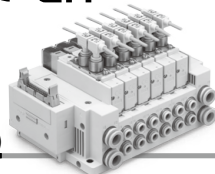


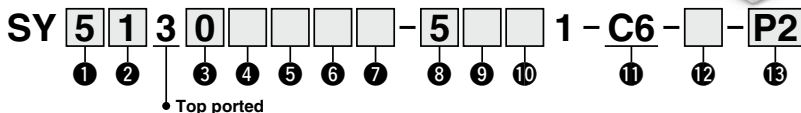
SY5000/7000 Series

Valve with Pressure Sensor



Mountable manifold
Metal base: SS5Y5/7-50/51 type manifold
Connector connecting base: SS5Y5/7-10/11 type manifold

How to Order Valves (With mounting screw)



1 Series

5	SY5000
7	SY7000

2 Type of actuation

1		Single
2	2-position	Double
3		Closed center
4	3-position	Exhaust center
5		Pressure center
A*1	4-position	N.C./N.C.
B*1	dual 3-port	N.O./N.O.
C*1		N.C./N.O.

*1 Only the rubber seal type is available for the 4-position dual 3-port valve.

3 Seal type

0	Rubber seal
1	Metal seal

4 Pilot type

Nll	Internal pilot
R	External pilot

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

Nll	None
H	Built-in

* Only the rubber seal type is available. A manifold installed type is available if a back pressure check valve with a metal seal is required. Refer to page 625 for ordering examples. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

* The built-in valve type back pressure check valve is not available for the 3-position type or the SY7000.

6 Pilot valve option

Nll	Standard (0.7 MPa)
B	Quick response type (0.7 MPa)
K*1	High pressure type (1.0 MPa)

*1 Only the metal seal type is available for the high pressure type.

7 Coil type

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

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

* Be careful of the energizing time when the power saving circuit is selected. Refer to page 705 for details.

8 Rated voltage

5	24 VDC
6	12 VDC

* The applicable rated voltage varies depending on the manifold wiring type.

9 Light/surge voltage suppressor and common specification

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

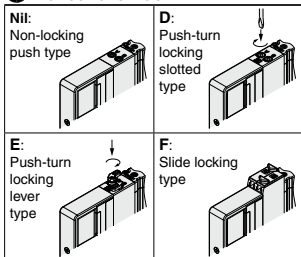
* For the non-polar type, be careful of surge voltage intrusion. Refer to page 706 for details. (Excludes when an SI unit manifold is used)

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

* Select "R," "U," "S," or "Z" for the valve when the SI unit output polarity is positive common.

Select "R," "U," "NS," or "NZ" for the valve when the SI unit output polarity is negative common.

10 Manual override



11 A, B port size

Symbol	A, B port	SY5000	SY7000
C6	ø6	●	●

12 Type of mounting screw

Nll	Round head combination screw
B	Hexagon socket head cap screw
K	Round head combination screw (Drop prevention type)
H	Hexagon socket head cap screw (Drop 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. Refer to page 611 for base gasket and mounting screw part numbers

* "B" and "H" cannot be selected for the individual SUP/EXH spacer assembly or interface regulator.

13 Pressure sensor

Symbol	Included quantity
P1	1 pc.
P2	2 pcs.

* The top-ported type valve and the C6 (ø6) One-touch fitting are used.

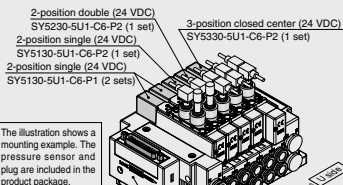
* The PSE540-R06 pressure sensor is included in the product package.

* When "P1" is selected, one plug (KQ2P-06) is included in the product package.

How to Order Manifold Assembly

Example (SS5Y5-10F1-□)

SS5Y5-10F1-05D-C8
...1 set (Type 10 5-station manifold base part no.)
*SY5130-5U1-C6-P1
...2 sets (2-position single part no.)
*SY5130-5U1-C6-P2
...1 set (2-position double part no.)
*SY5230-5U1-C6-P2
...1 set (2-position double part no.)
*SY5330-5U1-C6-P2
...1 set (3-position closed center part no.)
*The asterisk denotes the symbol for the assembly. Prefix it to the part numbers of the valve, etc.



• For the valve arrangement, the valve closest to the D side is considered the 1st station.
• Under the manifold part number, state the valves to be mounted in order starting with the 1st station as shown in the figure above. If the arrangement becomes too complicated, specify the details on a manifold specification sheet.

SY5000/7000 Series

Pressure Sensor Specifications

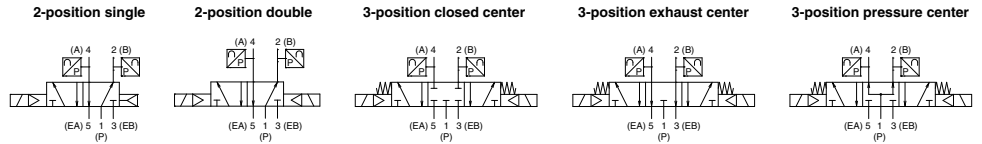
Model		PSE540
Rated pressure range		0 to 1 MPa*1
Power supply voltage		12 to 24 VDC $\pm 10\%$, Ripple (p-p) 10% or less (with reverse connection protection)
Current consumption		15 mA or less
Output specifications		Analog output 1 to 5 V (within rated pressure range), 0.6 to 1 V (within extension analog output range), Output impedance: Approx. 1 k Ω
Linearity		$\pm 0.7\%$ F.S. or less
Environment	Enclosure*2	IP40
Temperature characteristics		$\pm 2\%$ F.S. (25°C reference)
Sensor cable		Oilproof heavy-duty vinyl cable (ellipse), 3 cores, 2.7 x 3.2, 3 m, Conductor area: 0.15 mm ² , Insulator O.D.: 0.9 mm

*1 Set the pressure within the operating pressure range of the valve.

*2 Please note that even if the manifold is IP67, the product will remain IP40.

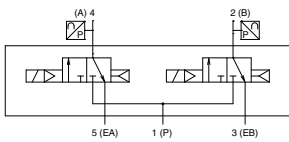
Symbol

Internal pilot

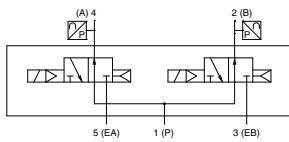


4-Position Dual 3-Port Valve

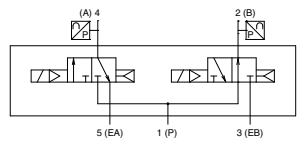
N.C. valve x 2 pcs.



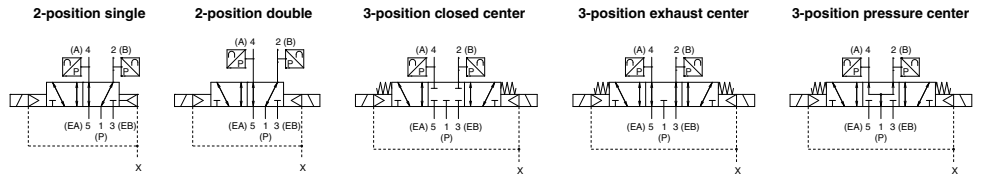
N.O. valve x 2 pcs.



N.C. valve, N.O. valve 1 pc. of each

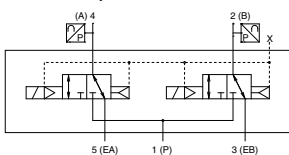


External pilot

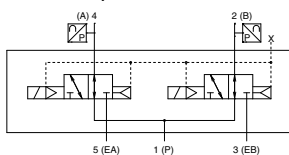


4-Position Dual 3-Port Valve

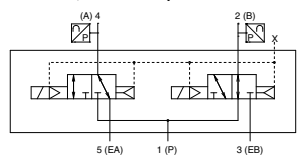
N.C. valve x 2 pcs.



N.O. valve x 2 pcs.



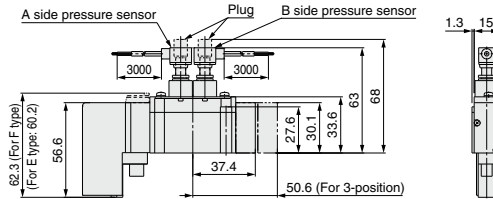
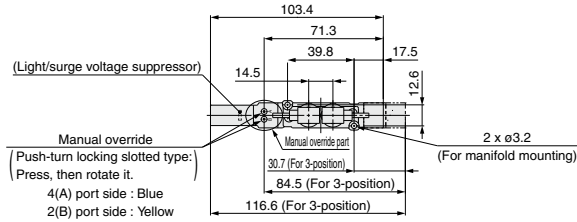
N.C. valve, N.O. valve 1 pc. of each



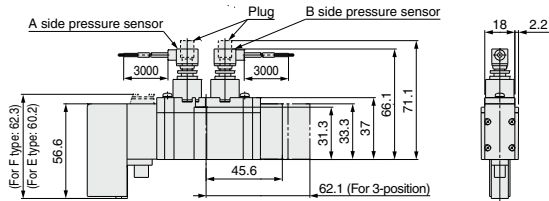
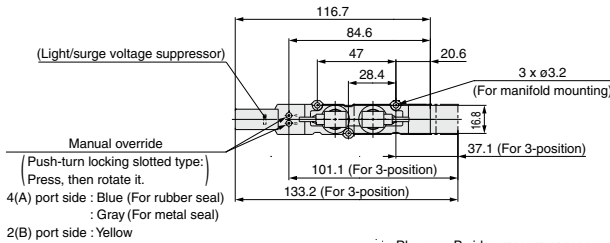
Valve with Pressure Sensor **SY5000/7000 Series**

Dimensions

SY5000-P2



SY7000-P2



SY3000/5000/7000 Series

Made to Order

Please contact SMC for detailed dimensions, specifications, and lead times.



1 Main Valve Fluororubber Specification

Symbol
-X90

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

- When using a lubricant other than the recommended turbine oil, and there is a possibility of malfunction due to swelling of the spool valve seals.

Applicable valves series SY3□□0, SY5□□0, SY7□□0 (Only rubber seal type)

SY³₅□□⁰₃ 0 □ □ □ □ - □ □ □ 1 - □ □ - □ -X90

- Entry is the same as standard products. Specifications and performance are the same as standard products.

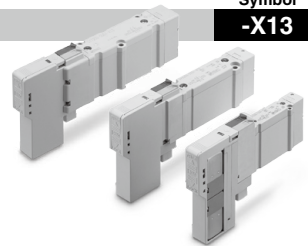
2 With Safety Slide Locking Manual Override

Symbol
-X13

A safety lock is added to the slide locking manual override. (Refer to page 391.)

SY³₅□□⁰⁰₃₁ □ □ □ □ - □ □ G1 - □ -X13

- Entry is the same as standard products. Specifications and performance are the same as standard products.



3 2-Position Single Solenoid Valve with Built-in Return Spring (Only rubber seal type)

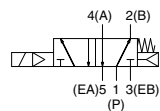
Symbol
-X350

A 2-position single solenoid valve with a spring built into the main valve. The main valve returns to origin (the OFF position) via the spring when it is not pressurized.

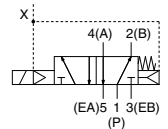
SY³₅ 1 □ □ □ □ - □ □ □ 1 - □ □ - □ -X350

- Rubber seal type
- Entry is the same as standard products. Specifications and performance are the same as standard products.

Internal pilot type



External pilot type



- * For the external pilot type, exhaust the external pilot (X) port and the main pressure simultaneously. If the main pressure cannot be exhausted due to the system specifications, please contact SMC separately.

- * The manual option is only applicable to the non-locking push type.