

How to Order Valves

SQ2 1 3 0 **- 5** **1 - C6** **-** **-** **-**

Seal

0	Metal seal
1	Rubber seal

CE compliant

Nil	—
Q	CE compliant

Type of actuation

1	2 position single (A)4 2(B) (R1)5 1 3(R2) (P)
2	2 position double (Double solenoid) (1) (A)4 2(B) (A)4 2(B) (R1)5 1 3(R2) (R1)5 1 3(R2) (P) (P) Metal seal Rubber seal
3	3 position closed center (A)4 2(B) (R1)5 1 3(R2) (P)
4	3 position exhaust center (A)4 2(B) (R1)5 1 3(R2) (P)
5	3 position pressure center (A)4 2(B) (R1)5 1 3(R2) (P)
A (2)	4 position dual 3 port valve 4(A) 2(B) 5(R1) 1(P) 3(R2)
B (2)	4 position dual 3 port valve 4(A) 2(B) 5(R1) 1(P) 3(R2)
C (2)	4 position dual 3 port valve 4(A) 2(B) 5(R1) 1(P) 3(R2)

Note 1) For double solenoid specification, the function symbol below is "D".
Note 2) Only rubber seal types are applicable.

Function

Symbol	Specifications
Nil	Standard type (0.4 W)
B	Quick response type (0.95 W)
D (1)	2 position double (Double solenoid specifications)
N (2)	Negative common
R (3)	External pilot specifications

Note 1) "D" is specified for 2 position double.
Note 2) Negative common specifications are not available for the S kit.
Note 3) Except dual 3 port valves.
Note 4) When two or more symbols are specified, indicate them alphabetically.

With/Without manifold block

Nil	M	MB
Without manifold block	With manifold block	With manifold block, built-in back pressure check valve
	 * Lead wire is not included.	 * Lead wire is not included.
• When ordering with manifolds • When only valves are required.	For adding stations	

Port plug mounting port

Nil	None
A	Port 4(A)
B	Port 2(B)

Cylinder port

Symbol	Port size	Port location
C4	With One-touch fittings for ø4	Side ported
C6	With One-touch fittings for ø6	
C8	With One-touch fittings for ø8	Top ported (1)
L4	With One-touch fittings for ø4	
L6	With One-touch fittings for ø6	
L8	With One-touch fittings for ø8	

Note 1) Can be changed to side ported configuration.
Note 2) Refer to page 54 for the inch-size One-touch fittings.

Manual override

Nil	B	D
Non-locking push type (Tool required)	Locking type (Tool required)	Slide locking type (Manual type) * Only side ported type applicable

Rated voltage

5	24 VDC
6	12 VDC

Note 1) Light/surge voltage suppressor is built-in.
Note 2) S kit: 24 VDC only

Plug-in
Plug Lead
SQ1000
SQ2000

EX510

F kit

P kit

J kit

T kit

L kit

S kit

C kit

Manifold Options

How to Increase Manifold Stations

Construction

Manifold Exploded View

Valve Specifications

Model

Series			Type of actuation		Seal	Model	Flow characteristic ⁽¹⁾						Response time (ms) ⁽²⁾		Weight (g)
							1→4/2 (P→A/B)			4/2→5/3 (A/B→R1/R2)			Standard (0.4 W)	Quick response (0.95 W)	
							C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv			
SQ2000	2 position	Single	Metal seal	SQ2130	2.2	0.17	0.51	2.4	0.14	0.57	35 or less	20 or less	145		
			Rubber seal	SQ2131	2.3	0.17	0.51	3.1	0.18	0.71	31 or less	24 or less	140		
		Double	Metal seal	SQ2230D	2.2	0.17	0.51	2.4	0.14	0.57	20 or less	15 or less	160		
			Rubber seal	SQ2231D	2.3	0.17	0.51	3.1	0.18	0.71	26 or less	20 or less	155		
	3 position	Closed center	Metal seal	SQ2330	1.9	0.17	0.46	2.1	0.15	0.47	56 or less	37 or less	180		
			Rubber seal	SQ2331	1.9	0.17	0.46	1.8	0.29	0.47	44 or less	34 or less	175		
		Exhaust center	Metal seal	SQ2430	1.9	0.17	0.46	2.4	0.14	0.55	56 or less	37 or less	180		
			Rubber seal	SQ2431	1.9	0.17	0.46	3.1	0.14	0.65	44 or less	34 or less	175		
		Pressure center	Metal seal	SQ2530	2.3	0.17	0.51	2.1	0.18	0.47	56 or less	37 or less	180		
			Rubber seal	SQ2531	2.5	0.17	0.56	1.8	0.30	0.47	44 or less	34 or less	175		
	1 position	Dual 3 port valve	Rubber seal	SQ2531 _{A/C}	1.5	0.17	0.40	1.5	0.17	0.40	34 or less	19 or less	155		

Note 1) Values for the top ported cylinder port size of C8. CYL → Values of EXH. The side ported type will be about 10% less.
 Note 2) Based on JIS B 8375-1981. (Values with a supply pressure of 0.5 MPa and light/surge voltage suppressor. Values fluctuate depending on the pressure and air quality.)



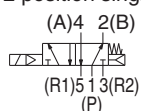
Specifications

Valve specifications	Valve construction		Metal seal	Rubber seal
	Fluid		Air/Inert gas	
	Maximum operating pressure		0.7 MPa	
	Min. operating pressure	Single	0.1 MPa	0.15 MPa
		Double (Double solenoid)	0.1 MPa	0.1 MPa
		3 position	0.1 MPa	0.2 MPa
		4 position	—	0.15 MPa
	Ambient fluid temperature		-10 to 50°C ⁽¹⁾	
	Lubrication		Not required	
	Pilot valve manual override		Push type (Tool required)/Locking type (Tool required)/Slide locking type (Manual type)	
Solenoid specifications	Vibration/Impact resistance ⁽²⁾		30/150 m/s ²	
	Protection structure		Dust tight	
	Coil rated voltage		12 VDC, 24 VDC	
	Allowable voltage fluctuation		±10% of rated voltage	
	Coil insulation type		Equivalent to class B	
	Power consumption (Current)	24 VDC	0.4 W DC (17 mA), 0.95 W DC (40 mA) ⁽³⁾	
		12 VDC	0.4 W DC (34 mA), 0.95 W DC (80 mA) ⁽³⁾	

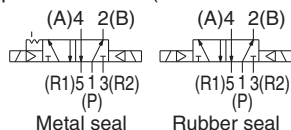
Note 1) Use dry air to prevent condensation when operating at low temperatures.
 Note 2) Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)
 Impact resistance: No malfunction occurred when it is tested with a drop tester 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.
 Note 3) Value for quick response type.

JIS Symbol

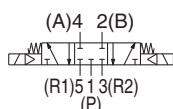
2 position single



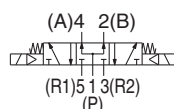
2 position double (Double solenoid)



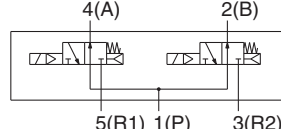
3 position closed center



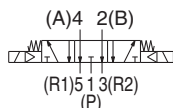
3 position pressure center



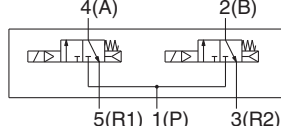
4 position dual 3 port valve (B)



3 position exhaust center



4 position dual 3 port valve (A)



4 position dual 3 port valve (C)

