

3 Port Solenoid Valve

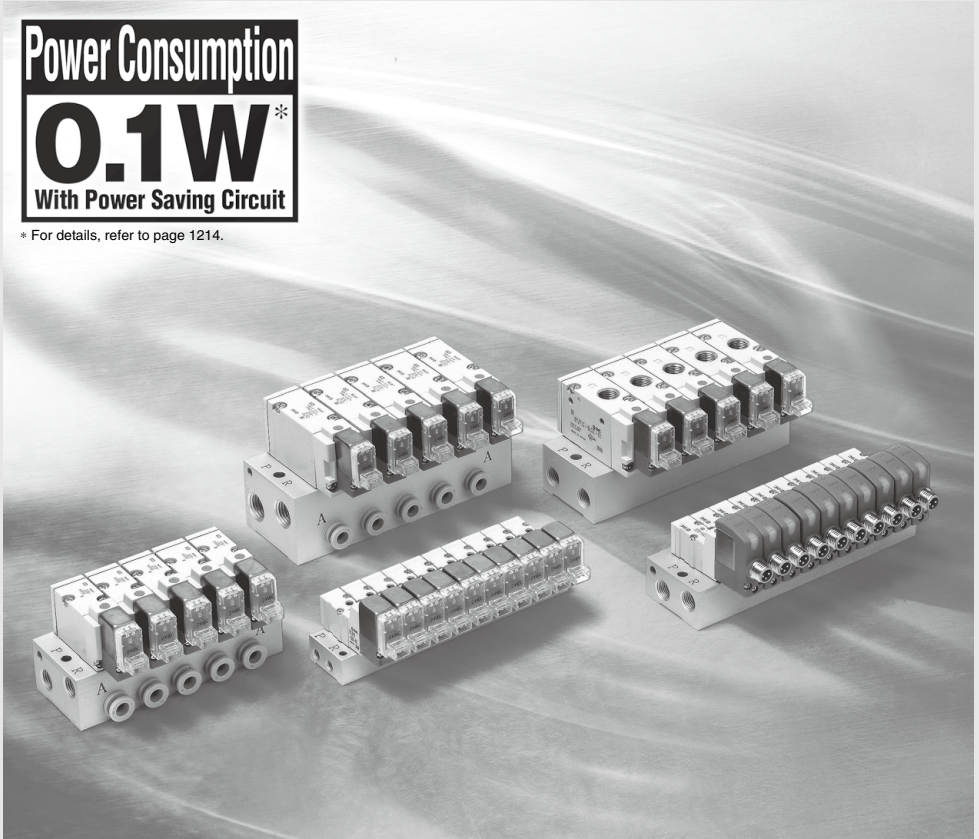
SYJ300/500/700 Series

Rubber Seal

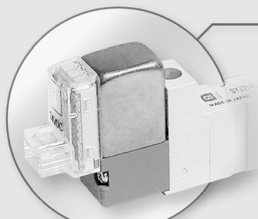
CE
[Option]

Power Consumption
0.1W*
With Power Saving Circuit

* For details, refer to page 1214.



SYJ
VQZ
VP
VG
VP3



Cover (stainless steel)

Improved pilot valve






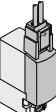




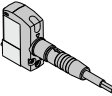
Pilot valve cover is stronger using stainless steel.
Mounting thread is also reinforced from size M1.7 to M2.

Flow Rate Characteristics

Series	Flow rate characteristics		
	C [dm ³ /(s·bar)]	b	Cv
SYJ300	0.36	0.31	0.089
SYJ500	1.2	0.41	0.32
SYJ700	2.7	0.38	0.72

Rubber Seal 3 Port Solenoid Valve **SYJ300/500/700 Series**

Variations

	Series	Port size	Sonic conductance C [dm ³ /(s·bar)]	Type of actuation	Voltage	Electrical entry	Option	Manual override
							Light/Surge voltage suppressor	
Body ported	SYJ300  P.1160	M3 x 0.5	[Effective area 0.9 mm ² { 2→3 } { (A→R) }]			Grommet 		
	SYJ500  P.1174	M5 x 0.8	0.66 { 2→3 } { (A→R) }			L plug connector 		
	SYJ700  P.1192	1/8	2.5 { 2→3 } { (A→R) }		For DC ■ 24 VDC 12 VDC 6 VDC 5 VDC 3 VDC	M plug connector 	For DC ■ With surge voltage suppressor ■ With light/surge voltage suppressor	■ Non-locking push type
Base mounted	SYJ300  P.1160	M5 x 0.8	0.36 { 2→3 } { (A→R) }	● N.C. ● N.O.	For AC ■ 100 VAC $\frac{50}{60}$ Hz 110 VAC $\frac{50}{60}$ Hz 200 VAC $\frac{50}{60}$ Hz 220 VAC $\frac{50}{60}$ Hz		For AC (Note) ■ With light/surge voltage suppressor	■ Push-turn locking slotted type
	SYJ500  P.1174	1/8	1.2 { 2→3 } { (A→R) }			DIN terminal  (SYJ500, 700 only)		■ Push-turn locking lever type
	SYJ700  P.1192	1/8, 1/4	2.7 { 2→3 } { (A→R) }			M8 connector 		

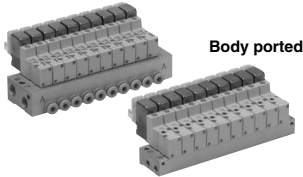
Note) All AC voltage models have built-in surge voltage suppressor.

Manifold Variations

Valve series	A port location	P, R ports size	A port size								
			M3	M5	1/8	With One-touch fitting					
						Applicable tubing O.D.					
			ø4	ø6	ø8	N3	N7	N9			
Body ported	SYJ300 P.1166	Top	M5 x 0.8	● ^{Note 1)}	—	—	—	—	—	—	—
		1/8	● ^{Note 2)}	—	—	—	—	—	—	—	
	SYJ500 P.1180	Top	1/8	—	●	—	—	—	—	—	—
SYJ700 P.1198	Top	1/8	—	—	● ^{Note 1)}	—	—	—	—	—	
		1/4	—	—	●	—	—	—	—	—	
Base mounted	SYJ300 P.1166	Side	M5 x 0.8	● ^{Note 1)}	—	—	—	—	—	—	
			1/8	—	●	—	●	—	●	—	
	SYJ500 P.1180	Bottom	1/8	—	●	●	—	—	—	—	
		Side		—	●	●	●	●	—	●	
	SYJ700 P.1198	Bottom	1/8	—	—	● ^{Note 1)}	—	—	—	—	
			1/4	—	—	●	—	—	—	—	
Side	1/4	—	—	—	●	●	●	—	●		

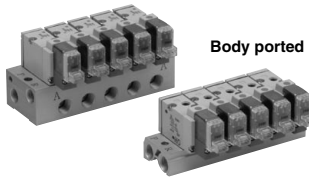
Note 1) Only for internal pilot
 Note 2) Only for external pilot

Base mounted



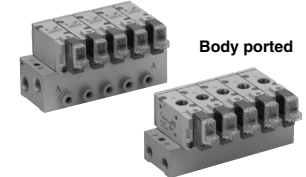
SYJ300 series

Base mounted



SYJ500 series

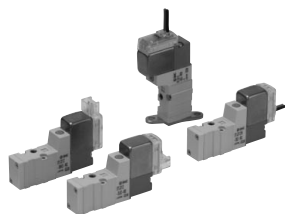
Base mounted



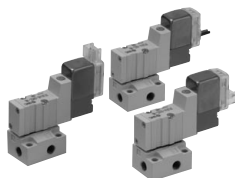
SYJ700 series

- SYJ**
- VQZ**
- VP**
- VG**
- VP3**

Rubber Seal 3 Port Pilot Solenoid Valve **SYJ300 Series**



Body ported



Base mounted

Specifications

Fluid		Air
Operating pressure range (MPa)	Internal pilot	0.15 to 0.7
Ambient and fluid temperature (°C)		-10 to 50 (No freezing.)
Response time ms (at 0.5 MPa) ^{Note 1)}		15 or less
Max. operating frequency (Hz)		10
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
Impact/Vibration resistance (m/s²) ^{Note 2)}		150/30
Enclosure		Dust proof (* M8 connector conforms to IP65.)

* Based on IEC60529

Note 1) Based on dynamic performance test, JIS B 8419: 2010. (Coil temperature: 20°C, at rated voltage, without surge voltage suppressor.)

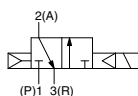
Note 2) Impact resistance: No malfunction occurred when it is tested in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Value in the initial state)

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Value in the initial state)

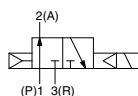
Symbol

Internal pilot

SYJ31²

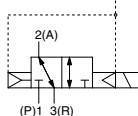


SYJ32²

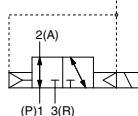


External pilot

SYJ31²R



SYJ32²R



Solenoid Specifications

Electrical entry		Grommet (G), (H), L plug connector (L), M plug connector (M), M8 connector (W)	
Coil rated voltage (V)	DC	24, 12, 6, 5, 3	
	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)
		With power saving circuit	0.1 (With light only) * [Starting 0.4, Holding 0.1]
Apparent power (VA) *	AC	100 V	0.78 (With light: 0.81)
		110 V	0.86 (With light: 0.89)
		[115 V]	[0.94 (With light: 0.97)]
		200 V	1.18 (With light: 1.22)
		220 V	1.30 (With light: 1.34)
		[230 V]	[1.42 (With light: 1.46)]
Surge voltage suppressor		Diode (Varistor when non-polar types)	
Indicator light		LED	

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

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

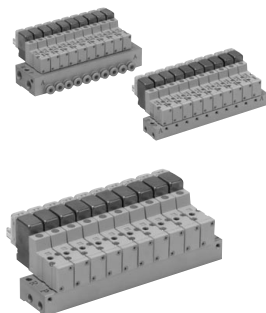
* For details, refer to page 1214.



Made to Order

(For details, refer to pages 1210 and 1211)

SYJ300 Series Manifold Specifications



Manifold Specifications

Model	For internal pilot	Type 20	Type 41, S41	Type 42, S42
	For external pilot	Type 20R	—	Type 42R, S42R
Manifold type		Single base/B mount		
P (SUP), R (EXH)		Common SUP/Common EXH		
Valve stations		2 to 20 stations		
A port	Location	Valve	Base	
	Direction	Top	Side	
Porting specifications	P, R port	$\frac{M5 \times 0.8}{\varnothing}$	M5 x 0.8	$\frac{1}{8}$
		A port	M3 x 0.5	M3 x 0.5
	X port <small>Note)</small>	M5 x 0.8	—	M5 x 0.8

Note) Only for external pilot

Flow Rate Characteristics

Manifold			Port size		Flow rate characteristics						Effective area (mm ²)
					1→2 (P→A)			2→3 (A→R)			
					C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv	
Body ported for internal pilot	Type SS3YJ3-20	SYJ3□2	M5 x 0.8	M3 x 0.5	—	—	—	—	—	—	0.9
	Type SS3YJ3-41 S41	SYJ3□4	M5 x 0.8	M3 x 0.5	—	—	—	—	—	—	1.5
Base mounted for internal pilot	Type SS3YJ3-42-M5	SYJ3□4	1/8	M5 x 0.8	0.31	0.17	0.075	0.32	0.11	0.072	—
	C4			0.33	0.36	0.086	0.33	0.2	0.082	—	
	Type SS3YJ3-S42-M5	SYJ3□4	1/8	M5 x 0.8	0.32	0.3	0.079	0.33	0.35	0.086	—
	C4			0.35	0.17	0.082	0.35	0.26	0.086	—	
Body ported for external pilot	Type SS3YJ3-20R	SYJ3□2R	1/8	M3 x 0.5	—	—	—	—	—	—	0.9
	Type SS3YJ3-42R-M5	SYJ3□4R	1/8	M5 x 0.8	0.31	0.17	0.075	0.32	0.11	0.072	—
Type SS3YJ3-42R-C4	C4			0.33	0.36	0.086	0.33	0.20	0.082	—	
Type SS3YJ3-S42R-M5	M5 x 0.8			0.32	0.30	0.079	0.33	0.35	0.086	—	
Type SS3YJ3-S42R-C4	C4			0.35	0.17	0.082	0.35	0.26	0.086	—	

Note) Value at manifold base mounted, 2 position single acting

How to Order Manifold (Example)

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

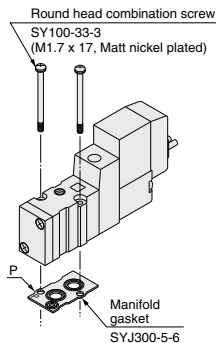
(Example)

SS3YJ3-20-03 1 set (manifold base) SS3YJ3-42R-03-C4 1 set (manifold base)
 *SYJ312-5LZ-M3 2 sets (valve) *SYJ314R-5G 2 sets (valve)
 *SYJ300-10-7A 1 set (blanking plate assembly) *SYJ300-10-7A 1 set (blanking plate assembly)

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

Combinations of Solenoid Valve, Manifold Gasket and Manifold Base

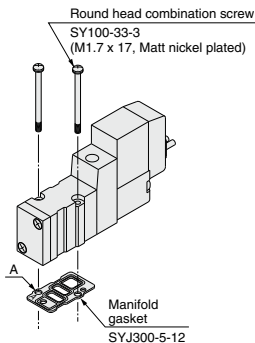
Body ported (Type SYJ3□2(R)-(-Q))



Applicable base

SS3YJ3-20(-Q) | Manifold
SS3YJ3-20R(-Q) | base

Base mounted (Type SYJ3□4(R)-(-Q))

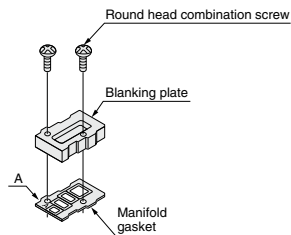


Applicable base Sub-plate

SS3YJ3-41(-Q)
SS3YJ3-S41(-Q)
SS3YJ3-42(-Q)
SS3YJ3-S42(-Q)
SS3YJ3-42R(-Q)
SS3YJ3-S42R(-Q) } Manifold
base

Blanking Plate Assembly

Part no.: SYJ300-10-7A(-Q)



Applicable base Sub-plate

SS3YJ3-20(-Q)
SS3YJ3-20R(-Q)
SS3YJ3-41(-Q)
SS3YJ3-S41(-Q)
SS3YJ3-42(-Q)
SS3YJ3-S42(-Q)
SS3YJ3-42R(-Q)
SS3YJ3-S42R(-Q) } Manifold
base

Note) Add suffix "-Q" for the CE-compliant product.

Caution

Mounting screw tightening torques

M1.7: 0.12 N·m

Use caution to the assembly orientation for solenoid valves, gasket and optional parts.

SYJ

VQZ

VP

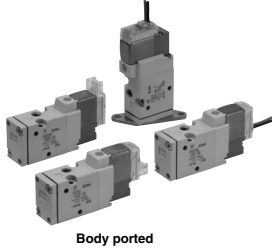
VG

VP3

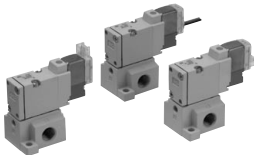
Rubber Seal 3 Port Pilot Solenoid Valve **SYJ500 Series**



Specifications



Body ported



Base mounted

Fluid		Air
Operating pressure range (MPa)	Internal pilot	0.15 to 0.7
Ambient and fluid temperature (°C) –10 to 50 (No freezing.)		
Response time ms (at 0.5 MPa) ^{Note 1)} 25 or less		
Max. operating frequency (Hz) 5		
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		
Impact/Vibration resistance (m/s²) ^{Note 2)} 150/30		
Enclosure		Dust proof (* DIN terminal, M8 connector conforms to IP65.)

* Based on IEC60529

Note 1) Based on dynamic performance test, JIS B 8419: 2010. (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 at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Value in the initial state)

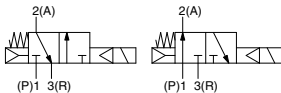
Solenoid Specifications

Symbol

Internal pilot

SYJ51 $\frac{2}{4}$

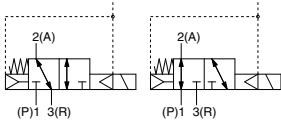
SYJ52 $\frac{2}{4}$



External pilot

SYJ51 $\frac{2}{4}$ R

SYJ52 $\frac{2}{4}$ R



Electrical entry		Grommet (G), (H), L plug connector (L), M plug connector (M), DIN terminal (D), (Y), M8 connector (W)	
Coil rated voltage (V)	DC	G, H, L, M, W	D, Y
	AC 50/60 Hz	24, 12, 6, 5, 3	24, 12
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) * [Starting 0.4, Holding 0.1]
Apparent power (VA) *	AC	100 V	0.78 (With light: 0.81) 0.78 (With light: 0.87)
		110 V [115 V]	0.86 (With light: 0.89) 0.86 (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 [230 V]	1.30 (With light: 1.34) 1.27 (With light: 1.46) 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 VAC and 230 VAC, the allowable voltage is –15% to +5% of rated voltage.

* For details, refer to page 1214.



Made to Order

(For details, refer to pages 1210 and 1211.)

Flow Rate Characteristics/Weight

Valve model		Type of actuation	Port size	Flow rate characteristics						Weight (g) ^{Note)}			
				1→2 (P→A)			2→3 (A→R)			Grommet	L/M plug connector	DIN terminal	M8 connector
				C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv				
Body ported	SYJ512	N.C.	M5 x 0.8	0.53	0.45	0.14	0.47	0.39	0.12	46	47	68	51
	SYJ522	N.O.		0.66	0.45	0.18	0.66	0.45	0.18				
Base mounted (with sub-plate)	SYJ514	N.C.	1/8	1.2	0.41	0.32	1.1	0.46	0.32	60 (46)	61 (47)	82 (68)	65 (51)
	SYJ524	N.O.		1.3	0.37	0.33	1.2	0.48	0.34				

Note) Value for DC. Add 3 g for AC. (): Without sub-plate.

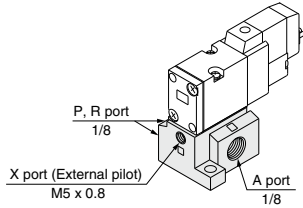
External Pilot

SYJ500R

Pilot valve pressure is supplied separately from the main valve pressure through the use of a separate supply port. It can be used in the vacuum (up to -100 kPa) or low pressure line with 0.15 MPa or less.

Specifications

Applicable model	Base mounted (SYJ514R, SYJ524R)	
Operating pressure range MPa	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7



Note 1) For manifold base, refer to page 1180.

Note 2) External pilot type body ported valves (SYJ5□2R) can only be used on the manifold. For body ported models with the external pilot option, please refer to page 1211.

SYJ

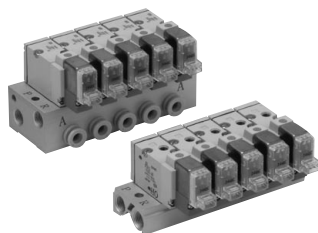
VQZ

VP

VG

VP3

SYJ500 Series Manifold Specifications



Manifold Specifications

Model	For internal pilot	Type 20	Type 40	Type 41
	For external pilot	Type 21R	Type 40R	Type 41R
Manifold type		Single base/B mount		
P (SUP), R (EXH)		Common SUP, common EXH		
Valve stations		2 to 20 stations		
A port Porting specifications	Location	Valve	Base	
	Direction	Top	Bottom	Side
Port size	P, R port	1/8	1/8	1/8
	A port	M5 x 0.8	M5 x 0.8 1/8	M5 x 0.8, 1/8, C4 (One-touch fitting for ø4), C6 (One-touch fitting for ø6)
	X port <small>(Note)</small>	M5 x 0.8	M5 x 0.8	M5 x 0.8

Note) Only for external pilot

Flow Rate Characteristics

Manifold			Port size		Flow rate characteristics					
					1→2 (P→A)			2→3 (A→R)		
			1(P), 3(R) port	2(A) port	C [dm ³ /(sbar)]	b	Cv	C [dm ³ /(sbar)]	b	Cv
Body ported for internal pilot	Type SS3YJ5-20	SYJ5□2	1/8	M5 x 0.8	0.47	0.43	0.13	0.74	0.32	0.19
	Type SS3YJ5-40-M5	SYJ5□4	1/8	M5 x 0.8	0.71	0.52	0.21	0.81	0.28	0.20
Type SS3YJ5-40-Ø1	1/8		1/8	0.98	0.36	0.25	0.92	0.24	0.22	
Type SS3YJ5-41-M5	1/8		M5 x 0.8	0.71	0.49	0.20	0.80	0.23	0.19	
Type SS3YJ5-41-Ø1	1/8		1/8	1.0	0.37	0.26	0.96	0.25	0.24	
Type SS3YJ5-41-C4	1/8		C4	0.68	0.35	0.17	1.0	0.25	0.24	
Type SS3YJ5-41-C6	1/8		C6	1.0	0.27	0.25	1.0	0.30	0.26	
Body ported for external pilot	Type SS3YJ5-21R	SYJ5□2R	1/8	M5 x 0.8	0.47	0.43	0.13	0.74	0.32	0.19
Body ported for external pilot	Type SS3YJ5-40R-M5	SYJ5□4R	1/8	M5 x 0.8	0.71	0.52	0.21	0.81	0.28	0.20
	Type SS3YJ5-40R-Ø1		1/8	1/8	0.98	0.36	0.25	0.92	0.24	0.22
	Type SS3YJ5-41R-M5		1/8	M5 x 0.8	0.71	0.49	0.20	0.80	0.23	0.19
	Type SS3YJ5-41R-Ø1		1/8	1/8	1.0	0.37	0.26	0.96	0.25	0.24
	Type SS3YJ5-41R-C4		1/8	C4	0.68	0.35	0.17	1.0	0.25	0.24
	Type SS3YJ5-41R-C6		1/8	C6	1.0	0.27	0.25	1.0	0.30	0.26

Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold (Example)

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

(Example)

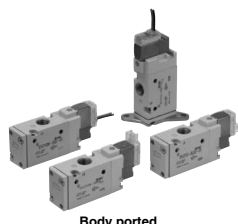
SS3YJ5-20-Ø3 1 set (manifold base) SS3YJ5-41R-Ø3-C6 1 set (manifold base)
 * SYJ512-5LZ-M5 2 sets (valve) * SYJ514R-5G 2 sets (valve)
 * SYJ500-10-1A 1 set (blanking plate assembly) * SYJ500-10-3A 1 set (blanking plate assembly)

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

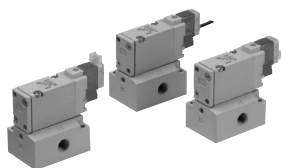
Rubber Seal 3 Port Pilot Solenoid Valve **SYJ700 Series**



Specifications



Body ported



Base mounted

Fluid		Air
Operating pressure range (MPa)	Internal pilot	0.15 to 0.7
Ambient and fluid temperature (°C)		-10 to 50 (No freezing.)
Response time ms (at 0.5 MPa) <small>Note 1)</small>		30 or less
Max. operating frequency (Hz)		5
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
Impact/Vibration resistance (m/s²) <small>Note 2)</small>		150/30
Enclosure		Dust proof (* DIN terminal, M8 connector: IP65)

* Based on IEC60529

Note 1) Based on dynamic performance test, JIS B 8419: 2010. (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)

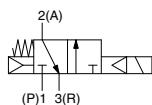
Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz.

Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Value in the initial state)

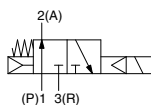
Symbol

Internal pilot

SYJ71 $\frac{2}{4}$

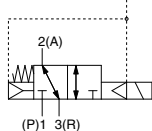


SYJ72 $\frac{2}{4}$

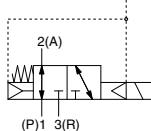


External pilot

SYJ71 $\frac{2}{4}$ R



SYJ72 $\frac{2}{4}$ R



Solenoid Specifications

Electrical entry		Grommet (G), (H), L plug connector (L), M plug connector (M), DIN terminal (D), (Y), M8 connector (W)	
		G, H, L, M, W	D, Y
Coil rated voltage (V)	DC	24, 12, 6, 5, 3	
	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) * [Starting 0.4, Holding 0.1]	
Apparent power (VA) *	AC	100 V	0.78 (With light: 0.81) 0.78 (With light: 0.87)
		110 V [115 V]	0.86 (With light: 0.89) 0.86 (With light: 0.97) [0.94 (With light: 0.97)]
		200 V	1.18 (With light: 1.22) 1.15 (With light: 1.30)
		220 V [230 V]	1.30 (With light: 1.34) 1.27 (With light: 1.46) [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 VAC and 230 VAC, the allowable voltage is -15% to +5% of rated voltage.

* For details, refer to page 1214.



Made to Order

(For details, refer to pages 1210 and 1211.)

Flow Rate Characteristics/Weight

Valve model		Type of actuation	Port size	Flow rate characteristics						Weight (g) ^(Note)			
				1→2 (P→A)			2→3 (A→R)			Grommet	L/M plug connector	DIN terminal	M8 connector
				C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv				
Body ported	SYJ712	N.C.	1/8	2.8	0.43	0.77	2.5	0.51	0.76	75	76	97	80
	SYJ722	N.O.		2.7	0.38	0.72	2.4	0.42	0.69				
Base mounted (with sub-plate)	SYJ714	N.C.	1/8	2.9	0.32	0.71	2.7	0.34	0.69	135 (75)	136 (76)	157 (97)	140 (80)
	SYJ724	N.O.	1/8	2.8	0.21	0.70	2.3	0.45	0.63				
	SYJ714	N.C.	1/4	3.0	0.31	0.74	2.6	0.33	0.66				
	SYJ724	N.O.		2.7	0.31	0.68	2.3	0.48	0.64				

Note) Value for DC. Add 3 g for AC. (): Without sub-plate.

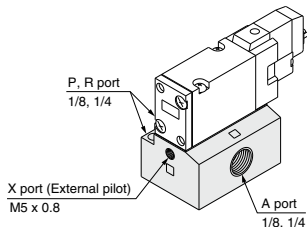
External Pilot

SYJ700R

Pilot valve pressure is supplied separately from the main valve pressure through the use of a separate supply port. It can be used in the vacuum (up to -100 kPa) or low pressure line with 0.15 MPa or less.

Specifications

Applicable model	Base mounted (SYJ714R, SYJ724R)	
Operating pressure range MPa	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7



- Note 1) For manifold base, refer to page 1198.
 Note 2) External pilot type body ported valves (SYJ□2R) can only be used on the manifold.
 For body ported models with the external pilot option, please refer to page 1211.

SYJ

VQZ

VP

VG

VP3

SYJ700 Series Manifold Specifications



Manifold Specifications



Model	For internal pilot	Type 20	Type 21	Type 40	Type 41	Type 42
	For external pilot	—	Type 21R	—	Type 41R	Type 42R
Manifold type		Single base/B mount				
P (SUP), R (EXH)		Common SUP, common EXH				
Valve stations		2 to 20 stations				
A port Porting specifications	Location	Valve	Valve	Base	Base	Base
	Direction	Top	Top	Bottom	Bottom	Side
Port size	P, R port	1/8	1/4	1/8	1/4	1/4
	A port	1/8	1/8	1/8	1/8	1/8 C6 (ø6 One-touch fitting) C8 (ø8 One-touch fitting)
	X port <small>Note)</small>	—	M3 x 0.8	—	M5 x 0.8	M5 x 0.8

Note) Only for external pilot

Flow Rate Characteristics

Manifold			Port size		Flow rate characteristics					
					1→2 (P→A)			2→3 (A→R)		
			1(P), 3(R) port	2(A) port	C [dm ³ /(sbar)]	b	Cv	C [dm ³ /(sbar)]	b	Cv
Body ported for internal pilot	Type SS3YJ7-20	SYJ7□2	1/8	1/8	2.2	0.34	0.55	2.3	0.27	0.59
	Type SS3YJ7-21		1/4	1/8	2.2	0.39	0.59	2.4	0.32	0.62
	Type SS3YJ7-40		1/8	1/8	2.1	0.35	0.59	2.3	0.27	0.54
Base mounted for internal pilot	Type SS3YJ7-41	SYJ7□4	1/4	1/8	2.2	0.35	0.59	2.4	0.36	0.66
	Type SS3YJ7-42-01		1/4	1/8	2.0	0.27	0.47	2.2	0.32	0.56
	Type SS3YJ7-42-C6		1/4	C6	1.6	0.32	0.39	2.2	0.27	0.54
	Type SS3YJ7-42-C8		1/4	C8	2.1	0.24	0.51	2.3	0.31	0.59
Body ported for external pilot	Type SS3YJ7-21R	SYJ7□2R	1/4	1/8	2.2	0.34	0.55	2.4	0.32	0.62
	Type SS3YJ7-41R		1/4	1/8	2.2	0.35	0.59	2.4	0.36	0.66
Base mounted for external pilot	Type SS3YJ7-42R-01	SYJ7□4R	1/4	1/8	2.0	0.27	0.47	2.2	0.32	0.56
	Type SS3YJ7-42R-C6		1/4	C6	1.6	0.32	0.39	2.2	0.27	0.54
	Type SS3YJ7-42R-C8		1/4	C8	2.1	0.24	0.51	2.3	0.31	0.59

Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold (Example)

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

(Example)

SS3YJ7-20-03 1 set (manifold base) SS3YJ7-42R-03-01 1 set (manifold base)

* SYJ712-5LZ-01 2 sets (valve) * SYJ714R-5G 2 sets (valve)

* SYJ700-10-1A 1 set (blanking plate assembly) * SYJ700-10-2A 1 set (blanking plate assembly)

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

M8 Connector Conforming to IEC60947-5-2

SYJ300/500/700 Series

Made to Order



How to Order Valve

Type of actuation

1	Normally closed
2	Normally open

Series

3	SYJ300
5	SYJ500
7	SYJ700

Rated voltage

DC	5	24 VDC
6	12 VDC	
V	6 VDC	
S	5 VDC	
R	3 VDC	

Light/Surge voltage suppressor

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)

Bracket

Nil	Without bracket
F	With bracket

Port size

M5	M5 x 0.8
01	1/8 (SYJ700 only)

Body option

Nil	Pilot valve individual exhaust
M	Common exhaust type for main and pilot valve
R	External pilot*

Electrical entry

WAO: Without connector

WA□: With connector ^{Note}

CE-compliant

Nil	—
Q	CE-compliant

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Port size

Nil	Without sub-plate	
M5	M5 port	SYJ300
	With sub-plate	
01	1/8 port	SYJ500
	With sub-plate	SYJ700
02	1/4 port	SYJ700
	With sub-plate	

Manual override

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

Body ported SYJ 5 1 2 □ - 5 WAO □ □ - M5 - □ - □

Base mounted SYJ 5 1 4 □ - 5 WAO □ □ - 01 - □ - □

3 port (Manifold types 20, 20R, 21R)

3 port (Sub-plate type, manifold types 40, 40R, 41, 41R, S41, 42, S42, 42R, S42R)

* SYJ□2R, SYJ5□2R, SYJ7□2R are only for manifold use.

Note) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 1217.

How to Order Pilot Valve Assembly

V111 - 5 WAO □ □

Rated voltage

DC	5	24 VDC
6	12 VDC	
V	6 VDC	
S	5 VDC	
R	3 VDC	

Light/Surge voltage suppressor

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)

Electrical entry

WAO	M8 connector	Without connector
WA□		With connector ^{Note}

Note) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 1217.

Note) Since V111 is CE-compliant as standard, the suffix "Q" is not necessary.

SYJ500/700 Series

Made to Order

For detailed specifications, delivery and pricing, please contact SMC.



Note) AC-type models that are CE-compliant have DIN terminals only.

Body Ported External Pilot

How to Order Applicable solenoid valve series/SYJ5□2R, SYJ7□2R



• CE-compliant

NII	—
Q	CE-compliant

Note) AC-type models that are CE-compliant have DIN terminals only.

Operating Pressure Range MPa

Operating pressure range	-100 kPa to 0.7
Pilot pressure range	0.15 to 0.7

Dimensions

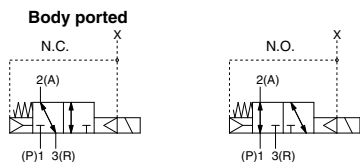
SYJ500: 8 mm longer in total length

SYJ700: 8 mm longer in total length

External Pilot Port

Series	Port size
SYJ500, SYJ700	M5 x 0.8

Symbol



SYJ

VQZ

VP

VG

VP3