring	○	○				○
Double wiring			○	○	○	

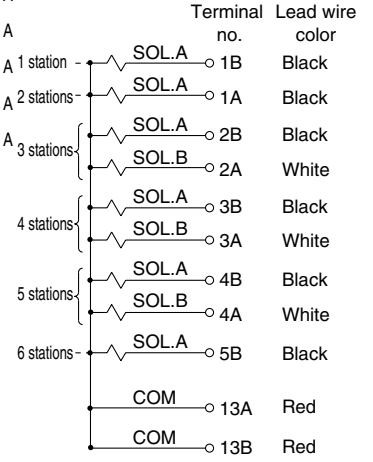
∗ The drawing above shows connections based on the manifold specification example in the table to the left.

Wiring (P kit: Flat ribbon cable kit)

Procedure) Based on the manifold specifications, station 1 of SOL.A (black wire) will be terminal number 1B of the flat ribbon cable connector, and for station 2 and thereafter, connect black wires, then white wires in the order as shown below by the arrows.







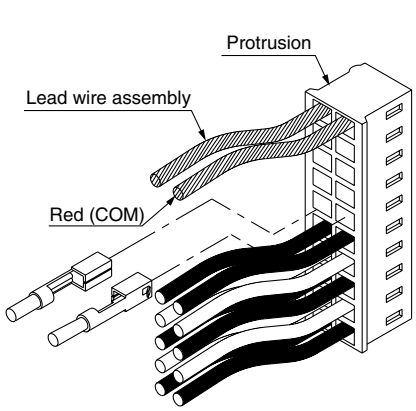
Manifold Specifications' Example

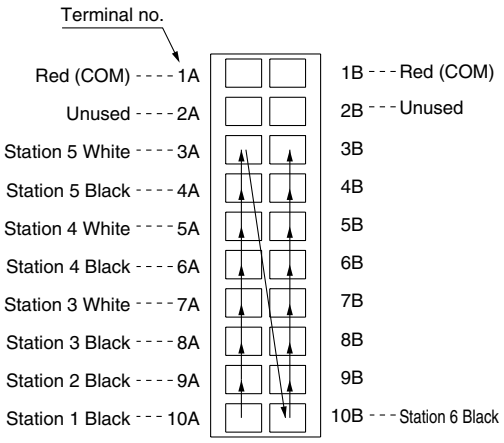
Stations	1	2	3	4	5	6
Single wiring	○	○				○
Double wiring			○	○	○	

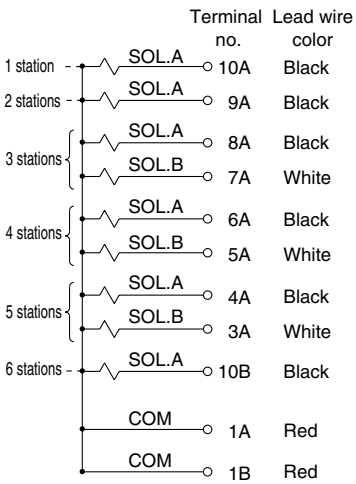
∗ The drawing above shows connections for type 26P flat ribbon cable connector based on the manifold specification example in the table to the left.
For type 20P, the connection will be the same as above except that COM changes to 10A and 10B.

Wiring (J kit: Flat ribbon cable, PC Wiring System compatible)

Procedure) Based on the manifold specifications, station 1 of SOL.A (black wire) will be terminal number 10A of the flat ribbon cable connector, and for station 2 and thereafter, connect black wires, then white wires in the order as shown below by the arrows.







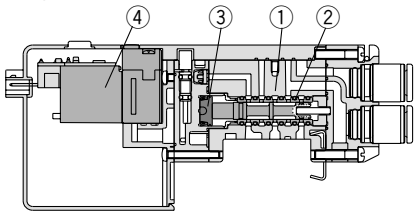
Manifold Specifications' Example

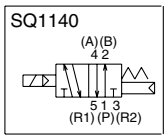
Stations	1	2	3	4	5	6
Single wiring	○	○				○
Double wiring			○	○	○	

Construction: Series SQ1000 Plug Lead Type Main Parts and Pilot Valve Assembly

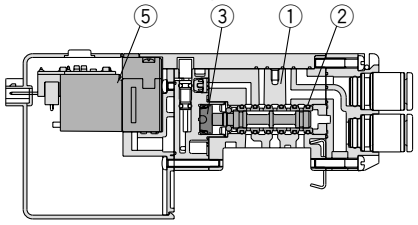
Metal seal type

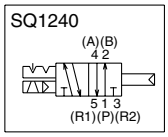
Single: SQ1140



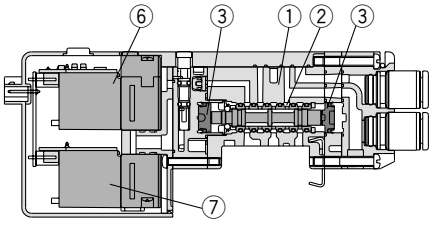


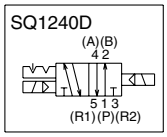
Double (Latching): SQ1240



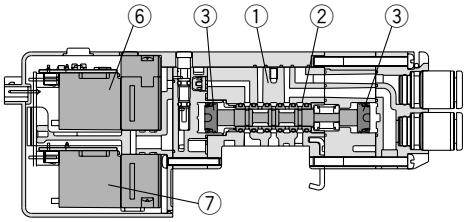


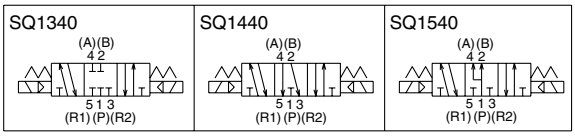
Double (Double solenoid): SQ1240D





3 position: SQ1$^{3}_{4}_{5}$40





Component Parts

No.	Description	Material
①	Body	Zinc die-casted
②	Spool/Sleeve	Stainless steel (Metal seal)
	Spool	Aluminum (Rubber seal)
③	Piston	Resin

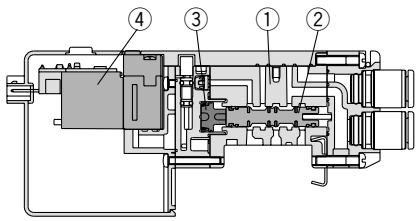
Pilot Valve Assembly Note)

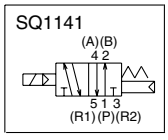
No.	Model	SQ1□4□
④	For single	VQ110$^{(K)}_{(Y)}$-$^{5}_{6}$ (N)J1(B)
⑤	For double (Latching)	VQ110L-$^{5}_{6}$ J2 Negative COM: VQ110N-$^{5}_{6}$ J2
⑥	For double (Double solenoid) on A side	VQ110$^{(K)}_{(Y)}$-$^{5}_{6}$ (N)J3(B)
	For 3P, Dual 3 port on A side	
⑦	For double (Double solenoid) on B side	VQ111$^{(K)}_{(Y)}$-$^{5}_{6}$ (N)J4
	For 3P, Dual 3 port on B side	

Note) Nil: Standard
B : Locking type manual override
K : High pressure specifications (metal seal only)
N : Negative common specifications
Y : Low wattage specifications

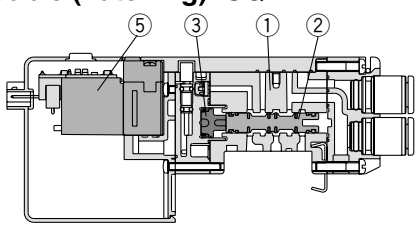
Rubber seal type

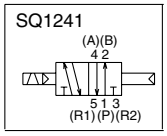
Single: SQ1141



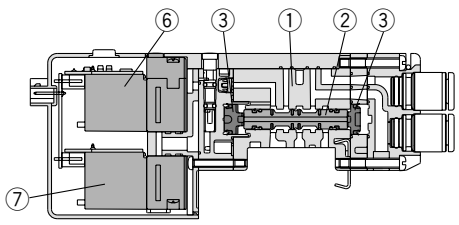


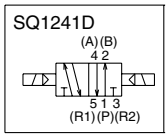
Double (Latching): SQ1241



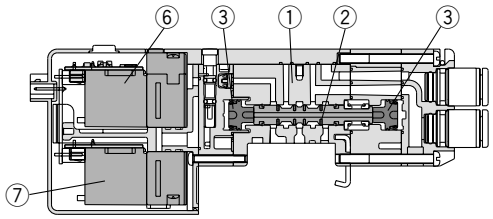


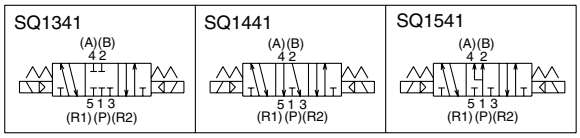
Double (Double solenoid): SQ1241D



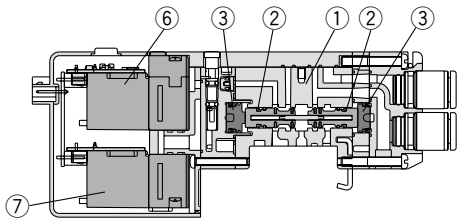


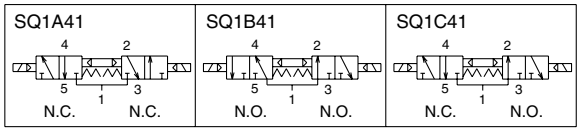
3 position: SQ1$^{3}_{4}_{5}$41





Dual 3 port valve: SQ1$^{A}_{B}_{C}$41

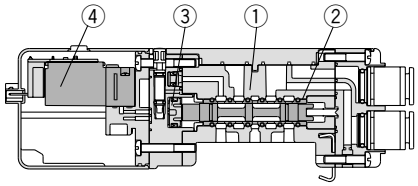


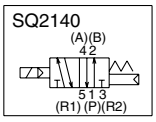


Construction: Series SQ2000 Plug Lead Type Main Parts and Pilot Valve Assembly

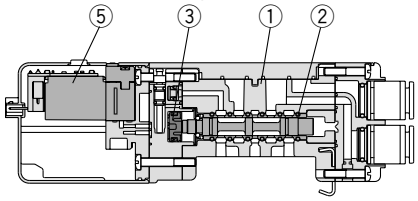
Metal seal type

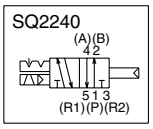
Single: SQ2140



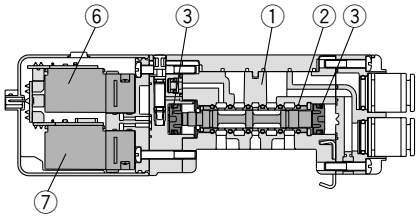


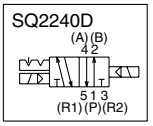
Double (Latching): SQ2240



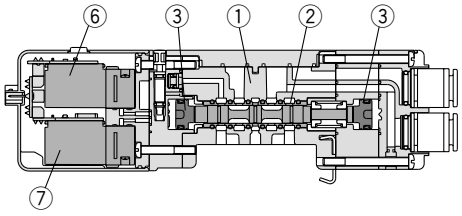


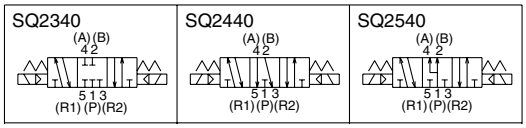
Double (Double solenoid): SQ2240D





3 position: SQ2 $\begin{smallmatrix}3\\4\\5\end{smallmatrix}$ 40





Component Parts

No.	Description	Material
①	Body	Aluminum die-casted
②	Spool/Sleeve	Stainless steel (Metal seal)
	Spool	Aluminum (Rubber seal)
③	Piston	Resin

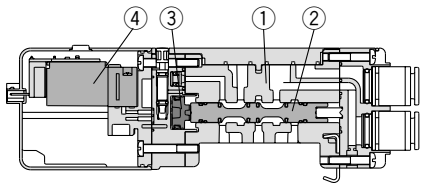
Pilot Valve Assembly [Note)]

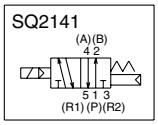
No.	Model	SQ2□4□
④	For single	VQ111S(Y)- $\begin{smallmatrix}5\\6\end{smallmatrix}$ (N)J21
⑤	For double (latching)	VQ110SL- $\begin{smallmatrix}5\\6\end{smallmatrix}$ J22 Negative COM: VQ110SN- $\begin{smallmatrix}5\\6\end{smallmatrix}$J22
⑥	For double (Double solenoid) on A side	VQ111S(Y)- $\begin{smallmatrix}5\\6\end{smallmatrix}$ (N)J23
	For 3P, Dual 3 port on A side	
⑦	For double (Double solenoid) on B side	VQ111S(Y)- $\begin{smallmatrix}5\\6\end{smallmatrix}$ (N)J24
	For 3P, Dual 3 port on B side	

Note) Nil : Standard
N : Negative COM specifications
Y : Low wattage specifications

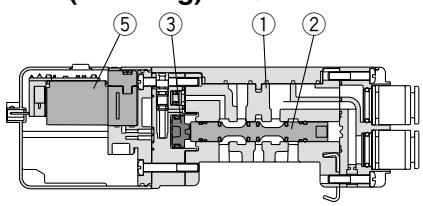
Rubber seal type

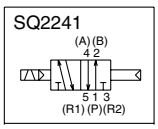
Single: SQ2141



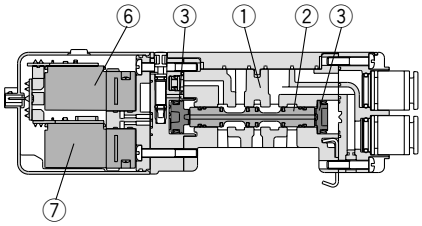


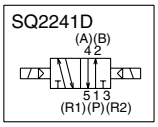
Double (Latching): SQ2241



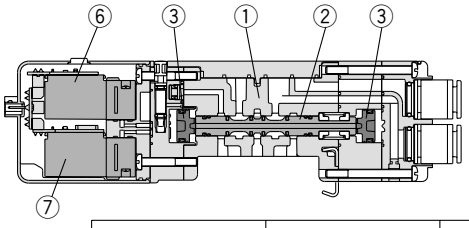


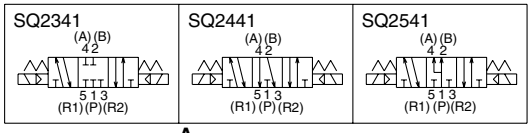
Double (Double solenoid): SQ2241D



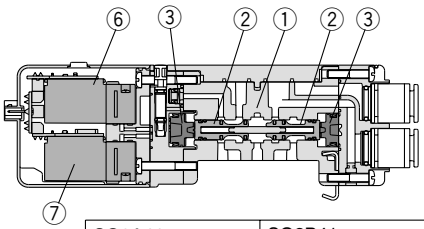


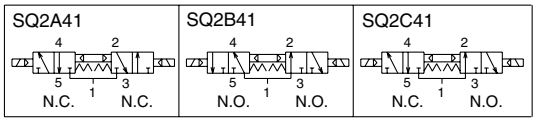
3 position: SQ2 $\begin{smallmatrix}3\\4\\5\end{smallmatrix}$ 41





Dual 3 port valve: SQ2 $\begin{smallmatrix}A\\B\\C\end{smallmatrix}$ 41

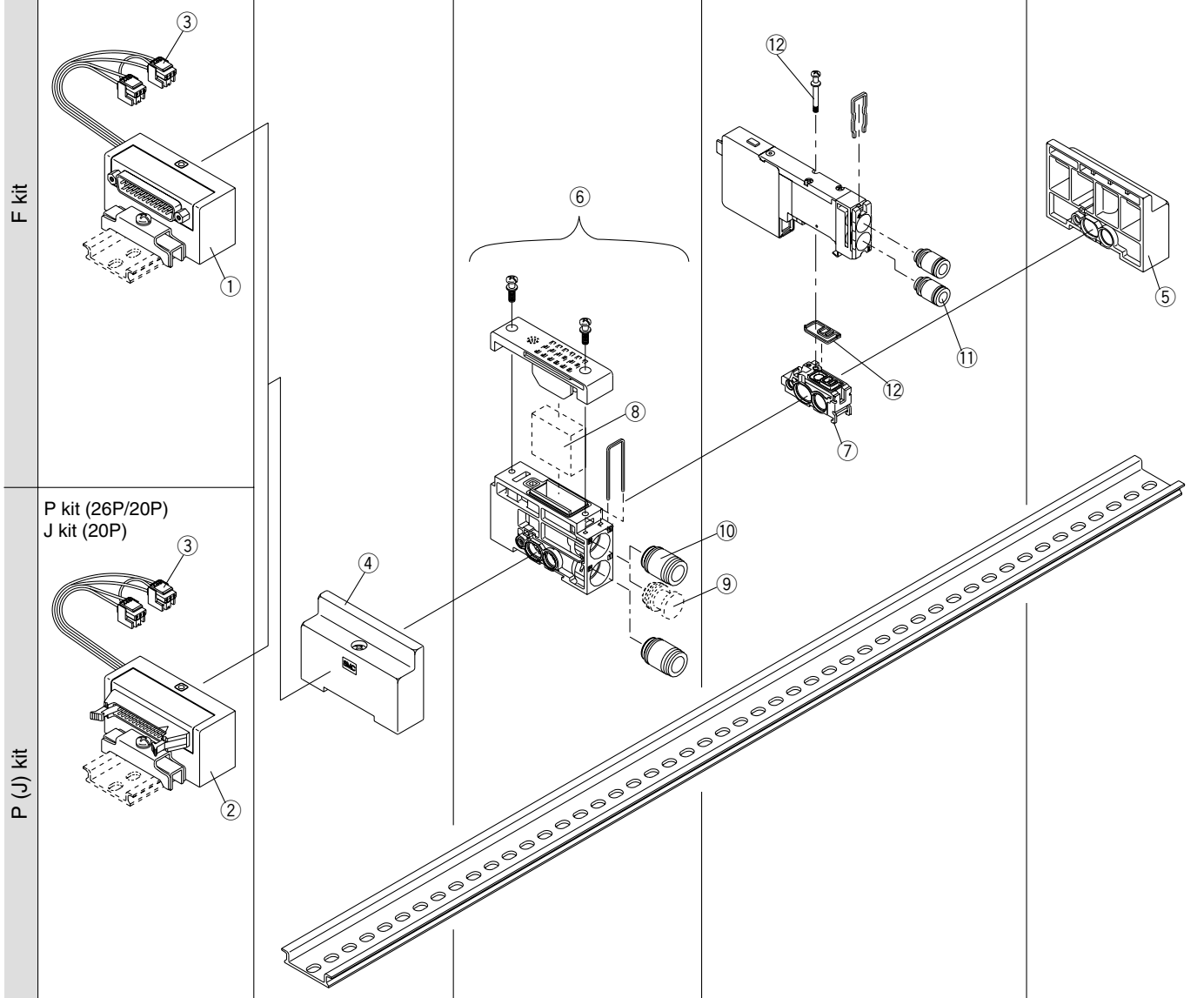




Exploded View of Manifold: SQ1000 (Plug lead type manifold) SS5Q14

(F, P, J, C kit)

	Wiring unit assembly	D side end plate assembly	SUP/EXH block assembly	Valve and manifold block assembly	U side end plate assembly
F kit					
P (J) kit	P kit (26P/20P) J kit (20P)				



Manifold Spare Parts

Refer to pages 2-3-112 to 2-3-117 of "How to Add Manifold Stations" regarding the mounting of each spare parts.

<① D-sub connector housing assembly>

AXT100 – 40 – FL25 – S 03

Wiring

S	Single wiring
D	Double wiring

Stations

01	For 1 station
⋮	⋮
24	For 24 stations

<② Flat ribbon cable connector housing assembly>

AXT100 – 40 – PL26 / PL20 / JL20 – S 03

Wiring

S	Single wiring
D	Double wiring

Stations Note)

01	For 1 station
⋮	⋮
24	For 24 stations

Note)
PL26: 01 to 24 (P kit, 26P)
PL20: 01 to 18 (P kit, 20P)
JL20: 01 to 16 (J kit, 20P)

<③ Lead wire assembly>

(For F kit)

For station 1 **SSQ1000 – 4 1 B – F – 155**

Wiring

0	For single (2-wire)
1	For double (3-wire)

For 2 to station 24 **SSQ1000 – 4 1 A – F – 205**

Wiring

0	For single (2-wire)
1	For double (3-wire)

Lead wire length

Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)
Station 2	**165**	Station 8	**245**	Station 14	**320**	Station 20	**400**
Station 3	**175**	Station 9	**260**	Station 15	**335**	Station 21	**405**
Station 4	**190**	Station 10	**280**	Station 16	**250**	Station 22	**420**
Station 5	**205**	Station 11	**290**	Station 17	**365**	Station 23	**435**
Station 6	**215**	Station 12	**300**	Station 18	**375**	Station 24	**450**
Station 7	**230**	Station 13	**310**	Station 19	**385**		

(For P, J kit)

For station 1 **SSQ1000 – 4 1 B – P – 150**

Wiring

0	For single (2-wire)
1	For double (3-wire)

For 2 to station 24 **SSQ1000 – 4 1 A – P – 200**

Wiring

0	For single (2-wire)
1	For double (3-wire)

Lead wire length

Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)
Station 2	**160**	Station 8	**240**	Station 14	**315**	Station 20	**395**
Station 3	**170**	Station 9	**255**	Station 15	**330**	Station 21	**400**
Station 4	**185**	Station 10	**275**	Station 16	**345**	Station 22	**415**
Station 5	**200**	Station 11	**285**	Station 17	**360**	Station 23	**430**
Station 6	**210**	Station 12	**295**	Station 18	**370**	Station 24	**445**
Station 7	**225**	Station 13	**305**	Station 19	**380**		

(For C kit)

AXT661 – 1 3 AL –

Wiring

3	For double (3-wire)
4	For single (2-wire)

Lead wire length

Symbol	L dimension (mm)
Nil	300
6	600
10	1000
15	1500
20	2000
25	2500
30	3000
50	5000

<④ D side end plate assembly>

SSQ1000 – 3A – 4

<⑤ U side end plate assembly>

SSQ1000 – 2A – 4

<⑥ SUP/EXH block assembly>

SSQ1000 – PR – 4 – C8 –

Port size

C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16"

Option

Nil	Common exhaust type
R	External pilot
S	Built-in silencer, direct exhaust

Note) Enter "-RS" for both options.

<⑦ Manifold block assembly>

SSQ1000 – 1A – 4 – Including gaskets ⑫

Option

Nil	None
B	Back pressure check valve
R	External pilot specifications

Note) Enter "-BR" for both options.

<⑧ Element>

SSQ1000 – SE

Note) Part number for a 10 piece set of elements. Refer to page 2-3-5 for replacement procedures.

<⑨ Port plug>

VVQZ2000 – CP

<⑩ Fitting assembly>

(For P, R port)

VVQ1000 – 51A – C8

Port size

C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16"

Note) Purchasing order is available in units of 10 pieces

<⑪ Fitting assembly>

(For cylinder port)

VVQ1000 – 50A – C6

Port size

C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
M5	M5 thread
N1	One-touch fitting for ø1/8"
N3	One-touch fitting for ø5/32"
N7	One-touch fitting for ø1/4"

Note) Purchasing order is available in units of 10 pieces

<⑫ Gasket and screw assembly>

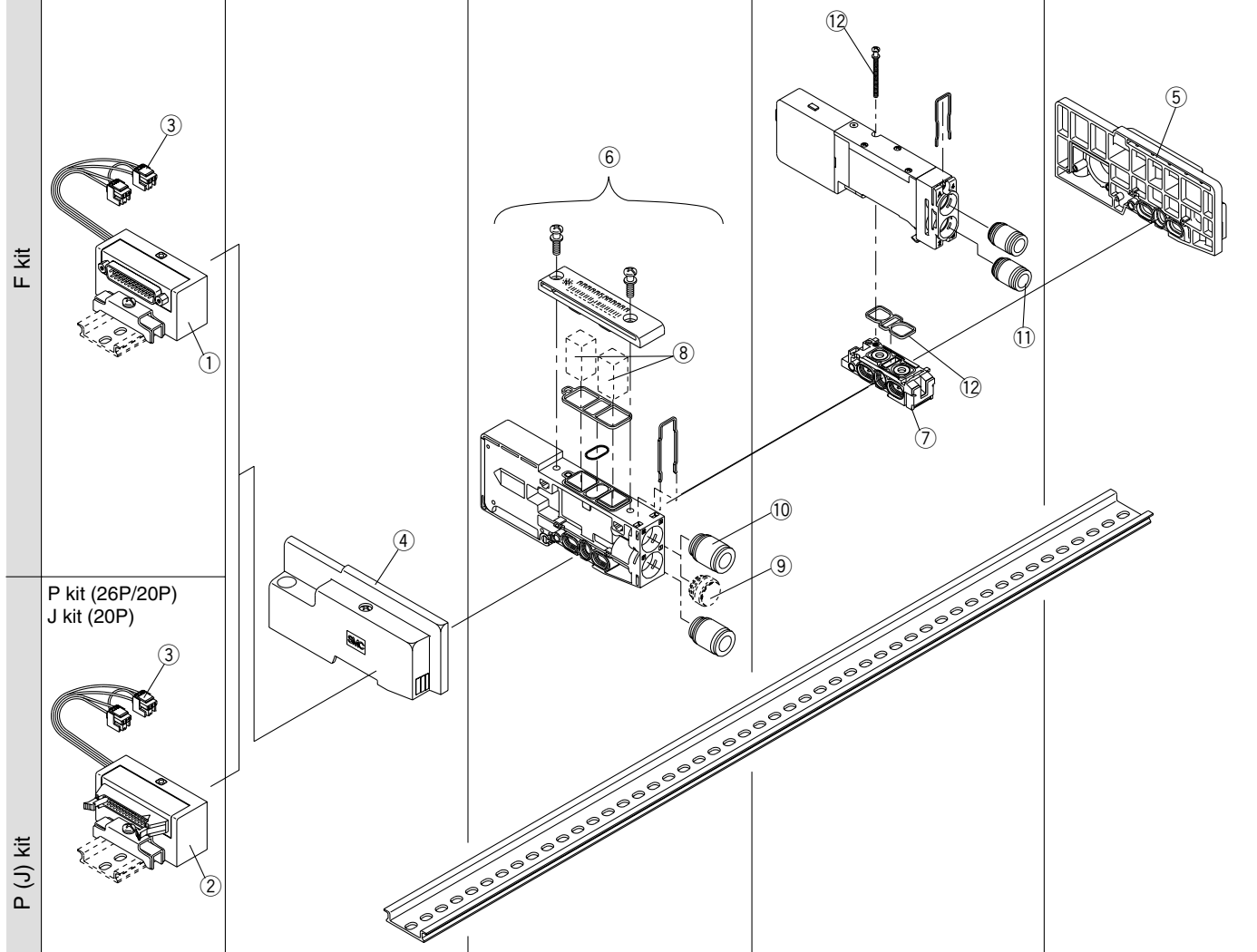
SQ1000 – GS

Note) Part number for 10 pieces each of gaskets and screws.

Exploded View of Manifold: SQ2000 (Plug lead type manifold) SS5Q24

(F, P, J, C kit)

	Wiring unit assembly	D side end plate assembly	SUP/EXH block assembly	Valve and manifold block assembly	U side end plate assembly
F kit					
P (J) kit	P kit (26P/20P) J kit (20P)				



Manifold Spare Parts

Refer to pages 2-3-112 to 2-3-117 of "How to Add Manifold Stations" regarding the mounting of each spare parts.

<① D-sub connector housing assembly>

AXT100 – 41 – FL25 – S 03

Wiring

S	Single wiring
D	Double wiring

Stations

01	For 1 station
⋮	⋮
12	For 12 stations

<② Flat ribbon cable connector housing assembly>

AXT100 – 41 – PL26 / PL20 / JL20 – S 03

Wiring

S	Single wiring
D	Double wiring

Stations Note)

01	For 1 station
⋮	⋮
12	For 12 stations

Note)
PL26: 01 to 12 (P kit, 26P)
PL20: 01 to 09 (P kit, 20P)
JL20: 01 to 08 (J kit, 20P)

<③ Lead wire assembly>

(For F kit)

For station 1 **SSQ1000 – 4 1 B – F – 170**

Wiring

0	For single (2-wire)
1	For double (3-wire)

For 2 to station 24 **SSQ1000 – 4 1 A – F – 230**

Wiring

0	For single (2-wire)
1	For double (3-wire)

Lead wire length

Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)
Station 2	**190**	Station 8	**310**	Station 14	**430**	Station 20	**550**
Station 3	**210**	Station 9	**330**	Station 15	**450**	Station 21	**570**
Station 4	**230**	Station 10	**250**	Station 16	**470**	Station 22	**590**
Station 5	**250**	Station 11	**370**	Station 17	**490**	Station 23	**610**
Station 6	**270**	Station 12	**390**	Station 18	**510**	Station 24	**630**
Station 7	**290**	Station 13	**410**	Station 19	**530**		

(For P, J kit)

For station 1 **SSQ1000 – 4 1 B – P – 170**

Wiring

0	For single (2-wire)
1	For double (3-wire)

For 2 to station 24 **SSQ1000 – 4 1 A – P – 310**

Wiring

0	For single (2-wire)
1	For double (3-wire)

Lead wire length

Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)
Station 2	**190**	Station 8	**310**	Station 14	**430**	Station 20	**550**
Station 3	**210**	Station 9	**330**	Station 15	**450**	Station 21	**570**
Station 4	**230**	Station 10	**250**	Station 16	**470**	Station 22	**590**
Station 5	**250**	Station 11	**370**	Station 17	**490**	Station 23	**610**
Station 6	**270**	Station 12	**390**	Station 18	**510**	Station 24	**630**
Station 7	**290**	Station 13	**410**	Station 19	**530**		

(For C kit)

AXT661 – 1 3 AL – 6

Wiring

3	For double (3-wire)
4	For single (2-wire)

Lead wire length

Symbol	L dimension (mm)
Nil	300
6	600
10	1000
15	1500
20	2000
25	2500
30	3000
50	5000

<④ D side end plate assembly>

SSQ2000 – 3A – 4 □

Manifold mounting

Nil	DIN rail mount style
E	Direct mount style

<⑤ U side end plate assembly>

SSQ2000 – 2A – 4 □ – 1

Manifold mounting

Nil	DIN rail mount style
E	Direct mount style

<⑥ SUP/EXH block assembly>

SSQ2000 – PR – 3 – C10 – □

Port size

C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"

Option

Nil	Common exhaust type
R	External pilot
S	Built-in silencer, direct exhaust

Note) Enter "-RS" for both options.

<⑦ Manifold block assemblies>

SSQ2000 – 1A – 4 □ Including gaskets ⑫

Option

Nil	None
B	Back pressure check valve
R	External pilot specifications

Note) Enter "-BR" for both options.

<⑧ Element>

SSQ2000 – SE

Note) Part number for a 10 piece set of elements. Refer to page 2-3-5 for replacement procedure.

<⑨ Port plug>

VVQZ3000 – CP

<⑩ Fitting assembly>

(For P, R port)

VVQ2000 – 51A – C10

Port size

C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"

Note) Purchasing order is available in units of 10 pieces

<⑪ Fitting assembly>

(For cylinder port)

VVQ1000 – 51A – C8

Port size

C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
N3	One-touch fitting for ø5/32"
N7	One-touch fitting for ø1/4"
N9	One-touch fitting for ø5/16"

Note) Purchasing order is available in units of 10 pieces

<⑫ Gasket and screw assembly>

SQ2000 – GS

Note) Part number for 10 pieces each of gaskets and screws.