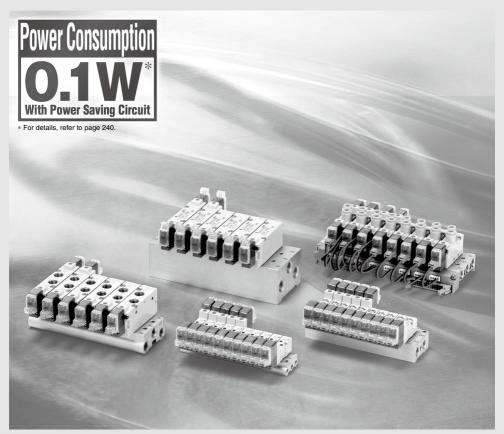
4/5 Port Solenoid Valve

SYJ3000/5000/7000 Series

Rubber Seal

The EX510 series is to be discontinued. When designing new equipment and facilities, consider using another series (EX260/EX600) instead.







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								
Series	C [(dm³/s·bar)]	b	Cv						
SYJ3000	0.46	0.36	0.12						
SYJ5000	0.83	0.32	0.21						
SYJ7000	2.9	0.35	0.74						

Manifold Variations

			A, B port size									Manifold option					
	Manifold	Variations		МЗ	M5	1/8		O	One-touch fittings				lanking plate	idividual SUP spacer	ndividual EXH spacer	nterface regulator	3 port valve mixed mounting
				IVIO	IVIO	1/0	ø4	ø6	ø8	ø5/32"	Ø 1/4"	ø5/16"	Blankin	Individual S	Individual E	Interface	3 port va mixed m
Indi	vidual wiring																
	5 port body ported	Type 20	SYJ3000 P. 164	•	_	_	_	_	_	_	_	_	•	_	_	_	•
			SYJ5000 P. 192	_	•	_	•	•	_	•	•	_	•	_	•	_	
			SYJ7000 P. 224	_	_	•	_	•	•	_	•	•	•	_		_	
	5 port body ported	Type 21	SYJ7000 P. 224	_	_	•	_	•	•	_	•	•	•	_	•	_	•
XH type	4 port base mounted	туре 31	SYJ3000	•	_	_	_	_		_	_	_	•	_	_		•
Common SUP/Common EXH	4 port base mounted	туре 32		_	•	_	•	_		•	_	_	•	_			•
IP/Co	5 port base mounted	туре 40	SYJ5000 P. 192	_	•	_	ı	_	ı	_	_	_	•	_	•	a	•
n SU			SYJ7000 P. 224	_	_	•	_	_		_	_	_	•	•	•	regulation)	•
m o	5 port base mounted	_{Type} 41	SYJ3000 P. 164	_	•	_	•	_	_	•	_	_	•	_	_		
E	Sase mounted		SYJ5000 P. 192	_	•	_	_	_	_	_	_	_		•		•	
Ŏ	\		SYJ7000 P. 224	_	-		_	_	_	_	_	_				(P regulation)	
	5 port base mounted	туре 42	SYJ5000 P. 192	_	_	•		•		_	•	_	•	•	•	a	•
			SYJ7000 P. 224	_	_	_	_	•	•	_	•	•	•	•	•	regulation)	•
	5 port base mounted	туре 43	SYJ5000 P. 192	_	_	_	•	_	_	•	_	_	•	•	•	(P regulation)	•
Common SUP/ Individual EXH type	5 port base mounted	_{Туре} 46	SYJ3000 P. 164	_	•	_	•	_	_	•	_	_	•	_	_	_	•



Manifold Variations

					Α,	Вро	ort siz	ze			1	Manif	fold c	ption	า
Manifold Variations		МЗ	M5	1/8		0	ne-to	uch fit	tings		Blanking plate	ndividual SUP spacer	ndividual EXH spacer	nterface regulator	3 port valve mixed mounting
		IIIO		170	ø4	ø6	ø8	ø5/32"	ø 1/4"	ø5/16"	Blankir	Individual	Individual	Interface	3 port v mixed n
Flat Ribbon Cable															
5 port type 20P body ported	SYJ5000	_	•	_	•	•	_	•	•		•	_	_	_	•
5 port body ported	P. 193 SYJ3000 P. 165	•	_	_	_	_	_	_	_	_	•	_	_	_	•
	SYJ7000 P. 225		_	•	_	•	•	_	•	•	•	_		_	•
4 port base mounted	SYJ3000 P. 165	_	•	_	•	_	_	•	_		•			_	•
5 port base mounted	SYJ5000 P. 193	_	•	_	_	_	_	_	_	_	•	_	_	_	•
5 port type 43P base mounted	SYJ5000	_	_	_	•	_	_	•	_		•	_		_	•

Manifold Variations

		A, B port size									Manifold option				
Manifold Variations	M3	3 M5	1/8		O	ne-to	uch fit	tings		ng plate	ndividual SUP spacer	ndividual EXH spacer	Interface regulator	3 port valve mixed mounting	
	IVIC	JIVIS	1/0	ø4	ø6	ø8	ø5/32"	ø 1/4"	ø5/16"	Blanking	Individual S	Individual E	Interface	3 port va mixed m	
EX510 Gateway-type Serial Transmission System															
	YJ5000 —		_	•	•	_	•	•	_	•	_	_	_	•	
5 port type 21SA SY	YJ3000 P. 162	-	_	_	_	_	_	_	_	•	_	_	_	•	
	YJ7000 —	- -	•	_	•	•		•	•	•	_	_	_	•	
	YJ3000 —	•	_	•	_	_	•			•		_		•	
5 port base mounted Type 41SA SY	YJ5000 -	•	_	_	_	_	_	_		•	_	_	_	•	

Manifold option

5 port base mounted

5 port base mounted

Individual SUP spacer assembly



Individual EXH spacer assembly

Type 42**S**A

 $_{Type}$ 43SA

SYJ7000

SYJ5000

SYJ5000

P. 191

P. 191



Interface regulator



3 port valve and 4/5 port valve mixed mounting



* Refer to page 166 for further information on the SYJ3000 series, page 195 on the SYJ5000 series and page 227 on the SYJ7000 series.

Rubber Seal 4/5 Port Solenoid Valve

SYJ3000/5000/7000 Series

Variations

vaii	ations						
	Series	Sonic conductance:	Type of	Voltage	Electrical entry	Option	Manual
	Selles	C [dm³/(s·bar)]	actuation	vollage	Electrical entry	With light/surge voltage suppressor	override
	SYJ3000			For DC		For DC	
	P. 148	$\begin{bmatrix} \text{Effective area} \\ 0.9 \text{ mm}^2 \\ 4/2 \rightarrow 5/3 \\ (\text{A/B} \rightarrow \text{EA/EB}) \end{bmatrix}$		■ 24 VDC 12 VDC 6 VDC 5 VDC 3 VDC	Grommet	■ With surge voltage suppressor	
ted	SYJ5000						
Body ported	P. 176	$ \begin{cases} 0.47 \\ 4/2 \rightarrow 5/3 \\ (A/B \rightarrow EA/EB) \end{cases} $			L plug connector	■ With light/surge voltage suppressor	
	SYJ7000		2 Position • Single				
	P. 208	$ \begin{cases} 2.4 \\ 4/2 \rightarrow 5/3 \\ (A/B \rightarrow EA/EB) \end{cases} $	• Double	For AC	M plug connector		■ Non-locking
	SYJ3000	0.46 $\begin{cases} 4/2 \rightarrow 5/3 \\ (A/B \rightarrow EA/EB) \end{cases}$	3 Position ● Closed center ● Exhaust center ● Pressure center	■ 100 VAC ⁵⁰ / ₆₀ Hz 110 VAC ⁵⁰ / ₆₀ Hz 200 VAC ⁵⁰ / ₆₀ Hz 220 VAC ⁵⁰ / ₆₀ Hz		For AC ^{Note)} ■ With light/surge	push type Push-turn locking
Base mounted	SYJ5000	$\begin{cases} 0.83 \\ 4/2 \rightarrow 5/3 \\ (A/B \rightarrow EA/EB) \end{cases}$			DIN terminal (SYJ5000, 7000 only)	voltage suppressor	■ Push-turn locking lever type
	SYJ7000				M8 connector		

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

Rubber Seal 4/5 Port Solenoid Valve

SYJ3000 Series (EUK





Body ported



Base mounted

Symbol

Specifications

Fluid		Air				
0	2 position single	0.15 to 0.7				
Operating pressure range (MPa)	2 position double 3 position ture (°C) 2 position single, double 3 position 2 position single, double 3 position	0.1 to 0.7				
(2)	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) 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 and difficulties in both energized and or energized and account 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

2 position single (B)2 4(A) (B)2 4(A) (B)3 1 5(R) (P) (P)	
(B)2 4(A) (B)2 4(A) (B)2 (A) (B)2 (B)2 (B)2 (B)2 (B)2 (B)2 (B)2 (B)	Ele
(R)3 1 5(R) (P) (P) (P) (P) (P) (P) (P) (P) (P) (P	
(R)3 1 5(R) 1 3(R) (P) (P) 2 position double 2 position double F	Coi
(R)3 1 5(R) 1 3(R) (P) (P) 2 position double 2 position double F	Alle
(B)2 4(A) (B)2 4(A)	o
(R)3 15(R) 13(R)	
(P) (P)	٩р
3 position closed center 3 position closed center	٠,٢
(B)2 4(A) (B)2 4(A)	
	Sui
(P) (P)	nd
	In c
	For
	For
(R)3 15(R) 13(R) B	r
(P) (P)	

3 position pressure center

(B)2 4(A)



3 position pressure center

(B)2 4(A)

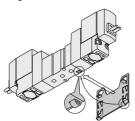
(R)3

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 suppressor			Diode (Non-polarity type: Varistor)				
Indicator light			LED				

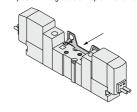
common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC, tr 115 VAC and 230 VAC, the allowable voltage is –15% to +5% of rated voltage, or details refer to page 240.

acket Mounting

the groove on the bottom of the valve as shown.



① Insert the lower hook of the mounting bracket into ② Press the valve and mounting bracket together until the upper hook of the bracket snaps into place in the groove on top of the valve.



Flow Rate Characteristics/Weight

				Port	size	We	eight (g) Note:	3, 4)	Effective		Flow	rate cha	aracteristics	Note 2)	
Valve	model	Тур	e of actuation	1, 5, 3	4, 2	Grommet	L/M plug	M8	area	1→4/	′2 (P→A	/B)	4/2→5/3	(A/B→E	EA/EB)
				(P, EA, EB)	(A, B)	Giornine	connector	connector	(mm ²)	C [dm3/(s-bar)]	b	Cv	C [dm3/(s-bar)]	b	Cv
	SYJ314□	0	Single			62 (36)	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)	-	0.46	0.30	0.12	0.40	0.33	0.12
Base mounted				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			53	55	63							
Body ported	SYJ332□		Closed center	M3 x 0.5	M3 x 0.5				0.9						
Body ported	SYJ342□	3 position	Exhaust center			56	58	66							
	SYJ352□		Pressure center												
Note 1)	SYJ313□	2 position	Single			36	37	41							
4 Port	SYJ323□	2 position	Double]		53	55	63	_						
Base mounted	SYJ333□		Closed center	1/8	M5 x 0.8				_						
(For manifold	SYJ343□	3 position	Exhaust center	1		56	58	66	_						
base only)	SYJ353□		Pressure center						_						

Note 1) Dedicated for manifold base. For details, refer to page 158.

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

· · · · · · · · ·				- 3	. 5						
				E	Bore size						
	A.,	CJ2 serie	s		CM2 series						
	Average	Pressure	0.5 MPa		Pressure 0.5 MPa						
Series	speed	Load rate	: 50%		Load rate	e: 50%					
	(mm/s)	Stroke 60	mm		Stroke 30	00 mm					
		ø6	ø10	ø16	ø20 ø25		ø32	ø40			
	800				_						
	700				—П Ре	rpendicula	r unward a	ctuation H			
	600							Н			
	500				ЩШНо	rizontal act	tuation	Н			
SYJ3120-M3	400							_			
	300										
	200				-						
	100	\vdash	-	-	\vdash						
	0										

Base Mounted

					Bore size						
	Average	CJ2 serie	-		CM2 series						
		Pressure	0.5 MPa		Pressure 0.5 MPa Load rate: 50%						
Series	speed	Load rate	: 50%								
	(mm/s)	Stroke 60	mm (Stroke 300 mm						
		ø6	ø10	ø16	ø20	ø25	ø32	ø40			
	800										
	700				Pei	rpendicula	r, upward a	ctuation			
	600 500				ППно	rizontal ac	tuation				
SYJ3140-M5					7.0	I Lornar ao	I				
3133140-IVI3	300										
	200										
	100	\vdash	\vdash	-	\vdash	-					
	0										

- 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: (Lload weight s 9.8)/Theoretical force) x 100°

Conditions

Во	ody ported	CJ2 series CM2 series					
	Tubing bore x Length	ø4 x	1 m				
SYJ3120-M3	Speed controller	02F-04					
	Silencer	AN120-M3					

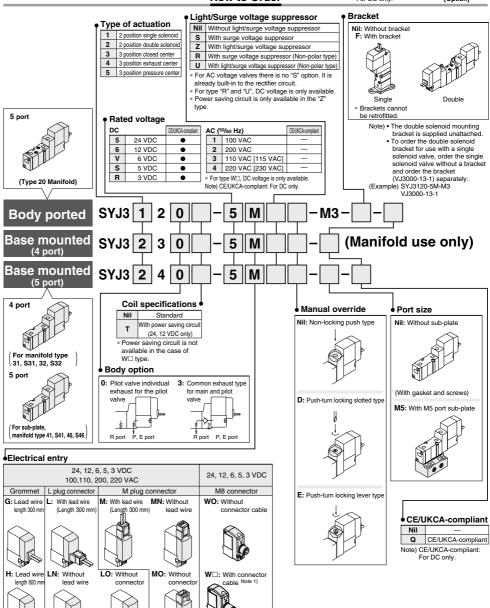
Bas	e mounted	CJ2 series	CM2 series
	Tubing bore x Length	ø6 x	1 m
SYJ3140-M5	Speed controller	AS2002F-06	AS2002F-06
	Silencer	AN12	.0-M5



How to Order

Note) CE/UKCA-compliant: For DC only.





* LN, MN type: with 2 sockets

* Refer to page 239 for the lead wire length of L and M plug connectors.

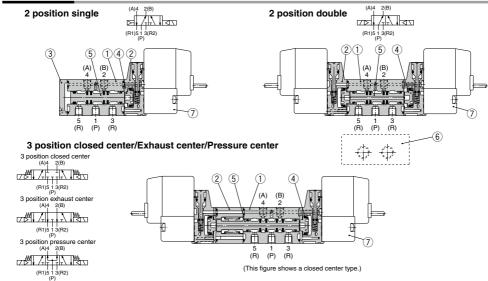
* Refer to page 242 for the connector assembly with cover for L and M plug connectors.

* For connector cable of M8 connector, refer to page 242.

* M8 thread conforming to IEC60947-5-2 standard is also available. Refer to page 237 for details. Note 1) Enter the cable length symbols in \square . Please be sure to fill in the blank referring to page 242.

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 166.)

Construction



Component Parts

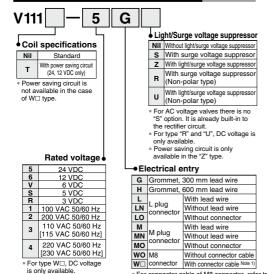
No.	Description	Material	Note
1	Body	Zinc die-casted	White
2	Piston plate	Resin	White
3	End cover	Resin	White
4	Piston	Resin	
- 5	Spool valve assembly	Alminum, H-NBR	

Replacement Parts

No.	Description	Part no.	Note
6	Sub-plate Note)	SYJ3000-22-1 (-Q)	Zinc die-casted
7	Pilot valve	V111 (T) - 🗆 🗆 🗆	

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

How to Order Pilot Valve Assembly



^{*} For connector cable of M8 connector, refer to page 242. Note 1) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 242.

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

CE/UKCA-compliant: For

DC only.



SYJ3000 Series

2 Position Single *[]: AC

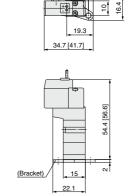
Grommet (G), (H): SYJ3120-□H□□-M3

G: Approx. 300 54.4 [56.6] H: Approx. 600 (Lead wire length) 13.2 Manual override M3 x 0.5 2 x ø1.8 (For manifold mounting) (A, B port) (Light/surge voltage suppressor) 22.1 12.6 28 5 6 ø1.2 (PE port) 15 M3 x 0.5 (P, R port)

With bracket: SYJ3120-□H□□-M3-F

2 x ø3.5

(For mounting)

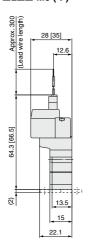


28.4

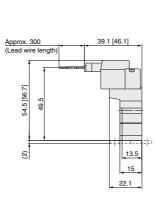
22

3.2

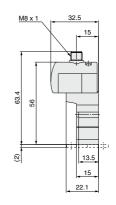
L plug connector (L): SYJ3120-□L□□-M3 (-F)



M plug connector (M): SYJ3120-□M□□-M3 (-F)



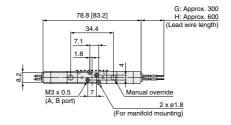
M8 connector (WO): SYJ3120-□WO□□-M3 (-F)

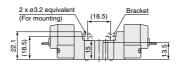


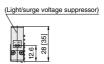
^{*} Refer to page 243 for dimentions with connector cable.

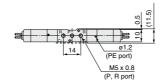
2 Position Double

Grommet (G), (H): SYJ3220-□H□□-M3 (-F)





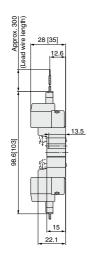


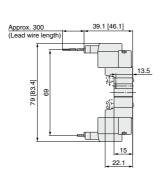


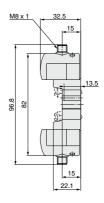
L plug connector (L): SYJ3220-□L□□-M3 (-F)

M plug connector (M): SYJ3220-□M□□-M3 (-F)

M8 connector (WO): SYJ3220-□WO□□-M3 (-F)



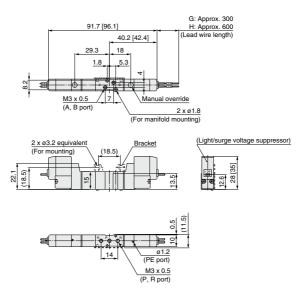




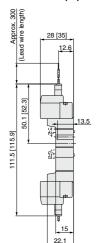
^{*} Refer to page 243 for dimentions with connector cable.



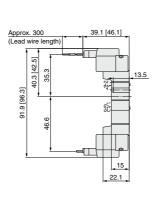
Grommet (G), (H): SYJ3 ³/₅20-□ H□□-M3 (-F)



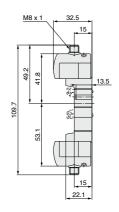
L plug connector (L): SYJ3^{3/2}20-□L□□-M3 (-F)



M plug connector (M): SYJ3⅔20-□M□□-M3 (-F)



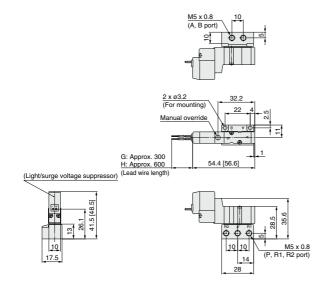
M8 connector (WO): SYJ3³/₂20-□WO□□-M3 (-F)



Refer to page 243 for dimentions with connector cable.

2 Position Single *[]: AC

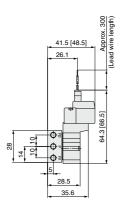
Grommet (G), (H): SYJ3140-□^G_H□□-M5

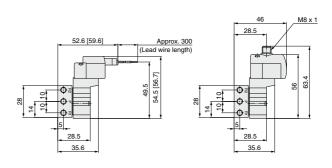


L plug connector (L): SYJ3140-□L□□-M5

M plug connector (M): SYJ3140-□M□□-M5

M8 connector (WO): SYJ3140-□WO□□-M5





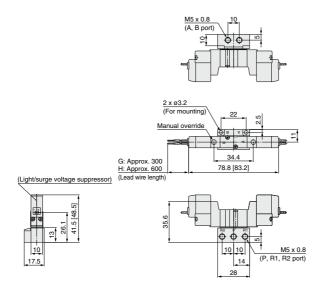


^{*} Refer to page 243 for dimentions with connector cable.

SYJ3000 Series

2 Position Double * []: AC

Grommet (G), (H): SYJ3240-□^G_H□□-M5

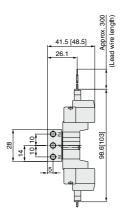


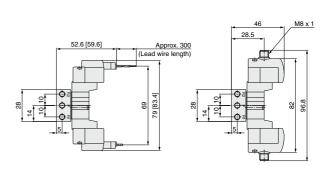
L plug connector (L):

SYJ3240-ULUU-M5

M plug connector (M): SYJ3240-□M□□-M5

M8 connector (WO): SYJ3240-□WO□□-M5



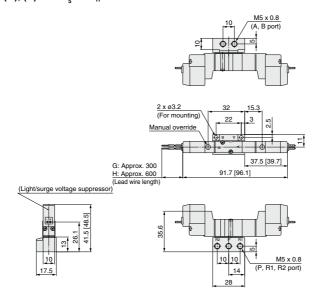


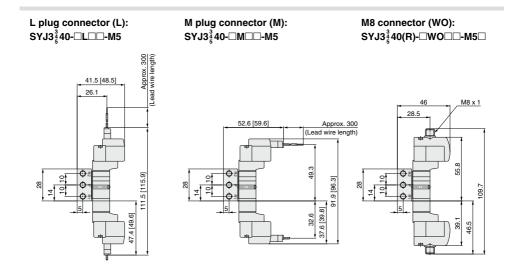
^{*} Refer to page 243 for dimentions with connector cable.

3 Position Closed Center/Exhaust Center/Pressure Center

* []: AC

Grommet (G), (H): SYJ3³/₄40-□^G_H□□-M5





* Refer to page 243 for dimentions with connector cable.



SYJ3000 Series Manifold Specifications



Manifold Standard



Manifold Specifications

Model	Type 20	Type 31, S31	Type 32, S32	Type 41, S41	Type 46, S46			
Manifold type		Single base/B mount						
P (SUP), R (EXH)		Common SUP/Common EXH Common SUP Individual EXH						
Valve stations	Valve stations			2 to 20 stations				
A, B port	Location	Valve	Base					
Porting specifications	Direction	Тор						
Port size	P, R port	M5 :	M5 x 0.8		/8	P: 1/8 R: M5 x 0.8		
	A, B port	M3:	x 0.5	M5 x 0.8, C4 (One-touch fitting for				

Flow Rate Characteristics

		Port size Flow rate characteristics						Effective			
	Manifold			Port size		1→4/2 (P→A/B)			4/2→5/3 (A/B→R)		
				2(B), 4(A) Port	C [dm ³ /(s-bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv	area (mm²)
Body ported for internal pilot	Type SS5YJ3-20	SYJ3□2□	M5 x 0.8	M3 x 0.5	-	-	-	1	-	-	0.9
	Type SS5YJ3- 31 S31	SYJ3□3□	M5 x 0.8	M3 x 0.5	-	-	-	-	-	-	0.9
	Type SS5YJ3-32-M5			M5 x 0.8	0.25	0.19	0.060	0.32	0.25	0.077	-
	Type SS5YJ3-32-C4 Type SS5YJ3-S32-M5	SYJ3□3□	1/8	C4	0.25	0.18	0.059	0.30	0.27	0.075	-
				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 Type SS5YJ3-46-C4		M5 x 0.8	0.20	0.25	0.048	0.10	0.12	0.024	-	
		CV IODAD	1/8	C4	0.21	0.27	0.050	0.21	0.13	0.047	-
	Type SS5YJ3-S46-M5	SYJ3□4□	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.



^{*} Use manifold specification sheet.

• 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 base/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				
FUIT SIZE	A, B port	M3 x 0.5	M5 x 0.8, C4 (One-touch fitting for Ø4)			
Applicable flat ribbon cable connector		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/UKCA-compliant: For DC only.

Flow Rate Characteristics

			Port	size	Flow rate characteristics						Effective
			I OIT SIZE		1→4/2 (P→A/B)		4/2→5/3 (A/B→R)		area		
	Manifold		1(P), 5/3(R) Port	2(B), 4(A) Port	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	(mm²)
Body ported for internal pilot	Type SS5YJ3-21P			M3 x 0.5	-	-	-	-	-	-	0.9
Base mounted	Type SS5YJ3-32P-M5	CV 12-22	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	513333	1/6	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 •

T With power saving circuit

Standard

Nil



Light/Surge voltage suppressor

Z With light/surge voltage suppressor With light/surge voltage suppressor (Non-polar type) Note) Z: Positive common specifications only Power saving circuit is only available

in the "Z" type For DC SYJ3 1 For AC SYJ3 1

5 24 VDC

6

12 VDC

Type of actuation e

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position prossure center

Rated voltage

1 100 VAC 3 110 VAC (115 VAC)

Manual override

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

A, B port size • Symbol Port size Nil Base mounted МЗ M3 x 0.5

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/UKCA-compliant

Nil	_					
Q	CE/UKCA-compliant					
Note) CE/UKCA-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

Single solenoid	SY3000-37-46A
Double solenoid, 3 position type	SY3000-37-47A

For 110 VAC (115 VAC)

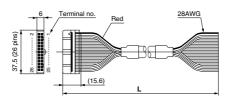
Single solenoid	SY3000-37-54A
Double solenoid, 3 position type	SY3000-37-55A



SYJ3000/5000/7000 Series

Flat Ribbon Cable Connector

AXT100-FC26-2



Flat ribbon cable connector

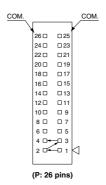
Cable	Assembly part no.
length (L)	26 pins
1.5 m	AXT100-FC26-1
3 m	AXT100-FC26-2
5 m	AXT100-FC26-3

- When using a standard commercial connector, use a 26-pin type connector conforming to MIL-C-83503 with strain relief.
- Cannot be used for movable wiring
- * Lengths other than the above are also available. Please contact SMC for details.

Connector Manufacturer's Example

- HIROSE ELECTRIC CO., LTD.
- 3M Japan Limited
- Fujitsu Limited
- · Japan Aviation Electronics Industry, Limited
- J.S.T. Mfg. Co., Ltd.
- Oki Electric Cable Co., Ltd.

Specified Layout



A mixture of single and double wiring can be specified on the manifold specification sheet. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 24 or less for P and PC. 1 solenoid is required for the 2-position single, and 2 solenoids for the 2-position double, and 3-position.



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 \	/DC



Flow Rate Characteristics

	Manifold		Port	size	1→4/2	_		aracteristic		B→R)	Effective
	Manifold		1(P), 5/3(R) Port		C [dm ³ /(s-bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	area (mm²)
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	1/6	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

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

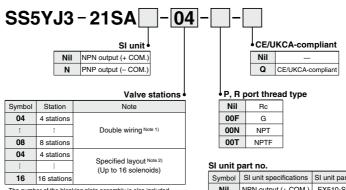
Add the valve and option part numbers under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet. The connector assembly lead wire length used for EX10 manifold varies depending on the number of stations. Therefore, solenoid valves (including 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 Body Ported Manifold

SYJ3000 Series (EUK

The EX510 series is to be discontinued. When designing new equipment and facilities, consider using another series (EX260/EX600) instead.

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.

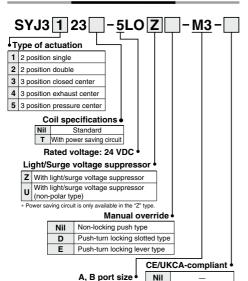
Note 2 Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+ COM.)	EX510-S001	Web
N	PNP output (- COM.)	EX510-S101	Catalog

Refer to the **Web Catalog** and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download the Operation Manual via our website, https://www.smcworld.com

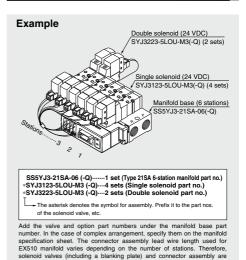
How to Order Valve

How to Order Manifold Assembly (Example)



Q

CE/UKCA-compliant



assembled when shipped as a standard specification. Please specify the

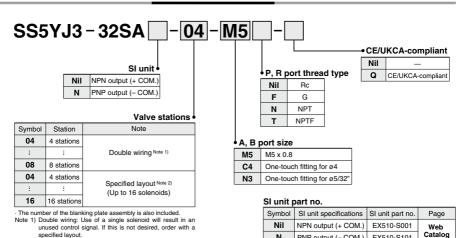
mounting solenoid valve when ordering.

EX510 Gateway-type Serial Transmission System Base Mounted Manifold

SYJ3000 Series (EUK

The EX510 series is to be discontinued. When designing new equipment and facilities, consider using another series (EX260/EX600) instead.

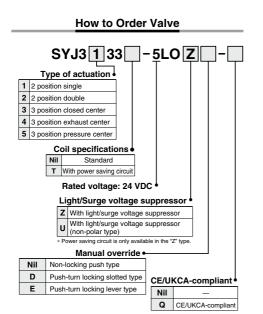
How to Order Manifold



Refer to the Web Catalog and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download the Operation Manual via our website. https://www.smcworld.com.

How to Order Manifold Assembly (Example)

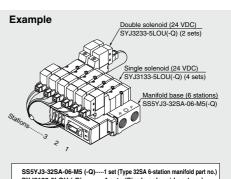
PNP output (- COM.)



Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3

wiring has been specified.)

position valves cannot be used where single solenoid



* 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

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.

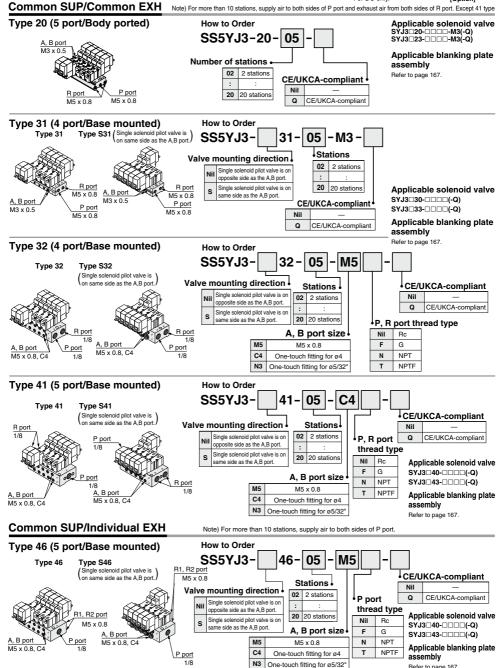
SYJ3000 Series

Note) CE/UKCA-compliant: For DC only.



Refer to page 167.





Flat Ribbon Cable Manifold

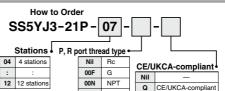
SYJ3000 Series

Note) CE/UKCA-compliant: For DC only.



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





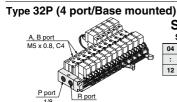
NPTF

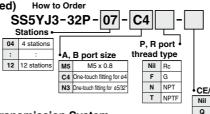
Applicable solenoid valve Refer to page 159.

Applicable connector assembly

Refer to page 159.

Applicable blanking plate assembly Refer to page 167.





Applicable solenoid valve Refer to page 159.

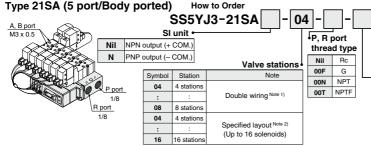
Applicable connector assembly

Refer to page 159.

CE/UKCA-compliant

Applicable blanking plate assembly Refer to page 167. CE/UKCA-compliant

EX510 Gateway-type Serial Transmission System



Applicable solenoid valve Refer to page 162.

Applicable blanking plate assembly

Refer to page 167.

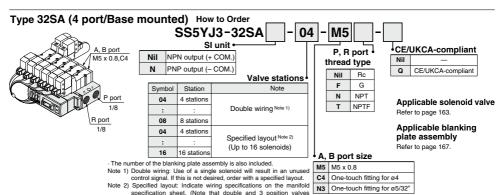
CE/UKCA-compliant Nil

CE/UKCA-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.

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.)



SYJ3000 Series

Mixed Installation of the SYJ300 and the SYJ3000 Valves on the Same Manifold

The SYJ300 series valves can be mounted on the manifolds for SYJ3000 series.

① SS5YJ3-20, SS5YJ3-21P, SS5YJ3-21SA

The 3 port valve can be used by simply sealing off the unused "R" port with rubber plug SYJ3000-33-1.

Applicable solenoid valves:

SYJ312, SYJ312M, SYJ322, SYJ322M series

② SS5YJ3-31, -S31, SS5YJ3-32, -S32,

SS5YJ3-32SA, SS5YJ3-46, -S46, SS5YJ3-32P
The 3 port valve can be used without modification. The A port of the valve will flow out of the B
port of the manifold

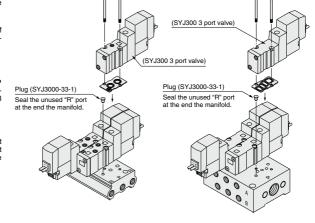
Applicable solenoid valves:

SYJ314, SYJ314M, SYJ324, SYJ324M series

③ SS5YJ3-41, -S41

The 3 port valve can be used on the 4 port manifold by simply sealing off the unused "R" port with rubber plug SYJ3000-33-1. The A port of the valve will flow out of the B port of the manifold. Applicable solenoid valves:

SYJ314, SYJ314M, SYJ324, SYJ324M series



Type SS5YJ3-20

Type SS5YJ3-41

A port of the 3 port valve flows out of the manifold B port.

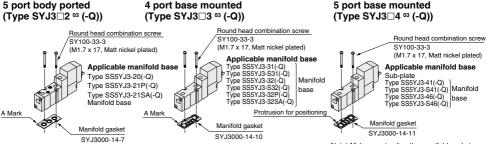
↑ Caution

Mounting screw tightening torques

M1.7: 0.12 N·m

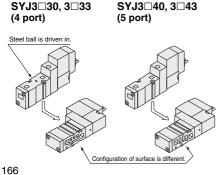
Use caution to the assembly orientation for solenoid valves, gasket, and optional parts.

Combinations of Solenoid Valve, Manifold Gasket and Manifold Base



Note) Make sure to align the manifold gasket with the groove of the valve body.

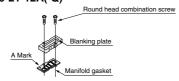
Difference between SYJ3 3 and SYJ3 43



ØSMC

Combination of Blanking Plate Assembly and Manifold Base

Blanking plate assembly SYJ3000-21-12A(-Q)



Manifold base

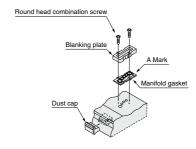
Applicable manifold base Type SS5YJ3-20(-Q) Type SS5YJ3-21SA(-Q) Type SS5YJ3-41(-Q) Type SS5YJ3-S41(-Q) Type SS5YJ3-46(-Q) Type SS5YJ3-S46(-Q) Type SS5YJ3-31(-Q)

Type SS5YJ3-S31(-Q) Type SS5YJ3-32(-Q) Type SS5YJ3-S32(-Q) Type SS5YJ3-32SA(-Q)

Note) Manifold gasket "SYJ3000-14-2" can be used with the following manifold bases.

Type SS5YJ3-31(-Q) -S31(-Q) Manifold base of -32(-Q) -S32(-Q) -32SA(-Q)

Blanking plate assembly SYJ3000-21-13A(-Q)



Applicable manifold base

SS5YJ3-21P(-Q) SS5YJ3-32P(-Q) Manifold base



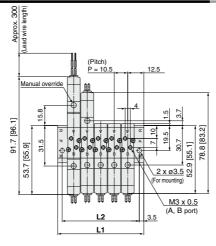
Caution

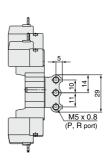
Mounting screw tightening torques

M1.7: 0.12 N·m

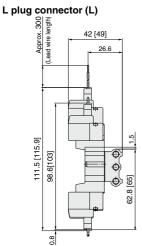
Use caution to the assembly orientation for solenoid valves, gasket, and optional parts.

Grommet (G)

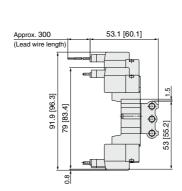




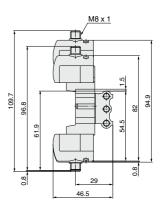
(Station n)----- (Station 1) (Light/surge voltage suppressor) 42 [49] 26.6



M plug connector (M)



M8 connector (WO)



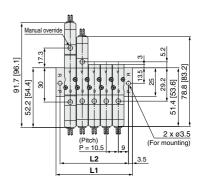
* Refer to page 243 for dimentions with connector cable.

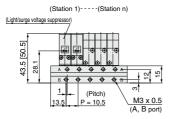
Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	35.5	46	56.5	67	77.5	88	98.5	109	119.5	130	140.5	151	161.5	172	182.5	193	203.5	214	224.5
L2	28.5	39	49.5	60	70.5	81	91.5	102	112.5	123	133.5	144	154.5	165	175.5	186	196.5	207	217.5

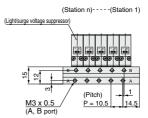
Type 31 Manifold: Side Ported/SS5YJ3-31-Stations -M3

* []: AC

Type S31 Manifold: Side Ported Signer Solenoid pilot valve is on same SS5YJ3-S31-Stations -M3



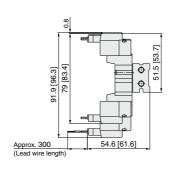




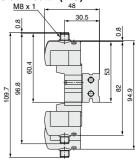
L plug connector (L)

(Lead wire length) 98.6[103] 98.6[10

M plug connector (M)



M8 connector (WO)

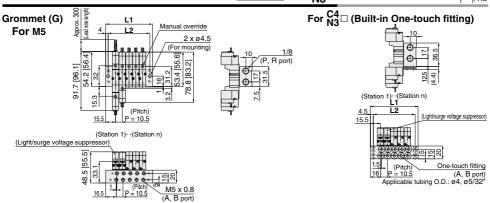


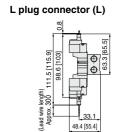
 Refer to page 243 for dimentions with connector cable.

Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	35.5	46	56.5	67	77.5	88	98.5	109	119.5	130	140.5	151	161.5	172	182.5	193	203.5	214	224.5
L2	28.5	39	49.5	60	70.5	81	91.5	102	112.5	123	133.5	144	154.5	165	175.5	186	196.5	207	217.5

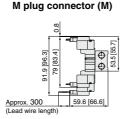
Type 32 Manifold: Side Ported/SS5YJ3-32-Stations -M5, N3 □

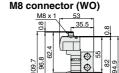
* []: AC





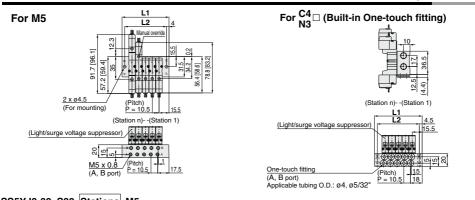
48.4 [55.4]





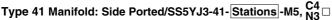
* Refer to page 243 for dimensions with connector cable.

Type S32 Manifold: Side Ported (Single solenoid pilot valve is on same side as the A,B port.)/SS5YJ3-S32-Stations -M5, N3



•	SS5YJ	3-32, S	32-	statio	ns -N	15														
	Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
	L1	41.5	52	62.5	73	83.5	94	104.5	115	125.5	136	146.5	157	167.5	178	188.5	199	209.5	220	230.5
	L2	33.5	44	54.5	65	75.5	86	96.5	107	117.5	128	138.5	149	159.5	170	180.5	191	201.5	212	222.5

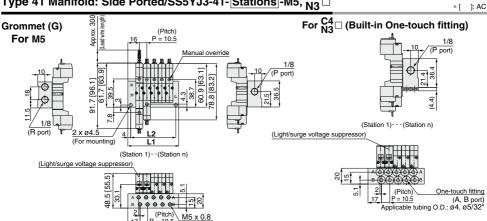
SS5YJ	3-32, S	32-	Statio	ns -C	4														
Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	42.5	53	63.5	74	84.5	95	105.5	116	126.5	137	147.5	158	168.5	179	189.5	200	210.5	221	231.5
L2	33.5	44	54.5	65	75.5	86	96.5	107	117.5	128	138.5	149	159.5	170	180.5	191	201.5	212	222.5



P = 10.5

(A, B port)

(Lead wire length)

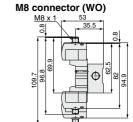


L plug connector (L) 111.5 [115.9] 98.6[103] **⊕** 8 Lead wire length) Approx. 300

48.5 [55.5]

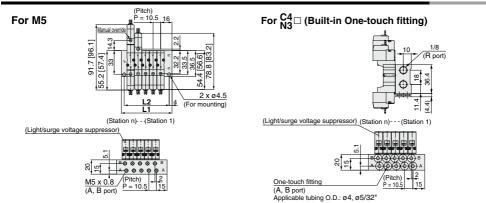
79 [83.4] 63. 91.9 [96.3] Φ 59.6 [66.6] Approx. 300

M plug connector (M)



* Refer to page 243 for dimentions with connector cable.

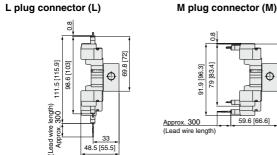
Type S41 Manifold: Side Ported (Single solenoid pilot valve is on same side as the A.B port.)/SS5YJ3-S41-Stations -M5, $\frac{C4}{N3}$



Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	39.5	50	60.5	71	81.5	92	102.5	113	123.5	134	144.5	155	165.5	176	186.5	197	207.5	218	228.5
L2	31.5	42	52.5	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.5	189	199.5	210	220.5

Type 46 Manifold: Side Ported/SS5YJ3-46-Stations -M5, C4 □

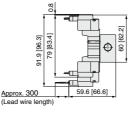
* []: AC Approx. 300 Lead wire length) Grommet (G) For C4 □ (Built-in One-touch fitting) Approx. For M5 P = 10.5 60.7 [62.9] . 65 .8 [83.2] 91.7 [96.1] 59.9 2 x ø4.5 (Station 1) - - - (Station n) 4 (For mounting) (Light/surge voltage suppressor) L1 (Station 1) -- (Station n) (Light/surge voltage suppressor) One-touch fitting 200 (A, B port)



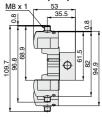
48 5 [55 5]

62 [83,4] Φ 9

M5 x 0.8 (A, B port)



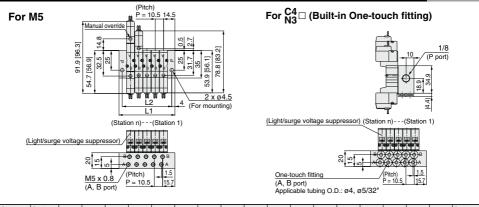
M8 connector (WO)

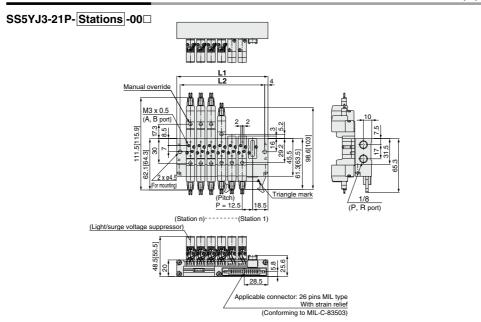


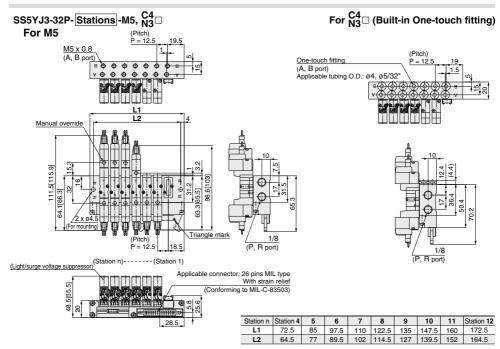
Applicable tubing O.D.: ø4, ø5/32

* Refer to page 243 for dimentions with connector cable.

Type S46 Manifold: Side Ported (Single solenoid pilot valve is)/SS5YJ3-S46-Stations -M5, N3





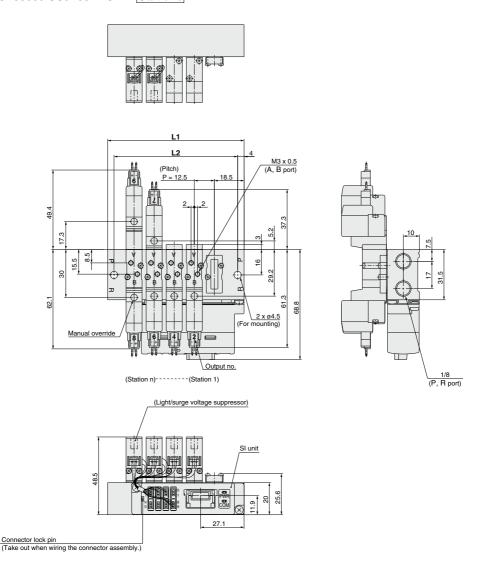


SMC

SYJ3000 Series

EX510 Gateway-type Serial Transmission System

SYJ3000:SS5YJ3-21SA - Stations -

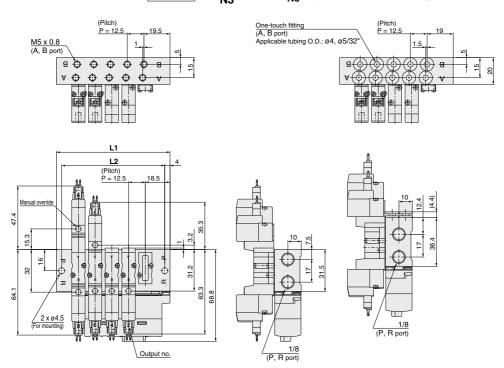


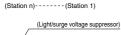
Station n	Station 4	5	6	7	8	9	10	11	12	13	14	15	Station 16
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5	185	197.5	210	222.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5	177	189.5	202	214.5

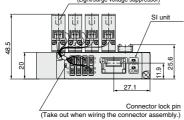
SYJ3000 Series

EX510 Gateway-type Serial Transmission System

SYJ3000:SS5YJ3-32SA - Stations - M5, N3 For N3 (Built-in One-touch fitting)







Station n	Station 4	5	6	7	8	9	10	11	12	13	14	15	Station 16
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5	185	197.5	210	222.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5	177	189.5	202	214.5

Rubber Seal 5 Port Solenoid Valve

SYJ5000 Series (ELK



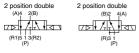


Body ported

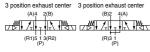


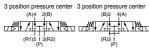
Base mounted

Symbol Body ported	Base mounted (with sub-pl
2 position single	2 position single
(A)4 2(B) (R1)5 1 3(R2)	(B)2 4(A) (R)3 1 (P)
2 position double	2 position double











Specifications

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

Based on IEC60529

* Bassed on IE-L00229
Note 1) Based on ynamic 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
amature in both energized and de-energized states every conso 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 deenergized states in the axial direction and at the right angles to the main valve and amature. (Value in the initial state)

Solenoid Specifications

Coli rated voltage (V) DC AC 50/60 Hz Coli rated voltage fluctuation		
M8 connector (W) G, H, L, M, W D, Y		
Note		
Coil rated voltage (V) DC		
Coil rated voltage (Y)		
Allowable voltage fluctuation 100, 110, 200, 220 100 110, 200, 220 110% of rated voltage * 10% of rated volta		
Power consumption (W) DC Standard 0.35 (With light: 0.4 (DIN terminal with light: 0.1 (With light only) \$\frac{\text{\$V\$}}{\text{saving circuit}}\$ (Starting 0.4, Holding 0.1)		
Power consumption (W) DC With power saving circuit [Starting 0.4, Holding 0.1]	±10% of rated voltage *	
saving circuit [Starting 0.4, Holding 0.1]	0.45)}	
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: 1.97)]	.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 ty	nes)	
Indicator light LED (Neon light when AC with DIN termina		

- 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 240.

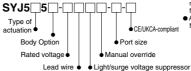
Built-in Speed Controller

SYJ5 5

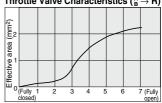
- Built-in exhaust flow controls enable simple cylinder speed adjustments
- When mounted on the manifold, the common exhaust discharges the pilot and main valve exhaust through a common EXH port to enable simple exhausting.



How to order valve with built-in speed controller



Throttle Valve Characteristics ($^{A}_{B} \rightarrow R$)



- 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

				Port	size		Flow	rate cha	aracteristics	Note 1)			Weig	ht (g) Note 2,	3)
١	Valve model		Type of actuation		1, 5, 3 4, 2		1R4/2 (PRA/B)		4/2R5/3	(A/BRE/	4/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	0.13	46	47	68	51
		2 position	Double			0.47	0.41	0.13	0.47	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			0.69	0.39	0.18	0.44	0.39	0.12	53	54	75	58
l å		2 pusitiut	Double		C4		0.55	0.10	0.44	0.55	0.12	71	73	115	81
Body ported	SYJ5□20-□-C4		Closed center	M5 x 0.8	fitting for ø4)	0.69	0.40	0.19	0.43	0.40	0.12		84	126	72
16		3 position	Exhaust center			0.56	0.40	0.15	0.41 [0.41]		0.10 [0.11]	82			
ā			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	0.19	0.47	0.40	0.12	53	54	75	58
		2 position	Double		C6			0.10	0.47		0.12	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
ΙĒ		2 position	Double				0.21	0.10	0.00	5.	0.2	98 (64)	100 (66)	142 (108)	74
Base mounted	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 (119)	85
å			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.

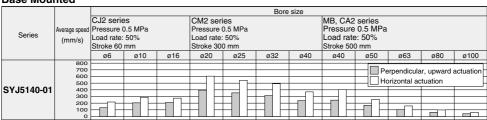
Note 3) For DC voltages. For AC voltages add 3 g to the weight of the single solenoid and 6 g to the weight of the double solenoid and 3 position types.

Use as a guide for selection.

Cylinder Speed Chart

Please confirm the actual conditions with SMC **Body Ported** Sizing Program. Bore size CJ2 series CM2 series Average speed Pressure 0.5 MPa 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 actuatio 700 600 500 Horizontal actuation SYJ5120-M5 400 300 200 100

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

Condition	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						
	Siloncor		ANI120-M5							

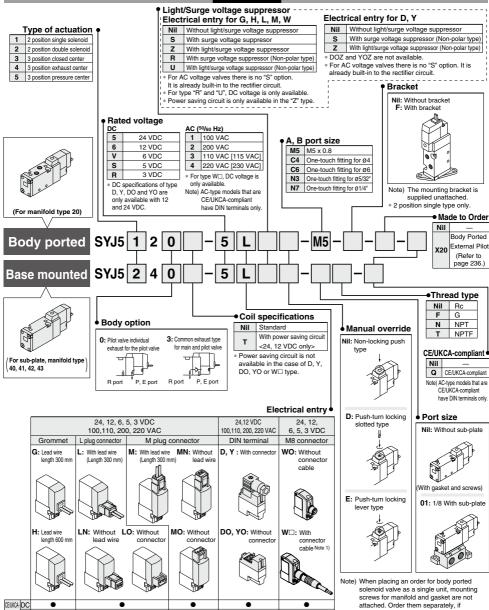
Е	lase mounted	CJ2 series	CM2 series MB, CA2 series
	Tubing bore x Length	ø4 x 1 m	ø6 x 1 m
SYJ5140-01	Speed controller	AS2301F-04	AS3001F-06
	Silencer		AN101-01



How to Order

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





* LN, MN type: with 2 sockets

•

- Refer to page 239 for the lead wire length of L and M plug connectors.

 Refer to page 242 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 241.
- * For connector cable of M8 connector, refer to page 242.
- * M8 thread conforming to IEC60947-5-2 standard is also available. Refer to page 237 for details.

Note 1) Enter the cable length symbols in \square . Please be sure to fill in the blank referring to page 242.

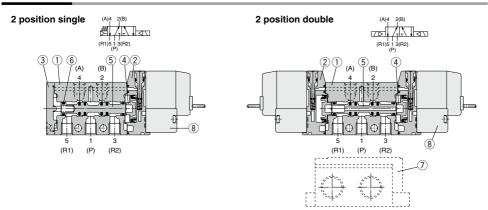
necessary. (For details, refer to page 194.)



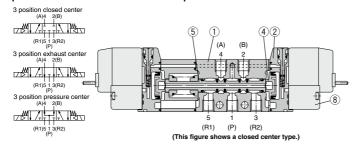
•

compliant AC

Construction



3 position closed center/exhaust center/pressure center



Component Parts

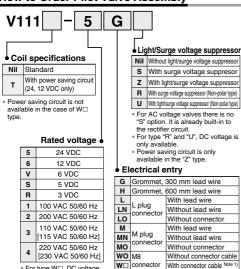
оор	onone i aito		
No.	Description	Material	Note
1	Body	Aluminum die-casted	White
2	Piston plate	Resin	White
3	End cover	Resin	White
4	Piston	Resin	_
5	Spool valve assembly	Aluminum, H-NBR	_
- 6	Spool spring	Stainless steel	_

Replacement Parts

	No.	Description	Part no.	Note				
Ξ	7	Sub-plate Note)	SYJ5000-22-1 (-Q)	Aluminum die-casted				
Ξ	8	Pilot valve	V111(T)-□□□					
Ξ	_	Bracket assembly	SYJ5000-13-3A					
π	A LL . (" " OT / LL OF !!! OA '							

^{*} Add suffix "-Q" for the CE/UKCA-compliant product.

How to Order Pilot Valve Assembly



- * For type W□, DC voltage
- is only available. * CE/UKCA-compliant: For DC only.

5

D

V115-

5

6

1

2

3

4

or DO type.

Rated voltage

24 VDC

12 VDC

100 VAC 50/60 Hz

200 VAC 50/60 Hz

110 VAC 50/60 Hz

[115 VAC 50/60 Hz] 220 VAC 50/60 Hz

[230 VAC 50/60 Hz] * DC specifications of type D and DO is only available with 12 and 24 * Power saving circuit is not available in the case of D

* For connector cable of M8 connector,

Note 1) Enter the cable length symbols

in □. Please be sure to fill in the blank referring to page 242.

refer to page 242.

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

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

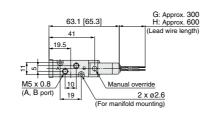
Electrical entry

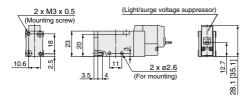
D	DIN terminal	With connector		
D	(Type D)	Without connector		
Y	DIN terminal	With connector		
D	(Type Y)	Without connector		

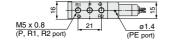
Note) Do not replace V111 (G, H, L, M, W) to V115 (DIN terminal) and vice versa when replacing pilot valve assembly only.

Note) Since V111 and V115 are CE/UKCA-compliant as standard, the suffix "-Q" is not necessary.

Grommet (G), (H): SYJ5120-□H□□-M5

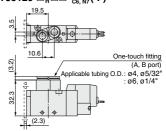




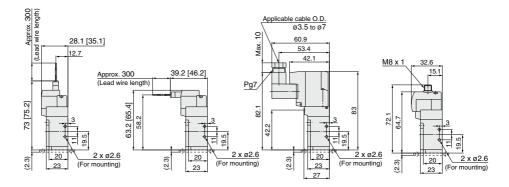


With bracket SYJ5120-□-M-□-M5-F 2 x Ø 3.5 (For mounting) 3.5.1 [42.1] (Bracket) (Bracket) (Continuous properties of the properties o

Built-in One-touch fitting: SYJ5120
Graph C4, N3 (-F)



L plug connector (L): M plug connector (M): DIN terminal (D, Y): M8 connector (WO): SYJ5120- \square L \square -M5(-F) SYJ5120- \square M \square -M5(-F) SYJ5120- \square C-M5(-F) SYJ5120- \square M0 \square -M5(-F) SYJ5120- \square M0 \square -M5(-F)



Refer to page 243 for dimentions with connector cable.

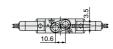


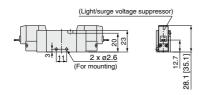
2 Position Double *[]: AC

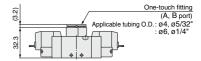
Grommet (G), (H): SYJ5220-□H□□-M5

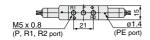
87.2 [91.6] G: Approx. 300 H: Approx. 600 (Lead wire length) 43 (Lead wire length) M5 x 0.8 19 2 x Ø2.6 (A, B port) (For manifold mounting)

Built-in One-touch fitting: SYJ5220-









L plug connector (L): M plug connector (M): SYJ5220-□L□-M5

M plug connector (M): SYJ5220-□V□-M5

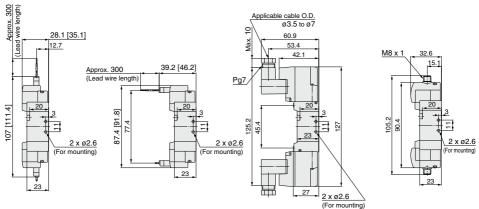
M8 connector (WO): SYJ5220-□W□-M5

Applicable cable O.D.

O 3.5 to 07

O 3.5 to 07

O 3.5 to 07



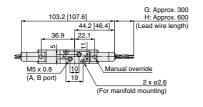


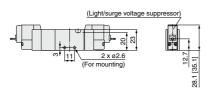
^{*} Refer to page 243 for dimentions with connector cable.

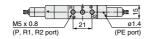
3 Position Closed Center/Exhaust Center/Pressure Center

* []: AC

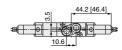
Grommet (G), (H): SYJ5 ₹20-□H□□-M5

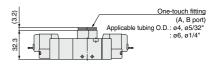






Built-in one-touch fitting: SYJ5³/₄20-□^G_H□□-^{C4, N3}_{C6 N7}

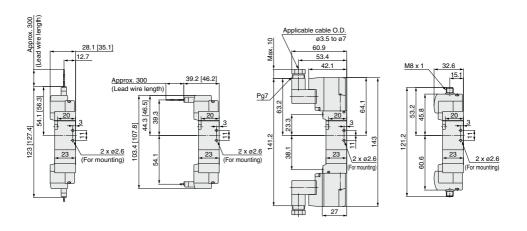




L plug connector (L): SYJ5³/₄20-□L□□-M5

M plug connector (M): SYJ5³/₄20-□M□□-M5 DIN terminal (D, Y): SYJ5³/₄20-□^D/_Y□□-M5

M8 connector (WO): SYJ5³/₄20-□WO□□-M5



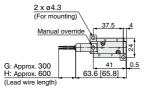
* Refer to page 243 for dimentions with connector cable.



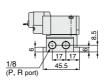
2 Position Single *[]: AC

Grommet (G), (H): SYJ5140-□^G_H□□-01□

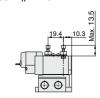




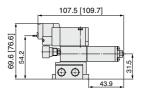
(Light/surge voltage suppressor)



Built-in speed controller: SYJ5150-□^G_H□□-01□



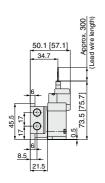
With interface regulator

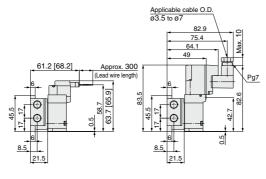


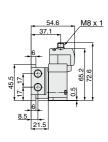
L plug connector (L): SYJ5140-□L□□-01□

M plug connector (M): SYJ5140-□M□□-01□

DIN terminal (D, Y): SYJ5140-□^D_Y□□-01□ M8 connector (WO): SYJ5140-□WO□□-01□





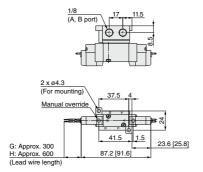




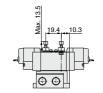
Refer to page 243 for dimentions with connector cable.

2 Position Double *[]: AC

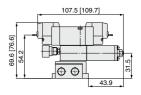
Grommet (G), (H): SYJ5240-□^G_H□□-01□

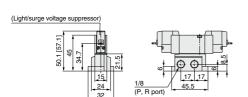


Built-in speed controller: SYJ5250-□^G_H□□-01□



With interface regulator



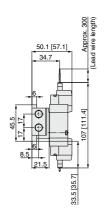


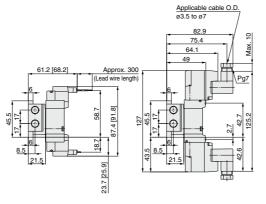
L plug connector (L): SYJ5240-□L□□-01□

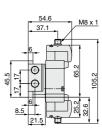
M plug connector (M): SYJ5240-□M□□-01□

DIN terminal (D, Y): SYJ5240-□ □ □ □ □ -01 □

M8 connector (WO): SYJ5240-□WO□□-01□









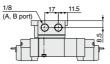
^{*} Refer to page 243 for dimentions with connector cable.

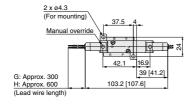
3 Position Closed Center/Exhaust Center/Pressure Center

* []: AC

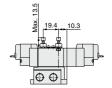
Grommet (G), (H): SYJ5³/₅40-□^G_H□□-01□

1/8 (A, B port)

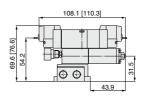


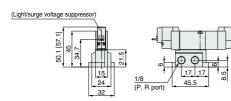


Built-in speed controller: SYJ5450-□H□□-01□



With interface regulator

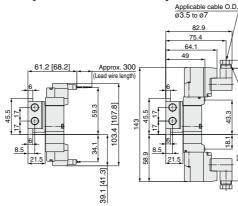




L plug connector (L): SYJ5440-ULUU-01U

(Lead wire length) 50.1 [57.1] 34.7 [51.1]

M plug connector (M): SYJ5³/₄40-□M□□-01□

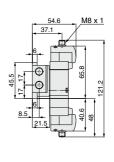


DIN terminal (D, Y): M8 connector (WO): SYJ5440-UWOUU-01U SYJ5³40-□^D□□-01□

Pg7

141.2

18.1



^{*} Refer to page 243 for dimentions with connector cable.

SYJ5000 Series Manifold Specifications



Manifold Standard



Manifold Specifications

	Model		Type 20	Type 40	Type 41	Type 42	Type 43		
	Manifold type	Single base/B mount							
9	P (SUP), R (EXH)			Common SUP, Common EXH					
	Valve stations		2 to 20 stations						
	A, B port	Location	Valve	Base Base					
	Porting specifications	Direction	Тор	Top Bottom Side					
		P, R port	1/8 1/4			1/4	1/8		
	Port size	A, B port	M5 x 0.8, C4 (One-touch fitting for o4) C6 (One-touch fitting for o6)		x 0.8 1/8, C6 (One-touch fitting for ø6)		C4 (One-touch fitting for ø4)		

Flow Rate Characteristics

				Port size		Flow rate characteristics						
						1→4/2 (P→A/B)			4/2→5/3 (A/B→R)			
	Manifold		1(P), 5/3(R) Port	2(B), 4(A) Port	C [dm³/(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv		
Pody ported	Type SS5YJ5-20	SYJ5□2□		M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19		
Body ported for internal pilot			1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20		
ioi internai pilot			1/8	C6	0.79	0.36	0.21	0.91	0.36	0.24		
	Type SS5YJ5-40		1/8	M5 x 0.8	0.55	0.35	0.15	0.64	0.26	0.16		
Base mounted	Type SS5YJ5-41			M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17		
for internal pilot	Type SS5YJ5-42-01		1/4	1/8	0.74	0.22	0.18	0.82	0.31	0.21		
ioi internai pilot	Type SS5YJ5-42-C6	i	1/4	C6	0.71	0.24	0.17	0.8	0.29	0.20		
	Type SS5YJ5-43		1/8	C4	0.55	0.29	0.14	0.74	0.32	0.19		

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: SS5YJ5-20-03 1 pc. (Manifold base)

* SYJ5120-5G-M5 ----- 2 pcs. (Valve)

* SYJ5000-21-5A ······ 1 pc. (Blanking plate assembly)

SS5YJ5-43-03-C4 ······· 1 pc. (Manifold base)

* SYJ5140-5LZ ----- 1 pc. (Valve)

* SYJ5240-5LZ ----- 1 pc. (Valve)

* SYJ5000-21-6A ··············· 1 pc. (Blanking plate assembly)

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



^{*} Use manifold specification sheet.

Flat Ribbon Cable Manifold

Note) CE/UKCA-compliant: For DC only.



 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 20	Type 41P	Type 43P			
Manifold type		Single base/B mount					
P (SUP), R (EXH)		Common SUP, Common EXH					
Valve stations			3 to 12 stations				
A, B port Location Porting specifications Direction		Valve	Ba	se			
		Top Side					
	P, R port	1/8	1,	/8			
Port size	A, B port	M5 x 0.8, C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	M5 x 0.8	C4 (One-touch fitting for ø4)			
Applicable flat rib	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	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/UKCA-compliant: For DC only.

Flow Rate Characteristics

			Dow	Don't since		Flow rate characteristics						
	Manager Lat		Port size		1→4/2 (P→A/B)			4/2→5/3 (A/B→R)				
Manifold		1(P), 5/3(R) Port	2(B), 4(A) Port	C [dm³/(s·bar)]	b	Cv	C [dm ³ /(s-bar)]	b	Cv			
Body ported			1/8	M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19		
for internal pilot	Type SS5YJ5-20P		1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20		
			1/8	C6	0.79	0.36	0.21	0.91	0.36	0.24		
Base mounted	Type SS5YJ5-41P	5YJ5-41P SYJ5□43	1/8	M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17		
for internal pilot	Type SS5YJ5-43P	3103043	1/8	C4	0.55	0.29	0.14	0.74	0.32	0.19		

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.

SS5YJ5-41P-07-C4 (-Q)... 1 pc. (Manifold base) Example: * SYJ5143-5LOU (-Q) 3 pcs. (Valve)

Nil

* SYJ5243-5LOU (-Q) ·· 3 pcs. (Valve) * SYJ5000-21-8A 1 pc. (Blanking plate assembly) * SY3000-37-28A 3 pcs. (Connector assembly)

* 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.

Note) CE/UKCA-compliant: For DC only.

Symbol

Nil

M5

C4

N3

Z With light/surge voltage suppressor



A, B port size

Port size

Base mounted

M5 x 0.8

One-touch fitting for Ø4

One-touch fitting for Ø6

One-touch fitting for Ø5/32'

One-touch fitting for Ø1/4"

Light/Surge voltage suppressor CE/UKCA-compliant 9

Connector Assembly

20P For 12, 24 VDC

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

SY3000-37-3A With individual EXH spacer assembly Double solenoid, 3 position type SY3000-37-4A With individual EXH spacer assembly With 3 port adaptor plate SY3000-37-3A

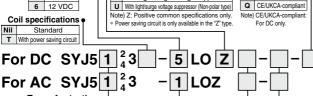
For 100 VAC

Single solenoid SY3000-37-46A Double solenoid, 3 position type SY3000-37-47A Single solenoid SY3000-37-32A With individual EXH spacer assembly Double solenoid, 3 position type SY3000-37-33A With individual EXH spacer assembly SY3000-37-32A With 3 port adaptor plate

For 110 VAC

Single solenoid	SY3000-37-54A
Double solenoid, 3 position type	SY3000-37-55A
Single solenoid With individual EXH spacer assembly	SY3000-37-35A
Double solenoid, 3 position type With individual EXH spacer assembly	SY3000-37-36A
With 3 port adaptor plate	SY3000-37-35A

How to Order Valve Rated voltage 5 24 VDC



Type of actuation • 1 2 position single

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

Rated voltage 100 VAC 110 VAC (115 VAC)

Manual override

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

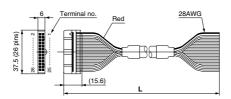
Note) In the case of flat ribbon cable type, "U" and "Z" types are for DC specifications and "Z type is for AC specifications. "Z" type for DC is positive common specification only. For the other combination, please contact SMC.



SYJ3000/5000/7000 Series

Flat Ribbon Cable Connector

AXT100-FC26-2



Flat ribbon cable connector

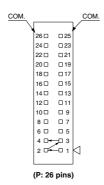
Cable	Assembly part no.
length (L)	26 pins
1.5 m	AXT100-FC26-1
3 m	AXT100-FC26-2
5 m	AXT100-FC26-3

- * When using a standard commercial connector, use a 26-pin type connector conforming to MIL-C-83503 with strain relief.
- Cannot be used for movable wiring
- * Lengths other than the above are also available. Please contact SMC for details.

Connector Manufacturer's Example

- HIROSE ELECTRIC CO., LTD.
- 3M Japan Limited
- Fujitsu Limited
- · Japan Aviation Electronics Industry, Limited
- J.S.T. Mfg. Co., Ltd.
- Oki Electric Cable Co., Ltd.

Specified Layout

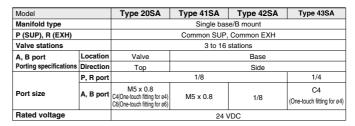


A mixture of single and double wiring can be specified on the manifold specification sheet. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 24 or less for P and PC. 1 solenoid is required for the 2-position single, and 2 solenoids for the 2-position double, and 3-position.



EX510 Gateway-type Serial Transmission System

Manifold for EX510 Serial Wiring Specifications





Type 20SA

Flow Rate Characteristics

			Port	size		Flow	rate ch	aracteristic	s		
	Manifold		FUIL	SIZE	1→4	l/2(P→A	VB)	4/2→5/3(A/B→R)			
	Maniioid		1(P), 5/3(R) Port	2(B), 4(A) Port	C [dm³/(s·bar)]			C [dm³/(s·bar)]	b	Cv	
Body ported		SYJ5□2□	1/8	M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19	
for internal pilot	Type SS5YJ5-20SA		1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20	
			1/8	C6	0.79	0.36	0.21	0.91	0.36	0.24	
	Type SS5YJ5-41SA		1/8	M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17	
for internal pilot	Type SS5YJ5-42SA-01 Type SS5YJ5-43SA	SYJ5□4□	1/4	1/8	0.74	0.22	0.18	0.82	0.31	0.21	
ioi internai piiot	Type SS5YJ5-43SA	1/8	C4	0.55	0.29	0.14	0.74	0.32	0.19		

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

How to Order Manifold (Example)

SS5YJ5-20SA-05 1 set (Type 20SA 5 stations manifold part no.) * SYJ5123-5LOU-M5 3 sets (Single solenoid part no.)

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

* SYJ5223-5LOU-M5 2 sets (Double solenoid part no.)

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.

41P · 43P

For 12, 24 VDC	
Single solenoid	SY3000-37-28A
Double solenoid, 3 position type	SY3000-37-29A
Single solenoid With individual SUP/EXH spacer assembly	SY3000-37-3A
Double solenoid, 3 position type With individual SUP/EXH spacer assembly	SY3000-37-4A
Single solenoid With interface regulator	SY3000-37-3A
Double solenoid, 3 position type With interface regulator	SY3000-37-6A
With 3 port adaptor plate	SY3000-37-3A

For 100 VAC	
Single solenoid	SY3000-37-46A
Double solenoid, 3 position type	SY3000-37-47A
Single solenoid With individual SUP/EXH spacer assembly	SY3000-37-32A
Double solenoid, 3 position type With individual SUP/EXH spacer assembly	SY3000-37-33A
Single solenoid With interface regulator	SY3000-37-15A
Double solenoid, 3 position type With interface regulator	SY3000-37-34A
With 3 port adaptor plate	SY3000-37-32A

For 110 VAC

101110170	
Single solenoid	SY3000-37-54A
Double solenoid, 3 position type	SY3000-37-55A
Single solenoid With individual SUP/EXH spacer assembly	SY3000-37-35A
Double solenoid, 3 position type With individual SUP/EXH spacer assembly	SY3000-37-36A
Single solenoid With interface regulator	SY3000-37-19A
Double solenoid, 3 position type With interface regulator	SY3000-37-37A
With 3 port adaptor plate	SY3000-37-35A

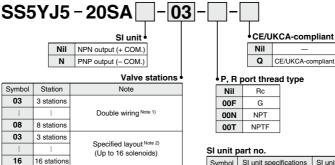


EX510 Gateway-type Serial Transmission System Body Ported Manifold

SYJ5000 Series (EK

The EX510 series is to be discontinued. When designing new equipment and facilities, consider using another series (EX260/EX600) instead.

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 heen specified.)

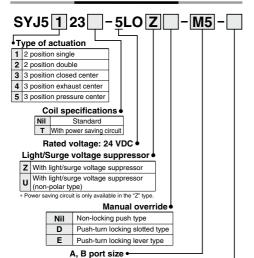
CE/UKCA-compliant

CE/UKCA-compliant

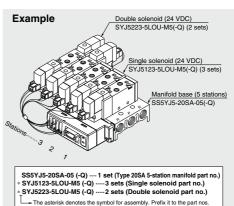
Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+ COM.)	EX510-S001	Web
N	PNP output (- COM.)	EX510-S101	Catalog

Refer to the **Web Catalog** and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download the Operation Manual via our website, https://www.smcworld.com

How to Order Valve



How to Order Manifold Assembly (Example)



The asterisk denotes the symbol for assembly. Prefix it to the part no 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.

M5 x 0.8

C4 One-touch fitting for ø4
C6 One-touch fitting for ø6

N3 One-touch fitting for ø5/32

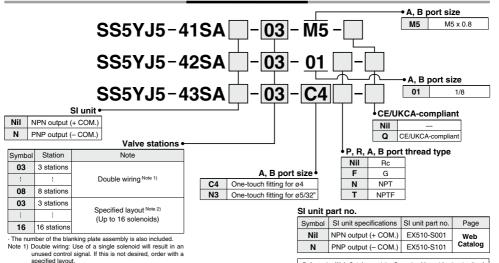
N7 One-touch fitting for ø1/4"

EX510 Gateway-type Serial Transmission System Base Mounted Manifold

SYJ5000 Series (ELK

The EX510 series is to be discontinued. When designing new equipment and facilities, consider using another series (EX260/EX600) instead.

How to Order Manifold



Refer to the **Web Catalog** and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download the Operation Manual via our website, https://www.smcworld.com

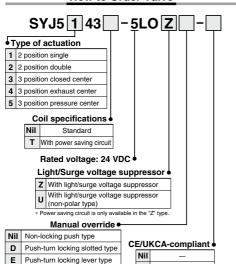
How to Order Valve

Note 2) Specified layout: Indicate wiring specifications on the

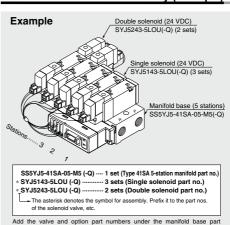
wiring has been specified.)

manifold specification sheet. (Note that double and 3

position valves cannot be used where single solenoid



How to Order Manifold Assembly (Example)



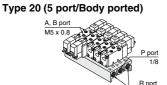
Add the valve and option part numbers under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet. The connector assembly lead wire length used for EXS10 manifold varies depending on the number of stations. Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Please specify the mounting solenoid valve when ordering.

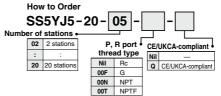
Q CE/UKCA-compliant

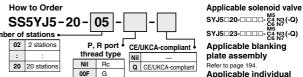
Note) AC-type models that are CE/UKCA-compliant have DIN terminals only

Common SUP/Common EXH

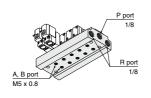
Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port.

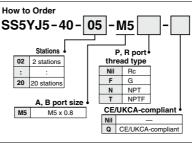












Applicable solenoid valve SYJ5□40-□□□□(-Q) SYJ5 43- CC (-Q) SYJ5 50- CC CC SYJ5053000(-Q) Applicable blanking plate assembly Refer to page 194.

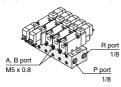
EXH spacer assembly

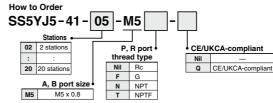
Refer to page 196.

Applicable individual **EXH** spacer assembly Refer to page 195.

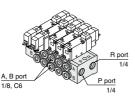
Applicable individual SUP spacer assembly Refer to page 196.

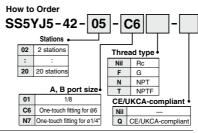
Type 41 (5 port/Base mounted)





Type 42 (5 port/Base mounted)





Applicable solenoid valve SYJ5 40- CC CC

SYJ5 43- 00 00 (-Q) SYJ5 = 50- = = = = (-Q) SYJ5 = 53- = = = (-Q)

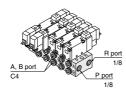
Applicable blanking plate assembly

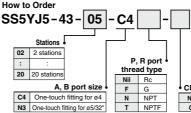
Refer to page 194.

Applicable individual EXH spacer assembly Refer to page 195.

Applicable individual SUP spacer assembly Refer to page 195.

Type 43 (5 port/Base mounted)



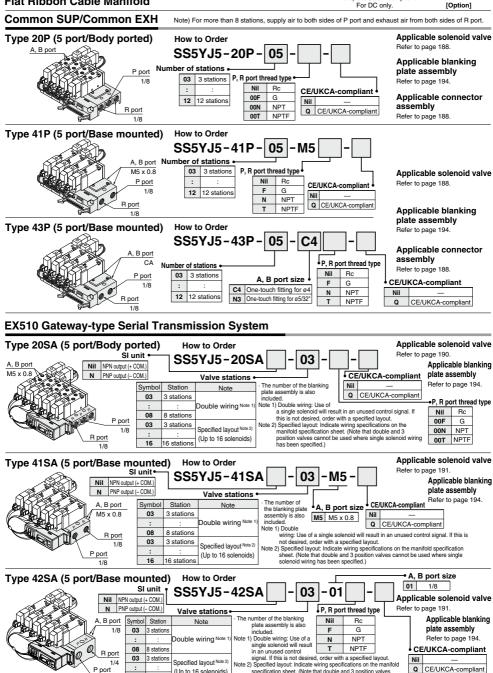


Applicable individual SUP spacer assembly Refer to page 196.

CE/UKCA-compliant Q CE/UKCA-compliant



Note) CE/UKCA-compliant: For DC only



specification sheet. (Note that double and 3 position valves

cannot be used where single solenoid wiring has been specified.)

(Up to 16 solenoids)

16 16 station

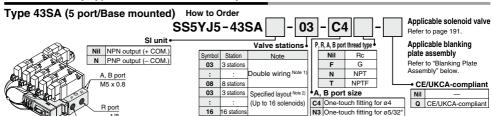
1/4

Q CE/UKCA-compliant

Flat Ribbon Cable Manifold



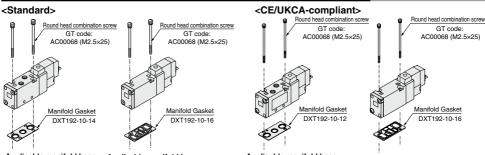
EX510 Gateway-type Serial Transmission System



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.)

Combinations of Solenoid Valve, Manifold Gasket and Manifold Base



Applicable manifold base

- · Type SS5YJ5-20 · Type SS5YJ5-20P
- · Type SS5YJ5-20SA

Applicable manifold base

- · Type SS5YJ5-41P Sub-plate
- · Type SS5YJ5-40 · Type SS5YJ5-43P
- · Type SS5YJ5-41 · Type SS5YJ5-41SA
- · Type SS5YJ5-42 · Type SS5YJ5-42SA
- · Type SS5YJ5-43 · Type SS5YJ5-43SA

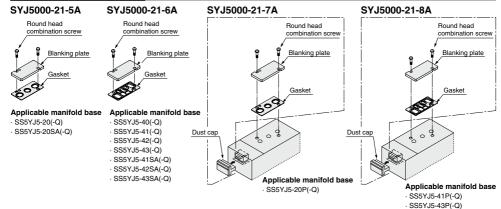
Applicable manifold base

- Type SS5YJ5-20-Q
- Type SS5YJ5-20P-Q
- · Type SS5YJ5-20SA-Q

Applicable manifold base

- · Type SS5YJ5-41P-Q Sub-plate · Type SS5YJ5-40-Q · Type SS5YJ5-43P-Q
- Type SS5YJ5-41-Q · Type SS5YJ5-41SA-Q
- · Type SS5YJ5-42-Q · Type SS5YJ5-42SA-Q
- · Type SS5YJ5-43-Q · Type SS5YJ5-43SA-Q

Blanking Plate Assembly

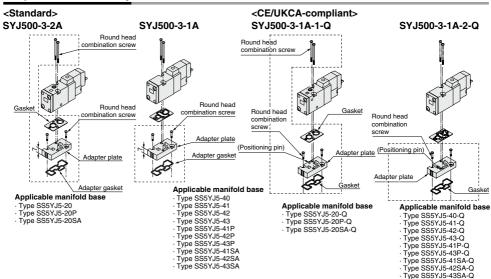


Mounting screw tightening torques | Use caution to the assembly orientation for solenoid valves, gasket, and optional parts.

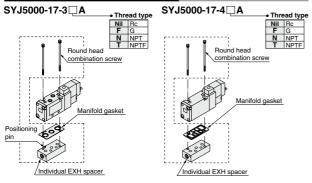
Mix Installation of the SYJ500 and the SYJ5000 Valves on the Same Manifold

- Use of an adapter plate makes it possible to mount the SYJ500 series on the manifold bases of the SYJ5000 series
- When mounting the SYJ500 valve on the SYJ5000 manifold, the SYJ500 solenoid must be positioned on the same side of the manifold as a single solenoid SYJ500. (Refer to the figure below.)
- For base mounted type, the A port of the 3 port valve flows out the B port of manifold base.

Adapter Plate Assembly



Individual EXH Spacer Assembly



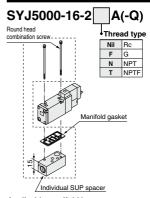
Applicable manifold base

- · Type SS5YJ5-20(-Q)
- · Type SS5YJ5-20P(-Q)
- · Type SS5YJ5-20SA(-Q)

Applicable manifold base

- · Type SS5YJ5-40(-Q)
- Type SS5YJ5-41(-Q)
- · Type SS5YJ5-42(-Q) · Type SS5YJ5-43(-Q)
- Type SS5YJ5-41P(-Q)
- Type SS5YJ5-43P(-Q)
- · Type SS5YJ5-41SA(-Q)
- Type SS5YJ5-42SA(-Q) · Type SS5YJ5-43SA(-Q)

Individual SUP Spacer Assembly



Applicable manifold base

- · Type SS5YJ5-41(-Q)
- Type SS5YJ5-42(-Q)
- · Type SS5YJ5-43(-Q)
- · Type SS5YJ5-41P(-Q) Type SS5YJ5-43P(-Q)
- Type SS5YJ5-41SA(-Q)
- Type SS5YJ5-42SA(-Q)
- Type SS5YJ5-43SA(-Q)



Mounting screw tightening torques | M2.5: 0.45 N·m

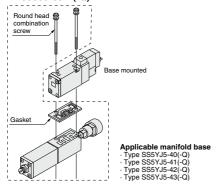
Use caution to the assembly orientation for solenoid valves, gasket, and optional parts.



Interface Regulator (P port regulation)

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

ARBYJ5000-00-P(-Q)



* Refer to page 245 prior to handling.



Mounting screw tightening torques

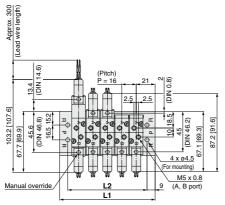
M2.5: 0.45 N·m

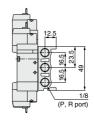
Use caution to the assembly orientation for solenoid valves, gasket, and optional parts.

Type 20: Top Ported/SS5YJ5-20- Stations -00□

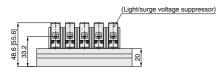
* []: AC



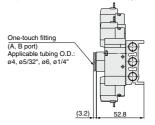




(Station n)----- (Station 1)



For C4, N3, C6, N7 (Built-in One-touch fitting)





33.2

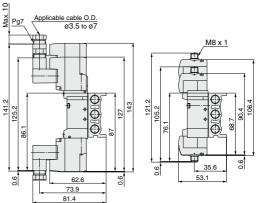
48.6 [55.6]

123 [127.4] 107 [111.4]

(Lead wire length) Approx. 300 59.7 [66.7]

DIN terminal (D, Y)

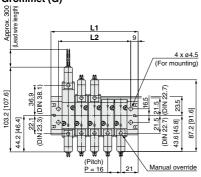
M8 connector (WO)

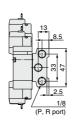


 Refer to page 243 for dimentions with connector cable.

Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330	346
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

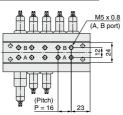
Grommet (G)



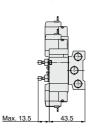


(Light/surge voltage suppressor)

(Station n)-----(Station 1)



Built-in speed controller

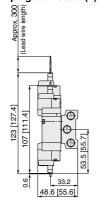


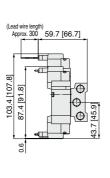
L plug connector (L)

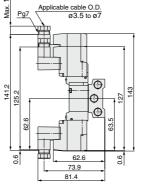
M plug connector (M)

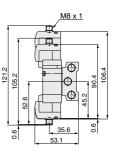
DIN terminal (D, Y)

M8 connector (WO)





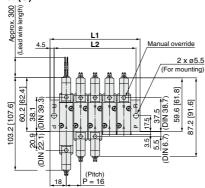


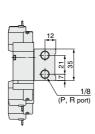


 Refer to page 243 for dimentions with connector cable.

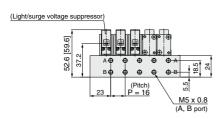
Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330	346
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

Grommet (G)

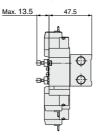




(Station 1)-----(Station n)



Built-in speed controller

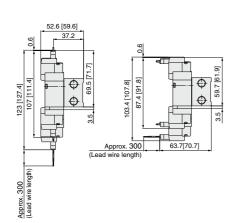


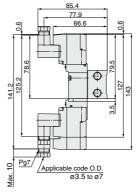
L plug connector (L) M plug connector (M)

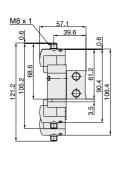
(M)

DIN terminal (D, Y)

M8 connector (WO)







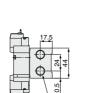
 Refer to page 243 for dimentions with connector cable.

Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331

Type 42: Side Ported/SS5YJ5-42-Stations -01, C6 □

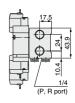
* []: AC

Grommet (G) For 01 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 1



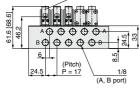
1/4

(P, R port)

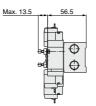


For $_{N7}^{C6}\square$ (Built-in One-touch fitting)

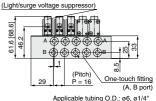
(Light/surge voltage suppressor)



Built-in speed controller



(Station 1)----(Station n)



* Other dimensions are the same as the grommet type.

L plug connector (L)

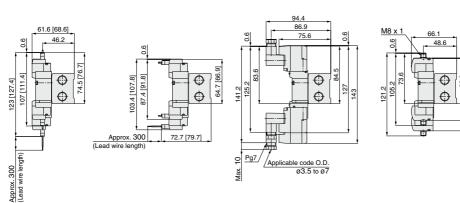
M plug connector (M)

DIN terminal (D, Y)

M8 connector (WO)

90.4

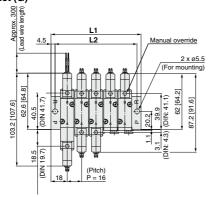
106.4

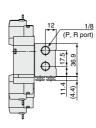


 Refer to page 243 for dimentions with connector cable.

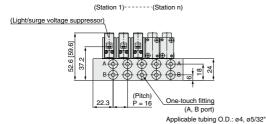
A, B port size Sta	tation n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
For 1/8	L1	66	83	100	117	134	151	168	185	202	219	236	253	270	287	304	321	338	355	372
FUI 1/6	L2	53	70	87	104	121	138	155	172	189	206	223	240	257	274	291	308	325	342	359
For I	L1	65	81	97	113	129	145	161	177	193	209	225	241	257	273	289	305	321	337	353
C6/N7	L2	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340

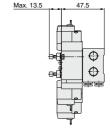
Grommet (G)



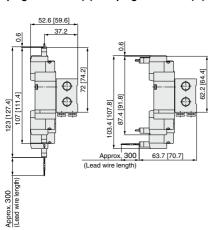


Built-in slottle valve

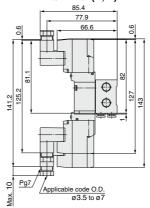


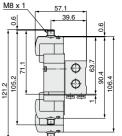


L plug connector (L) M plug connector (M)



DIN terminal (D, Y)





M8 connector (WO)

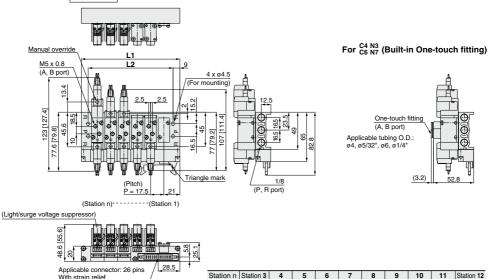
 Refer to page 243 for dimentions with connector cable.

Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L2	43	59	75	91	107	123	139	155	171	187	203	219	235	251	267	283	299	315	331

234.5

216.5

SS5YJ5-20P- Stations -00□



77

L1

5 6

> 111.5 129 146.5 164 181.5 199

94.5 112 129.5 147 164.5 182 199.5 217

76.5

8 9

8

132 149.5 10 11

202

167 184.5

Station 12

234.5

219.5

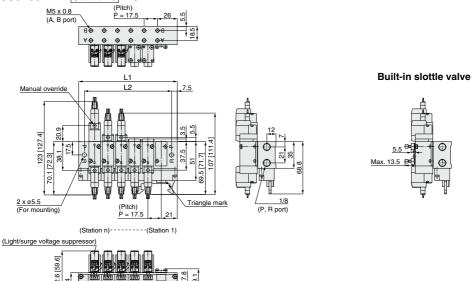
SS5YJ5-41P- Stations -M5

With strain relief

(Conforming to MIL-C-83503)

Applicable connector: 26 pins With strain relief

(Conforming to MIL-C-83503)



Station n Station 3

77 94.5 112 129.5 147 164.5 182 199.5 217

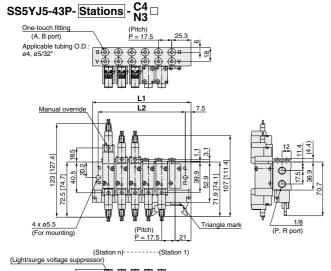
L1

12

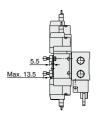
4 5 6

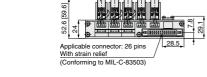
79.5

97 114.5



Built-in speed controller

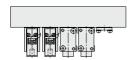


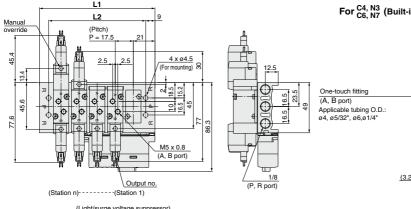


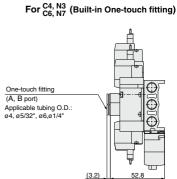
Station n	Station 3	4	5	6	7	8	9	10	11	Station 12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5

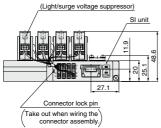
EX510 Gateway-type Serial Transmission System

SS5YJ5-20SA□- Stations -□





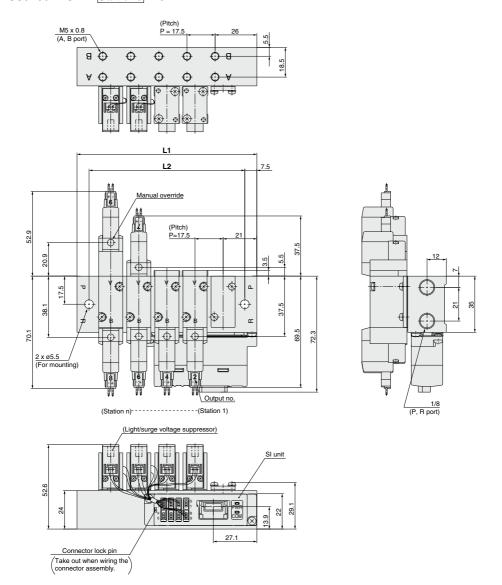




Station n	Station 3	4	5	6	7	8	9	10	11	12	13	14	15	Station 16
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5
L2	59	76.5	94	111.5	129	146.5	164	181.5	199	216.5	234	251.5	269	286.5

EX510 Gateway-type Serial Transmission System

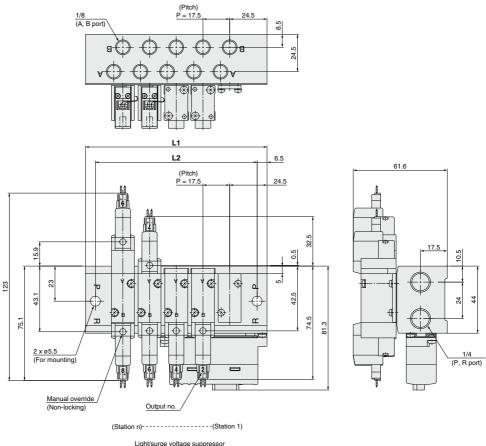
SS5YJ5-41SA□- Stations -M5□

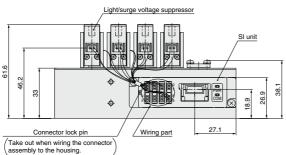


Station n	Station 3	4	5	6	7	8	9	10	11	12	13	14	15	Station 16
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5
L2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5	237	254.5	272	289.5

EX510 Gateway-type Serial Transmission System

SS5YJ-42SA□- Stations -01□

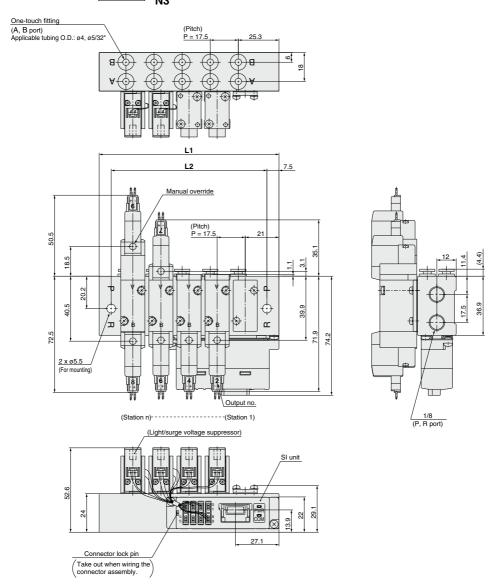




Station	n Station 4	5	6	7	8	9	10	11	12	13	14	15	Station 16
L1	101.5	119	136.5	154	171.5	189	206.5	224	241.5	259	276.5	294	311.5
L2	88.5	106	123.5	141	158.5	176	193.5	211	228.5	246	263.5	281	298.5

EX510 Gateway-type Serial Transmission System

SS5YJ5-43SA - Stations - C4



Station n	Station 3	4	5	6	7	8	9	10	11	12	13	14	15	Station 16
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5
L2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5	237	254.5	272	289.5

Rubber Seal 5 Port Solenoid Valve

SYJ7000 Series (EUK



Body ported



Base mounted

Specifications

Fluid		Air				
Onevetine assessme sense	2 position single	0.15 to 0.7				
Operating pressure range (MPa)	2 position double	0.1 to 0.7				
(2)	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)

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) (R1)513(R2) (P1)513(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(B)3
3 position closed center (A)4 2(B) (R1)5 1 3(R2) (P)	3 position closed center (B)2 4(A) (B)2 4(A) (B)3 15(B1) (B)3 15(B1)
3 position exhaust center (A)4 2(B) (R1)5 1 3(R2)	3 position exhaust center (B)2 4(A) (R2)3 1 5(R1)

Electrical entry			Grommet (G), (H) L plug connector (L) M plug connector (M) DIN terminal (D), (Y) M8 connector (W)				
.	DC		G, H, L, M, W 24, 12, 6, 5, 3	D, Y 24, 12			
Coil rated voltage (V)	(V) AC 50/60 Hz		100, 110, 200, 220				
Allowable voltage fluctuation	n		±10% of rate	ed voltage *			
		Standard	0.35 (With light: 0.4 (DIN	terminal with light: 0.45)}			
Power consumption (W)	DC	With power saving circuit	0.1 (With li	ight only) * 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)			
Apparent power (VA)*	AC	[115 V]	[0.94 (With light: 0.97)]	[0.94 (With light: 1.07)]			
Apparent power (VA)	AC	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	In common between 110 VAC and 115 VAC, and between						

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

* For details refer to page 240.



3 position pressure center 3 position pressure center

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

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

Flow Rate Characteristics/Weight

				Port	size		Flow rate characteristics Note			Note 1)			Weight (g) Note 2, 3)		
١ ١	/alve model	Туре	of actuation	1,5,3	4,2	1P4/	2 (PPA/E	3)	4/2P5/3	(A/BPEA	VEB)		L/M plug	DIN	M8
		,,		(P,EA,EB)	(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- 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]		108	110	152	118
			Pressure center			3.0 [0.83]	0.37 [0.50]	0.78 [0.25]	1.8	0.37	0.45				
2		2 position	Single			1.6	0.33	0.4	2.2	0.32	0.53	96	97	98	101
Body ported		2 position	Double		C6	1.0		0.4				109	111	153	119
۱ĕ	SYJ7□20-□-C6		Closed center	1/8	(One-touch	1.4	0.27	0.35	1.9	0.33	0.49				
18		3 position	Exhaust center		fitting for ø6)	1.1	0.37	0.27	2.5 [1.3]	0.32[0.54]		119	121	163	129
ω			Pressure center			1.8 [0.78]	0.36 [0.40]	0.45 [0.22]	1.6	0.30	0.39				
		2 position	Single			2.0	0.39	0.52	2.3	0.34	0.61	96	97	98	101
		2 position	Double		C8							109	111	153	119
	SYJ7□20-□-C8		Closed center	1/8	(One-touch	1.7	0.35	0.42	2.0	0.29	0.49				
		3 position	Exhaust center		fitting for ø8)	1.2	0.38	0.33	2.6 [1.3]	0.35[0.49]		119	121	163	129
			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)
		- pountain	Double								• • • •	178 (98)	180 (100)	222 (142)	188 (108)
١	SYJ7□40-□-01		Closed center	1/8	1/8	1.9	0.36	0.48	2.1	0.46	0.57				
발		3 position	Exhaust center			1.2	0.48	0.35		0.36[0.57]		188 (108)	190 (110)	232 (152)	198 (118)
Base mounted			Pressure center			3.3 [0.85]	0.43 [0.54]	0.78 [0.25]	2.1	0.45	0.56				
e		2 position	Single			2.3	0.41	0.61	2.9	0.35	0.74	165 (85)		187 (107)	170 (90)
gg			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				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.

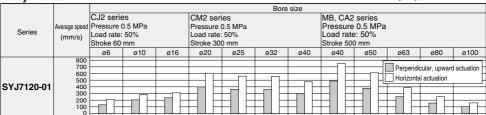
Note 3) For DC voltages. For AC voltages add 3 g to the weight of the single solenoid and 6 g to the weight of the double solenoid and 3 position types.

Cylinder Speed Chart

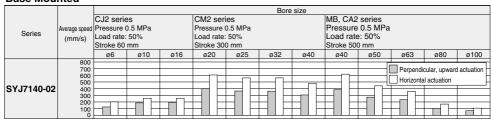
Body Ported

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	1 m	ø12 x 1 m
SYJ7120-01	Speed controller	AS2302F-06	AS3302F-06	AS4002F-12
	Silencer		AN110-01	

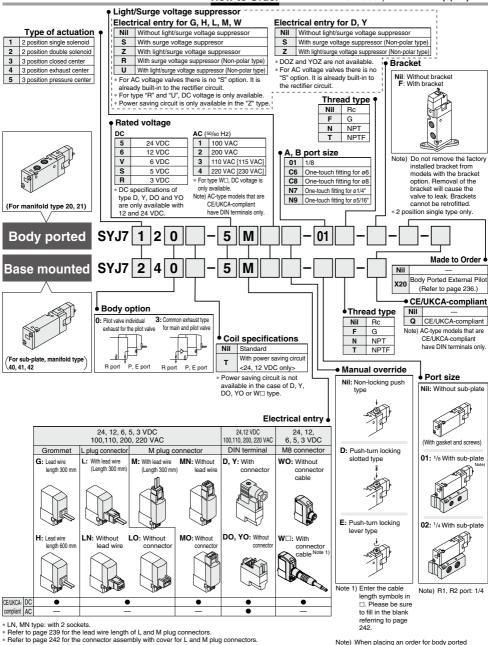
Е	sase mounted	CJ2 series CM2 series MB, CA2:						
	Tubing bore x Length		ø6 x 1 m					
SYJ7140-02	Speed controller	AS1302F-06	AS3002F-06					
	Silencer		AN20-02					



How to Order

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





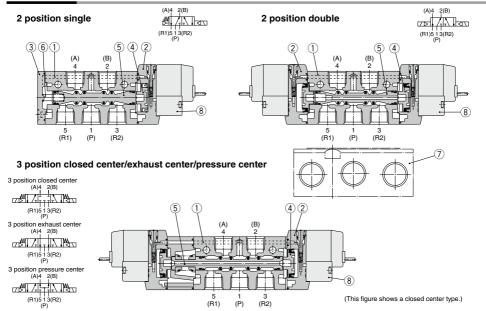
solenoid valve as a single unit, mounting screws for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to page 226.)

* For connector cable of M8 connector, refer to page 242. * M8 thread conforming to IEC60947-5-2 standard is also available. Refer to page 237 for details.

* DIN terminal type "Y" which conforms to EN-175301-803C (former DIN43650C) is also available. For details,

refer to page 241

Construction



Component Parts

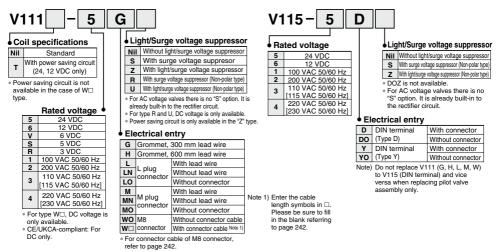
scription	Material	Note						
	Aluminum die-casted	White						
	Resin	White						
ver	Aluminum die-casted	White						
	Resin	-						
alve assembly	Aluminum, H-NBR							
spring	Stainless steel	-						
	plate ver alve assembly spring	Aluminum die-casted plate Resin Aluminum die-casted Resin Resin Aluminum, H-NBR						

Replacement Parts

No.	Description	Part no.	Note
-	Sub-plate Note)	SYJ7000-22-1(-Q)	1/8 Aluminum
,	ous plate	SYJ7000-22-2(-Q)	1/4 die-casted
8	Pilot valve	V111(T)-□□□	_

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

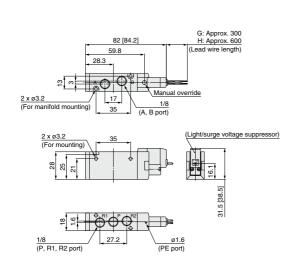
How to Order Pilot Valve Assembly





2 Position Single *[]: AC

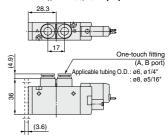
Grommet (G), (H): SYJ7120-□G□□-01□



With bracket: SYJ7120-□^G□□-01□-F



Built-in One-touch fitting: SYJ7120-□H□□- C8, N9□ (-F)

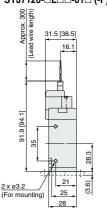


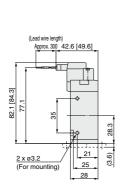
L plug connector (L):

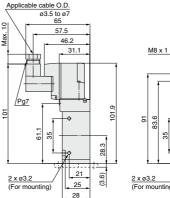
M plug connector (M): SYJ7120-\(\subseteq \subs

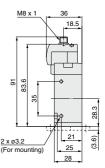
DIN terminal (D, Y): SYJ7120-□^D□□-01□(-F)

M8 connector (WO): SYJ7120-□WO□□-01□ (-F)







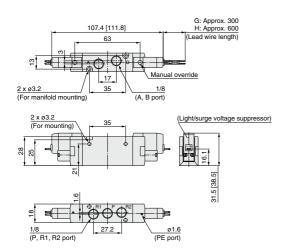


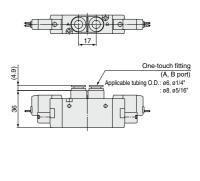
* Refer to page 243 for dimentions with connector cable.

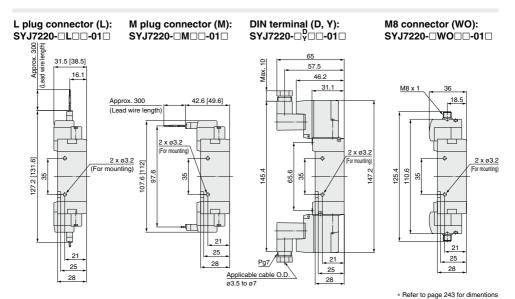
2 Position Double *[]:AC

Grommet (G), (H): SYJ7220-□G□□-01□

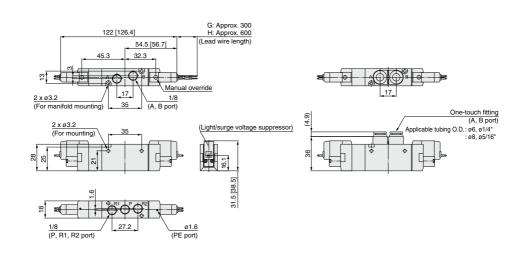
Built-in One-touch fitting: SYJ7220-□H□□-C6,N7□

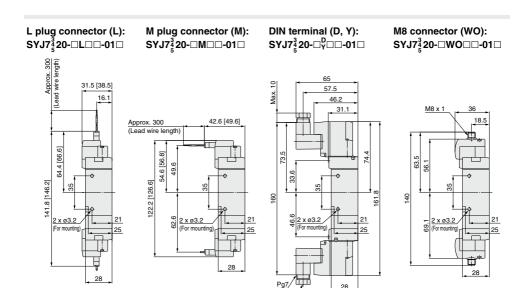






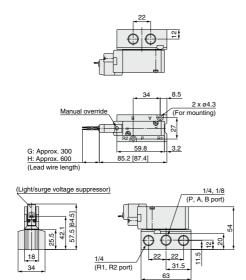
Grommet (G), (H): SYJ7³/₅20-□^G_H□□-01□



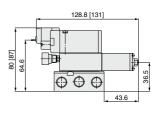


Applicable cable O.D. ø3.5 to ø7

Grommet (G), (H): SYJ7140-□G□□-010□

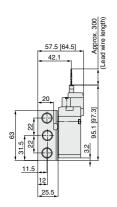


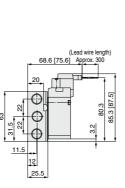
With interface regulator

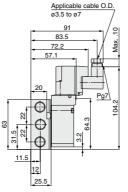


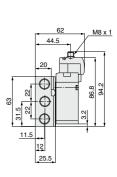
L plug connector (L): SYJ7140-□L□□-010□-010□ M plug connector (M): SYJ7140-□M□□-012□ DIN terminal (D, Y): SYJ7140- $\Box_Y^D \Box \Box_{02}^{01} \Box$

M8 connector (WO): SYJ7140-□WO□□-0010□







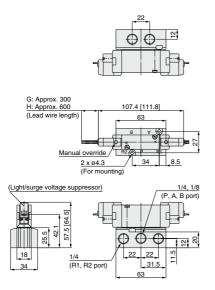


^{*} Refer to page 243 for dimentions with connector cable.

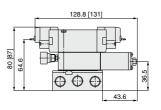


2 Position Double *[]: AC

Grommet (G), (H): SYJ7240-□H□□-010□



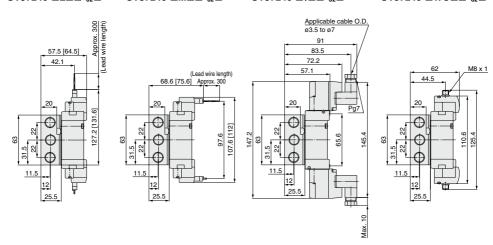
With interface regulator



L plug connector (L): SYJ7240-□L□□-010□-010□

M plug connector (M): SYJ7240-□M□□-0100□-010□□

DIN terminal (D, Y): SYJ7240-□^D/□□-010□ M8 connector (WO): SYJ7240-□WO□□-02□



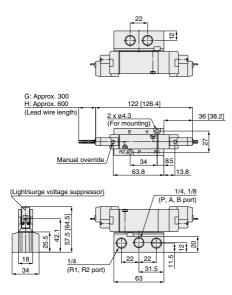
 Refer to page 243 for dimentions with connector cable.



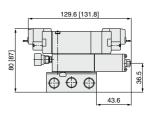
3 Position Closed Center/Exhaust Center/Pressure Center

* []: AC

Grommet (G), (H): SYJ7³/₄40-□^G_H□□-⁰¹/₀₂□



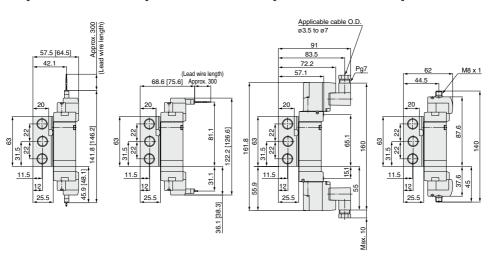
With interface regulator



L plug connector (L): SYJ7³/₂40-□L□□-⁰¹₀₂□ M plug connector (M): SYJ7 $\frac{3}{6}$ 40- \square M \square - $\frac{01}{02}$ \square

DIN terminal (D, Y): SYJ7 $\frac{3}{4}$ 40- $\Box_{Y}^{D}\Box\Box$ - $\frac{01}{02}\Box$

M8 connector (WO): SYJ7³/₂ 40-□WO□□-⁰¹/₀₂□



* Refer to page 243 for dimentions with connector cable.



Manifold Specifications



Manifold Standard



Manifold Specifications

Model		Type 20	Type 21	Type 40	Type 41	Type 42
	Type 20	Type 21	1 9 0 40	Type 41	Type 42	
Manifold type			Sing	le base/B mo	unt	
P (SUP), R (EXH)			Common	SUP, Comm	on EXH	
Valve stations	2 to 15 stations	2 to 20 stations				
A, B port	Location	Valve		Base Base		se
Porting specifications	Direction	To	Тор		ottom Side	
	P, R port	1/8		1/4		
Port size	A, B port	1/8 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)		1/8		C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)

Flow Rate Characteristics

			Port size		Flow rate characteristics						
					1→4	/2 (P→ <i>F</i>	VB)	4/2→5/3 (A/B→R)			
Manifold			1(P), 5/3(R) Port	2(B), 4(A) Port	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	
			1/8	1/8	2.2	0.35	0.57	2.3	0.26	0.55	
	Type SS5YJ7-20	SYJ7□2□	1/8	C6	1.4	0.32	0.37	2.0	0.25	0.49	
Body ported			1/8	C8	1.7	0.38	0.45	2.1	0.25	0.51	
for internal pilot	Type SS5YJ7-21		1/4	1/8	2.1	0.36	0.55	2.3	0.26	0.54	
			1/4	C6	1.4	0.32	0.36	2.1	0.24	0.50	
			1/4	C8	1.8	0.37	0.50	2.1	0.20	0.50	
	Type SS5YJ7-40		1/4	1/8	2.1	0.28	0.51	2.5	0.23	0.59	
Base mounted	Type SS5YJ7-41		1/4	1/8	2.0	0.30	0.50	2.2	0.30	0.55	
for internal pilot	Type SS5YJ7-42-C6	SYJ7□4□	1/4	C6	1.5	0.32	0.38	2.2	0.23	0.52	
	Type SS5YJ7-42-C8		1/4	C8	1.9	0.24	0.46	2.2	0.26	0.53	

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.

* SYJ7000-21-1A 1 pc. (Blanking plate assembly)

•SS5YJ7-41-03-01-----1 pc. (Manifold base)

* SYJ7140-5LZ ------1 pc. (Valve) * SYJ7240-5LZ ------1 pc. (Valve)

* SYJ7000-21-1A 1 pc. (Blanking plate assembly)

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

Note) CE/UKCA-compliant:

Flat Ribbon Cable Manifold

For DC only

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		
Manifold type	Э	Single base/B mount		
P (SUP), R (EXH)		Common SUP, Common EXH		
Valve stations		3 to 12 stations		
A, B port location		Valve		
Port size	P, R port	1/4		
POIT SIZE	A, B port	1/8, C6, C8		
Applicable fla		Socket: 26 pins MIL type with strain relief (MIL-C-83503)		
Internal wirin	ıg	In common between +COM and -COM (Z type: +COM only).		
Rated voltage Note 3)		24, 12 VDC, 100, 110 VAC		

Note 1) The value is for manifold base and individually operated 2 position type.

Note 2) The withstand vollage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.

Note 3) CE/UKCA-compliant: For DC only.

Flow Rate Characteristics

	Manifold		D. d		Flow rate characteristics						
			Port size		1→4/2 (P→A/B)			4/2→5/3 (A/B→R)			
			1(P), 5/3(R) Port		C [dm³/(s-bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv	
Body ported	Type SS5YJ7-21P-01		1/4	1/8	2.1	0.36	0.55	2.3	0.26	0.54	
for internal pilet	Type SS5YJ7-21P-C6	SYJ7□23	1/4	C6	1.4	0.32	0.36	2.1	0.24	0.50	
	Type SS5YJ7-21P-C8		1/4	C8	1.8	0.37	0.50	2.1	0.20	0.50	

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

How to Order Manifold (Example)

Instruct by specifying the valves, blanking plate assembly and connector assembly to be mounted

on the manifold along with the manifold base model no. Example:

●SS5YJ7-21P-07 (-Q)... 1 pc. (Manifold base) * SYJ7123-5LOU-C8 (-Q) ... 3 pcs. (Valve)

* SYJ7223-5LOU-C8 (-Q) - 3 pcs. (Valve)

* SYJ7000-21-3A (-Q) ··· 1 pc. (Blanking plate assembly) * SY3000-37-3A ..

··· 3 pcs. (Connector assembly) * SY3000-37-4A 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

Manual override

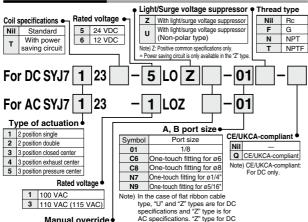
Nil Non-locking push type

D Push-turn locking slotted type

E Push-turn locking lever type

Note) CE/UKCA-compliant: For DC only.





is positive common specification

onlly. For the other combination.

please contact SMC.

Connector Assembly

For 12 24 VDC

101 12, 24 100	
Single solenoid	SY3000-37-3A
Double solenoid, 3 position type	SY3000-37-4A
Single solenoid With individual EXH spacer assembly	SY3000-37-3A
Double solenoid, 3 position type With individual EXH spacer assembly	SY3000-37-6A
With 3 port adaptor plate	SY3000-37-3A

Ear 100 VAC

FOR 100 VAC	
Single solenoid	SY3000-37-32A
Double solenoid, 3 position type	SY3000-37-33A
Single solenoid With individual EXH spacer assembly	SY3000-37-15A
Double solenoid, 3 position type With individual EXH spacer assembly	SY3000-37-34A
With 3 port adaptor plate	SY3000-37-32A

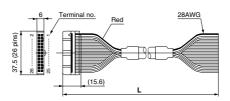
For 110 VAC

Single solenoid	SY3000-37-35A
Double solenoid, 3 position type	SY3000-37-36A
Single solenoid With individual EXH spacer assembly	SY3000-37-19A
Double solenoid, 3 position type With individual EXH spacer assembly	SY3000-37-37A
With 3 port adaptor plate	SY3000-37-35A

SYJ3000/5000/7000 Series

Flat Ribbon Cable Connector

AXT100-FC26-2



Flat ribbon cable connector

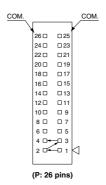
Cable	Assembly part no.
length (L)	26 pins
1.5 m	AXT100-FC26-1
3 m	AXT100-FC26-2
5 m	AXT100-FC26-3

- When using a standard commercial connector, use a 26-pin type connector conforming to MIL-C-83503 with strain relief.
- Cannot be used for movable wiring
- * Lengths other than the above are also available. Please contact SMC for details.

Connector Manufacturer's Example

- HIROSE ELECTRIC CO., LTD.
- 3M Japan Limited
- Fujitsu Limited
- · Japan Aviation Electronics Industry, Limited
- J.S.T. Mfg. Co., Ltd.
- Oki Electric Cable Co., Ltd.

Specified Layout

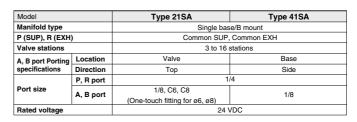


A mixture of single and double wiring can be specified on the manifold specification sheet. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 24 or less for P and PC. 1 solenoid is required for the 2-position single, and 2 solenoids for the 2-position double, and 3-nostifion.



EX510 Gateway-type Serial Transmission System

Manifold for EX510 Serial Wiring Specifications





Flow Rate Characteristics

				Flow rate characteristics						
			Port size		1→4/2 (P→A/B)		4/2→5/3 (A/B→F		→R)	
Manifold		1(P), 5/3(R) Port	2(B), 4(A) Port	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	
Doob or control			1/4	1/8	2.1	0.36	0.55	2.3	0.26	0.54
Body ported for internal pilot	Type SS5YJ7-21SA	SYJ7□2□	1/4	C6	1.4	0.32	0.36	2.1	b 0.26 0 0.24 0 0.20 0	0.50
for internal pilot	•		1/4	C8	1.8	0.37	0.50	2.1		0.50
Base mounted for internal pilot	Type SS5YJ7-41SA	SYJ7□4□	1/4	1/8	2.0	0.30	0.50	2.2	0.30	0.55

How to Order Manifold (Example)

- *_SYJ7223-5LOU-01 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.

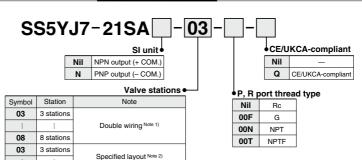


EX510 Gateway-type Serial Transmission System Body Ported Manifold

SYJ7000 Series (EUK

The EX510 series is to be discontinued. When designing new equipment and facilities, consider using another series (EX260/EX600) instead.

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.

16 stations

(Up to 16 solenoids)

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

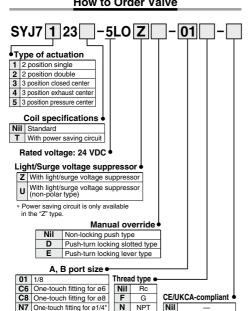
SI unit part no.

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+ COM.)	EX510-S001	Web
N	PNP output (- COM.)	EX510-S101	Catalog

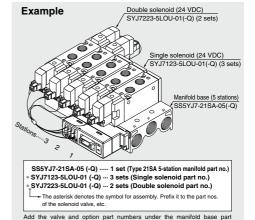
Refer to the Web Catalog and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download the Operation Manual via our website, https://www.smcworld.com

How to Order Valve

How to Order Manifold Assembly (Example)



NPTF



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.

N9 One-touch fitting for ø5/16"

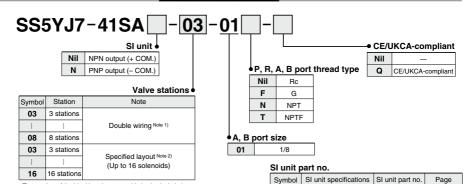
Q CE/UKCA-compliant

EX510 Gateway-type Serial Transmission System Base Mounted Manifold

SYJ7000 Series (ELK

The EX510 series is to be discontinued. When designing new equipment and facilities, consider using another series (EX260/EX600) instead.

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.

PNP output (- COM) Refer to the Web Catalog and the Operation Manual for the details of EX510 Gateway-type Serial Transmission System. Please download

the Operation Manual via our website, https://www.smcworld.com.

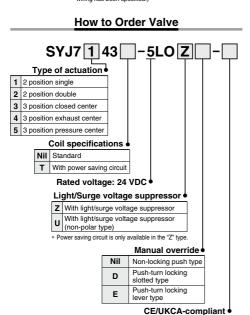
NPN output (+ COM.)

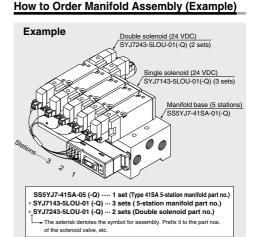
EX510-S001

FX510-S101

Web

Catalog





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.

CE/UKCA-compliant

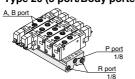
Manifold Standard

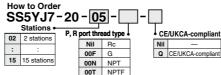
Note) AC-type models that are CE/UKCA-compliant have DIN terminals only.



Common SUP/Common EXH



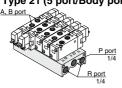


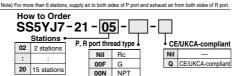




SYJ7 23- 000

Type 21 (5 port/Body ported)





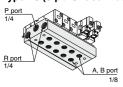
00T NPTF

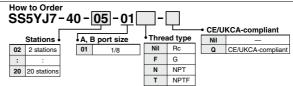
Applicable blanking plate assembly Refer to page 227.

Applicable individual EXH spacer assembly Refer to page 226.

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

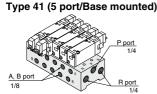
Type 40 (5 port/Base mounted)

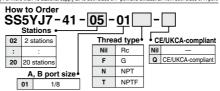




Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port. Applicable solenoid valve

How to Order





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

SYJ7 40- CC CC

SYJ7 43- CC CC (-Q) Applicable blanking plate assembly

Refer to page 227. Applicable individual **EXH** spacer assembly

Refer to page 226. Applicable individual SUP spacer assembly

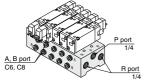
Refer to page 226 Applicable interface

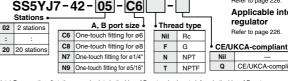
regulator

Refer to page 226

Nil Q CE/UKCA-compliant

Type 42 (5 port/Base mounted)





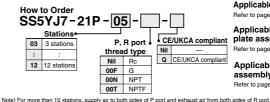
Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port.

Flat Ribbon Cable Manifold

Note) CE/UKCA-compliant: For DC only.

Common SUP/Common EXH





Applicable solenoid valve

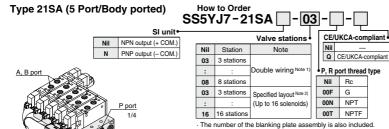
Refer to page 219. Applicable blanking

plate assembly

Refer to page 227.

Applicable connector assembly Refer to page 219.

EX510 Gateway-type Serial Transmission System



Applicable solenoid valve Refer to page 222.

Applicable blanking plate assembly

Applicable solenoid valve Refer to page 223.

Applicable blanking plate assembly Refer to page 227.

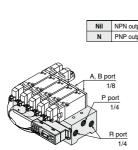
CE/UKCA-compliant

Refer to page 227.

SS5YJ7-41SA -03-01 -

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)

							_		
	SΙι	ınit•						Ap	plicable soleno
outp	ut (+ C	OM.)		A, B	— port si	ze		Refe	er to page 223.
outp	ut (– C	OM.)	Valve stations	01	1/	_			plicable blank
	Nil	Station	Note	P, R	port thr	ead type	.	•	ite assembly
	03	3 stations			Nil	Rc		Rete	er to page 227.
	:	:	Double wiring Note 1)		F	G			
	08	8 stations			N	NPT			
	03	3 stations	Specified layout Note 2)		Т	NPTF		CE/UI	KCA-compliant
	:	:	(Up to 16 solenoids)					Nil	_
	16	16 stations					L	Q	CE/UKCA-compli

The number of the blanking plate assembly is also included.

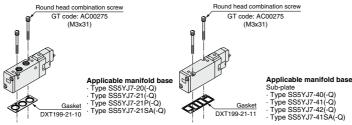
How to Order

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.

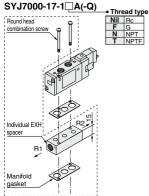
Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet.

(Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

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)

Individual FXH Manifold gasket

SYJ7000-17-2 A(-Q

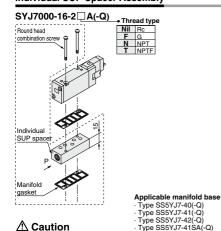
Round head

combination scr

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

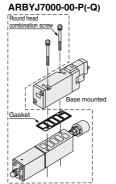
Interface Regulator (P port regulation)

Thread type

INP

Nil Rc

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)
- M3: 0.8 N·m Use caution to the assembly orientation for solenoid valves, gasket, and optional parts.



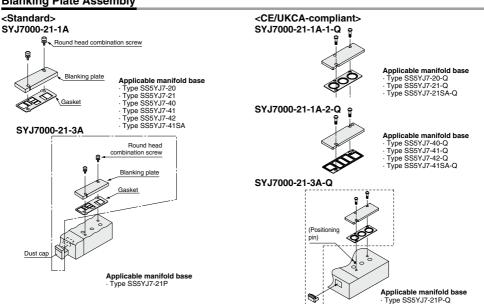


Mix Installation of the SYJ700 and the SYJ7000 Valves on the Same Manifold

- Use of an adapter plate makes it possible to mount the SYJ700 series on the manifold bases of the SYJ7000 series.
- When mounting the SYJ700 valve on the SYJ7000 manifold, the SYJ700 solenoid must be positioned on the same side of the manifold as a single solenoid. SYJ700. (Refer to the figure below.)
- For base mounted type, the A port of the 3 port valve flows out the B port of manifold base.

Adapter plate assembly Adapter plate assembly SYJ700-3-1A(-Q) SYJ700-3-2A(-Q) SYJ700 SYJ700 Series Base mounted Series Body ported Round head combination screw Round head combination screen Gaske Round head Round head combination screw combination so Adapter plate Adapter plate O-ring Manifold gasket Applicable manifold base Applicable manifold base · Type SS5YJ7-20(-Q) Type SS5YJ7-40(-Q) Type SS5YJ7-21(-Q) Type SS5YJ7-41(-Q) Type SS5YJ7-21P(-Q) Type SS5YJ7-42(-Q) · Type SS5YJ7-21SA(-Q) · Type SS5YJ7-41SA(-Q)

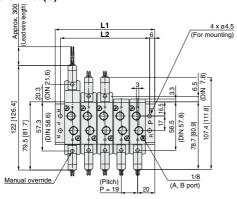
Blanking Plate Assembly

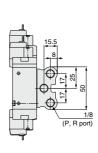


SMC

Type 20: Top Proted/SS5YJ7-20- Stations -00□

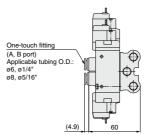
Grommet (G)



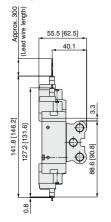


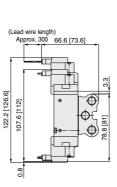
Built-in One-touch fitting

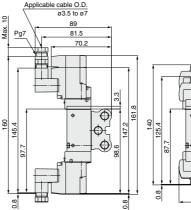
(Station n)------ (Station 1)
(Light/surge voltage suppressor)

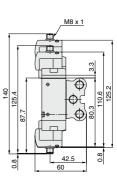


L plug connector (L) M plug connector (M) DIN terminal (D, Y) M8 connector (WO)









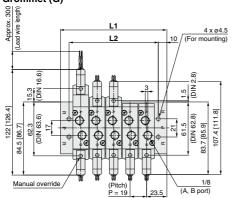
 Refer to page 243 for dimentions with connector cable.

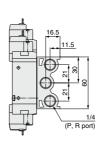
Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	Station 15
L1	59	78	97	116	135	154	173	192	211	230	249	268	287	306
L2	47	66	85	104	123	142	161	180	199	218	237	256	275	294

Type 21: Top Ported/SS5YJ7-21- Stations (-00□)

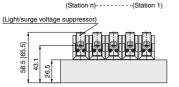
* []: AC

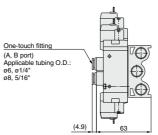




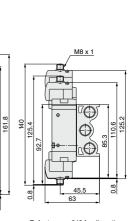


Built-in One-touch fitting





L plug connector (L) M plug connector (M) DIN terminal (D, Y) Approx. 300 (Lead wire length) Applicable cable O.D. ø3.5 to ø7 58.5 [65.5] 84.5 43.1 73.2 (Lead wire length) Approx. 300 69.6 [76.6] 141.8 [146.2] 122.2 [126.6] 127.2 [131.6] 107.6 [112] 160



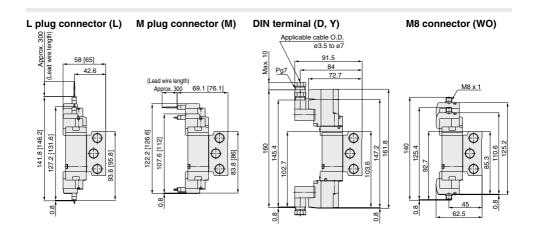
M8 connector (WO)

 Refer to page 243 for dimentions with connector cable.

0.8

Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389	408
L2	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388

Approx. 300 (Lead wire length) Grommet (G) 4 x ø4.5 (For mounting) 16.6) 1.5 OIN 2.8) 122 [126.4] 107.4 [111.8] (DIN 63.6) DIN 62.8) 84.5 [86.7] 62.3 83.7 [85.9] (P, R port) Manual override P = 19 (Station n) ---(Station 1) (Light/surge voltage suppressor) 58 [65] 42.6 Φ (A, B port) (Pitch) 23.5



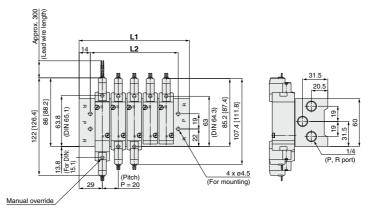
* Refer to page 243 for dimentions with connector cable.

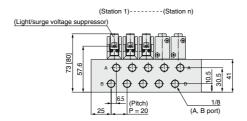
Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389	408
L2	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388

Type 41: Side Ported/SS5YJ7-41- Stations -01□

* []: AC

Grommet (G)

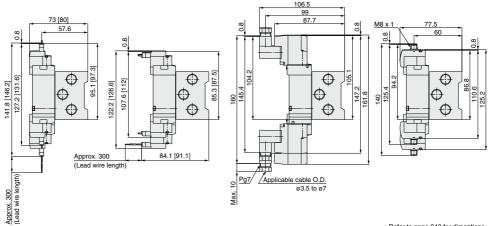




L plug connector (L) M plug connector (M)

DIN terminal (D, Y)

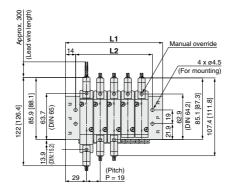
M8 connector (WO)

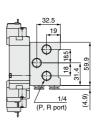


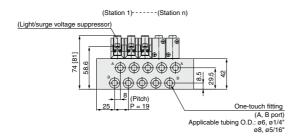
* Refer to page 243 for dimentions with connector cable.

Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	78	98	118	138	158	178	198	218	238	258	278	298	318	338	358	378	398	418	438
L2	50	70	90	110	130	150	170	190	210	230	250	270	290	310	330	350	370	390	410

Grommet (G)

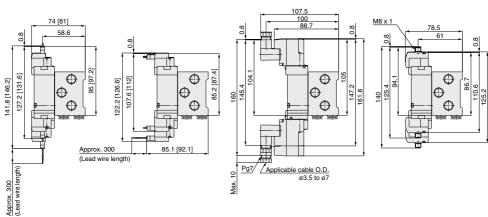






L plug connector (L) M plug connector (M) DIN terminal (D, Y)

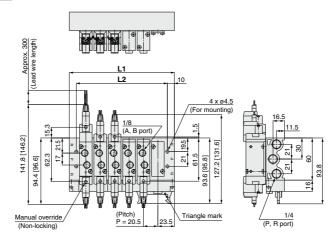
M8 connector (WO)

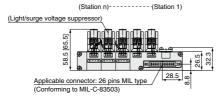


* Refer to page 243 for dimentions with connector cable.

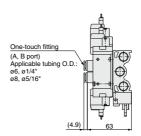
Station n	Station 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Station 20
L1	77	96	115	134	153	172	191	210	229	248	267	286	305	324	343	362	381	400	419
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

SS5YJ7-21P- Stations (-00□)





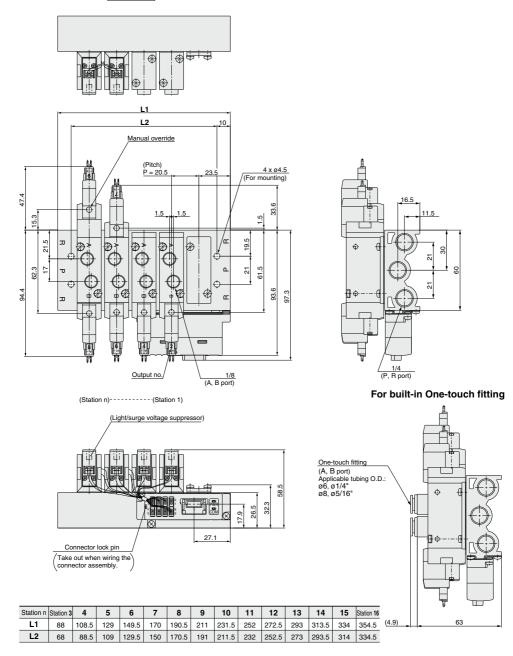
For built-in One-touch fitting



Station n	Station 3	4	5	6	7	8	9	10	11	Station 12
L1	88	108.5	129	149.5	170	190.5	211	231.5	252	272.5
L2	68	88.5	109	129.5	150	170.5	191	211.5	232	252.5

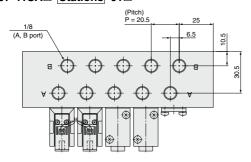
EX510 Gateway-type Serial Transmission System

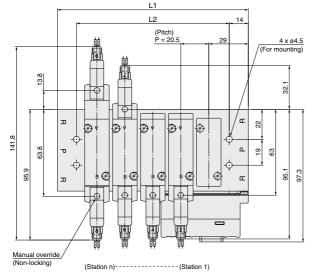
SS5YJ7-21SA□- Stations -□

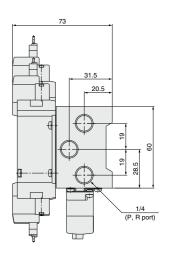


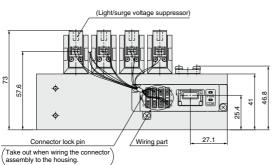
EX510 Gateway-type Serial Transmission System

SS5YJ7-41SA□- Stations -01□









5	Station n	Station 3	4	5	6	7	8	9	10	11	12	13	14	15	Station 16
	L1	99	119.5	140	160.5	181	201.5	222	242.5	263	283.5	304	324.5	345	365.5
	L2	71	91.5	112	132.5	153	173.5	194	214.5	235	255.5	276	296.5	317	337.5

SYJ5000/7000 Series Made to Order



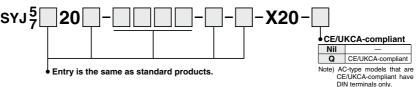


Please contact SMC for detailed dimensions, specifications and lead times.

1 Body Ported External Pilot

Symbol -X20

Applicable solenoid valve series SYJ5□20, SYJ7□20



Operating Pressure Range MPa

operating ricodule mange in	ı u
Operating pressure range	-100 kPa to 0.7
Pilot pressure range	0.15 to 0.7

External Pilot Port

Series	Port size
SYJ5000, SYJ7000	M5 x 0.8

Dimensions

SYJ5000: 8 mm SYJ7000: 8 mm longer in total length.

Symbol

Body ported

2 position single

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

2 position double

(A)4 2(B) 513 (R1)(P)(R2)

3 position closed center



3 position exhaust center



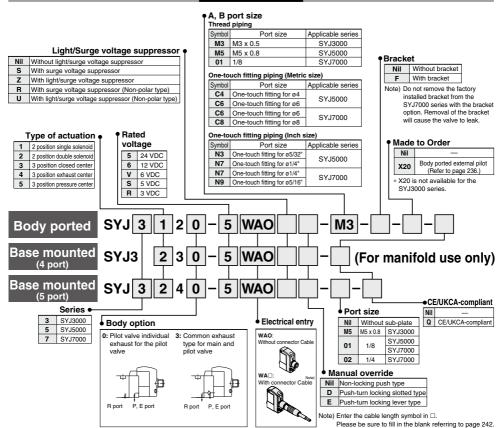
3 position pressure center

SYJ3000/5000/7000 Series

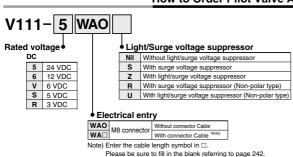
Made to Order

M8 Connector Conforming to IEC60947-5-2 Standard

How to Order Valve



How to Order Pilot Valve Assembly



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





Be sure to read this before handling the products. For safety instructions and 3/4/5-port solenoid valve precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

Manual Override Operation

⚠ Warning

When the manual override is operated, connected equipment will be actuated. Confirm safety before operating.

■ Non-locking push type [Standard]

Press in the direction of the arrow



■ Push-turn locking slotted type [Type D]

While pressing, turn in the direction of the arrow.

If it is not turned, it can be operated the same way as the non-locking type.





When operating the locking type D with a screw driver, turn it gently using a watchmakers screw driver.

[Torque: Less than 0.1 N·m]

■ Push-turn locking lever type [Type E]

While pressing, turn in the direction of the arrow. If it is not turned, it can be operated the same way as the non-locking type.





∧ Caution

When locking the manual override on the push-turn locking types (D, E), be sure to push it down before turning. Turning without first pushing it down can cause damage to the

Turning without first pushing it down can cause damage to the manual override and trouble such as air leakage, etc.

Output Port

For the SYJ series, due to the main valve construction, as air is output to the output port on the side opposite of where the energized pilot valve and manual override are located, be careful when using double solenoid or 3-position valves. Check the symbol for details.

Solenoid Valve for 200, 220 VAC Specifications

⚠ Warning

Solenoid valves with grommet and L/M type plug connector AC specifications have a built-in rectifier circuit in the pilot section to operate the DC coil.

With 200, 220 VAC specification pilot valves, this built-in rectifier generates heat when energized. The surface may become hot depending on the energized condition; therefore, do not touch the solenoid valves.

Common Exhaust Type for Main and Pilot Valve

⚠ Caution

Pilot air is exhausted through the main valve body rather than directly to atmosphere.

- Suitable for applications where exhausting the pilot valve to atmosphere would be detrimental to the surrounding working environment.
- For use in extremely dirty environments where there is the possibility that dust could enter the pilot exhaust and damage the valve.

Ensure that the piping of exhaust air is not too restrictive.

SYJ3000/5000/7000 series Mixed Installation of 3 Port and 5 Port Valves on Same Manifold.

⚠ Caution

The SYJ3000/5000/7000 series and the SYJ300/500/700 series can be mounted on the same manifold. How to mount on the same manifold is shown on the following pages.

SYJ3000, SYJ300	P. 166
SYJ5000, SYJ500 ·····	P. 195
SYJ7000, SYJ700	P. 227

If 4 or 5 port valve is used as a 3 port valve

The SYJ3000, 5000, 7000 series may be used as a N.C.or N.O. 3 port valve by plugging one of the A,B ports. Be sure not to plug the exhaust ports (R). Can be used when a double solenoid, 3 port valve is required.

Plug po	sition	B port	A port
Type of a	ctuation	N.C.	N.O.
solenoids	Single	(R)4 2(B) (R1)5 1 3(R2) (P)	(R)5 1 3(R2)
Number of	Double	(A)4 2(B) (R1)5 1 3(R2) (P)	(R15 1 3(R2) (R15 1 3(R2)

(JIS symbols above: SYJ5000 series)

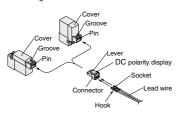


Be sure to read this before handling the products. For safety instructions and 3/4/5-port solenoid valve precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

How to Use Plug Connector

1. Attaching and detaching connectors

- To attach a connector, hold the lever and connector unit between your fingers and insert straight onto the pins of the solenoid valve so that the lever's pawl is pushed into the groove and locks.
- To detach a connector, remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.



2. Crimping of lead wires and sockets

Strip 3.2 to 3.7 mm at the end of the lead wires, insert the ends of the core wires evenly into the sockets, and then crimp with a crimping tool. When this is done, take care that the coverings of the lead wires do not enter the core wire crimping area.

Use an exclusive crimping tool for crimping. (Contact SMC for special crimping tools.)

Core wire crimping area ,Crimping area



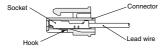
3. Attaching and detaching sockets with lead wires

Attaching

Insert the sockets into the square holes of the connector (+, - indication), and continue to push the sockets all the way in until they lock by hooking into the seats in the connector. (When they are pushed in, their hooks open and they are locked automatically.) Then confirm that they are locked by pulling lightly on the lead wires.

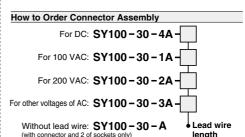
Detaching

To detach a socket from a connector, pull out the lead wire while pressing the socket's hook with a stick having a thin tip (approx. 1 mm). If the socket will be used again, first spread the hook outward.



Plug Connector Lead Wire Length

Standard length is 300 mm, but the following lengths are also available.



SY100-30-1A-20

How to Order

SY100-30-4A-20

Include the connector assembly part number together with the part number for the plug connector's solenoid valve without connector.

Ex.) In case of 2000 mm of lead wire

For DC For AC

SYJ3120-5LO-M3 SYJ3120-1LO-M3

length		
300 mm		
600 mm		
1000 mm		
1500 mm		
2000 mm		
2500 mm		
3000 mm		
5000 mm		

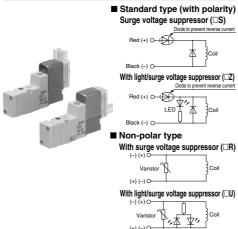


Be sure to read this before handling the products. For safety instructions and 3/4/5-port solenoid valve precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

Surge Voltage Suppressor

<For DC>

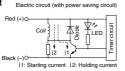
Grommet, L/M Plug Connector



- Connect the standard type in accordance with the +, polarity indication. (The non-polar type can be used with the connections made either way.)
- Since voltage specifications other than standard 24 and 12 VDC do not have diodes for polarity protection, be careful not to make errors in the polarity.
- When wiring is done at the factory, positive (+) is red and negative (-) is black.

■ With power saving circuit

Power consumption is decreased by 1/4 by reducing the wattage required to hold the valve in an energized state. (Effective energizing time is over 62 ms at 24 Black VDC.)

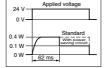


Operating Principle

With the above circuit, the current consumption when holding is reduced to save energy. Please refer to the electric wave data to the right.

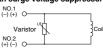
 Please be careful not to reverse the polarity, since a diode to prevent the reversed current is not provided for the power saving circuit.

(In the case of SYJ³/₅□□0T, the electri wave form of energy saving type)

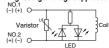


DIN Terminal

With surge voltage suppressor (DS)



With light/surge voltage suppressor (DZ)

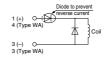


DIN terminal has no polarity.

M8 Connector

■ Standard type (with polarity)

With light/surge voltage suppressor (□S) With light/surge voltage suppressor (□Z)

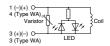




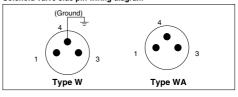
■ Non-polar type

With surge voltage suppressor (□R)

1 (-)(+) O 4 (Type WA) U Varistor 3 (+)(-) O 3 (Type WA) With light/surge voltage suppressor (□U)



Solenoid valve side pin wiring diagram



- For the standard type, connect + to 1 and to 3 for Type W according to polarity, while + to 4 and - to 3 for Type WA.
- Please be careful not to reverse the polarity, since a diode to prevent the reversed current is not provided for DC voltages other than 24 and 12 VDC.
- The WA-type valve cannot be grounded.



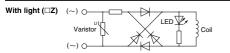
Be sure to read this before handling the products. For safety instructions and 3/4/5-port solenoid valve precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

Surge Voltage Suppressor

<For AC>

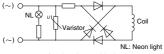
(There is no "S" type because the generation of surge voltage is prevented by a rectifier.)

Grommet, L/M Plug Connector



DIN Terminal

With light (DZ)



Note) Surge voltage suppressor of varistor has residual voltage corresponding to the protective element and rated voltage; therefore, protect the controller side from the surge. The residual voltage of the diode is approximately 1 V.

How to Use DIN Terminal

∕ Caution

Connection

- Loosen the holding screw and pull the connector out of the solenoid valve terminal block.
- After removing the holding screw, insert a flat head screwdriver, etc. into the notch on the bottom of the terminal block and pry it open, separating the terminal block and the housing.
- 3. Loosen the terminal screws (slotted screws) on the terminal block, insert the cores of the lead wires into the terminals according to the connection method, and fasten them securely with the terminal screws.
- 4. Secure the cord by fastening the gland nut.

▲ Caution

When making connections, take note that using other than the supported size (ø3.5 to ø7) heavy duty cord will not satisfy IP65 (enclosure) standards. Also, be sure to tighten the gland nut and holding screw within their specified torque ranges.

Changing the entry direction

After separating the terminal block and housing, the cord entry can be changed by attaching the housing in the desired direction (4 directions at 90° intervals).

* When equipped with a light, be careful not to damage the light with the cord's lead wires.

Precautions

Plug in and pull out the connector vertically without tilting to one side.

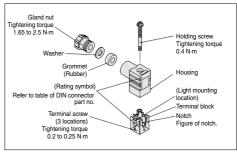
Compatible cable

Cord O.D.: ø3.5 to ø7

(Reference) 0.5mm2, 2-core or 3-core, equivalent to JIS C 3306

How to Use DIN Terminal

∧ Caution



Type "Y"

DIN connector type Y is a DIN connector that confirms to the DIN pitch 8-mm standard.

- . D type DIN connector with 9.4 mm pitch between terminals is not interchangeable
- To distinguish from the D type DIN connector, "N" is listed at the end of voltage symbol.
 (For connector parts without lights, "N" is not indicated. Please refer to the name plate to distinguish.
- Dimensions are completely the same as D type DIN connector.
- When exchanging the pilot valve assembly only, "V115-□D" is interchangeable with "V115-□Y". Do not replace V111 (G, L, M) to V115-□D/□Y (DIN terminal), and vice versa.

DIN Connector Part No.

<Type D>

Without light	SY100-61-1			
With light				
Rated voltage	Voltage symbol	Part no.		
24 VDC	24V	SY100-61-3-05		
12 VDC	12V	SY100-61-3-06		
100 VAC	100V	SY100-61-2-01		
200 VAC	200V	SY100-61-2-02		
110 VAC	110V	SY100-61-2-03		
220 VAC	220V	SY100-61-2-04		

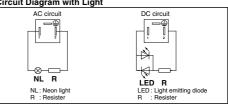
<Type Y>

Without light

With light			
Voltage symbol	Part no.		
24VN	SY100-82-3-05		
12VN	SY100-82-3-06		
100VN	SY100-82-2-01		
200VN	SY100-82-2-02		
110VN	SY100-82-2-03		
220VN	SY100-82-2-04		
	24VN 12VN 100VN 200VN 110VN		

SY100-82-1

Circuit Diagram with Light



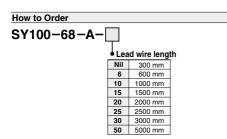


Be sure to read this before handling the products. For safety instructions and 3/4/5-port solenoid valve precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

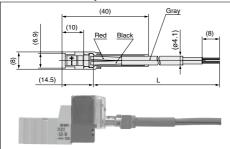
Connector Assembly with Cover

Connector assembly with dust proof protective cover.

- Effective to prevention of short circuit failure due to the entry of foreign matter into the connector.
- Chloroprene rubber for electrical use, which provides outstanding weather resistance and electrical insulation, is used for the cover material. However, do not allow contact with cutting oil,
- Simple and unencumbered appearance by adopting roundshaped cord.



Connector Assembly with Cover: Dimensions



How to Order

Enter the part number for a plug connector solenoid valve without connector together with the part number for a connector assembly with cover.

Ex. 1) Lead wire length of 2000 mm SYJ3120-5LOZ-M3 SY100-68-A-20

Ex. 2) Lead wire length of 300 mm (standard) SYJ3120-5LPZ-M3

Symbol for connector assembly with cover

* In this case, the part number for the connector assembly with cover is not required.

M8 Connector

⚠ Caution

 M8 connector types have an IP65 (enclosure) rating, offering protection from dust and water. However please note: these products are not intended for use in water.

Select a SMC connector cable (V100-49-1-□) or a FA sensor type connector, with M8 threaded 3 pin specifications conforming to Nippon Electric Control Equipment Association Standard, NECA4202 (IEC60947-5-2). Make sure the connector O.D. is 10.5 mm or less when used with the SYJ3000 series manifold. If more than 10.5 mm, it cannot be mounted due to the size.

- 2. Do not use a tool to mount the connector, as this may cause damage. Only tighten by hand. (0.4 to 0.6 N·m)
- The excessive stress on the cable connector will not be able to satisfy the IP65 rating. Please use caution and do not apply a stress of 30 N or greater.

Failure to meet IP65 performance may result if using alternative connectors than those shown above, or when insufficiently tightened.

· Connector cable mounting



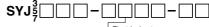
Note) Connector cable should be mounted in the correct direction. Make sure that the arrow symbol on the connector is facing the triangle symbol on the valve when using SMC connector cable (V100-49-1-□). Be careful not to squeeze it in the wrong direction, as problems such as pin damage may occur.

■ Connector cable

. M8 connector cable for M8 can be ordered as follows:

How to Order

 To order solenoid valve and connector cable at the same time (Connector cable will be included in the shipment of the solenoid valve.)



Electrical entry

W1,WA1: Cable length 300 mm W2,WA2: Cable length 500 mm

W3,WA3: Cable length 1000 mm W4,WA4: Cable length 2000 mm W7,WA7: Cable length 5000 mm

Ex. 1) Cable length: 300 mm SYJ3120-5W1ZE-M3

Symbol for electrical entry

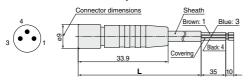




Be sure to read this before handling the products. For safety instructions and 3/4/5-port solenoid valve precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

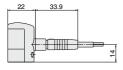
M8 Connector

2. To order connector cable only



Cable length (L)	No.
300 mm	V100-49-1-1
500 mm	V100-49-1-2
1000 mm	V100-49-1-3
2000 mm	V100-49-1-4
5000 mm	V100-49-1-7

ø3.4 mm
ø1.16 mm
0.16 mm ²



Flat Ribbon Cable Manifold

Caution Type 21P

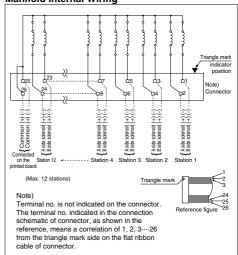




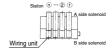
- In the manifold valves, the wiring to the individual valves is provided on a printed circuit board, and the connection to the external wires is consolidated through the use of a flat ribbon cable.
- A single MIL flat ribbon cable connects the entire manifold to your power source. This greatly reduces installation time.

Flat Ribbon Cable Manifold

Manifold Internal Wiring



- For more than 10 stations, both poles of the common should be wired.
- · For single solenoid, connect to the B side solenoid.
- The maximum number of stations that can be accommodated is 12. For more stations, contact SMC.
- Only non-polar valves are available for the DC flat cable manifold, therefore negative COM or positive COM wiring of the manifold is possible. The valve does not switch with negative COM if a Z type is used. Be sure to use a positive COM.

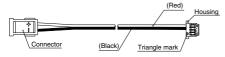




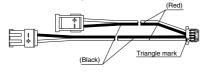
Be sure to read this before handling the products. For safety instructions and 3/4/5-port solenoid valve precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

EX510 Gateway-type Serial Transmission System

When ordering the connector assembly only For single solenoids (SY3000-37-81A-□-N)



For double solenoids (SY3000-37-81A- ---)



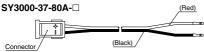
Connector Assembly Order No.

(Can be used for the manifold without a specified layout (8 stations or less))

Model	Part no.	Connector mounting position	
	SY3000-37-81A-2-N	Single : 1 to 4 stations	
SS5YJ3- 21 SA	SY3000-37-81A-2-5	Double/3 position: 1 to 4 stations	
	SY3000-37-81A-1-N	Single : 5 to 8 stations	
	SY3000-37-81A-1-4	Double/3 position: 5 to 8 stations	
20	SY3000-37-81A-2-N	Single : 1 to 8 stations	
SS5YJ5- 41 SA	SY3000-37-81A-2-5	Double/3 position: 1 to 8 stations	
SS5YJ7- 21 SA	SY3000-37-81A-3-N	Single : 1 to 8 stations	
	SY3000-37-81A-3-6	Double/3 position: 1 to 4 stations	
	SY3000-37-81A-3-7	Double/3 position: 5 to 8 stations	

Note) The above is for the station addition or maintenance. When ordering a connector assembly separately, a number would not be printed on the connector.

When ordering connector assembly (except housing)



Connector Assembly Order No.

(Can be used for the manifold with a specified layout)

Model	Part no.	Connector mounting position	
	SY3000-37-80A-5	On A side	1 to 8 stations
CCEV ID 21 CA	SY3000-37-80A-2	On B side	1 to 6 stations
SS5YJ3- 21 SA	SY3000-37-80A-7	On A side	04-40-4-6
	SY3000-37-80A-4	On B side	9 to 16 stations
	SY3000-37-80A-5	On A side	1 to 8 stations
	SY3000-37-80A-2	On B side	I to 8 stations
SS5YJ5- 41 SA	SY3000-37-80A-7	On A side	9 to 12 stations
3331J3- 42 3A	SY3000-37-80A-4	On B side	
	SY3000-37-80A-9	On A side	
	SY3000-37-80A-7	On B side	13 to 16 stations
	SY3000-37-80A-7	On A side	4 4 - 0 -4 -4
	SY3000-37-80A-3	On B side	1 to 8 stations
00577 2104	SY3000-37-80A-10	On A side	O to 10 stations
SS5Y7- 21 SA	SY3000-37-80A-6	On B side	9 to 12 stations
	SY3000-37-80A-12	On A side	40.1- 40 -1-1
	SY3000-37-80A-9	On B side	13 to 16 stations

Note 1) The above is for station addition or maintenance. When ordering a connector assembly separately, a number will not be printed on the connector.

Note 2) After inserting the connector assembly into the housing, be sure to confirm that the lead wire will not come off by lightly pulling the wire. Furthermore, do not reuse the lead wire after it has been inserted and removed.

Note 3) Wiring is set longer than the actual wiring distance.

When ordering the housing only



Bracket

∧ Caution

For bracket attached types of SYJ3000 (Single) and SYJ7000, do not use it without bracket.

Replacement of Pilot Valve

⚠ Caution

Mount it so that there is no slippage or deformation in gaskets, and tighten with the tightening torque as shown below.

Series	Thread size	Tightening torque
SYJ3000	M1.7	0.12 N·m
SYJ5000	M2.5	0.45 N·m
SYJ7000	M3	0.8 N·m



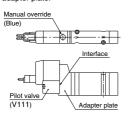


Be sure to read this before handling the products. For safety instructions and 3/4/5-port solenoid valve precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

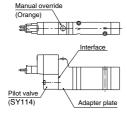
Replacement of Pilot Valve

Pilot valves in this series are improved to provide excellent energy saving results. However following this improvement, these new valves are no longer compatible with the current pilot valve used at the interface. Consult with SMC when you need to exchange these pilot valves, in the case of manual override (marked in orange) of the adapter plate.

New type



Current type



Interface Regulator



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

Specifications

Specifications			
Interface regulator		ARBYJ5000	ARBYJ7000
Applicable solenoid valve model		SYJ5000	SYJ7000
Regulating port		Р	Р
Proof pressure		1.5 MPa	
Maximum operating pressure		1.0 MPa	
Set pressure range		0.05 to 0.7 MPa Note 1)	
Ambient and fluid temperature		-5 to 60°C (No freezing) Note 2)	
Thread size for connection of pressure gauge		M5 x 0.8	
Weight (kg)		0.06	0.09
Effective area at exhaust Note 3)	P→A	1.9	5.1
side (mm²) S at P ₁ = 0.7 MPa, P ₂ = 0.5 MPa	Р→В	2.1	5.8
Effective area at supply Note 3)	A→EA	4.5	12.6
side (mm²) S at P₂ = 0.5 MPa	В→ЕВ	4.5	12.6

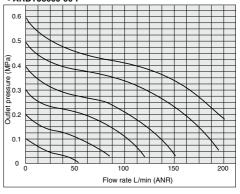
Interface Regulator

- Note 1) Set the pressure within the operating pressure range of the solenoid valve.
- Note 2) The maximum operating temperature for the solenoid valve is 50°C.
- Note 3) The effective area listed is for a single solenoid 2 position valve mounted on a sub-plate.
- Note 4) Apply pressure from P port in the base for interface regulator.

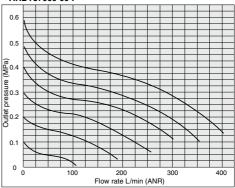
Flow Rate Characteristics

 $(P \rightarrow A)$ Condition: Inlet pressure 0.7 MPa

• ARBYJ5000-00-P



• ARBYJ7000-00-P





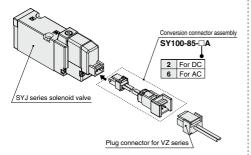


When changing from a VZ series to an SYJ series product

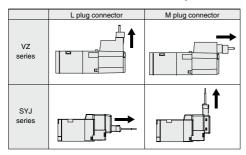
⚠ Caution

 The L and M plug connectors of the VZ series and SYJ series are not interchangeable.

When the VZ series wiring is to be used as is, order the required conversion connector assembly separately. (Refer to the part number below when ordering.)



2. The L and M plug connectors of the VZ series and SYJ series have different electrical entry directions.



- The DIN connectors (D type) of the VZ series and SYJ series are interchangeable. Therefore, the DIN connector can continue to be used as is.
- 4. Mounting interchangeability is as shown below.

 $\ensuremath{\mathsf{VZ}}$ series sub-plates and manifolds can continue to be used as is.

Valves for cylinders with a valve have the same mounting interchangeability.

Note the rounding up of the series number.

VZ300 series \Rightarrow SYJ500 series VZ500 series \Rightarrow SYJ700 series

VZ3000 series ⇒ SYJ5000 series VZ5000 series ⇒ SYJ7000 series