

3 Port Solenoid Valve

Series *SYJ300/500/700*

Power Consumption
0.1 W
With Power Saving Circuit



Improved pilot valve

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

Flow Characteristics

| Series | Flow 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 |

V100

SY

SYJ

VK

VZ

VT

VP

VG

VP

S070

VQ

VKF

VQZ

VZ


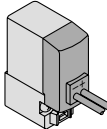

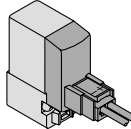

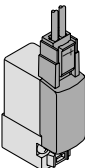

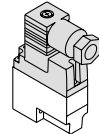

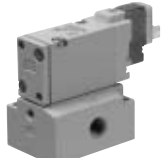
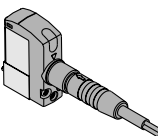
VS

VFN

3 Port Solenoid Valve Rubber Seal

Series SYJ300/500/700

Series Variations

| | Series | Port size | Sonic conductance C [dm ³ /(s·bar)] | Type of actuation | Voltage | Electrical entry | Option | Manual override | | |
|--------------|---|-----------|---|-------------------|---|--|--|---|--|--|
| | | | | | | | With light/surge voltage suppressor | | | |
| Body Ported | SYJ300  P. 4-4-4 | M3 x 0.5 | [Effective area 0.9 mm ² { 2 → 3 } { (A → R) }] | • N.C. • N.O. | For DC ■ 24 VDC 12 VDC 6 VDC 5 VDC 3 VDC For AC ■ 100 VAC ⁵⁰ / ₆₀ Hz 110 VAC ⁵⁰ / ₆₀ Hz 200 VAC ⁵⁰ / ₆₀ Hz 220 VAC ⁵⁰ / ₆₀ Hz | Grommet  | For DC ■ With surge voltage suppressor ■ With light/surge voltage suppressor For AC ^{Note)} ■ With light/surge voltage suppressor | ■ Non-locking push type ■ Push-turn locking slotted type ■ Push-turn locking lever type | | |
| | SYJ500  P. 4-4-18 | M5 x 0.8 | 0.66 { 2 → 3 } { (A → R) } | | | L plug connector  | | | | |
| | SYJ700  P. 4-4-37 | 1/8 | 2.5 { 2 → 3 } { (A → R) } | | | M plug connector  | | | | |
| Base Mounted | SYJ300  P. 4-4-4 | M5 x 0.8 | 0.36 { 2 → 3 } { (A → R) } | | | DIN terminal  (SYJ500, 700 only) | | | | |
| | SYJ500  P. 4-4-18 | 1/8 | 1.2 { 2 → 3 } { (A → R) } | | | | | | | |
| | SYJ700  P. 4-4-37 | 1/8, 1/4 | 2.7 { 2 → 3 } { (A → R) } | | | M8 connector  | | | | |



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

3 Port Pilot Operated Solenoid Valve Rubber Seal Series SYJ700

Flow Characteristics/Weight

| Valve model | | Type of actuation | Port size | Flow characteristics | | | | | | Weight (g) ^{Note)} | | | |
|-------------------------------|--------|-------------------|-----------|----------------------|------|------|-----------------|------|------|-----------------------------|--------------------|--------------|--------------|
| | | | | 1 → 2 (P → A) | | | 2 → 3 (A → R) | | | Grommet | L/M plug connector | DIN terminal | M8 connector |
| | | | | C [dm³/(s bar)] | b | Cv | C [dm³/(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. | | 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.

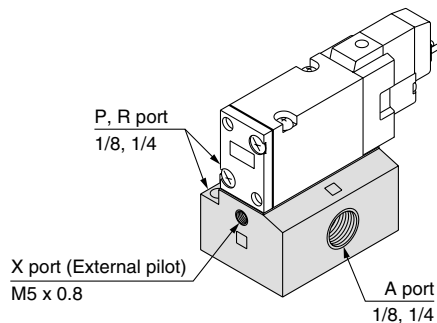
External Pilot

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 4-4-42.
Note 2) External pilot type body ported valves (SYJ7□2R) can only be used on the manifold. For body ported models with the external pilot option, please refer to page 4-4-55.

V100

SY

SYJ

VK

VZ

VT

VP

VG

VP

S070

VQ

VKF

VQZ

VZ

VS

VFN

How to Order

Rated voltage

DC

| | |
|---|--------|
| 5 | 24 VDC |
| 6 | 12 VDC |
| V | 6 VDC |
| S | 5 VDC |
| R | 3 VDC |

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

AC (50/60 Hz)

| | |
|---|-------------------|
| 1 | 100 VAC |
| 2 | 200 VAC |
| 3 | 110 VAC [115 VAC] |
| 4 | 220 VAC [230 VAC] |

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

Type of actuation

| | |
|---|-----------------|
| 1 | Normally closed |
| 2 | Normally open |

3 port

(For manifold type 20, 21R)

Light/Surge voltage suppressor

Electrical entry for G, H, L, M and 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.

Bracket

Nil: Without bracket
F: With bracket

* Bracket is mounted.
* External pilot type is not available.

Thread type

| | |
|-----|------|
| Nil | Rc |
| F | G |
| N | NPT |
| T | NPTF |

Body option

Nil: Individual pilot exhaust type

R port P, E port

M: Common exhaust for the pilot and main valve

R port P, E port

R: External pilot type*

* SYJ7□2R is only for manifold use.

Coil specifications

| | |
|-----|---|
| Nil | Standard |
| T | With power saving circuit (24, 12 VDC only) |

* Power saving circuit is not available in the case of "D", "DO", "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 01: 1/8 port With sub-plate 02: 1/4 port With sub-plate

(With gasket and screws)

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 | | 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 | |

(Note) When placing an order for body ported solenoid valve as a single unit, mounting bolt for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to page 4-4-43.)

* "LN", "MN" type: with 2 sockets.
* DIN terminal "Type Y" conforming to DIN43650C standard is also available. For details, refer to page 4-4-54.
* For connector cable of M8 connector, refer to page 4-4-60.