

5 Port Solenoid Valve Body Ported Manifold Stacking Type/Flat Ribbon Cable



Type **23P**

Series SY9000

How to Order Manifold

SS5Y 9 - 23P - 05 - [] - [] - []

- Manifold series**
9 SY9000
- Valve stations**

Symbol	Stations
04	4 stations
:	:
12	12 stations
- Thread type**

Nil	Rc
00F	G
00N	NPT
00T	NPTF
- Option**

Symbol	Mounting
Nil	Direct mounting
D	DIN rail mounting (with DIN rail)
D0	DIN rail mounting (without DIN rail)
D*	When a longer DIN rail is desired than the specified stations, specify the station number to be required into * mark.
- CE-compliant**

Nil	—
Q	CE-compliant

* This also includes the number of blanking plate assemblies.
* Type 23P manifold of Series SY9000 is concurrently used for the internal and external pilot.
* For DC only.

How to Order Manifold Assembly (Example)

Example

(Single solenoid) Connector assembly SY9000-37-1A
(Double solenoid) Connector assembly SY9000-37-2A

SS5Y9-23P-05 1 set (Type 23, 5-station manifold base part no.)
 * **SY9000-26-3A** 1 set (Blanking plate assembly part no.)
 * **SY9120-5LOU-C12** ... 2 sets (Single solenoid part no.)
 * **SY9220-5LOU-C12** ... 2 sets (Double solenoid part no.)
 * **SY9000-37-1A** 2 sets (Connector assembly part no.)
 * **SY9000-37-2A** 2 sets (Connector assembly part no.)

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

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

How to Order Valve

For DC: SY 9 1 20 [] - 5 LO Z [] - 02 [] - []
For AC: SY 9 1 20 [] - 1 LO Z [] - 02 [] - []

- Rated voltage**

5	24 VDC
6	12 VDC
- Light/surge voltage suppressor**

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

Note) Z: Positive common specifications only.
- CE-compliant**

Nil	—
Q	CE-compliant
- Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF
- A, B port size Thread piping**

Symbol	Port size
02	1/4
03	3/8
- One-touch fitting (Metric size)**

Symbol	Port size
C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
C12	One-touch fitting for ø12
- One-touch fitting (Inch size)**

Symbol	Port size
N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"
- Series**
9 SY9000
- Type of actuation**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
- Pilot specifications**

Nil	Internal pilot
R	External pilot

* Type 23P manifolds can be used for both internal and external pilots.
- Rated voltage**

1	100 VAC
3	110 VAC (115 VAC)
- Manual override**

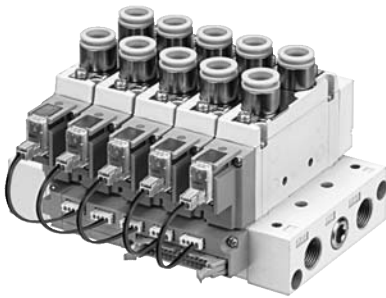
Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Note) In the case of flat cable type, "U" and "Z" types are for DC specifications and "Z" type is for AC specifications. "Z" type for DC is positive common specification only. For the other combination, please contact SMC.
 Note) When placing an order for body ported solenoid valve as a single unit, mounting screw for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to page 173.)

- Multiple valve wiring is simplified through the use of the flat cable connector.

• **Clean appearance**

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Manifold Specifications

Model	SS5Y9-23P(-Q)	
Applicable valve	SY9□20	
Manifold type	Stacking type	
P (SUP)/R (EXH)	Common SUP, Common EXH	
Valve stations	4 to 12 stations ^{Note1)}	
A, B port location	Valve	
Port size	P, EA, EB port	3/8 1/4 3/8
	A, B port	C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10) C12 (One-touch fitting for ø12)
Manifold base mass W (g) n: Stations	W = 73n + 259	
Applicable flat ribbon cable connector	Flat ribbon cable connector, Socket: 26 pins MIL with strain relief, Conforming to MIL-C-83503	
Internal wiring	In common between +COM and -COM (Z type: +COM only)	
Rated voltage ^{Note4)}	12, 24 VDC, 100, 110 VAC	

- Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA/EB port on both sides.
- Note 2) The withstand voltage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.
- Note 3) Refer to "Manifold Option" on page 173.
- Note 4) CE-compliant: For DC only.

Connector Assembly

For 12, 24 VDC

Specifications	For SY9000
For single solenoid	SY9000-37-1A
Double solenoid 3 position	SY9000-37-2A
Single with spacer assembly	SY9000-37-3A
Double, 3 position with spacer assembly	SY9000-37-4A

For 100 VAC

Specifications	For SY9000
For single solenoid	SY9000-37-1B
Double solenoid 3 position	SY9000-37-2B
Single with spacer assembly	SY9000-37-3B
Double, 3 position with spacer assembly	SY9000-37-4B

For 110 VAC (115 VAC)

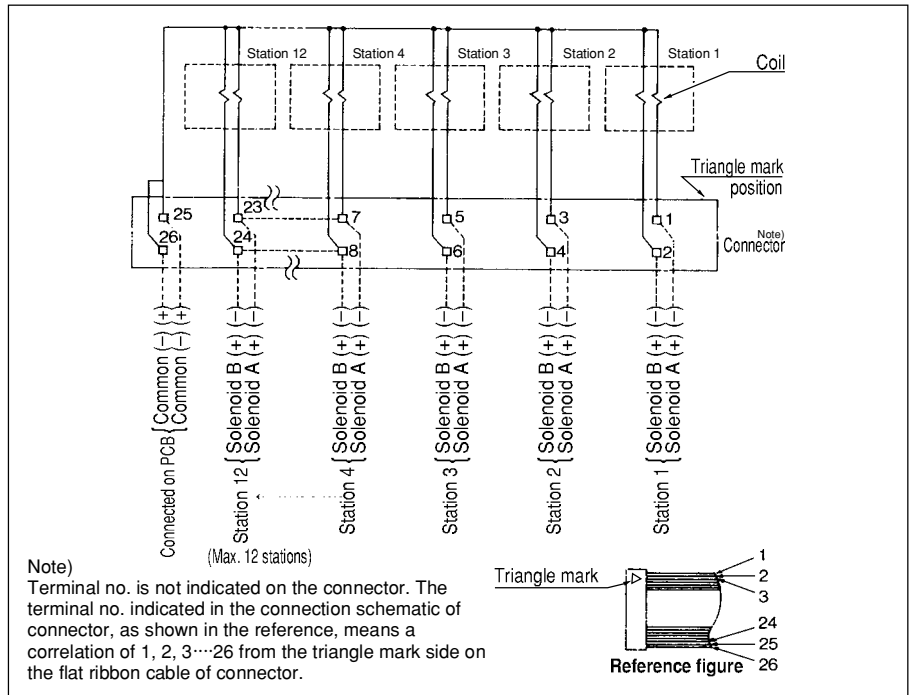
Specifications	For SY9000
For single solenoid	SY9000-37-1C
Double solenoid 3 position	SY9000-37-2C
Single with spacer assembly	SY9000-37-3C
Double, 3 position with spacer assembly	SY9000-37-4C

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /(s·bar ^{1/2}))	b	Cv	C (dm ³ /(s·bar ^{1/2}))	b	Cv
SS5Y9-23P(-Q)	3/8	C12	6.3	0.20	1.5	8.2	0.28	1.9

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

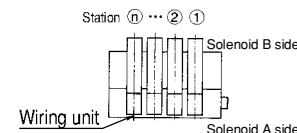
Internal Wiring of Manifold (Non-polar type)



Caution

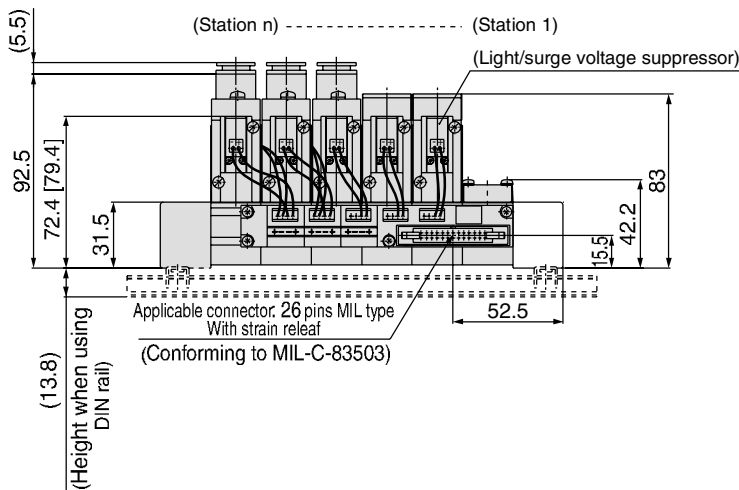
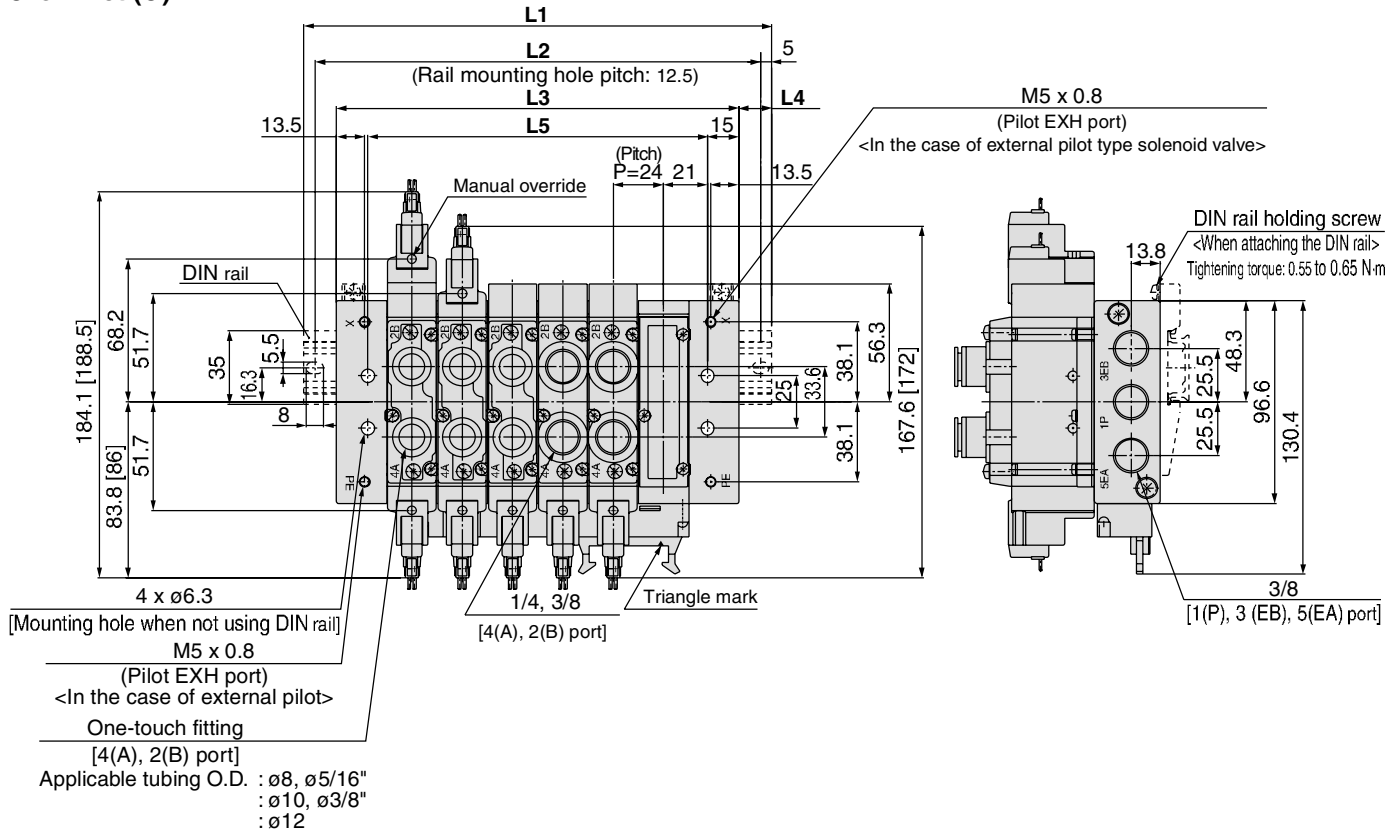
- For non-polar (U) valves, the electrical DC connections can be used with either positive and negative COM. For type (Z), only use with positive COM as the valve does not operate correctly when used with negative COM.

- For more than 10 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations that can be accommodated is 12. For more stations, please contact SMC.



SY9000: SS5Y9-23P- Stations -(D)

Grommet (G)



Stations n	4 stations	5	6	7	8	9	10	11	12 stations
L1	173	198	223	248	273	298	323	335.5	360.5
L2	162.5	187.5	212.5	237.5	262.5	287.5	312.5	325	350
L3	144	168	192	216	240	264	288	312	336
L4	14.5	15	15.5	16	16.5	17	17.5	12	12.5
L5	114	138	162	186	210	234	258	282	306

Note) In the case of direct mounting without DIN rail, total width of manifold is L3.