### Rubber Seal 4/5 Port Solenoid Valve

# **SYJ3000/5000/7000** Series

#### **Variations**

vari	ations						
	Series	Sonic conductance: C [dm³/(s·bar)]	Type of actuation	Voltage	Electrical entry	Option  With light/surge voltage suppressor	Manual override
Body ported	SYJ3000 P. 150 SYJ5000 P. 178 SYJ7000 P. 210	$\begin{bmatrix} \text{Effective area} \\ 0.9 \text{ mm}^2 \\ \left\{ 4/2 \rightarrow 5/3 \\ \left\{ (\text{A/B} \rightarrow \text{EA/EB}) \right\} \end{bmatrix} \\ \\ 0.47 \\ \left\{ 4/2 \rightarrow 5/3 \\ \left\{ (\text{A/B} \rightarrow \text{EA/EB}) \right\} \end{bmatrix} \\ \\ 2.4 \\ \left\{ 4/2 \rightarrow 5/3 \\ \left\{ (\text{A/B} \rightarrow \text{EA/EB}) \right\} \end{bmatrix}$	2 Position  • Single • Double	For DC  124 VDC 12 VDC 6 VDC 5 VDC 3 VDC	Grommet  L plug connector  M plug connector	For DC  With surge voltage suppressor  With light/surge voltage suppressor	■ Non-locking
Base mounted	SYJ3000 P. 150 SYJ5000			■ 100 VAC <sup>®</sup> / <sub>cs</sub> Hz 110 VAC <sup>®</sup> / <sub>cs</sub> Hz 200 VAC <sup>®</sup> / <sub>cs</sub> Hz 220 VAC <sup>®</sup> / <sub>cs</sub> Hz	DIN terminal  (SYJ5000, 7000 only)	For AC Note)  ■ With light/surge voltage suppressor	push type  Push-turn locking slotted type  Push-turn locking lever type
	SYJ7000 P.210	$ \begin{cases} 2.9 \\ 4/2 \rightarrow 5/3 \\ (A/B \rightarrow EA/EB) \end{cases} $			M8 connector		

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

SV SYJ SZ

VP4 VQ 1/2

VQC 1/2 VQC 4/5 VQZ SQ VFS VFR

#### **Rubber Seal** 4/5 Port Solenoid Valve

## SYJ3000 Series





Body ported



Base mounted

4 port (manifold)

2 position double

(B)2 4(A)

3 position exhaust center (B)2

4(A)

1 3(R) (P)

4(A)

3 position pressure center

(B)2

ition closed center

Symbol

5 port

<del>75</del>₩ (R)3 1 5(R) 2 position double

1 5(R) (P) (R)3 3 position closed cente

(B)2

(R)3 15(R) 3 position exhaust cente

(R)3 15(R) (P)

1 5(R) (P) (R)3

3 position pressure cente

(B)2 4(A)

## **Specifications**

Fluid		Air
O	2 position single	0.15 to 0.7
Operating pressure range (MPa)	2 position double	0.1 to 0.7
( 4)	3 position	0.2 to 0.7
Ambient and fluid tempera	ture (°C)	-10 to 50 (No freezing)
Response time (ms) Note 1)	2 position single, double	15 or less
(at 0.5 MPa)	3 position	30 or less
Max. operating	2 position single, double	10
frequency (Hz)	3 position	3
Manual override (Manual o	peration)	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	e (m/s²) <sup>Note 2)</sup>	150/30
Enclosure		Dust proof (* M8 connector conforms to IP65.)

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

and animation in control in the initial state)

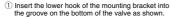
No malfunction occurred in one sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Value in the initial state)

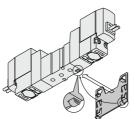
#### Solenoid Specifications

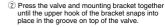
Electrical entry			Grommet (G), (H), L plug connector (L), M plug connector (M), M8 connector (W)
Coil rated voltage (V)		DC	24, 12, 6, 5, 3
Con rated voltage (v)		AC 50/60 Hz	100, 110, 200, 220
Allowable voltage fluctua	tion		±10% of rated voltage *
		Standard	0.35 (With light: 0.4)
Power consumption (W)	DC	With power saving circuit	0.1 (With light only) * [Starting 0.4, Holding 0.1]
		100 V	0.78 (With light: 0.81)
Apparent power (VA) *	AC	110 V [115 V]	0.86 (With light: 0.89) [0.94 (With light: 0.97)]
Apparent power (VA)	AC	200 V	1.18 (With light: 1.22)
		220 V [230 V]	1.30 (With light: 1.34) [1.42 (With light: 1.46)]
Surge voltage suppresso	r	-	Diode (Non-polarity type: Varistor)
Indicator light		LED	

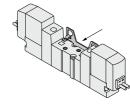
- For 115 VAC and 230 VAC, the allowable voltage is –15% to +5% of rated voltage. For details refer to page 242.

#### **Bracket Mounting**











#### Flow Rate Characteristics/Weight

				Port	size	We	eight (g) Note:	3, 4)	Effective		Flow	rate cha	aracteristics	Note 2)	
Valve	model	Тур	Type of actuation		4, 2	Grommet	L/M plug	M8	area	1→4/	′2 (P→A	/B)	4/2→5/3	(A/B→F	EA/EB)
				(P, EA, EB)	(A, B)	Gioiiiilet	connector	connector	(mm <sup>2</sup> )	C [dm3/(s-bar)]	b	Cv	C [dm3/(s-bar)]	b	Cv
	SYJ314□	0	Single				63 (37)	67 (41)		0.46	0.36	0.12	0.46	0.35	0.12
5 port	SYJ324□	2 position	Double			79 (53)	81 (55)	89 (63)		0.40	0.50	0.12	0.40	0.55	0.12
Base mounted	0.000.		Closed center	M5 x 0.8	M5 x 0.8				_	0.47	0.33	0.12	0.47	0.31	0.12
(with sub-plate)	SYJ344□	3 position	Exhaust center	1		82 (56)	84 (58)	92 (66)	_	0.36	0.39	0.10	0.59 [0.40]	0.43 [0.33]	0.16 [0.11]
	SYJ354□		Pressure center						_	0.58 [0.32]	0.42 [0.33]	0.16 [0.080]	0.46	0.32	0.11
	SYJ312□	2 position	Single			36	37	41							
5 port	SYJ322□	2 position	Double		0.5 M3 x 0.5	53	55	63							
Body ported	SYJ332□		Closed center M Exhaust center	M3 x 0.5					0.9						
Body ported	SYJ342□	3 position				56	58	66							
	SYJ352□		Pressure center												
Note 1)	SYJ313□	0	Single			36	37	41		]					
4 Port	SYJ323□	2 position	Double	1		53	55	63	_						
Base mounted	SYJ333□		Closed center	1/8	M5 x 0.8				_	1					
(For manifold	SYJ343□	3 position	Exhaust center	1		56	58	66	_	]					
base only)	SYJ353□		Pressure center	1					_	1					
Note to Death					400					-					

Note 1) Dedicated for manifold base. For details, refer to page 160.

Note 2) [ ] denotes the normal position. Exhaust center: 4/2  $\rightarrow$  5/3, Pressure center: 1  $\rightarrow$  4/2

Note 3) (): Without sub-plate.

Note 4) For DC voltages. For AC voltages add 3 g to the weight of the single solenoid and 6 g to the weight of the double solenoid and 3 position types.

#### Cylinder Speed Chart

Use as a guide for selection. Please confirm the actual conditions with SMC Sizing Program.

#### **Body Ported**

		Bore size										
Series	Average speed (mm/s)	CJ2 serie Pressure Load rate Stroke 60	0.5 MPa : 50%		CM2 series Pressure 0.5 MPa Load rate: 50% Stroke 300 mm							
		ø6	ø10	ø16	ø20	ø25	ø32	ø40				
SYJ3120-M3	800 700 600 500 400 300 200 100					rpendicular rizontal act		actuation				

Base Moun	tea									
					Bore size					
	Average	CJ2 serie Pressure			CM2 series Pressure 0.5 MPa					
Series	speed (mm/s)	Load rate Stroke 60			Load rate: 50% Stroke 300 mm					
		ø6	ø10	ø16	ø20	ø25	ø32	ø40		
SYJ3140-M5	800 700 600 500 400 300 200 100					rpendicular rizontal act	r, upward a	actuation		

- Cylinder is in extending. Speed controller is meter-out, which is directly connected with cylinder and its needle is fully opened.
   Average speed of cylinder is obtained by dividing the full stroke time by the stroke.
   Load factor: (Load weight v.98). /Theoretical force) x 1000.

#### Conditions

Bo	dy ported	CJ2 series	CM2 series			
	Tubing bore x Length	ø4 x 1 m				
SYJ3120-M3	Speed controller	AS1002F-04				
	Silencer	AN120-M5				

Bas	e mounted	CJ2 series	CM2 series			
	Tubing bore x Length	ø6 x 1 m				
SYJ3140-M5	Speed controller	AS2002F-06	AS2002F-06			
	Silencer	AN120-M5				

SV

VP4

VQ 1/2 ۷Q 4/5

vqc 1/2

VQC 4/5

VQZ SQ

VFS

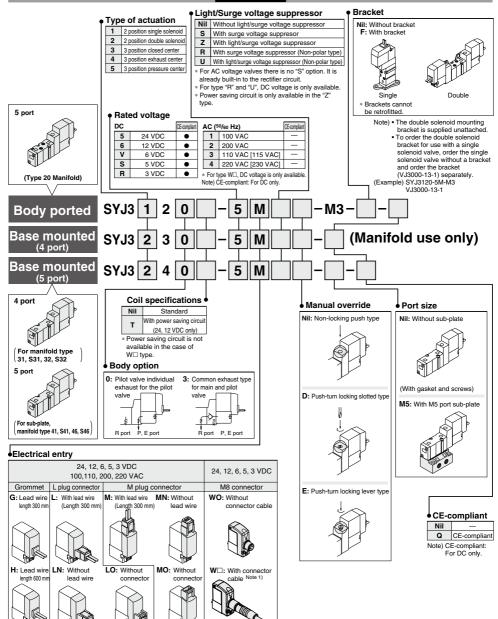
**VFR** 

VQ7

#### **How to Order**

Note) CE-compliant: For DC only.





\* LN, MN type: with 2 sockets.

\* Refer to page 241 for the lead wire length of L and M plug connectors.

\* Refer to page 244 for the connector assembly with cover for L and M plug connectors.

\* For connector cable of M8 connector, refer to page 244.

\* M8 thread conforming to IEC60947-5-2 standard is also available. Refer to page 239 for details. Note 1) Enter the cable length symbols in  $\Box$ . Please be sure to fill in the blank referring to page 244.

Note) When placing an order for body ported solenoid valve as a single unit, mounting screws for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to page 168.)

# SYJ3000 Series Manifold Specifications



#### **Manifold Standard**



#### **Manifold Specifications**

Model				Type 32, S32	Type 41, S41	Type 46, S46			
Manifold type	Single base/B mount								
P (SUP), R (EXH)		Common SUP/Common EXH Common Individual							
Valve stations		2 to 20 stations							
A, B port	Location	Valve		Base					
Porting specifications	Direction	Тор		Si					
Port size	P, R port	M5:	x 0.8	.8 1/8		P: 1/8 R: M5 x 0.8			
	A, B port	M3	x 0.5	M5 x 0.8, C4	fitting for ø4)				

#### Flow Rate Characteristics

			D. at	-1		Flow	rate ch	aracteristic	cs		Effective
	Manifold		Port	size	1→4/2	(P→	4/B)	4/2→5/	3 (A/B	→R)	area
	Marillold		1(P), 5/3(R) Port		C [dm³/(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s-bar)]	b	Cv	(mm²)
Body ported for internal pilot	Type SS5YJ3-20	SYJ3□2□	M5 x 0.8	M3 x 0.5	-	-	-	-	-	-	0.9
	Type SS5YJ3-31	SYJ3□3□	M5 x 0.8	M3 x 0.5	-	-	-	-	-	-	0.9
	Type SS5YJ3-32-M5	SYJ3□3□		M5 x 0.8	0.25	0.19	0.060	0.32	0.25	0.077	-
	Type SS5YJ3-32-C4		1/8	C4	0.25	0.18	0.059	0.30	0.27	0.075	-
	Type SS5YJ3-S32-M5			M5 x 0.8	0.25	0.26	0.060	0.29	0.15	0.062	-
	Type SS5YJ3-S32-C4			C4	0.24	0.21	0.057	0.27	0.18	0.062	-
Base mounted	Type SS5YJ3-41-M5			M5 x 0.8	0.32	0.25	0.081	0.33	0.19	0.079	-
for internal pilot	Type SS5YJ3-41-C4	SYJ3□4□	4.0	C4	0.32	0.28	0.079	0.35	0.24	0.084	-
	Type SS5YJ3-S41-M5	31J3U4U	1/8	M5 x 0.8	0.33	0.29	0.082	0.34	0.17	0.081	-
	Type SS5YJ3-S41-C4			C4	0.32	0.27	0.079	0.34	0.24	0.084	-
	Type SS5YJ3-46-M5			M5 x 0.8	0.20	0.25	0.048	0.10	0.12	0.024	-
	Type SS5YJ3-46-C4	SYJ3□4□	1/8	C4	0.21	0.27	0.050	0.21	0.13	0.047	-
	Type SS5YJ3-S46-M5	3103040	M5 x 0.8	M5 x 0.8	0.20	0.25	0.048	0.19	0.16	0.024	-
	Type SS5YJ3-S46-C4			C4	0.22	0.34	0.057	0.10	0.090	0.024	-

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:

• SS5YJ3-20-03------ 1 set (Manifold base) • SS5YJ3-S41-03-C4--- 1 set (Manifold base)

\* SYJ3000-21-12A... 1 set (Blanking plate assembly) \* SYJ3000-21-12A.... 1 set (Balnking plate assembly)

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



<sup>\*</sup> Use manifold specification sheet.

#### Flat Ribbon Cable Manifold

Note) CE-compliant: For DC only.



SV

VP4

1/2 VQ

4/5 voc

1/2 voc 4/5 VQZ SQ

VFS

**VFR** 

V07

#### • Multiple valve wiring is simplified through the use of the flat cable connector.

#### Clean appearance

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



#### Flat Ribbon Cable Manifold Specifications

Model		Type 21P	Type 32P				
Manifold type		Single bas	se/B mount				
P (SUP), R (EXH)		Common SUP, Common EXH					
Valve stations		4 to 12	stations				
A, B port	Location	Valve	Base				
Porting specifications	Direction	Тор	Side				
Port size	P, R port	1	/8				
FOIT SIZE	A, B port	M3 x 0.5	M5 x 0.8, C4 (One-touch fitting for Ø4)				
Applicable flat rib connector	bon cable	Socket: 26 pins MIL type with strain relief (MIL-C-83503)					
Internal wiring		In common between +COM and -COM (Z type: +COM only)					
Rated voltage Note	9 2)	24, 12 VDC/	100, 110 VAC				

Note 1) The withstand voltage specification for the wiring unit section conforms to JIS C 0704, Grade 1 or its equivalent. Note 2) CE-compliant: For DC only.

#### Flow Rate Characteristics

						Flow	rate ch	aracteristic	s		Effective
	Manifold			Port size		1→4/2 (P→A/B)			4/2→5/3 (A/B→R)		
				2(B), 4(A) Port	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	area (mm²)
Body ported for internal pilot	Type SS5YJ3-21P			M3 x 0.5	-	-	-	-	-	-	0.9
Base mounted	Type SS5YJ3-32P-M5	CV.13□33	1/8	M5 x 0.8	0.25	0.19	0.060	0.32	0.25	0.077	-
for internal pilot	Type SS5YJ3-32P-C4	0.00000	1/0	C4	0.25	0.18	0.059	0.3	0.27	0.075	-

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

#### How to Order Manifold

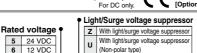
- SS5YJ3-32P-07-C4 (-Q) ···· 1 pc. (Manifold base) \* SYJ3000-21-13A (-Q) ···· 1 pc. (Blanking plate assembly) \* SYJ3133-5LOU (-Q) --- 3 pcs. (Valve) \* SY3000-37-28A ...... 3 pcs. (Connector assembly) SYJ3233-5LOU (-Q) --- 3 pcs. (Valve) \* SY3000-37-29A ...... 3 pcs. (Connector assembly) → The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.
- Note) Please indicate the connector assembly part no. below that connects the valve and the manifold.

#### **How to Order Valve**

Coil specifications •

Standard

Nil



Note) CE-compliant:

T With power saving circuit 12 VDC 6 Note) Z: Positive common specifications only \* Power saving circuit is only available

For DC SYJ3  For AC SYJ3  Type of actuation	1 3 3	' =	LOU -	
1 2 position single			A, B port size ←	_
2 2 position double	S	Symbol	Port size	
3 3 position closed center		Nil	Base mounted	
4 3 position exhaust center		М3	M3 x 0.5	
5 3 position pressure center	N	ote) In the	case of flat ribbon cable typ	эe

5 24 VDC

#### Rated voltage 1 100 VAC

3 110 VAC (115 VAC) Manual override

P	lil	Non-locking push type
- 1	D	Push-turn locking slotted type
- 1	E	Push-turn locking lever type

Note) In the case of flat ribbon cable type, "U" and "Z" types are for DC specifications and "Z" type is for AC specifications. "Z" type for DC is positive common

specification only. For the other

combination, please contact SMC.

**CE-compliant** Nil

Q CE-compliant Note) CE-compliant: For DC only.

#### Connector Assembly

#### For 12, 24 VDC

Single solenoid	SY3000-37-28A
Double solenoid, 3 position type	SY3000-37-29A

#### For 100 VAC

0: 1 1 11	01/0000 07 404
Single solenoid	SY3000-37-46A
Double solenoid, 3 position type	SY3000-37-47A

#### For 110 VAC (115 VAC)

101 110 170 (110	170)
Single solenoid	SY3000-37-54A
Double solenoid, 3 position type	SY3000-37-55A

#### EX510 Gateway-type Serial Transmission System

#### Manifold for EX510 Serial Wiring Specifications

Model		Type 21SA Type 32SA					
Manifold type		Single bas	e/B mount				
P (SUP), R (EXH)		Common SUP,	Common EXH				
Valve stations		4 to 16 stations					
A, B port	Location	Valve	Base				
Porting specifications	Direction	Тор	Side				
	P, R port	1.	/8				
Port size	A, B port	M3 x 0.5	M5 x 0.8, C4 (One-touch fitting for Ø4)				
Rated voltage		24 VDC					



#### Flow Rate Characteristics

		Port	size			Effective					
	Manifold		1 011	5120	1→4/2	(P→A	VB)	4/2→5/3 (A/B→R)			area
	Manifold			2(B), 4(A) Port	C [dm³/(s-bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	(mm <sup>2</sup> )
Body ported for internal pilot	Type SS5YJ3-21SA	SYJ3□23	1/8	M3 x 0.5	_	_	_	_	-	-	0.9
Base mounted	Type SS5YJ3-32SA-M5	SYJ3□33	1/8	M5 x 0.8	0.25	0.19	0.060	0.32	0.25	0.077	_
for internal pilot	Type SS5YJ3-32SA-C4	3100000	1/0	C4	0.25	0.18	0.059	0.3	0.27	0.075	_

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

#### **How to Order Manifold**

SS5YJ3-21SA-06--------- 1 set (Type 21SA 6 stations manifold part no.)

\* SYJ3123-5LOU-M3------- 4 sets (Single solenoid part no.)

\* SYJ3223-5LOU-M3------- 2 sets (Double solenoid part no.)

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

Add the valve and option part numbers under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet. The connector assembly lead wire length used for EX10 manifold varies depending on the number of stations. Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Please specify the mounting solenoid valve when ordering.

## EX510 Gateway-type Serial Transmission System

#### **Base Mounted Manifold**

## SYJ3000 Series



SV

SYJ SZ

VP4

VQ 1/2

4/5

voc

1/2

vac

VOZ

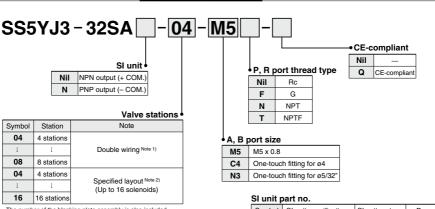
SO

VFS

**VFR** 

V07

#### **How to Order Manifold**



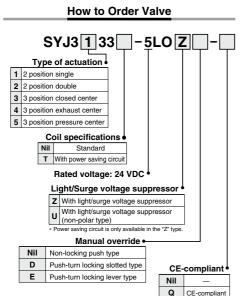
 The number of the blanking plate assembly is also included.
 Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a

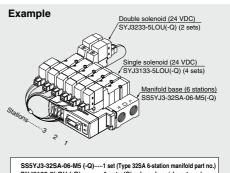
specified layout. Note 2) Specified layout indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

<b>3</b> 1 սու բ	oart no.		
Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+ COM.)	EX510-S001	Best Pneumatics
N	PNP output (- COM.)	EX510-S101	P.897

Refer to Best Pneumatics No. 1-1 and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download the Operation Manual via our website, http://www.smcworld.com

#### How to Order Manifold Assembly (Example)





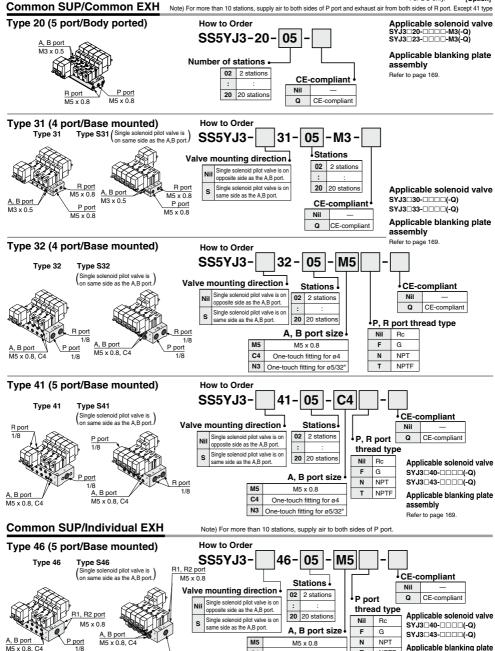
SS5YJ3-32SA-06-M5 (-Q)----1 set (Type 32SA 6-station manifold part no. 
\$ SYJ3133-5LOU (-Q)------4 sets (Single solenoid part no.) 
\$ SYJ3233-5LOU (-Q)------2 sets (Double solenoid part no.)

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

Add the valve and option part numbers under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet. The connector assembly lead wire length used for EX510 manifold varies depending on the number of stations. Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Please specify the mounting solenoid valve when ordering.

#### SYJ3000 Series

Note) CE-compliant: For DC only.



N3

P por

т NPTF

assembly

Refer to page 169.

One-touch fitting for ø4

One-touch fitting for ø5/32"

#### SYJ3000 Series

Note) CE-compliant: For DC only.



SYJ

SZ

VP4

VQ 1/2

VQ

4/5

voc

1/2

voc

4/5

VQZ

SO

VFS

VFR

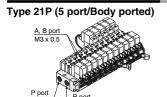
VQ7

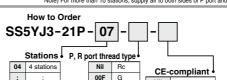


Flat Ribbon Cable Manifold

Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

CE-compliant





NPTE

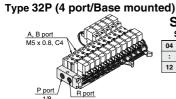
Applicable solenoid valve Refer to page 161.

Applicable connector assembly

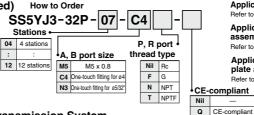
Refer to page 161.

Applicable blanking plate assembly

Refer to page 169.



Type 21SA (5 port/Body ported)



(Up to 16 solenoids)

00N NPT

> Applicable solenoid valve Refer to page 161.

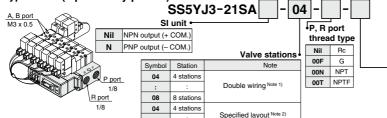
Applicable connector assembly

Refer to page 161.

Applicable blanking plate assembly

Refer to page 169. CE-compliant

EX510 Gateway-type Serial Transmission System



How to Order

12 12 stations

> Applicable solenoid valve Refer to page 164.

Applicable blanking plate assembly

Refer to page 169.

CE-compliant Nil CE-compliant

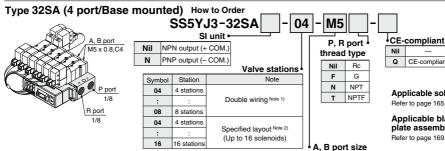
The number of the blanking plate assembly is also included.

16

Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

16 stations

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)



The number of the blanking plate assembly is also included.

Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)



Refer to page 165.

Applicable blanking plate assembly Refer to page 169.

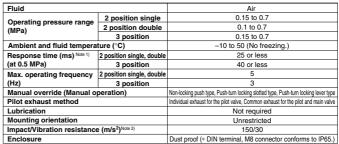
M5 M5 x 0.8 C4 One-touch fitting for ø4 N3 One-touch fitting for ø5/32"

### **Rubber Seal** 5 Port Solenoid Valve

# SYJ5000 Series (







\* Based on IEC60529

• Lased on It-COID-29.
Note 1) Based on dynamic performance test, UIS 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

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					
Cail rated valtage (V)	DC		24, 12, 6, 5, 3	24, 12					
Coil rated voltage (V)	AC 5	60/60 Hz	100, 110,	200, 220					
Allowable voltage fluctuati	on		±10% of rat	ed voltage *					
		Standard		terminal with light: 0.45)}					
Power consumption (W)	DC	With power	0.1 (With light only) *						
		saving circuit	[Starting 0.4, Holding 0.1]						
		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)					
*	AC	[115 V]	[0.94 (With light: 0.97)]	[0.94 (With light: 1.07)]					
Apparent power (VA) *		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)						
	445 1440		140 10001440						

- 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

Body ported



Base mounted

#### Symbol **Body ported** 2 position single (A)4 2(B)

Base mounted (with sub-plate) 2 position single

(R1)5 1 3(R2) (P) 2 position double 2 position double (A)4 2(B) (B)2 (R1)5 1 3(R2)

3 position closed center 3 position closed center (A)4 2(B) (B)2 4(A) (R1)5 1 3(R2)

3 position exhaust center 3 position exhaust center (A)4 2(B) (B)2 4(A) 7 M / I (R1)5 1 3(R2)





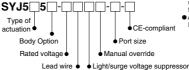
#### **Built-in Speed Controller**

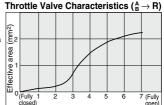
#### SYJ5□5□

- Built-in exhaust flow controls enable simple cylinder sneed 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.

(Single)

How to order valve with built-in speed controller SYJ5 5 -





• When using SYJ5□53 model the speed controller must be opend more than 1 complete rotation from fully closed in order to function proerly. Adjust the speed controller with a torque of 0.3

N·m or less.





#### Flow Rate Characteristics/Weight

	Valve model Type of actuation		Port	size		Flow	rate cha	aracteristics	S Note 1)			Weight (g) Note 2, 3)				
١					4, 2	1R4/	2 (PRA/I	В)	4/2R5/3	(A/BREA/EB)		Crammat	L/M plug	DIN	M8	
					(A, B)	C [dm3/(s-bar)]	b	Cv	C [dm³/(s-bar)]	b	Cv	Grommet	connector	terminal	connector	
		2 position	Single			0.47	0.41	0.13	0.47	0.41 0.	0.13	46	47	68	51	
		2 pusitivii	Double			0.47	5.	0.13	0.1	0.41	0.13	64	66	108	74	
	SYJ5□20-□-M5		Closed center	M5 x 0.8	M5 x 0.8	0.49	0.44	0.13	0.44	0.40	0.12					
		3 position	Exhaust center			0.46	0.37	0.12	0.47 [0.39]	0.43 [0.35]	0.13 [0.10]	75	77	119	85	
			Pressure center			0.49 [0.39]	0.51 [0.38]	0.14 [0.10]	0.45	0.42	0.12					
٦		2 position	Single	Single		0.69	0.39	0.18	0.44	0.39	0.12	53	54	75	58	
Body ported		z pusitivii	Double		C4		0.55	0.10	0.44	0.55	0.12	71	73	115	81	
ă	SYJ5□20-□-C4		Closed center		M5 x 0.8 (One	(One-touch	0.69	0.40	0.19	0.43	0.40	0.12				
18		3 position	Exhaust center		fitting for ø4)	0.56	0.40	0.15	0.41 [0.41]	0.37 [0.37]	0.10 [0.11]	82	84	126	72	
m			Pressure center			0.57 [0.41]	0.4 [0.37]	0.15 [0.10]	0.41	0.37	0.10					
		2 position	Single			0.70	0.36	0.36 0.19	0.47	0.40	0.12	53	54	75	58	
		2 pusition	Double		C6							71	73	115	81	
	SYJ5□20-□-C6		Closed center	M5 x 0.8	(One-touch	0.72	0.37	0.19	0.44	0.34	0.12					
		3 position	Exhaust center		fitting for ø6)	0.67	0.54	0.19	0.41 [0.41]	0.38 [0.38]	0.11 [0.11]	82	84	126	92	
			Pressure center			0.82 [0.44]	0.41 [0.39]	0.23 [0.12]	0.41	0.36	0.11					
8		2 position	Single			0.79	0.21	0.19	0.83	0.32	0.21	80 (49)	81 (47)	102 (68)	51	
Ē		2 pusition	Double									98 (64)	100 (66)	142 (108)	74	
Base mounted	ଛି   SYJ5□40-□-01		Closed center 1/8	1/8	0.80	0.28	0.18	0.86	0.34	0.20						
Se		3 position Exhaust center			0.71	0.26	0.18	1.1 [0.60]			109 (75)	111 (77) 153	153 (119)	85		
B			Pressure center			0.99 [0.47]	0.29 [0.38]	0.24 [0.12]	0.72	0.38	0.18					

Note 1) [ ]: denotes the normal position. Exhaust center: 4/2  $\rightarrow$  5/3, Pressure center: 1  $\rightarrow$  4/2 Note 2) ( ): Without sub-plate.

Note 3) For DC voltages. For AC voltages add 3 g to the weight of the single solenoid and 6 g to the weight of the double solenoid and 3 position types.

#### Cylinder Speed Chart

Use as a guide for selection. Please confirm the actual conditions with SMC **Body Ported** Sizing Program. Bore size CJ2 series Average speed Pressure 0.5 MPa CM2 series Pressure 0.5 MPa Series Load rate: 50% Load rate: 50% (mm/s) Stroke 60 mm Stroke 300 mm ø16 ø20 ø32 800 Perpendicular, upward actuation 700 600 500 Horizontal actuation SYJ5120-M5 400 300 200 100

#### Race Mounted

Dase Mou	iileu												
							Bore	size					
		CJ2 serie	es		CM2 ser	ies			MB, CA2	series			
	Average speed	Pressure (	0.5 MPa		Pressure	0.5 MPa			Pressure				
Series	(mm/s)	Load rate:	50%		Load rate: 50%				Load rate	e: 50%			
	(	Stroke 60	mm		Stroke 30	0 mm			Stroke 50	0 mm			
		ø6	ø10	ø16	ø20	ø25	ø32	ø40	ø40	ø50	ø63	ø80	ø100
	800	-											
	700									<u></u>	erpendicula	ar, upward	actuation ⊟
	600 500									□ Пно	orizontal ad	ctuation	
SYJ5140-01					⊢⊣⊢								
	300				+	$\vdash$		$\vdash$	$\vdash$				
	200												
	100												

**SMC** 

- \* Cylinder is in extending. Speed controller is meter-out, which is directly connected with cylinder and its needle is fully opened.
- Average speed of cylinder is obtained by dividing the full stroke time by the stroke.
   Load factor: ( (Load weight x 9.8) /Theoretical force) x 100%

#### Conditions

Conditions												
	Body ported	CJ2 series	CM2 series	MB, CA2 series								
	Tubing bore x Length	ø4 x 1 m	ø6 x 1 m	ø8 x 1 m								
SYJ5120-M5	Speed controller	AS1301F-04	AS3301F-06	AS3301F-08								
	Silencer	AN120-M5	AN1	10-01								

ı	E	ase mounted	CJ2 series	CM2 series MB, CA2 series
		Tubing bore x Length	ø4 x 1 m	ø6 x 1 m
	SYJ5140-01	Speed controller	AS2301F-04	AS3001F-06
		Silencer	AN101-01	AN101-01

SV VP4 VQ 1/2

> VQC 1/2 VQC 4/5

VQ 4/5

VQZ

SQ VFS

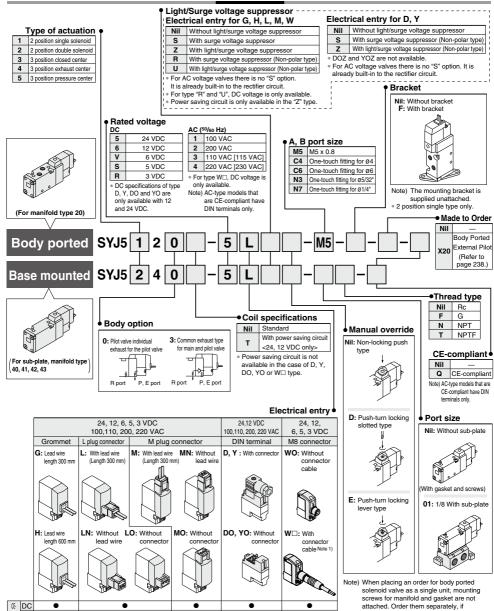
**VFR** 

VQ7

#### How to Order

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





- \* LN, MN type: with 2 sockets
- \* Refer to page 241 for the lead wire length of L and M plug connectors.
- \* Refer to page 244 for the connector assembly with cover for L and M plug connectors.
- \* DIN terminal type "Y" which conforms to EN-175301-803C (former DIN4365C) is also available. For details, refer to page 243.
- \* For connector cable of M8 connector, refer to page 244.
- \* M8 thread conforming to IEC60947-5-2 standard is also available. Refer to page 239 for details.

Note 1) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 244.

necessary. (For details, refer to page 196.)



compliant AC

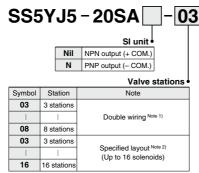
## EX510 Gateway-type Serial Transmission System

## **Body Ported Manifold**

## SYJ5000 Series



#### **How to Order Manifold**



The number of the blanking plate assembly is also included.
 Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

Specified layout.

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has heen specified.)

#### P, R port thread type

CE-compliant

CE-compliant

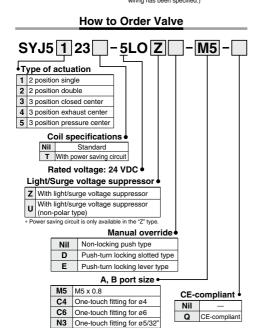
Nil	Rc
00F	G
00N	NPT
00T	NPTF

#### SI unit part no.

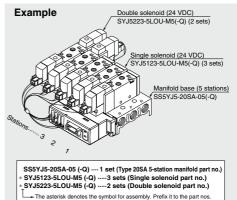
Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+ COM.)	EX510-S001	Best Pneumatics
N	PNP output (- COM.)	EX510-S101	No. 1-1 P.897

Refer to Best Pneumatics No. 1-1 and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download the Operation Manual via our website, http://www.smcworld.com

#### How to Order Manifold Assembly (Example)



N7 One-touch fitting for ø1/4"

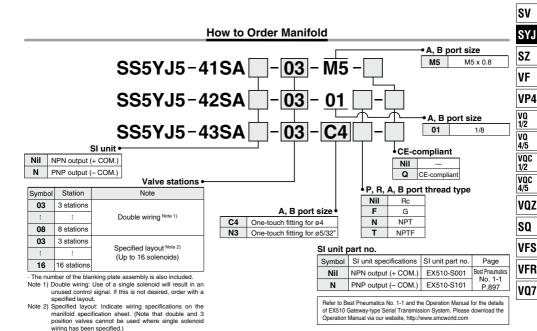


Add the valve and option part numbers under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet. The connector assembly lead wire length used for EK510 manifold varies depending on the number of stations. Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Please specify the mounting solenoid valve when ordering.

## EX510 Gateway-type Serial Transmission System Base Mounted Manifold

## SYJ5000 Series





#### **How to Order Valve**

-5LO Z

# Type of actuation 1 2 position single 2 2 position double 3 3 position closed center 4 3 position exhaust center 5 3 position pressure center Coil specifications Nii Standard T With power saving circuit Rated voltage: 24 VDC Light/Surge voltage suppressor With light/surge voltage suppressor With light/surge voltage suppressor With light/surge voltage suppressor

### \* Power saving circuit is only available in the "Z" type. Manual override ●

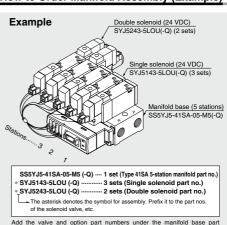
Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

(non-polar type)

SYJ5 1 43

CE-compliant					
Nil	_				
Q	CE-compliant				

#### **How to Order Manifold Assembly (Example)**



number. In the case of complex arrangement, specify them on the manifold specification sheet. The connector assembly lead wire length used for EX510 manifold varies depending on the number of slations. Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Please specify the mounting solenoid valve when ordering.

## **Rubber Seal** 5 Port Solenoid Valve

# SYJ7000 Series (





**Body ported** 



Base mounted

#### **Specifications**

Fluid		Air	
O	2 position single	0.15 to 0.7	
Operating pressure range (MPa)	2 position double	0.1 to 0.7	
( 4)	3 position	0.15 to 0.7	
Ambient and fluid tempera	ture (°C)	-10 to 50 (No freezing)	
Response time (ms) Note 1)	2 position single, double	30 or less	
(at 0.5 MPa)	3 position	60 or less	
Max. operating	2 position single, double	5	
frequency (Hz)	3 position	3	
Manual override (Manual o	peration)	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	e (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 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)

Grammat (G) (H)

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 Body ported 2 position single (A)4 2(B) (F)5(F)3(R2)	Base mounted 2 position single solenoid (B)2 4(A) (R2)3 1 5(R1) (P)
2 position double (A)4 2(B) (R1)5 1 3(R2) (P)	2 position double solenoid (B)2 4(A) (B)2 4(A) (B)3 15(B1) (B)3 15(B1)
3 position closed center  (A)4 2(B)  (B1)5 1 3(R2)  (P)	3 position closed center (B)2 4(A) (B)2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3 position exhaust center  (A)4 2(B)  (B1)5 1 3(B2)	3 position exhaust center (B)2 4(A) (R2)3 1 5(R1)

			Grommet (G), (H)				
			L plug connector (L)				
Electrical entry			M plug connector (M)				
,			DIN terminal (D), (Y)				
			M8 connector (W)				
			G, H, L, M, W	D, Y			
Coil rated voltage (V)			24, 12, 6, 5, 3	24, 12			
AC 50/60 Hz			100, 110, 200, 220				
Allowable voltage fluctuation	n		±10% of rat	ed voltage *			
		Standard	0.35 (With light: 0.4 (DIN terminal with light: 0.4				
Power consumption (W)	DC	With power	0.1 (With light only) *				
		saving circuit	saving circuit [Starting 0.4, Holding 0.1]				
	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)			
Apparent power (VA)*		[115 V]	[0.94 (With light: 0.97)]	[0.94 (With light: 1.07)]			
Apparent power (VA)		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			een 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 242.



3 position pressure center 3 position pressure center

(R2)3 1 5(R1) (P)

(R1)5 1 3(R2) (P)

#### Rubber Seal **SYJ7000 Series** 5 Port Solenoid Valve

#### Flow Rate Characteristics/Weight

				Port	Port size Flow rate characteristics Note 1)						Weight (g) Note 2, 3)				
١	Valve model		Type of actuation		4,2	2 1P4/2 (PPA/B)		B)	4/2P5/3	(A/BPEA	VEB)		L/M plug	DIN	M8
					(A,B)	C [dm3/(s-bar)]	b	Cv	C [dm3/(s-bar)]	b	Cv	Grommet	connector	terminal	connector
		2 position	Single			2.2	0.36	0.58	2.4	0.34	0.63	85	86	107	90
		2 position	Double			2.2	0.30	0.56	2.4	0.34	0.03	98	100	142	108
	SYJ7 20- 0-01		Closed center	1/8	1/8	1.8	0.37	0.45	2.0	0.35	0.49				
		3 position	Exhaust center			1.2	0.50	0.34	3.0 [1.3]	0.35[0.52]	0.73 [0.39]	108	110	152	118
			Pressure center			3.0 [0.83]	0.37 [0.50]	0.78 [0.25]	1.8	0.37	0.45				
9		2 position	Single			1.6	0.33	0.4	2.2	0.32	0.53	96	97	98	101
۱ř		2 pusitivii	Double		C6							109	111	153	119
Body ported	SYJ7□20-□-C6		Closed center	1/8	(One-touch	1.4	0.27	0.35	1.9	0.33	0.49				
Ιé		3 position	Exhaust center		fitting for ø6)	1.1	0.37	0.27	2.5 [1.3]	0.32[0.54]	0.61 [0.38]	119	121 163	129	
m			Pressure center			1.8 [0.78]	0.36 [0.40]	0.45 [0.22]	1.6	0.30	0.39				
	SYJ7□20-□-C8	3 position Exhaust cen	Single			2.0	0.39	0.52	2.3	0.34	0.61	96	97	98	101
			Double		C8				,			109	111	153	119
			Closed center	1/8	(One-touch fitting for ø8)	1.7	0.35	0.42	2.0	0.29	0.49	119	121 163		129
			Exhaust center			1.2	0.38	0.33	2.6 [1.3]	0.35[0.49]				163	
			Pressure center			1.9 [0.86]	0.57 [0.46]	0.59 [0.25]	1.7	0.39	0.42				
		2 position	Single			2.3	0.45	0.57	2.8	0.37	0.71	165 (85)	166 (86)	187 (107)	170 (90)
		- poonon	Double						-		•	178 (98)	180 (100)	222 (142)	188 (108)
٠	SYJ7□40-□-01		Closed center	1/8	1/8	1.9	0.36	0.48	2.1	0.46	0.57				
a		3 position	Exhaust center			1.2	0.48	0.35	3.4 [1.3]	0.36[0.57]		188 (108)	190 (110)	232 (152)	198 (118)
질			Pressure center			3.3 [0.85]	0.43 [0.54]	0.78 [0.25]	2.1	0.45	0.56				
Base mounted		2 position	Single			2.3	0.41	0.61	2.9	0.35	0.74	165 (85)	166 (86)	187 (107)	170 (90)
		2 position	Double									178 (98)	180 (100)	222 (142)	188 (108)
1	SYJ7□40-□-02		Closed center	1/4	1/4	1.9	0.46	0.50	2.2	0.44	0.60				
		3 position	Exhaust center			1.3	0.45	0.35	3.7 [1.4]			188 (108)	190 (110)	232 (152)	198 (118)
				Pressure center			3.6 [0.83]	0.23 [0.55]	0.84 [0.25]	2.1	0.47	0.58			

Note 1) []: denotes the normal position. Exhaust center:  $4/2 \rightarrow 5/3$ , Pressure center:  $1 \rightarrow 4/2$ 

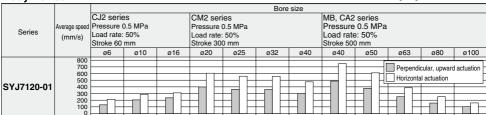
Note 2) (): Without sub-plate. Note 3) For DC voltages. For AC voltages add 3 g to the weight of the single solenoid and 6 g to the weight of the double solenoid and 3 position types.

#### Cylinder Speed Chart

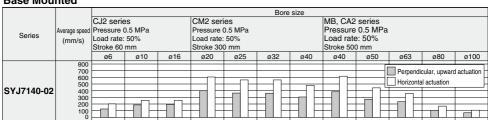
#### **Body Ported**

Use as a guide for selection.

Please confirm the actual conditions with SMC Sizing Program.



#### **Base Mounted**



- \* Cylinder is in extending. Speed controller is meter-out, which is directly connected with cylinder and its needle is fully opened.
- \* Average speed of cylinder is obtained by dividing the full stroke time by the stroke.

\* Load factor: ( (Load weight x 9.8) /Theoretical force) x 100%

#### **Conditions**

	Body ported	CJ2 series	CM2 series	MB, CA2 series	
	Tubing bore x Length	ø6 x	ø12 x 1 m		
	Speed controller	AS2302F-06	AS3302F-06	AS4002F-12	
	Silencer	AN110-01	AN2	0-02	

Е	sase mounted	CJ2 series CM2 series MB, CA2 series				
	Tubing bore x Length	ø6 x 1 m				
	Speed controller	AS1302F-06	-06 AS3002F-06			
	Silencer	AN110-01	AN20-02	AN3301F-06		

SV SYJ

۷F

VP4

VQ 1/2 VQ 4/5 voc 1/2

vac 4/5 VOZ

SO

VFS

**VFR** 

VQ7

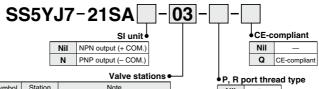
## **EX510 Gateway-type Serial Transmission System**

## **Body Ported Manifold**

## SYJ7000 Series



#### **How to Order Manifold**



Symbol	Station	Note			
03	3 stations				
÷	:	Double wiring Note 1)			
08	8 stations				
03	3 stations	O			
:	:	Specified layout Note 2) (Up to 16 solenoids)			
16	16 stations				

· The number of the blanking plate assembly is also included. Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

Nil	Rc	
00F	G	
00N	NPT	
00T	NPTF	

#### SI unit part no.

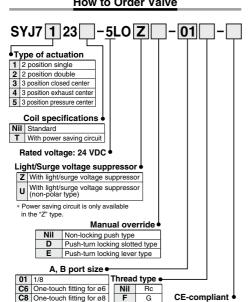
Symbol	SI unit specifications	SI unit part no.	Page	
Nil	NPN output (+ COM.)	EX510-S001	Best Pneumatics	
N	PNP output (- COM.)	EX510-S101	No. 1-1 P.897	

Refer to Best Pneumatics No. 1-1 and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download the Operation Manual via our website, http://www.smcworld.com

Double solenoid (24 VDC)

#### How to Order Valve

#### How to Order Manifold Assembly (Example)

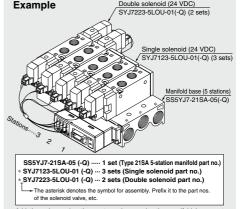


NPT

NPTF

Q

CE-compliant



Add the valve and option part numbers under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet. The connector assembly lead wire length used for EX510 manifold varies depending on the number of stations. Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Please specify the mounting solenoid valve when ordering.

N7 One-touch fitting for ø1/4"

N9 One-touch fitting for ø5/16"

## **EX510 Gateway-type Serial Transmission System Base Mounted Manifold**

# SYJ7000 Series



SV

SYJ SZ

VP4

VQ 1/2

4/5

voc

1/2

vac 4/5

VQZ

SO

VFS

VFR

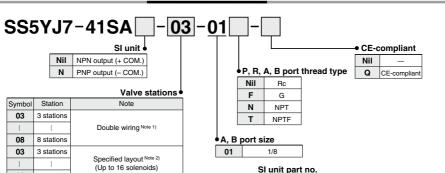
VQ7

Page

Best Pneumatics

No. 1-1

#### **How to Order Manifold**



The number of the blanking plate assembly is also included. Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.

#### Operation Manual via our website, http://www.smcworld.com. How to Order Manifold Assembly (Example)

Refer to Best Pneumatics No. 1-1 and the Operation Manual for the details

of EX510 Gateway-type Serial Transmission System. Please download the

SI unit specifications

NPN output (+ COM.)

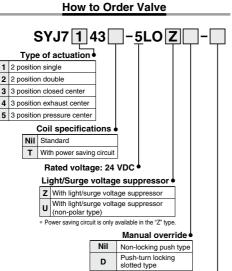
PNP output (- COM )

SI unit part no

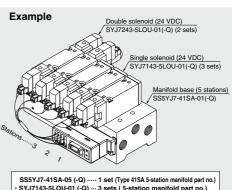
EX510-S001

EX510-S101

Symbol



e voltage suppressor				SS5YJ7-41SA-05 (-Q) 1 set (Ty
e voltage suppressor				* SYJ7143-5LOU-01 (-Q) ··· 3 sets ( * SYJ7243-5LOU-01 (-Q) ··· 2 sets (E
is only available in the "Z" type.  Manual overrie				The asterisk denotes the symbol for a of the solenoid valve, etc.
Nil	Non-locking push typ	е	Add the valve and option part numb number. In the case of complex arrange	
D	Push-turn locking slotted type			specification sheet. The connector as EX510 manifold varies depending on solenoid valves (including a blanking p assembled when shipped as a standar
E	Push-turn locking lever type			
	CE-cor	mpliant		mounting solenoid valve when ordering.
	Nil	_	1	



5-station manifold part no.) Double solenoid part no.)

assembly. Prefix it to the part nos.

ers under the manifold base part ement, specify them on the manifold sembly lead wire length used for the number of stations. Therefore, plate) and connector assembly are rd specification. Please specify the

CE-compliant

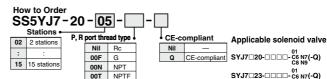
#### SYJ7000 Series

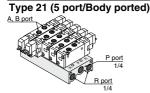
#### Manifold Standard

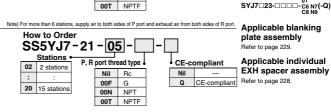
Note) AC-type models that are CE-compliant have DIN terminals only.

#### Common SUP/Common EXH

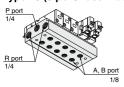


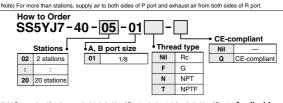






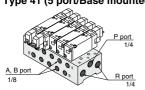
Type 40 (5 port/Base mounted)

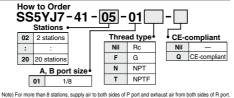




Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port. Applicable solenoid valve Type 41 (5 port/Base mounted)

How to Order





SYJ7 40- CC CC SYJ7 43- 0 0 (-Q)

Applicable blanking plate assembly Refer to page 229.

Applicable individual **EXH** spacer assembly Refer to page 228.

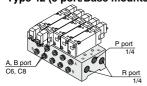
Applicable individual SUP spacer assembly Refer to page 228.

Applicable interface regulator

Refer to page 228.

**CE-compliant** Nil Q

Type 42 (5 port/Base mounted)





Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port

#### SYJ7000 Series

#### Flat Ribbon Cable Manifold

Note) CE-compliant: For DC only

SV

SZ

VP4

VQ 1/2

VQ 4/5

voc

vac

4/5

VQZ

SO

VFS

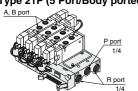
**VFR** 

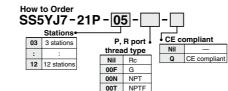
VQ7

1/2

#### Common SUP/Common EXH







Applicable solenoid valve Refer to page 221.

Applicable blanking plate assembly

Refer to page 229.

Applicable connector assembly

Refer to page 221.

Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port

03

#### EX510 Gateway-type Serial Transmission System

NPN output (+ COM.)

PNP output (- COM.)

P port

SI unit

#### Type 21SA (5 Port/Body ported)

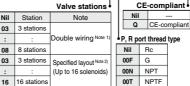
A, B port

Nil

N



How to Order



Applicable solenoid valve Refer to page 224.

#### Applicable blanking plate assembly

Refer to page 229.

The number of the blanking plate assembly is also included. Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is

not desired, order with a specified layout.

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

#### Type 41SA (5 Port/Base mounted) SI unit

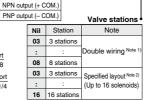
Nil

N

A, B port

1/8

R port



How to Order SS5YJ7-41SA

03 - 01 Applicable solenoid valve Refer to page 225. A, B port size Applicable blanking 01 1/8 plate assembly P, R port thread type Refer to page 229. Nil Ro

> CE-compliant Nil -compliant

The number of the blanking plate assembly is also included.

Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

F G

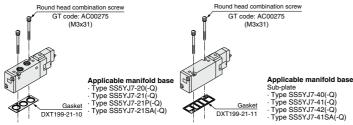
N NPT

NPTF

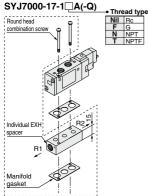
Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

#### SYJ7000 Series

#### Combinations of Solenoid Valve, Manifold Gasket and Manifold Base



#### **Individual EXH Spacer Assembly**





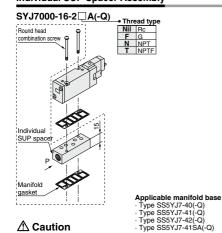
- Type SS5YJ7-20(-Q) Type SS5YJ7-21(-Q) Type SS5YJ7-21P(-Q)
- · Type SS5YJ7-21SA(-Q)

## SYJ7000-17-2 A(-Q) Thread type Nil Rc Round head combination scre Individual FXH spacer Manifold gasket

#### Applicable manifold base

- Type SS5YJ7-40(-Q) Type SS5YJ7-41(-Q)
- Type SS5YJ7-42(-Q) · Type SS5YJ7-41SA(-Q)

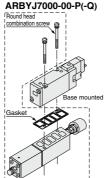
#### Individual SUP Spacer Assembly



Mounting screw tightening torques

#### Interface Regulator (P port regulation)

Spacer type regulating valve on manifold block can regulate the pressure to the valve individually



- Applicable manifold base · Type SS5YJ7-40(-Q) Type SS5YJ7-41(-Q)
- · Type SS5YJ7-42(-Q)

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



M3: 0.8 N·m