

Rubber Seal 5 Port Solenoid Valve Series SYJ5000



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Specifications

Fluid	Air	
Operating pressure range MPa	2 position single	0.15 to 0.7
	2 position double	0.1 to 0.7
	3 position	0.15 to 0.7
Ambient and fluid temperature (°C)	-10 to 50 (No freezing. Refer to back page 3.)	
Response time (ms) <small>Note 1)</small> (at 0.5 MPa)	2 position single, double	25 or less
	3 position	40 or less
Max. operating frequency (Hz)	2 position single, double	5
	3 position	3
Manual override (Manual operation)		Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type
Pilot exhaust method		Individual exhaust for the pilot valve, Common exhaust for the pilot and main valve
Lubrication		Not required
Mounting orientation		Unrestricted
Shock/Vibration resistance (m/s²) <small>Note 2)</small>		150/30
Enclosure		Dust proof (* DIN terminal, M8 connector conforms to IP65.)

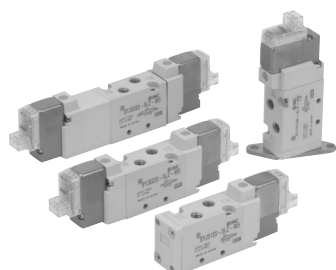


* Based on IEC60529

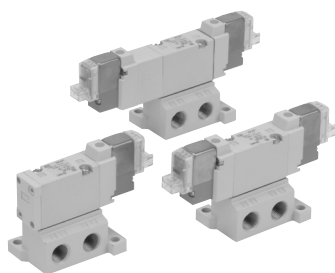
Note 1) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage, without surge voltage suppressor)

Note 2) Impact resistance: No malfunction occurred when it is tested 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. (Value in the initial state)

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz. Test was performed to axis and right angle directions of the main valve when pilot signal is ON and OFF. (Value in the initial state)



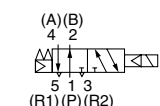
Body ported



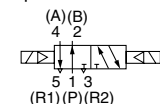
Base mounted

JIS Symbol

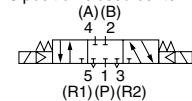
Body ported 2 position single



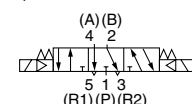
2 position double



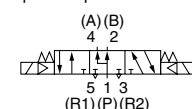
3 position closed center



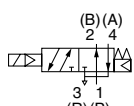
3 position exhaust center



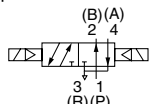
3 position pressure center



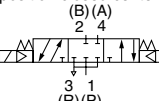
Base mounted (with sub-plate) 2 position single



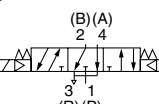
2 position double



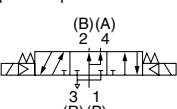
3 position closed center



3 position exhaust center



3 position pressure center



Solenoid Specifications

Electrical entry			Grommet (G), (H), L plug connector (L) M plug connector: (M), DIN terminal (D) M8 connector (W)	
			G, H, L, M, W	D
Coil rated voltage (V)	DC	24, 12, 6, 5, 3		24, 12
	AC 50/60 Hz	100, 110, 200, 220		
Allowable voltage fluctuation			±10% of rated voltage *	
Power consumption (W)	DC	Standard	0.35 (With light: 0.4 (DIN terminal with light: 0.45))	
		With power saving circuit	0.1 (With light only)	
Apparent power VA *	AC	100 V	0.78 (With light: 0.81)	0.78 (With light: 0.87)
		110 V	0.86 (With light: 0.89)	0.86 (With light: 0.97)
		[115 V]	[0.94 (With light: 0.97)]	[0.94 (With light: 1.07)]
		200 V	1.18 (With light: 1.22)	1.15 (With light: 1.30)
		220 V	1.30 (With light: 1.34)	1.27 (With light: 1.46)
		[230 V]	[1.42 (With light: 1.46)]	[1.39 (With light: 1.60)]
Surge voltage suppressor			Diode (DIN terminal, Varistor when non-polar types)	
Indicator light			LED (Neon light when AC with DIN terminal)	



* In common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC.

* For 115 VDC and 230 VDC, the allowable voltage is -15% to +5% of rated voltage.

* S, Z and T type (with power saving circuit) should be used within the following allowable voltage fluctuation range due to a voltage drop caused by the internal circuit. S and Z type: 24 VDC: -7% to +10%, 12 VDC: -4% to +10%

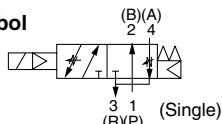
T type: 24 VDC: -8% to +10%, 12 VDC: -6% to +10%

Built-in Speed Controller

SYJ5□5□

- Built-in exhaust flow controls enable simple cylinder speed adjustments.
- When mounted on the manifold, the common exhaust discharges the pilot and main valve exhaust through a common EXH port to enable simple exhausting.

JIS Symbol

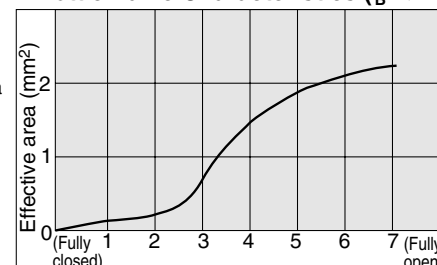


How to order valve with built-in speed controller

SYJ5□5□□□□□□□□□□

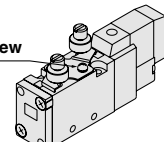
- Type of actuation
- Body Option
- Rated voltage
- Lead wire
- Manual override
- Light/surge voltage suppressor
- Port size

Throttle Valve Characteristics (A → R)



- When using SYJ5□53 model the speed controller must be opened more than 1 complete rotation from fully closed in order to function properly.
- Adjust the speed controller with a torque of 0.3 N·m or less.

Plate fixing screw



Note) Do not loosen plate fixing screw.



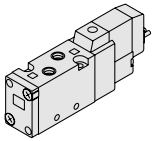
Made to Order

(For details, refer to pages 79 through to 80.)

How to Order

Type of actuation

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center



(For manifold type 20)

Light/surge voltage suppressor Electrical entry for G, H, L, M, W

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

- * For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
- * For type "R" and "U", DC voltage is only available.
- * Power saving circuit is only available in the "Z" type.

Electrical entry for D

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

- * DOZ is not available.
- * For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

Rated voltage

DC		AC (50/60 Hz)	
5	24 VDC	1	100 VAC
6	12 VDC	2	200 VAC
V	6 VDC	3	110 VAC [115 VAC]
S	5 VDC	4	220 VAC [230 VAC]
R	3 VDC		

- * DC specifications of type D and DO is only available with 12 and 24 VDC.

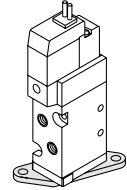
- * For type W□, DC voltage is only available.

A, B port size

M5	M5 x 0.8
C4	One-touch fitting for Ø4
C6	One-touch fitting for Ø6
N3	One-touch fitting for Ø5/32"
N7	One-touch fitting for Ø1/4"

Bracket

Nil: Without bracket
F: With bracket



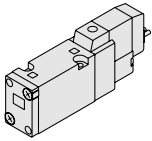
Note) The mounting bracket is supplied unattached.

Body ported

SYJ5 1 2 0 □ 5 L □ □ M5 □

Base mounted

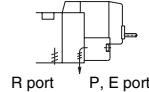
SYJ5 2 4 0 □ 5 L □ □ □ □



(For sub-plate, manifold type 40, 41, 42, 43)

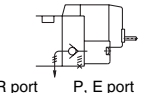
Body option

0: Pilot valve individual exhaust for the pilot valve



R port P, E port

3: Common exhaust type for main and pilot valve



R port P, E port

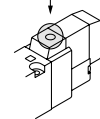
Coil specifications

Nil	Standard
T	With power saving circuit <24 V, 12 VDC only>

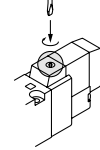
- * Power saving circuit is not available in the case of D, DO or W□ type.

Manual override

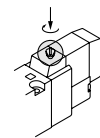
Nil: Non-locking push type



D: Push-turn locking slotted type



E: Push-turn locking lever type

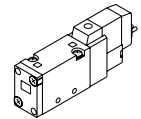


Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

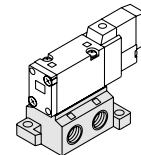
Port size

Nil: Without sub-plate



(With gasket and screws)

01: 1/8 With sub-plate



Electrical entry

24, 12, 6, 5, 3 VDC 100, 110, 200, 220 VAC				24, 12 VDC 100, 110, 200, 220 VAC		24, 12, 6, 5, 3 VDC	
Grommet	L plug connector	M plug connector	MN: Without lead wire	DIN terminal	M8 connector		
G: Lead wire length 300 mm	L: With lead wire (Length 300 mm)	M: With lead wire (Length 300 mm)	MN: Without lead wire	D: With connector	WO: Without connector cable		
H: Lead wire length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector	DO: Without connector	W□: With connector cable Note 1)		

- * LN, MN type: with 2 sockets.
- * DIN terminal type "Y" which conforms to EN-175301-803C (former DIN43650C) is also available. For details, refer to page 80.
- * For connector cable of M8 connector, refer to back page 10.

Note 1) Enter the cable length symbols in □. Please be sure to fill in the blank referring to back page 10.