

SY3000/5000/7000/9000 Body Ported Type Single Valve

How to Order

SY 5 1 20 — 5 L — — — 01 — — — Q

Series

3	SY3000
5	SY5000
7	SY7000
9	SY9000

Type of actuation

1	2 position single	
2	2 position double	
3	3 position closed centre	
4	3 position exhaust centre	
5	3 position pressure centre	

Rated voltage

DC specifications	
5	24VDC
6	12VDC
V	6VDC
S	5VDC
R	3VDC
9	Less than 50 VDC

AC specifications (50/60Hz)

1	100VAC
2	200VAC
3	110VAC [115VAC]
4	220VAC [230VAC]
9	Less than 250 VAC



Note 1) "D", "DO", "Y" and "YO" are only available in 24VDC and 12VDC in case of DC.

Note 2) "D", "DO", "Y" and "YO" are not available for SY3000.



Contact SMC for other voltages (9)



Protective class class I (Mark:)..... DIN terminal type



Protective class class III (Mark:)..... Grommet, L and M plug connector



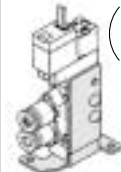
Note) When single body ported solenoid valves are ordered, manifold mounting bolts and gaskets are not included. Order them separately, if necessary. (Refer to page 1.2-65 for details.)

Thread

—	Rc (PT)
N	NPT
T	NPTF
F	G (PF)

Bracket

Nil: Without bracket
F1: With foot bracket
(2 position single type only)



F2: With side bracket



* SY9000 does not use brackets.

A/B port size

Symbol	Port size	Applicable series
M5	M5	SY3000
C4	ø4 One-touch fitting	
C6	ø6 One-touch fitting	
01	1/8	SY5000
C4	ø4 One-touch fitting	
C6	ø6 One-touch fitting	
C8	ø8 One-touch fitting	SY7000
02	1/4	
C8	ø8 One-touch fitting	
C10	ø10 One-touch fitting	SY9000
02	1/4	
03	3/8	
C8	ø8 One-touch fitting	SY9000
C10	ø10 One-touch fitting	
C12	ø12 One-touch fitting	

Manual override

Nil: Non-locking push type



D: Push-turn locking slotted type



E: Push-turn locking lever



Indicator light/Surge voltage suppressor

For electrical entry G, H, L, M

Nil	Without indicator light/surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light/surge voltage suppressor
U	With indicator light/surge voltage suppressor (non-polar type)



Note 1) "U" is available for DC only.

For electrical entry D

Nil	Without indicator light/surge voltage suppressor
S	With surge voltage suppressor (non-polar type)
Z	With indicator light/surge voltage suppressor (non-polar type)



Note 1) "DOZ" is not available.

Note 2) For AC, there is no "S" specification, since it is integrated with the rectifier.

Electrical entry

24V, 12V, 6V, 5V, 3VDC				24V, 12VDC 100V, 110V, 200V, 220VAC
Grommet	L type plug connector	M type plug connector		DIN terminal
G: Lead wire length 300mm 	L: With lead wire (length 300mm) 	M: With lead wire (length 300mm) 	MN: Without lead wire 	(Except SY3000) D: With connector Y: With connector (DIN 43650C)
H: Lead wire length 600mm 	LN: Without lead wire 	LO: Without connector 	MO: Without connector 	DO: Without connector YO: Without connector (DIN 43650C)



Note 1) "LN" and "MN" include 2 sockets.

Note 2) "D" and "DO" are not available for SY3000.

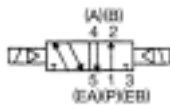
Construction

Series SY

Symbol:
2 position single



Symbol:
2 position double



Symbol:
3 position closed centre



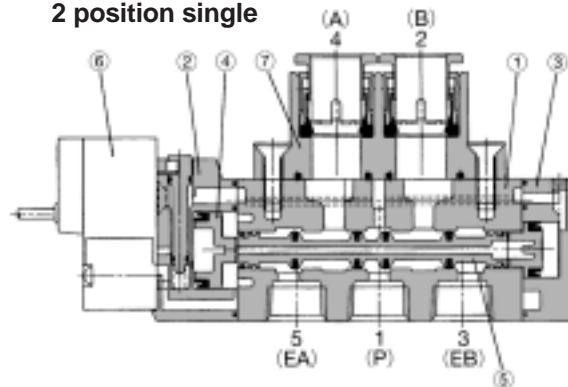
3 position exhaust centre



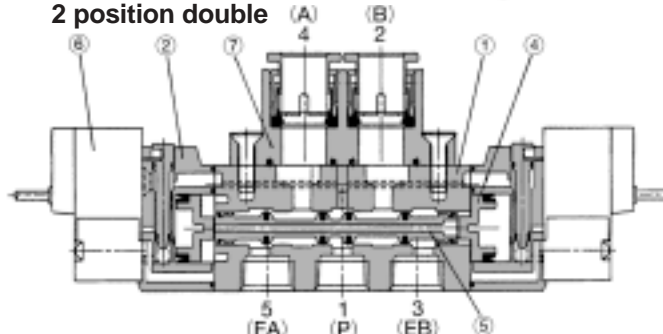
3 position pressure centre



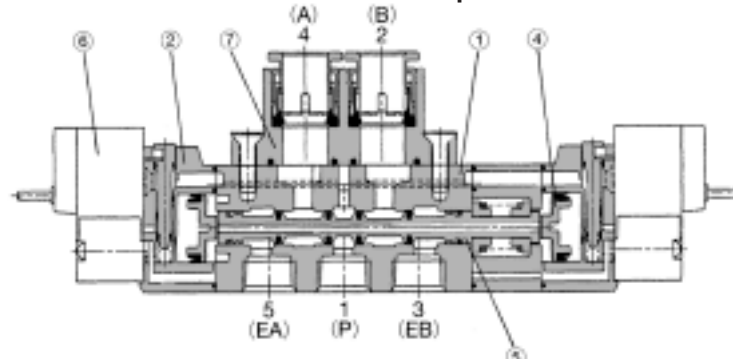
2 position single



2 position double



3 position closed centre/exhaust centre/pressure centre



(The diagram above shows the closed centre type.)

Parts list

No.	Description	Material	Note
1	Body	Die-cast aluminum (SY3000 is die-cast zinc.)	White
2	Adaptor plate	Resin	White (Gray for SY9000)
3	End plate	Resin	White
4	Piston	Resin	—
5	Spool valve assembly	Aluminum/NBR	—

Replacement parts

No.	Description	Part no.
6	Pilot valve assembly	Refer to "How to Order Pilot Valve Assemblies" on page 1.2-14.
7	Port block assembly	Refer to "How to Order Port Block Assemblies" on page 1.2-14.

Bracket assembly part nos.

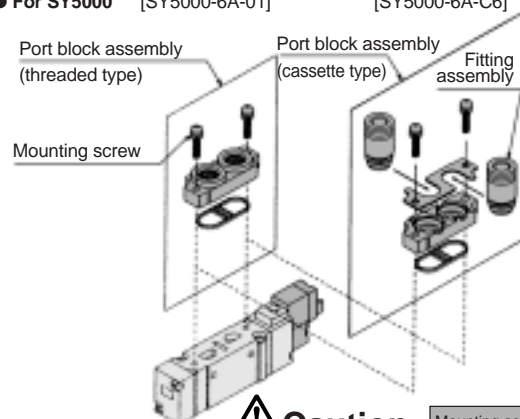
Description	Part no.
Bracket (for F1 type)	SX ³ 000-16-2A (with mounting screws)
Bracket (for F2 type)	SX ³ 000-16-1A (with mounting screws)

* Brackets are not available for SY9000.

How to Replace Port Block Assembly

With the body ported type, the A/B port size can be changed by replacing the port block assembly mounted on the body. Use appropriate tightening torque when replacing the port block assembly, as insufficient tightening of mounting screws will cause air leakage, etc.

● For SY5000 [SY5000-6A-01] [SY5000-6A-C6]



Caution

SY3000 (M2): 0.12N·m
SY⁵000 (M3): 0.6N·m
SY9000 (M4): 1.4N·m

Mounting screw tightening torques



* Refer to "How to Order Port Block Assemblies" on page 1.2-14 for part numbers.

SV

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VQC

SQ

VQ

VQ4

VQ5

VQZ

VQD

VFS

VS

VS7

VQ7