

5-Port Solenoid Valve

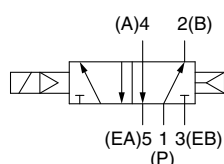
with Single/Double Switch Function

SY3 \dot{S} 00/SY5 \dot{S} 00

Features

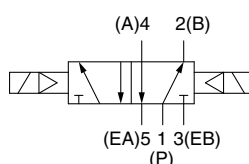
Choose between single and double solenoids by using the switch!

Single solenoid

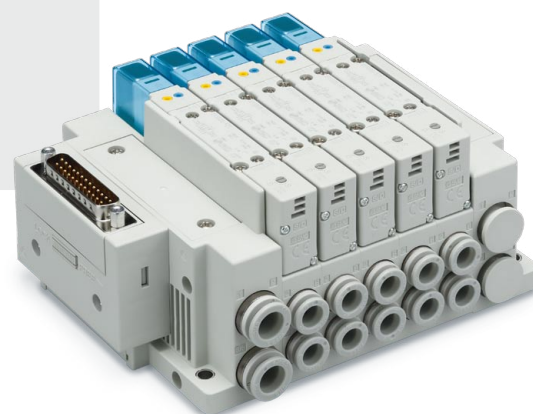


Actuation switch
recessed

Double solenoid



Actuation switch
protruding



Applicable cylinder speed	Main valve seal type	Series	Applicable cylinder											
			ø6	ø10	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125
100 mm/s or less	Rubber seal	SY3 \dot{S} D00												
300 mm/s or less														
100 mm/s or less		SY5 \dot{S} D00												
300 mm/s or less														

[Common conditions]

● Pressure: 0.5 MPa ● Piping length: 1 m ● Load ratio: 50% ● Stroke: 200 mm

Connector-type manifold (for side and bottom-ported types)

* Use as a guide for selection. Please check the actual conditions with SMC's Model Selection Software.



Caution

To ensure the safest possible operation of this product, please be sure to thoroughly read the "Safety Instructions" in our "Best Pneumatics" catalog before use.

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SP161X-007E
P: VQ



For How to Order: Manifold,
refer to the **Web Catalog**.

How to Order: Valves (With mounting screw)

Side Ported/Bottom Ported

SY **3** **S** 0 0 **5** 1 -

Top Ported

SY **3** **S** 3 0 **5** 1 - **C6**

1 Series

3	SY3000
5	SY5000

2 Type of actuation

S	Single (for actuation between single and double)
D	Double (for actuation between single and double)

* The condition of the actuation switch when the product is shipped and the printed symbol will vary depending on the selected actuation type.

3 Seal type

0	Rubber seal
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4 Pilot type

Nil	Internal pilot
R	External pilot

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

Nil	None
H	Built-in

6 Pilot valve option

Nil	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)

7 Coil type

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

* Be sure to select the power-saving circuit type if the valve will be continuously energized for long periods of time.

* Be careful of the energizing time when the power-saving circuit is selected. Refer to the **Web Catalog** for details.

8 Rated voltage

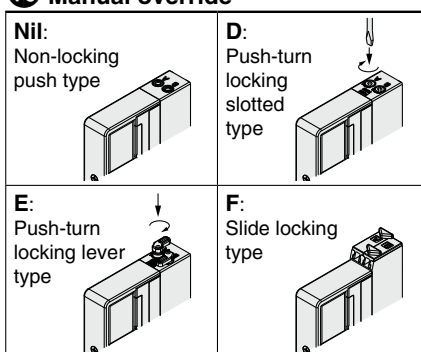
5	24 VDC
6	12 VDC

9 Light/surge voltage suppressor and common specification

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

* Only "Z" and "NZ" types are available with a power-saving circuit.

10 Manual override



11 A, B port size

Thread piping

Symbol	A, B port	SY3000	SY5000
M5	M5 x 0.8	●	—
01	1/8	—	●

One-touch fitting (Metric)

Symbol	A, B port	SY3000	SY5000
C2	ø2	●	—
C3	ø3.2	●	—
C4	ø4	●	●
C6	ø6	●	●
C8	ø8	—	●

One-touch fitting (Inch)

Symbol	A, B port	SY3000	SY5000
N1	ø1/8"	●	—
N3	ø5/32"	●	●
N7	ø1/4"	●	●
N9	ø5/16"	—	●

* When ports are of mixed sizes, indicate the piping specifications on the manifold specification sheet.

12 Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

13 Type of mounting screw

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

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

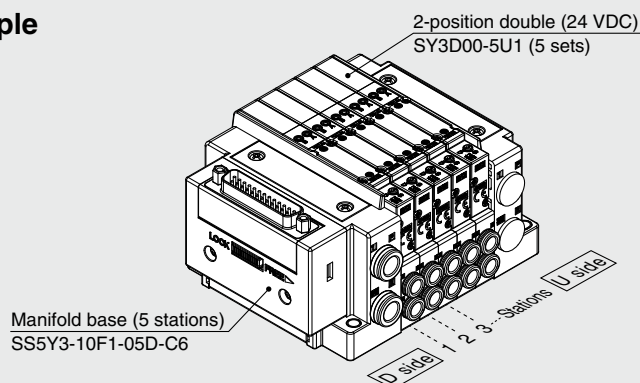
* **When ordering a valve individually, the base gasket is not included.**

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

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

How to Order: Manifold Assembly

Example



SS5Y3-10F1-05D-C6..... 1 set (Type 10 5-station manifold base part no.)
* SY3D00-5U1..... 5 sets (2-position single/double actuation valve part no.)

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

Specifications

Valve type	Pilot operated 2-position 5-port solenoid valve
Valve construction	Rubber seal
Type of actuation	Single/double actuation type

- * When purchasing a manifold, select a double wiring specification type.
- * Other specifications that are not listed are the same as those of the standard product. For details, refer to the **Web Catalog**.

Valve Weight

Base mounted

Valve model	Weight [g]
SY3^S_D00	84.5
SY5^S_D00	95.3

Body ported

Valve model	Port size	Weight [g]
SY3^S_D30	C2	88.5
	C3	95.9
	C4	87.9
	C6	90.9
	M5	84.4
SY5^S_D30	C4	127.9
	C6	123.7
	C8	112.3
	O1	115.2

⚠ Operating Precautions

- When using a single specification valve as a double specification valve, rotate the actuation switch using a watchmakers screwdriver so that the slit in the actuation switch moves to the D position shown in the figure to the right.
- When using a double specification valve as a single specification valve, press the actuation switch, and then rotate the switch counterclockwise. Note that in the case of a single specification setting, a malfunction will not occur even if the manual override part on the 2(B) side is operated.
- Do not energize both solenoids simultaneously.
- In the case of double specifications, the main valve is in a position such that there is continuity between 1(P) and 4(A). If the actuation switch is operated when the valve is not energized, the main valve will switch so that there is continuity between 1(P) and 2(B), so be careful of the actuator ejecting suddenly.**
- For details on electric circuits that have a light/surge voltage suppressor, refer to the **Web Catalog**.
- Select double wiring specifications as the manifold wiring specifications.
- When rotating the actuation switch, do not apply a higher torque than necessary. (Generally less than 0.05 N·m)

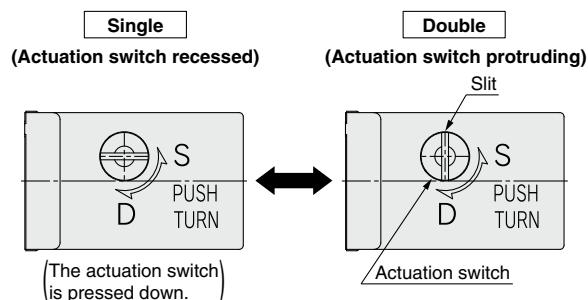
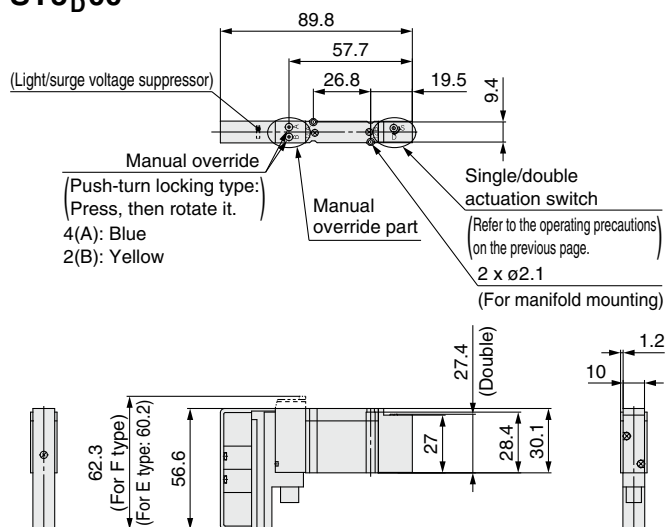


Fig. 1 Switching between single and double solenoids

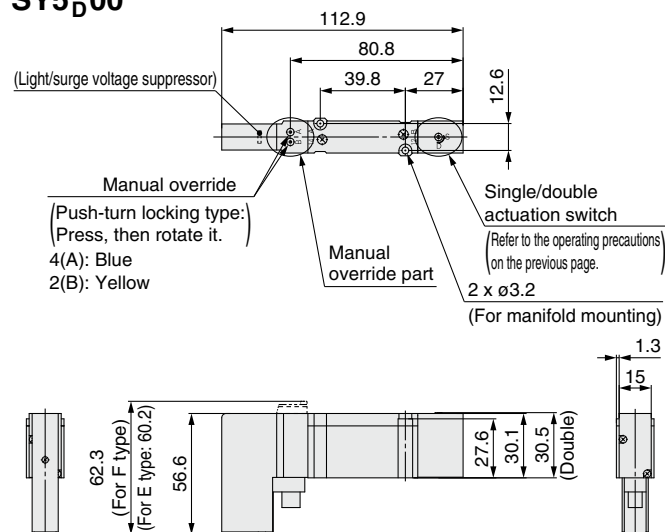
Dimensions

Side/Bottom ported

SY3^S_D00

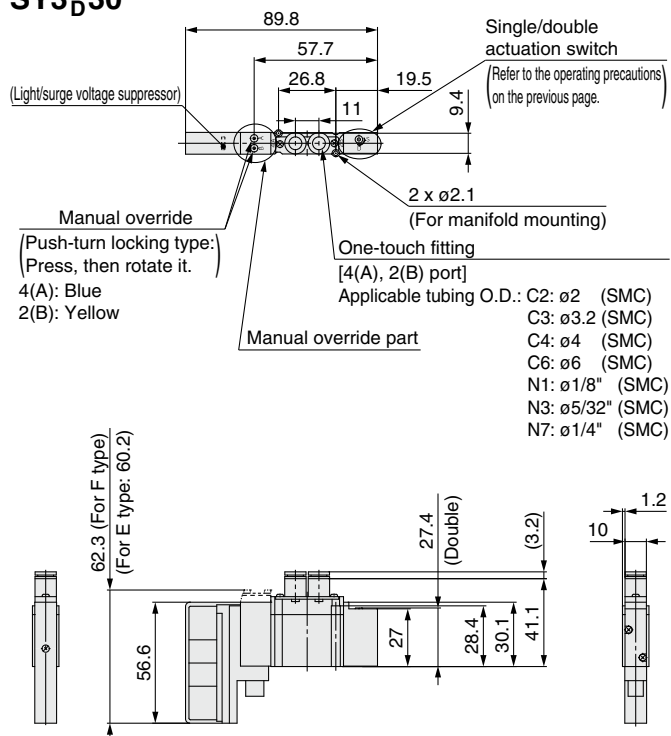


SY5^S_D00



Top ported

SY3^S_D30



SY5^S_D30

